Table 10.3.17 Discharged BOD of Industrial Wastewater by Sub-area (2001)

Province / Amphoe	Population in 2001			Breakdown of Population and Discharged BOD of IWW by Sub-area														IWW Disc. BOD Out of Basin	Total IWW Disc. BOD (kg/day)
	Admin. Total	Within Basin	Out of Basin	Noi River		Lop Buri River		Pasak River		Main R. (R0-R1)		Main R. (R1-R2)		Main R. (R2-R3)		Main R. (R3-R4)			
				Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty		
Chai Nat	119,237	48,763	70,474	7,681	362	0	0	0	0	27,334	1,289	13,748	648	0	0	0	0	3,323	5,622
Muang Chai Nat	73,037	48,763	24,274	7,681	362	0	0	0	0	27,334	1,289	13,748	648	0	0	0	0	1,145	3,444
Wat Sing	46,200	0	46,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,178	2,178
Sing Buri	63,738	63,738	0	10,583	1,340	5,139	651	0	0	0	0	48,016	6,081	0	0	0	0	0	8,072
Muang Sing Buri	63,738	63,738	0	10,583	1,340	5,139	651	0	0	0	0	48,016	6,081	0	0	0	0	0	8,072
Lop Buri	523,042	311,112	211,930	0	0	311,112	4,958	0	0	0	0	0	0	0	0	0	0	3,376	8,336
Muang Lop Buri	352,978	280,723	72,255	0	0	280,723	4,474	0	0	0	0	0	0	0	0	0	0	1,152	5,626
Khok Samrong	56,093	572	55,521	0	0	572	9	0	0	0	0	0	0	0	0	0	0	885	894
Ban Mi	113,971	29,817	84,154	0	0	29,817	475	0	0	0	0	0	0	0	0	0	0	1,341	1,816
Ang Thong	79,307	78,972	335	21,987	1,535	0	0	0	0	0	0	56,985	3,979	0	0	0	0	23	5,538
Muang Ang Thong	50,199	49,864	335	15,430	1,077	0	0	0	0	0	0	34,434	2,405	0	0	0	0	23	3,505
Pa Mok	29,108	29,108	0	6,557	458	0	0	0	0	0	0	22,551	1,575	0	0	0	0	0	2,033
Ayutthaya	282,019	280,885	1,134	44,549	6,329	1,919	273	77,543	11,016	0	0	106,248	15,094	10,405	1,478	20,221	2,873	161	37,224
Muang Ayutthaya	141,839	141,839	0	2,054	292	1,919	273	21,213	3,014	0	0	106,248	15,094	10,405	1,478	0	0	0	20,151
Tha Rua	56,330	56,330	0	0	0	0	0	56,330	8,003	0	0	0	0	0	0	0	0	0	8,003
Sena	63,850	62,716	1,134	42,495	6,037	0	0	0	0	0	0	0	0	0	0	20,221	2,873	161	9,071
Pathum Thani	503,682	280,073	223,609	0	0	0	0	0	0	0	0	0	0	0	0	280,073	17,972	0	17,972
Muang Pathum Thani	130,632	130,632	0	0	0	0	0	0	0	0	0	0	0	0	0	130,632	4,661	0	4,661
Thanyaburi	125,301	49,075	76,226	0	0	0	0	0	0	0	0	0	0	0	0	49,075	4,471	0	4,471
Lam Luk Ka	128,760	31,170	97,590	0	0	0	0	0	0	0	0	0	0	0	0	31,170	4,594	0	4,594
Khlong Luang	118,989	69,196	49,793	0	0	0	0	0	0	0	0	0	0	0	0	69,196	4,246	0	4,246
Nonthaburi	886,465	702,975	183,490	0	0	0	0	0	0	0	0	0	0	0	0	702,975	10,295	0	10,295
Muang Nonthaburi	513,121	329,631	183,490	0	0	0	0	0	0	0	0	0	0	0	0	329,631	5,959	0	5,959
Bang Bua Thong	95,127	95,127	0	0	0	0	0	0	0	0	0	0	0	0	0	95,127	1,105	0	1,105
Pak Kret	278,217	278,217	0	0	0	0	0	0	0	0	0	0	0	0	0	278,217	3,231	0	3,231
Sara Buri	336,661	0	336,661	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,175	38,175
Muang Sara Buri	141,490	0	141,490	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,044	16,044
Kaeng Khoi	73,086	0	73,086	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,287	8,287
Phra Phutthabat	34,467	0	34,467	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,908	3,908
Nong Khae	87,618	0	87,618	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,935	9,935
Total	2,774,151	1,746,518	1,027,633	84,800	9,567	318,170	5,882	77,543	11,016	27,334	1,289	224,997	25,803	10,405	1,478	1,003,269	31,140	45,060	131,234

Table 10.3.18 Discharged BOD of Industrial Wastewater by Sub-area (2011)

Province / Amphoe	Population in 2011			Breakdown of Population and Discharged BOD of IWW by Sub-area												IWW Disc. BOD Out of Basin	Total IWW Disc. BOD (kg/day)
	Admin. Total	Within Basin	Out of Basin	Noi River		Lop Buri River		Pasak River		Main R. (R0-R1)		Main R. (R1-R2)		Main R. (R2-R3)		Main R. (R3-R4)			
				Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty	Pop'n	Qt'ty		
Chai Nat	124,490	51,332	73,158	7,682	578	0	0	0	0	29,898	2,249	13,752	1,034	0	0	0	0	5,502	9,363
Muang Chai Nat	75,611	51,332	24,279	7,682	578	0	0	0	0	29,898	2,249	13,752	1,034	0	0	0	0	1,826	5,667
Wat Sing	48,879	0	48,879	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,676	3,676
Sing Buri	74,318	74,318	0	11,475	2,071	5,573	1,006	0	0	0	0	57,270	10,335	0	0	0	0	0	13,412
Muang Sing Buri	74,318	74,318	0	11,475	2,071	5,573	1,006	0	0	0	0	57,270	10,335	0	0	0	0	0	13,412
Lop Buri	640,876	400,726	240,150	0	0	400,726	8,586	0	0	0	0	0	0	0	0	0	0	5,145	13,731
Muang Lop Buri	461,681	363,651	98,030	0	0	363,651	7,791	0	0	0	0	0	0	0	0	0	0	2,100	9,892
Khok Samrong	38,535	148	38,387	0	0	148	3	0	0	0	0	0	0	0	0	0	0	822	826
Ban Mi	140,660	36,927	103,733	0	0	36,927	791	0	0	0	0	0	0	0	0	0	0	2,223	3,014
Ang Thong	80,570	80,254	316	20,725	2,275	0	0	0	0	0	0	59,529	6,536	0	0	0	0	35	8,846
Muang Ang Thong	51,736	51,420	316	14,580	1,601	0	0	0	0	0	0	36,840	4,045	0	0	0	0	35	5,680
Pa Mok	28,834	28,834	0	6,145	675	0	0	0	0	0	0	22,689	2,491	0	0	0	0	0	3,166
Ayutthaya	289,961	289,015	946	49,560	10,186	566	121	80,779	16,603	0	0	138,017	28,367	3,190	656	16,881	3,470	194	59,596
Muang Ayutthaya	162,824	162,824	0	630	129	566	121	20,399	4,193	0	0	138,017	28,367	3,190	656	0	0	0	33,465
Tha Rua	60,360	60,360	0	0	0	0	0	60,360	12,410	0	0	0	0	0	0	0	0	0	12,410
Sena	66,757	65,811	946	48,930	10,057	0	0	0	0	0	0	0	0	0	0	16,881	3,470	194	13,721
Pathum Thani	731,679	364,209	367,470	0	0	0	0	0	0	0	0	0	0	0	0	364,209	26,649	0	26,649
Muang Pathum Thani	182,792	182,792	0	0	0	0	0	0	0	0	0	0	0	0	0	182,792	6,658	0	6,658
Thanyaburi	183,566	58,478	125,088	0	0	0	0	0	0	0	0	0	0	0	0	58,478	6,686	0	6,686
Lam Luk Ka	192,267	36,326	155,961	0	0	0	0	0	0	0	0	0	0	0	0	36,326	7,003	0	7,003
Khlong Luang	173,034	86,613	86,421	0	0	0	0	0	0	0	0	0	0	0	0	86,613	6,302	0	6,302
Nonthaburi	1,490,620	1,178,657	311,963	0	0	0	0	0	0	0	0	0	0	0	0	1,178,657	15,263	0	15,263
Muang Nonthaburi	871,414	559,451	311,963	0	0	0	0	0	0	0	0	0	0	0	0	559,451	8,923	0	8,923
Bang Bua Thong	137,225	137,225	0	0	0	0	0	0	0	0	0	0	0	0	0	137,225	1,405	0	1,405
Pak Kret	481,981	481,981	0	0	0	0	0	0	0	0	0	0	0	0	0	481,981	4,935	0	4,935
Sara Buri	334,016	0	334,016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61,037	61,037
Muang Sara Buri	148,317	0	148,317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,103	27,103
Kaeng Khoi	70,179	0	70,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,824	12,824
Phra Phutthabat	25,525	0	25,525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,664	4,664
Nong Khae	89,995	0	89,995	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,445	16,445
Total	3,766,530	2,438,511	1,328,019	89,442	15,110	406,887	9,712	80,779	16,603	29,898	2,249	268,568	46,272	3,190	656	1,559,747	45,382	71,914	207,897

Table 10.3.19 Livestock Wastewater Quantity by Sub-area (Buffaloes, 1996)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Buffaloes W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	22,700	2,043	235	0	0	42	239	0	0	1,527
Muang Chai Nat	255.4	147.0	108.4	2,347	211	28	0	0	42	51	0	0	90
Manorom	225.6	0.0	225.6	2,074	187	0	0	0	0	0	0	0	187
Wat Sing	606.3	0.0	606.3	5,573	502	0	0	0	0	0	0	0	502
Sankhaburi	354.8	249.0	105.8	3,261	293	187	0	0	0	19	0	0	88
Sanphaya	228.3	228.3	0.0	2,098	189	20	0	0	0	169	0	0	0
Hankha	799.3	0.0	799.3	7,347	661	0	0	0	0	0	0	0	661
Sing Buri	822.5	822.5	0.0	1,900	171	72	23	0	0	77	0	0	0
Muang Sing Buri	112.4	112.4	0.0	260	23	7	3	0	0	14	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	204	18	18	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	79	7	7	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	440	40	37	0	0	0	2	0	0	0
Phrom Buri	82.5	82.5	0.0	191	17	2	0	0	0	15	0	0	0
In Buri	314.3	314.3	0.0	726	65	0	19	0	0	46	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	12,100	1,089	0	142	0	0	8	0	0	940
Muang Lop Buri	565.6	426.8	138.8	1,104	99	0	75	0	0	0	0	0	24
Khok Samrong	982.5	17.5	965.0	1,918	173	0	3	0	0	0	0	0	170
Chai Badan	1,253.0	0.0	1,253.0	2,445	220	0	0	0	0	0	0	0	220
Tha Luang	538.9	0.0	538.9	1,052	95	0	0	0	0	0	0	0	95
Tha Wung	242.8	242.8	0.0	474	43	0	35	0	0	8	0	0	0
Ban Mi	585.7	162.4	423.3	1,143	103	0	29	0	0	0	0	0	74
Pattana Nikom	517.0	0.0	517.0	1,009	91	0	0	0	0	0	0	0	91
Sa Boat	304.7	0.0	304.7	595	54	0	0	0	0	0	0	0	54
Khok Charoen	317.1	0.0	317.1	619	56	0	0	0	0	0	0	0	56
Lam San Thi	447.0	0.0	447.0	872	79	0	0	0	0	0	0	0	79
Nang Muang	445.5	0.0	445.5	869	78	0	0	0	0	0	0	0	78
Ang Thong	968.4	888.2	80.2	4,600	414	300	0	0	0	80	0	0	34
Muang Ang Thong	102.9	102.0	0.9	469	44	18	0	0	0	26	0	0	0
Chaiyo	72.3	72.3	0.0	343	31	0	0	0	0	31	0	0	0
Pa Mok	80.9	80.9	0.0	364	35	11	0	0	0	23	0	0	0
Pho Thong	219.4	212.4	7.0	1,042	94	91	0	0	0	0	0	0	3
Wiset Chai Chan	224.7	189.3	35.4	1,067	96	81	0	0	0	0	0	0	15
Samko	86.9	50.0	36.9	413	37	21	0	0	0	0	0	0	16
Sawaengha	181.3	181.3	0.0	861	78	78	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	17,800	1,602	287	88	238	0	137	142	302	407
Muang Ayutthaya	130.6	130.6	0.0	909	82	5	4	21	0	28	24	0	0
Tha Rua	106.2	106.2	0.0	739	67	0	0	67	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	1,385	125	0	7	117	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	1,049	94	41	0	0	0	0	0	34	20
Bang Sai	219.7	219.7	0.0	1,530	138	53	0	0	0	0	1	84	0
Bang Ban	135.3	135.3	0.0	942	85	21	0	0	0	43	21	0	0
Bang Pahan	121.9	121.9	0.0	849	76	0	29	12	0	36	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,595	144	0	0	0	0	0	95	23	25
Ban Phraek	39.1	39.1	0.0	272	25	0	19	0	0	6	0	0	0
Phak Hai	189.0	189.0	0.0	1,316	118	118	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	728	65	0	0	0	0	0	0	0	65
Maharat	120.1	120.1	0.0	836	75	0	29	22	0	24	0	0	0
Lat Bua Luang	199.9	136.9	63.0	1,392	125	0	0	0	0	0	0	86	39
Wang Noi	219.2	0.0	219.2	1,526	137	0	0	0	0	0	0	0	137
Sena	205.6	198.9	6.7	1,431	129	50	0	0	0	0	0	75	4
Uthai	186.8	2.5	184.3	1,301	117	0	0	0	0	0	2	0	115
Pathum Thani	1,525.9	485.5	1,040.4	10,300	927	0	0	0	0	0	0	295	632
Muang Pathum Thani	120.2	120.2	0.0	811	73	0	0	0	0	0	0	73	0
Sam Khok	95.0	95.0	0.0	641	58	0	0	0	0	0	0	58	0
Lat Lum Kaeo	168.1	168.1	0.0	1,270	114	0	0	0	0	0	0	114	0
Thanya Buri	112.1	8.7	103.4	757	68	0	0	0	0	0	0	5	63
Lam Luk Ka	297.7	6.0	291.7	2,010	181	0	0	0	0	0	0	4	177
Klong Laung	299.2	67.5	231.7	2,020	182	0	0	0	0	0	0	41	141
Nong Sua	413.6	0.0	413.6	2,792	251	0	0	0	0	0	0	0	251
Nonthaburi	622.3	273.6	348.7	2,000	180	0	0	0	0	0	0	79	101
Muang Nonthaburi	77.0	42.3	34.7	247	22	0	0	0	0	0	0	12	10
Kruai	57.4	0.0	57.4	184	17	0	0	0	0	0	0	0	17
Bang Yai	96.4	25.9	70.5	310	28	0	0	0	0	0	0	7	20
Bang Bua Thong	116.4	116.4	0.0	374	34	0	0	0	0	0	0	34	0
Pak Kret	89.0	89.0	0.0	286	26	0	0	0	0	0	0	26	0
Sai Noi	186.1	0.0	186.1	598	54	0	0	0	0	0	0	0	54
Sara Buri	3,576.6	186.3	3,390.3	12,700	1,143	0	8	51	0	0	0	0	1,083
Muang Sara Buri	503.8	0.0	503.8	1,789	161	0	0	0	0	0	0	0	161
Kaeng Khoi	871.1	0.0	871.1	3,093	278	0	0	0	0	0	0	0	278
Don Phunt	65.6	65.6	0.0	233	21	0	7	14	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	991	89	0	0	30	0	0	0	0	59
Phra Phutthabat	324.6	0.0	324.6	1,153	104	0	0	0	0	0	0	0	104
Muak Lek	752.5	0.0	752.5	2,672	240	0	0	0	0	0	0	0	240
Wihan Daeng	228.8	0.0	228.8	812	73	0	0	0	0	0	0	0	73
Saohai	125.1	0.0	125.1	444	40	0	0	0	0	0	0	0	40
Nong Khae	293.8	0.0	293.8	1,043	94	0	0	0	0	0	0	0	94
Nong Saeng	97.4	0.0	97.4	346	31	0	0	0	0	0	0	0	31
Nong Don	34.9	27.0	7.9	124	11	0	1	7	0	0	0	0	3
Total	18,741.8	6,037.4	12,704.4	84,100	7,569	894	261	290	42	540	142	676	4,724

Table 10.3.20 Livestock Wastewater Quantity by Sub-area (Buffaloes, 2001)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Buffaloes W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	23,400	2,106	243	0	0	44	246	0	0	1,574
Muang Chai Nat	255.4	147.0	108.4	2,420	218	29	0	0	44	52	0	0	92
Manorom	225.6	0.0	225.6	2,138	192	0	0	0	0	0	0	0	192
Wat Sing	606.3	0.0	606.3	5,745	517	0	0	0	0	0	0	0	517
Sankhaburi	354.8	249.0	105.8	3,362	303	193	0	0	0	19	0	0	90
Sanphaya	228.3	228.3	0.0	2,163	195	20	0	0	0	174	0	0	0
Hankha	799.3	0.0	799.3	7,573	682	0	0	0	0	0	0	0	682
Sing Buri	822.5	822.5	0.0	1,600	144	60	19	0	0	65	0	0	0
Muang Sing Buri	112.4	112.4	0.0	219	20	5	3	0	0	12	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	172	15	15	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	67	6	6	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	371	33	32	0	0	0	2	0	0	0
Phrom Buri	82.5	82.5	0.0	160	14	1	0	0	0	13	0	0	0
In Buri	314.3	314.3	0.0	611	55	0	16	0	0	38	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	10,100	909	0	118	0	0	6	0	0	784
Muang Lop Buri	565.6	426.8	138.8	921	83	0	63	0	0	0	0	0	20
Khok Samrong	982.5	17.5	965.0	1,601	144	0	3	0	0	0	0	0	141
Chai Badan	1,253.0	0.0	1,253.0	2,041	184	0	0	0	0	0	0	0	184
Tha Luang	538.9	0.0	538.9	878	79	0	0	0	0	0	0	0	79
Tha Wung	242.8	242.8	0.0	396	36	0	29	0	0	6	0	0	0
Ban Mi	585.7	162.4	423.3	954	86	0	24	0	0	0	0	0	62
Pattana Nikom	517.0	0.0	517.0	842	76	0	0	0	0	0	0	0	76
Sa Boat	304.7	0.0	304.7	496	45	0	0	0	0	0	0	0	45
Khok Charoen	317.1	0.0	317.1	517	46	0	0	0	0	0	0	0	46
Lam San Thi	447.0	0.0	447.0	728	66	0	0	0	0	0	0	0	66
Nang Muang	445.5	0.0	445.5	726	65	0	0	0	0	0	0	0	65
Ang Thong	968.4	888.2	80.2	3,800	342	248	0	0	0	66	0	0	28
Muang Ang Thong	102.9	102.0	0.9	404	36	15	0	0	0	21	0	0	0
Chaiyo	72.3	72.3	0.0	284	26	0	0	0	0	26	0	0	0
Pa Mok	80.9	80.9	0.0	317	29	9	0	0	0	19	0	0	0
Pho Thong	219.4	212.4	7.0	861	77	75	0	0	0	0	0	0	2
Wiset Chai Chan	224.7	189.3	35.4	882	79	67	0	0	0	0	0	0	13
Samko	86.9	50.0	36.9	341	31	18	0	0	0	0	0	0	13
Sawaengha	181.3	181.3	0.0	711	64	64	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	14,100	1,269	227	70	189	0	108	113	239	322
Muang Ayutthaya	130.6	130.6	0.0	720	65	4	4	17	0	22	19	0	0
Tha Rua	106.2	106.2	0.0	586	53	0	0	53	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	1,097	99	0	6	93	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	831	75	32	0	0	0	0	0	27	16
Bang Sha	219.7	219.7	0.0	1,212	109	42	0	0	0	0	1	67	0
Bang Ban	135.3	135.3	0.0	746	67	16	0	0	0	34	16	0	0
Bang Pahan	121.9	121.9	0.0	672	61	0	23	9	0	29	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,264	114	0	0	0	0	0	75	18	20
Ban Phraek	39.1	39.1	0.0	216	19	0	15	0	0	5	0	0	0
Phak Hai	189.0	189.0	0.0	1,042	94	94	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	576	52	0	0	0	0	0	0	0	52
Maharat	120.1	120.1	0.0	662	60	0	23	18	0	19	0	0	0
Lat Bua Luang	199.9	136.9	63.0	1,102	99	0	0	0	0	0	0	68	31
Wang Noi	219.2	0.0	219.2	1,209	109	0	0	0	0	0	0	0	109
Sena	205.6	198.9	6.7	1,134	102	39	0	0	0	0	0	59	3
Uthai	186.8	2.5	184.3	1,030	93	0	0	0	0	0	1	0	91
Pathum Thani	1,525.9	485.5	1,040.4	13,400	1,206	0	0	0	0	0	0	384	822
Muang Pathum Thani	120.2	120.2	0.0	1,056	95	0	0	0	0	0	0	95	0
Sam Khok	95.0	95.0	0.0	834	75	0	0	0	0	0	0	75	0
Lat Lum Kaeo	188.1	188.1	0.0	1,652	149	0	0	0	0	0	0	149	0
Thanya Buri	112.1	8.7	103.4	984	89	0	0	0	0	0	0	7	82
Lam Luk Ka	297.7	6.0	291.7	2,614	235	0	0	0	0	0	0	5	231
Klong Laung	299.2	67.5	231.7	2,627	236	0	0	0	0	0	0	53	183
Nong Sua	413.6	0.0	413.6	3,632	327	0	0	0	0	0	0	0	327
Nonthaburi	622.3	273.6	348.7	2,400	216	0	0	0	0	0	0	95	121
Muang Nonthaburi	77.0	42.3	34.7	297	27	0	0	0	0	0	0	15	12
Krual	57.4	0.0	57.4	221	20	0	0	0	0	0	0	0	20
Bang Yai	96.4	25.9	70.5	372	33	0	0	0	0	0	0	9	24
Bang Bua Thong	116.4	116.4	0.0	449	40	0	0	0	0	0	0	40	0
Pak Kret	89.0	89.0	0.0	343	31	0	0	0	0	0	0	31	0
Sai Noi	186.1	0.0	186.1	718	65	0	0	0	0	0	0	0	65
Sara Buri	3,576.6	186.3	3,390.3	10,600	954	0	7	43	0	0	0	0	904
Muang Sara Buri	503.8	0.0	503.8	1,493	134	0	0	0	0	0	0	0	134
Kaeng Khoi	871.1	0.0	871.1	2,582	232	0	0	0	0	0	0	0	232
Don Phunt	65.6	65.6	0.0	194	17	0	6	12	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	827	74	0	0	25	0	0	0	0	49
Phra Phutthabat	324.6	0.0	324.6	962	87	0	0	0	0	0	0	0	87
Muak Lek	752.5	0.0	752.5	2,230	201	0	0	0	0	0	0	0	201
Wihan Daeng	228.8	0.0	228.8	678	61	0	0	0	0	0	0	0	61
Saohai	125.1	0.0	125.1	371	33	0	0	0	0	0	0	0	33
Nong Khae	293.8	0.0	293.8	871	78	0	0	0	0	0	0	0	78
Nong Saeng	97.4	0.0	97.4	289	26	0	0	0	0	0	0	0	26
Nong Don	34.9	27.0	7.9	103	9	0	1	6	0	0	0	0	2
Total	18,741.8	6,037.4	12,704.4	79,400	7,146	778	214	232	44	491	113	718	4,556

Table 10.3.21 Livestock Wastewater Quantity by Sub-area (Buffaloes, 2011)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Buffaloes W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	25,000	2,250	259	0	0	47	263	0	0	1,681
Muang Chai Nat	255.4	147.0	108.4	2,585	233	31	0	0	47	56	0	0	99
Manorom	225.6	0.0	225.6	2,264	206	0	0	0	0	0	0	0	206
Wat Sing	606.3	0.0	606.3	6,137	552	0	0	0	0	0	0	0	552
Sankhaburi	354.8	249.0	105.8	3,592	323	206	0	0	0	21	0	0	96
Sanphaya	228.3	228.3	0.0	2,311	208	22	0	0	0	186	0	0	0
Hankha	799.3	0.0	799.3	8,091	728	0	0	0	0	0	0	0	728
Sing Buri	822.5	822.5	0.0	1,300	117	49	15	0	0	53	0	0	0
Muang Sing Buri	112.4	112.4	0.0	178	16	4	2	0	0	9	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	140	13	13	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	54	5	5	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	301	27	26	0	0	0	1	0	0	0
Phrom Buri	82.5	82.5	0.0	130	12	1	0	0	0	11	0	0	0
In Buri	314.3	314.3	0.0	497	45	0	13	0	0	31	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	8,400	756	0	98	0	0	5	0	0	652
Muang Lop Buri	565.6	426.8	138.8	766	69	0	52	0	0	0	0	0	17
Khok Samrong	982.5	17.5	965.0	1,331	120	0	2	0	0	0	0	0	118
Chai Badan	1,253.0	0.0	1,253.0	1,698	153	0	0	0	0	0	0	0	153
Tha Luang	538.9	0.0	538.9	730	66	0	0	0	0	0	0	0	66
Tha Wung	242.8	242.8	0.0	329	30	0	24	0	0	5	0	0	0
Ban Mi	585.7	162.4	423.3	794	71	0	20	0	0	0	0	0	52
Patiana Nikom	517.0	0.0	517.0	700	63	0	0	0	0	0	0	0	63
Sa Boat	304.7	0.0	304.7	413	37	0	0	0	0	0	0	0	37
Khok Charoen	317.1	0.0	317.1	430	39	0	0	0	0	0	0	0	39
Lam San Thi	447.0	0.0	447.0	606	55	0	0	0	0	0	0	0	55
Nang Muang	445.5	0.0	445.5	604	54	0	0	0	0	0	0	0	54
Ang Thong	968.4	888.2	80.2	3,200	288	208	0	0	0	56	0	0	24
Muang Ang Thong	102.9	102.0	0.9	340	31	12	9	0	0	18	0	0	0
Chaiyo	72.3	72.3	0.0	239	22	0	0	0	0	22	0	0	0
Pa Mok	80.9	80.9	0.0	267	24	8	0	0	0	16	0	0	0
Pho Thong	219.4	212.4	7.0	725	65	63	0	0	0	0	0	0	2
Wiset Chai Chan	224.7	189.3	35.4	743	67	56	0	0	0	0	0	0	11
Samko	86.9	50.0	36.9	287	26	15	0	0	0	0	0	0	11
Sawaengha	181.3	181.3	0.0	599	54	54	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	11,800	1,062	190	59	158	0	91	94	200	270
Muang Ayutthaya	130.6	130.6	0.0	603	54	3	3	14	0	18	16	0	0
Tha Rua	106.2	106.2	0.0	490	44	0	0	44	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	918	83	0	5	78	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	696	63	27	0	0	0	0	0	23	13
Bang Sha	219.7	219.7	0.0	1,014	91	35	0	0	0	0	0	56	0
Bang Ban	135.3	135.3	0.0	624	56	14	0	0	0	29	14	0	0
Bang Pahan	121.9	121.9	0.0	563	51	0	19	8	0	24	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,057	95	0	0	0	0	0	63	15	17
Ban Phraek	39.1	39.1	0.0	180	16	0	12	0	0	4	0	0	0
Phak Hai	189.0	189.0	0.0	872	79	79	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	482	43	0	0	0	0	0	0	0	43
Maharat	120.1	120.1	0.0	554	50	0	19	15	0	16	0	0	0
Lat Bua Luang	199.9	136.9	63.0	923	83	0	0	0	0	0	0	57	26
Wang Noi	219.2	0.0	219.2	1,012	91	0	0	0	0	0	0	0	91
Sena	205.6	198.9	6.7	949	85	33	0	0	0	0	0	50	3
Uthai	186.8	2.5	184.3	862	78	0	0	0	0	0	1	0	77
Pathum Thani	1,525.9	485.5	1,040.4	15,800	1,422	0	0	0	0	0	0	452	970
Muang Pathum Thani	120.2	120.2	0.0	1,245	112	0	0	0	0	0	0	112	0
Sam Khok	95.0	95.0	0.0	984	89	0	0	0	0	0	0	89	0
Lat Lum Kaeo	188.1	188.1	0.0	1,948	175	0	0	0	0	0	0	175	0
Thanya Buri	112.1	8.7	103.4	1,161	104	0	0	0	0	0	0	8	96
Lam Luk Ka	297.7	6.0	291.7	3,083	277	0	0	0	0	0	0	6	272
Klong Laung	299.2	67.5	231.7	3,098	279	0	0	0	0	0	0	63	216
Nong Sua	413.6	0.0	413.6	4,283	385	0	0	0	0	0	0	0	385
Nonthaburi	622.3	273.6	348.7	3,200	288	0	0	0	0	0	0	127	161
Muang Nonthaburi	77.0	42.3	34.7	396	36	0	0	0	0	0	0	20	16
Kruai	57.4	0.0	57.4	295	27	0	0	0	0	0	0	0	27
Bang Yai	96.4	25.9	70.5	496	45	0	0	0	0	0	0	12	33
Bang Bua Thong	116.4	116.4	0.0	599	54	0	0	0	0	0	0	54	0
Pak Kret	89.0	89.0	0.0	458	41	0	0	0	0	0	0	41	0
Sai Noi	186.1	0.0	186.1	957	86	0	0	0	0	0	0	0	86
Sara Buri	3,576.6	186.3	3,390.3	8,900	801	0	6	36	0	0	0	0	759
Muang Sara Buri	503.8	0.0	503.8	1,254	113	0	0	0	0	0	0	0	113
Kaeng Khoi	871.1	0.0	871.1	2,168	195	0	0	0	0	0	0	0	195
Don Phut	65.6	65.6	0.0	163	15	0	5	10	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	694	62	0	0	21	0	0	0	0	41
Phra Phutthabat	324.6	0.0	324.6	808	73	0	0	0	0	0	0	0	73
Muak Lek	752.5	0.0	752.5	1,873	169	0	0	0	0	0	0	0	169
Wihan Daeng	228.8	0.0	228.8	569	51	0	0	0	0	0	0	0	51
Saohai	125.1	0.0	125.1	311	28	0	0	0	0	0	0	0	28
Nong Khae	293.8	0.0	293.8	731	66	0	0	0	0	0	0	0	66
Nong Saeng	97.4	0.0	97.4	242	22	0	0	0	0	0	0	0	22
Nong Don	34.9	27.0	7.9	87	8	0	1	5	0	0	0	0	2
Total	18,741.8	6,037.4	12,704.4	77,600	6,984	707	176	194	47	467	94	779	4,517

Table 10.3.22 Livestock W.W. Generated BOD by Sub-area (Buffaloes, 1996)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Buffaloes BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	22,700	14,528	1,674	0	0	302	1,697	0	0	10,856
Muang Chai Nat	255.4	147.0	108.4	2,347	1,502	202	0	0	302	361	0	0	638
Manorom	225.6	0.0	225.6	2,074	1,327	0	0	0	0	0	0	0	1,327
Wat Sing	606.3	0.0	606.3	5,573	3,567	0	0	0	0	0	0	0	3,567
Sankhaburi	354.8	249.0	105.8	3,261	2,087	1,331	0	0	0	134	0	0	622
Sanphaya	228.3	228.3	0.0	2,098	1,343	141	0	0	0	1,202	0	0	0
Hankha	799.3	0.0	799.3	7,347	4,702	0	0	0	0	0	0	0	4,702
Sing Buri	822.5	822.5	0.0	1,900	1,216	509	161	0	0	546	0	0	0
Muang Sing Buri	112.4	112.4	0.0	260	166	46	22	0	0	97	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	204	131	131	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	79	51	51	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	440	282	266	0	0	0	15	0	0	0
Phrom Buri	82.5	82.5	0.0	191	122	12	0	0	0	110	0	0	0
In Buri	314.3	314.3	0.0	726	465	3	138	0	0	324	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	12,100	7,744	0	1,007	0	0	54	0	0	6,683
Muang Lop Buri	565.6	426.8	138.8	1,104	706	0	533	0	0	0	0	0	173
Khok Samrong	982.5	17.5	965.0	1,918	1,227	0	22	0	0	0	0	0	1,205
Chai Badan	1,253.0	0.0	1,253.0	2,445	1,565	0	0	0	0	0	0	0	1,565
Tha Luang	538.9	0.0	538.9	1,052	673	0	0	0	0	0	0	0	673
Tha Wung	242.8	242.8	0.0	474	303	0	249	0	0	54	0	0	0
Ban Mi	585.7	162.4	423.3	1,143	732	0	203	0	0	0	0	0	529
Pattana Nikom	517.0	0.0	517.0	1,009	646	0	0	0	0	0	0	0	646
Sa Boat	304.7	0.0	304.7	595	381	0	0	0	0	0	0	0	381
Khok Charoen	317.1	0.0	317.1	619	396	0	0	0	0	0	0	0	396
Lam San Thi	447.0	0.0	447.0	872	558	0	0	0	0	0	0	0	558
Nang Muang	445.5	0.0	445.5	869	556	0	0	0	0	0	0	0	556
Ang Thong	968.4	888.2	80.2	4,600	2,944	2,131	0	0	0	569	0	0	244
Muang Ang Thong	102.9	102.0	0.9	489	313	126	0	0	0	184	0	0	3
Chaiyo	72.3	72.3	0.0	343	220	0	0	0	0	220	0	0	0
Pa Mok	80.9	80.9	0.0	384	246	81	0	0	0	165	0	0	0
Pho Thong	219.4	212.4	7.0	1,042	667	646	0	0	0	0	0	0	21
Wiset Chai Chan	224.7	189.3	35.4	1,067	683	575	0	0	0	0	0	0	108
Samko	86.9	50.0	36.9	413	264	152	0	0	0	0	0	0	112
Sawaengha	181.3	181.3	0.0	861	551	551	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	17,800	11,392	2,042	628	1,696	0	971	1,013	2,149	2,892
Muang Ayutthaya	130.6	130.6	0.0	909	582	34	32	149	0	196	172	0	0
Tha Rua	106.2	106.2	0.0	739	473	0	0	473	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	1,385	886	0	53	833	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	1,049	672	290	0	0	0	0	0	242	140
Bang Sai	219.7	219.7	0.0	1,530	979	374	0	0	0	0	5	600	0
Bang Ban	135.3	135.3	0.0	942	603	148	0	0	0	307	148	0	0
Bang Pahan	121.9	121.9	0.0	849	543	0	203	83	0	258	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,595	1,021	0	0	0	0	0	677	165	178
Ban Phraek	39.1	39.1	0.0	272	174	0	132	0	0	42	0	0	0
Phak Hai	189.0	189.0	0.0	1,316	842	842	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	728	466	0	0	0	0	0	0	0	466
Maharat	120.1	120.1	0.0	836	535	0	209	158	0	168	0	0	0
Lat Bua Luang	199.9	136.9	63.0	1,392	891	0	0	0	0	0	0	0	891
Wang Noi	219.2	0.0	219.2	1,526	977	0	0	0	0	0	0	610	281
Sena	205.6	198.9	6.7	1,431	916	354	0	0	0	0	0	0	977
Uthai	186.8	2.5	184.3	1,301	832	0	0	0	0	0	532	30	
											11	0	821
Pathum Thani	1,525.9	485.5	1,040.4	10,300	6,592	0	0	0	0	0	0	2,097	4,495
Muang Pathum Thani	120.2	120.2	0.0	811	519	0	0	0	0	0	0	519	0
Sam Khok	95.0	95.0	0.0	641	410	0	0	0	0	0	0	410	0
Lat Lum Kaeo	188.1	188.1	0.0	1,270	813	0	0	0	0	0	0	813	0
Thanya Buri	112.1	8.7	103.4	757	484	0	0	0	0	0	0	38	447
Lam Luk Ka	297.7	6.0	291.7	2,010	1,286	0	0	0	0	0	0	26	1,260
Klong Laung	299.2	67.5	231.7	2,020	1,293	0	0	0	0	0	0	292	1,001
Nong Sua	413.6	0.0	413.6	2,792	1,787	0	0	0	0	0	0	0	1,787
Nonthaburi	622.3	273.6	348.7	2,000	1,280	0	0	0	0	0	0	563	717
Muang Nonthaburi	77.0	42.3	34.7	247	158	0	0	0	0	0	0	87	71
Kruai	57.4	0.0	57.4	184	118	0	0	0	0	0	0	0	118
Bang Yai	96.4	25.9	70.5	310	198	0	0	0	0	0	0	53	145
Bang Bua Thong	116.4	116.4	0.0	374	239	0	0	0	0	0	0	239	0
Pak Kret	89.0	89.0	0.0	286	183	0	0	0	0	0	0	183	0
Sai Noi	186.1	0.0	186.1	598	383	0	0	0	0	0	0	0	383
Sara Buri	3,576.6	186.3	3,390.3	12,700	8,128	0	59	365	0	0	0	0	7,705
Muang Sara Buri	503.8	0.0	503.8	1,789	1,145	0	0	0	0	0	0	0	1,145
Kaeng Khoi	871.1	0.0	871.1	3,093	1,980	0	0	0	0	0	0	0	1,980
Don Phunt	65.6	65.6	0.0	233	149	0	50	99	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	991	634	0	0	213	0	0	0	0	421
Phra Phutthabat	324.6	0.0	324.6	1,153	738	0	0	0	0	0	0	0	738
Muak Lek	752.5	0.0	752.5	2,672	1,710	0	0	0	0	0	0	0	1,710
Wihan Daeng	228.8	0.0	228.8	812	520	0	0	0	0	0	0	0	520
Saohai	125.1	0.0	125.1	444	284	0	0	0	0	0	0	0	284
Nong Khae	293.8	0.0	293.8	1,043	668	0	0	0	0	0	0	0	668
Nong Saeng	97.4	0.0	97.4	346	221	0	0	0	0	0	0	0	221
Nong Don	34.9	27.0	7.9	124	79	0	9	52	0	0	0	0	18
Total	18,741.8	6,037.4	12,704.4	84,100	53,824	6,356	1,854	2,060	302	3,838	1,013	4,809	33,591

Table 10.3.23 Livestock W.W. Generated BOD by Sub-area (Buffaloes, 2001)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Buffaloes BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	23,400	14,976	1,725	0	0	311	1,749	0	0	11,190
Muang Chai Nat	255.4	147.0	108.4	2,420	1,549	208	0	0	311	372	0	0	657
Manorom	225.6	0.0	225.6	2,138	1,368	0	0	0	0	0	0	0	1,368
Wat Sing	606.3	0.0	606.3	5,745	3,677	0	0	0	0	0	0	0	3,677
Sankhaburi	354.8	249.0	105.8	3,362	2,151	1,372	0	0	0	138	0	0	642
Sanphaya	228.3	228.3	0.0	2,163	1,384	145	0	0	0	1,239	0	0	0
Hankha	799.3	0.0	799.3	7,573	4,847	0	0	0	0	0	0	0	4,847
Sing Buri	822.5	822.5	0.0	1,600	1,024	429	135	0	0	460	0	0	0
Muang Sing Buri	112.4	112.4	0.0	219	140	39	19	0	0	82	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	172	110	110	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	67	43	43	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	371	237	224	0	0	0	13	0	0	0
Phrom Buri	82.5	82.5	0.0	160	103	10	0	0	0	93	0	0	0
In Buri	314.3	314.3	0.0	611	391	2	116	0	0	273	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	10,100	6,464	0	840	0	0	45	0	0	5,578
Muang Lop Buri	565.6	426.8	138.8	921	590	0	445	0	0	0	0	0	145
Khok Samrong	982.5	17.5	965.0	1,601	1,024	0	18	0	0	0	0	0	1,006
Chai Badan	1,253.0	0.0	1,253.0	2,041	1,306	0	0	0	0	0	0	0	1,306
Tha Luang	538.9	0.0	538.9	878	562	0	0	0	0	0	0	0	562
Tha Wung	242.8	242.8	0.0	396	253	0	208	0	0	45	0	0	0
Ban Mi	585.7	162.4	423.3	954	611	0	169	0	0	0	0	0	441
Patiana Nikom	517.0	0.0	517.0	842	539	0	0	0	0	0	0	0	539
Sa Boat	304.7	0.0	304.7	496	318	0	0	0	0	0	0	0	318
Khok Charoen	317.1	0.0	317.1	517	331	0	0	0	0	0	0	0	331
Lam San Thi	447.0	0.0	447.0	728	466	0	0	0	0	0	0	0	466
Nang Muang	445.5	0.0	445.5	726	464	0	0	0	0	0	0	0	464
Ang Thong	968.4	888.2	80.2	3,800	2,432	1,760	0	0	0	470	0	0	201
Muang Ang Thong	102.9	102.0	0.9	404	258	104	0	0	0	152	0	0	2
Chaiyo	72.3	72.3	0.0	284	182	0	0	0	0	182	0	0	0
Pa Mok	80.9	80.9	0.0	317	203	67	0	0	0	137	0	0	0
Pho Thong	219.4	212.4	7.0	861	551	533	0	0	0	0	0	0	18
Wiset Chai Chan	224.7	189.3	35.4	882	564	475	0	0	0	0	0	0	89
Samko	86.9	50.0	36.9	341	218	126	0	0	0	0	0	0	93
Sawaengha	181.3	181.3	0.0	711	455	455	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	14,100	9,024	1,617	498	1,343	0	769	803	1,702	2,291
Muang Ayutthaya	130.6	130.6	0.0	720	461	27	25	118	0	155	136	0	0
Tha Rua	106.2	106.2	0.0	586	375	0	0	375	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	1,097	702	0	42	660	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	831	532	230	0	0	0	0	0	191	111
Bang Sai	219.7	219.7	0.0	1,212	775	296	0	0	0	0	4	475	0
Bang Ban	135.3	135.3	0.0	746	478	117	0	0	0	243	117	0	0
Bang Pahan	121.9	121.9	0.0	672	430	0	161	66	0	204	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,264	809	0	0	0	0	0	537	131	141
Ban Phraek	39.1	39.1	0.0	216	138	0	104	0	0	34	0	0	0
Phak Hai	189.0	189.0	0.0	1,042	667	667	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	576	369	0	0	0	0	0	0	0	369
Maharat	120.1	120.1	0.0	662	424	0	166	125	0	133	0	0	0
Lat Bua Luang	199.9	136.9	63.0	1,102	706	0	0	0	0	0	0	483	222
Wang Noi	219.2	0.0	219.2	1,209	774	0	0	0	0	0	0	0	774
Sena	205.6	198.9	6.7	1,134	726	280	0	0	0	0	0	422	24
Uthai	186.8	2.5	184.3	1,030	659	0	0	0	0	0	9	0	651
Pathum Thani	1,525.9	485.5	1,040.4	13,400	8,576	0	0	0	0	0	0	2,729	5,847
Muang Pathum Thani	120.2	120.2	0.0	1,056	676	0	0	0	0	0	0	676	0
Sam Khok	95.0	95.0	0.0	834	534	0	0	0	0	0	0	534	0
Lat Lum Kaeo	168.1	168.1	0.0	1,652	1,057	0	0	0	0	0	0	1,057	0
Thanya Buri	112.1	8.7	103.4	984	630	0	0	0	0	0	0	49	581
Lam Luk Ka	297.7	6.0	291.7	2,614	1,673	0	0	0	0	0	0	34	1,639
Klong Laung	299.2	67.5	231.7	2,627	1,682	0	0	0	0	0	0	379	1,302
Nong Sua	413.6	0.0	413.6	3,632	2,325	0	0	0	0	0	0	0	2,325
Nonthaburi	622.3	273.6	348.7	2,400	1,536	0	0	0	0	0	0	675	861
Muang Nonthaburi	77.0	42.3	34.7	297	190	0	0	0	0	0	0	104	86
Krual	57.4	0.0	57.4	221	142	0	0	0	0	0	0	0	142
Bang Yai	96.4	25.9	70.5	372	238	0	0	0	0	0	0	64	174
Bang Bua Thong	116.4	116.4	0.0	449	287	0	0	0	0	0	0	287	0
Pak Kret	89.0	89.0	0.0	343	220	0	0	0	0	0	0	220	0
Sai Noi	186.1	0.0	186.1	718	459	0	0	0	0	0	0	0	459
Sara Buri	3,576.6	186.3	3,390.3	10,600	6,784	0	49	304	0	0	0	0	6,431
Muang Sara Buri	503.8	0.0	503.8	1,493	956	0	0	0	0	0	0	0	956
Kaeng Khoi	871.1	0.0	871.1	2,582	1,652	0	0	0	0	0	0	0	1,652
Don Phunt	65.6	65.6	0.0	194	124	0	42	83	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	827	529	0	0	178	0	0	0	0	351
Phra Phutthabat	324.6	0.0	324.6	962	616	0	0	0	0	0	0	0	616
Muak Lek	752.5	0.0	752.5	2,230	1,427	0	0	0	0	0	0	0	1,427
Wihan Daeng	228.8	0.0	228.8	678	434	0	0	0	0	0	0	0	434
Saohai	125.1	0.0	125.1	371	237	0	0	0	0	0	0	0	237
Nong Khae	293.8	0.0	293.8	871	557	0	0	0	0	0	0	0	557
Nong Saeng	97.4	0.0	97.4	289	185	0	0	0	0	0	0	0	185
Nong Don	34.9	27.0	7.9	103	66	0	8	44	0	0	0	0	15
Total	18,741.8	6,037.4	12,704.4	79,400	50,816	5,532	1,522	1,648	311	3,494	803	5,106	32,400

Table 10.3.24 Livestock W.W. Generated BOD by Sub-area (Buffaloes, 2011)

Province / Amphoe	Area (km2)			Number of Buffaloes (head)	Buffaloes Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Buffaloes BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	25,000	16,000	1,843	0	0	332	1,869	0	0	11,955
Muang Chai Nat	255.4	147.0	108.4	2,585	1,655	222	0	0	332	398	0	0	702
Mancrom	225.6	0.0	225.6	2,284	1,462	0	0	0	0	0	0	0	1,462
Wat Sing	606.3	0.0	606.3	6,137	3,928	0	0	0	0	0	0	0	3,928
Sankhaburi	354.8	249.0	105.8	3,592	2,299	1,466	0	0	0	147	0	0	685
Sanphaya	228.3	228.3	0.0	2,311	1,479	155	0	0	0	1,324	0	0	0
Hankha	799.3	0.0	799.3	8,091	5,178	0	0	0	0	0	0	0	5,178
Sing Buri	822.5	822.5	0.0	1,300	832	348	110	0	0	374	0	0	0
Muang Sing Buri	112.4	112.4	0.0	178	114	32	15	0	0	67	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	140	89	89	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	54	35	35	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	301	193	182	0	0	0	11	0	0	0
Phrom Buri	82.5	82.5	0.0	130	83	8	0	0	0	75	0	0	0
In Buri	314.3	314.3	0.0	497	318	2	94	0	0	221	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	8,400	5,376	0	699	0	0	38	0	0	4,639
Muang Lop Buri	565.6	426.8	138.8	766	490	0	370	0	0	0	0	0	120
Khok Samrong	982.5	17.5	965.0	1,331	852	0	15	0	0	0	0	0	837
Chai Badan	1,253.0	0.0	1,253.0	1,698	1,087	0	0	0	0	0	0	0	1,087
Tha Luang	538.9	0.0	538.9	730	467	0	0	0	0	0	0	0	467
Tha Wung	242.8	242.8	0.0	329	211	0	173	0	0	38	0	0	0
Ban Mi	585.7	162.4	423.3	794	508	0	141	0	0	0	0	0	367
Pattana Nikom	517.0	0.0	517.0	700	448	0	0	0	0	0	0	0	448
Sa Boat	304.7	0.0	304.7	413	264	0	0	0	0	0	0	0	264
Khok Charoen	317.1	0.0	317.1	430	275	0	0	0	0	0	0	0	275
Lam San Thi	447.0	0.0	447.0	606	388	0	0	0	0	0	0	0	388
Nang Muang	445.5	0.0	445.5	604	386	0	0	0	0	0	0	0	386
Ang Thong	968.4	888.2	80.2	3,200	2,048	1,482	0	0	0	396	0	0	170
Muang Ang Thong	102.9	102.0	0.9	340	218	88	0	0	0	128	0	0	2
Chaiyo	72.3	72.3	0.0	239	153	0	0	0	0	153	0	0	0
Pa Mok	80.9	80.9	0.0	267	171	56	0	0	0	115	0	0	0
Pho Thong	219.4	212.4	7.0	725	464	449	0	0	0	0	0	0	15
Wiset Chai Chan	224.7	189.3	35.4	743	475	400	0	0	0	0	0	0	75
Samko	86.9	50.0	36.9	287	184	106	0	0	0	0	0	0	78
Sawaengha	181.3	181.3	0.0	599	383	383	0	0	0	0	0	0	0
Ayutthaya	2,558.6	1,907.5	649.1	11,800	7,552	1,353	417	1,124	0	644	672	1,425	1,917
Muang Ayutthaya	130.6	130.6	0.0	603	386	22	21	99	0	130	114	0	0
Tha Rua	106.2	106.2	0.0	490	314	0	0	314	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	918	588	0	35	552	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	696	445	192	0	0	0	0	0	160	93
Bang Sai	219.7	219.7	0.0	1,014	649	248	0	0	0	0	4	398	0
Bang Ban	135.3	135.3	0.0	624	400	98	0	0	0	204	98	0	0
Bang Pahan	121.9	121.9	0.0	563	360	0	134	55	0	171	0	0	0
Bang Pa-In	229.1	189.1	40.0	1,057	677	0	0	0	0	0	449	110	118
Ban Phraek	39.1	39.1	0.0	180	115	0	87	0	0	28	0	0	0
Phak Hai	189.0	189.0	0.0	872	558	558	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	482	309	0	0	0	0	0	0	0	309
Maharat	120.1	120.1	0.0	554	355	0	139	105	0	112	0	0	0
Lat Bua Luang	199.9	136.9	63.0	923	590	0	0	0	0	0	0	404	186
Wang Noi	219.2	0.0	219.2	1,012	647	0	0	0	0	0	0	0	647
Sena	205.6	198.9	6.7	949	607	235	0	0	0	0	0	353	20
Uthai	186.8	2.5	184.3	862	552	0	0	0	0	0	7	0	544
Pathum Thani	1,525.9	485.5	1,040.4	15,800	10,112	0	0	0	0	0	0	3,217	6,895
Muang Pathum Thani	120.2	120.2	0.0	1,245	797	0	0	0	0	0	0	797	0
Sam Khok	95.0	95.0	0.0	984	630	0	0	0	0	0	0	630	0
Lat Lum Kaeo	188.1	188.1	0.0	1,948	1,247	0	0	0	0	0	0	1,247	0
Thanya Buri	112.1	8.7	103.4	1,161	743	0	0	0	0	0	0	58	685
Lam Luk Ka	297.7	6.0	291.7	3,083	1,973	0	0	0	0	0	0	40	1,933
Klong Laung	299.2	67.5	231.7	3,098	1,983	0	0	0	0	0	0	447	1,535
Nong Sua	413.6	0.0	413.6	4,283	2,741	0	0	0	0	0	0	0	2,741
Nonthaburi	622.3	273.6	348.7	3,200	2,048	0	0	0	0	0	0	900	1,148
Muang Nonthaburi	77.0	42.3	34.7	396	253	0	0	0	0	0	0	139	114
Kruai	57.4	0.0	57.4	295	189	0	0	0	0	0	0	0	189
Bang Yai	96.4	25.9	70.5	496	317	0	0	0	0	0	0	85	232
Bang Bua Thong	116.4	116.4	0.0	599	383	0	0	0	0	0	0	383	0
Pak Kret	89.0	89.0	0.0	458	293	0	0	0	0	0	0	293	0
Sai Noi	186.1	0.0	186.1	957	612	0	0	0	0	0	0	0	612
Sara Buri	3,576.6	186.3	3,390.3	8,900	5,696	0	41	255	0	0	0	0	5,399
Muang Sara Buri	503.8	0.0	503.8	1,254	802	0	0	0	0	0	0	0	802
Kaeng Khoi	871.1	0.0	871.1	2,168	1,387	0	0	0	0	0	0	0	1,387
Don Phunt	65.6	65.6	0.0	163	104	0	35	70	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	694	444	0	0	149	0	0	0	0	295
Phra Phutthabat	324.6	0.0	324.6	808	517	0	0	0	0	0	0	0	517
Muak Lek	752.5	0.0	752.5	1,873	1,198	0	0	0	0	0	0	0	1,198
Wihan Daeng	228.8	0.0	228.8	569	364	0	0	0	0	0	0	0	364
Saohai	125.1	0.0	125.1	311	199	0	0	0	0	0	0	0	199
Nong Khae	293.8	0.0	293.8	731	468	0	0	0	0	0	0	0	468
Nong Saeng	97.4	0.0	97.4	242	155	0	0	0	0	0	0	0	155
Nong Don	34.9	27.0	7.9	87	56	0	6	37	0	0	0	0	13
Total	18,741.8	6,037.4	12,704.4	77,600	49,664	5,027	1,267	1,380	332	3,320	672	5,542	32,123

Table 10.3.25 Livestock Wastewater Quantity by Sub-area (Cattle, 1996)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Cattle W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Nol River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	55,800	5,022	579	0	0	104	587	0	0	3,753
Muang Chai Nat	255.4	147.0	108.4	5,770	519	70	0	0	104	125	0	0	220
Manorom	225.6	0.0	225.6	5,097	459	0	0	0	0	0	0	0	459
Wat Sing	606.3	0.0	606.3	13,699	1,233	0	0	0	0	0	0	0	1,233
Sankhaburi	354.8	249.0	105.8	8,016	721	460	0	0	0	46	0	0	215
Sanphaya	228.3	228.3	0.0	5,158	464	49	0	0	0	416	0	0	0
Hankha	799.3	0.0	799.3	18,059	1,625	0	0	0	0	0	0	0	1,625
Sing Buri	822.5	822.5	0.0	42,700	3,843	1,609	507	0	0	1,726	0	0	0
Muang Sing Buri	112.4	112.4	0.0	5,835	525	146	71	0	0	308	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	4,589	413	413	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	1,786	161	161	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	9,890	890	841	0	0	0	49	0	0	0
Phrom Buri	82.5	82.5	0.0	4,283	385	38	0	0	0	347	0	0	0
In Buri	314.3	314.3	0.0	16,317	1,469	9	436	0	0	1,023	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	189,400	17,046	0	2,216	0	0	120	0	0	14,710
Muang Lop Buri	565.6	426.8	138.8	17,279	1,555	0	1,173	0	0	0	0	0	382
Khok Samrong	982.5	17.5	965.0	30,015	2,701	0	48	0	0	0	0	0	2,653
Chai Badan	1,253.0	0.0	1,253.0	38,278	3,445	0	0	0	0	0	0	0	3,445
Tha Luang	538.9	0.0	538.9	16,463	1,482	0	0	0	0	0	0	0	1,482
Tha Wung	242.8	242.8	0.0	7,417	668	0	548	0	0	120	0	0	0
Ban Mi	585.7	162.4	423.3	17,893	1,610	0	447	0	0	0	0	0	1,164
Pattana Nikom	517.0	0.0	517.0	15,794	1,421	0	0	0	0	0	0	0	1,421
Sa Boat	304.7	0.0	304.7	9,308	838	0	0	0	0	0	0	0	838
Khok Charoen	317.1	0.0	317.1	9,687	872	0	0	0	0	0	0	0	872
Lam San Thi	447.0	0.0	447.0	13,656	1,229	0	0	0	0	0	0	0	1,229
Nang Muang	445.5	0.0	445.5	13,610	1,225	0	0	0	0	0	0	0	1,225
Ang Thong	968.4	888.2	80.2	39,300	3,537	2,560	0	0	0	684	0	0	293
Muang Ang Thong	102.9	102.0	0.9	4,176	376	152	0	0	0	221	0	0	3
Chaiyo	72.3	72.3	0.0	2,934	264	0	0	0	0	264	0	0	0
Pa Mok	80.9	80.9	0.0	3,283	295	97	0	0	0	199	0	0	0
Pho Thong	219.4	212.4	7.0	8,904	801	776	0	0	0	0	0	0	26
Wiset Chai Chan	224.7	189.3	35.4	9,119	821	691	0	0	0	0	0	0	129
Samko	86.9	50.0	36.9	3,527	317	183	0	0	0	0	0	0	135
Sawaengha	181.3	181.3	0.0	7,358	662	662	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	35,800	3,222	577	178	480	0	275	287	608	818
Muang Ayutthaya	130.6	130.6	0.0	1,829	165	10	9	42	0	55	49	0	0
Tha Rua	106.2	106.2	0.0	1,487	134	0	0	134	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	2,785	251	0	15	236	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,110	190	82	0	0	0	0	0	68	40
Bang Sai	219.7	219.7	0.0	3,076	277	106	0	0	0	0	2	170	0
Bang Ban	135.3	135.3	0.0	1,895	171	42	0	0	0	87	42	0	0
Bang Pahan	121.9	121.9	0.0	1,707	154	0	57	23	0	73	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,208	289	0	0	0	0	0	192	47	50
Ban Phraek	39.1	39.1	0.0	548	49	0	37	0	0	12	0	0	0
Phak Hai	189.0	189.0	0.0	2,647	238	238	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,463	132	0	0	0	0	0	0	0	132
Maharat	120.1	120.1	0.0	1,682	151	0	59	45	0	48	0	0	0
Lat Bua Luang	199.9	136.9	63.0	2,799	252	0	0	0	0	0	0	173	79
Wang Noi	219.2	0.0	219.2	3,069	276	0	0	0	0	0	0	0	276
Sena	205.6	198.9	6.7	2,879	259	100	0	0	0	0	0	151	8
Uthai	186.8	2.5	184.3	2,616	235	0	0	0	0	0	3	0	232
Pathum Thani	1,525.9	485.5	1,040.4	14,600	1,314	0	0	0	0	0	0	418	896
Muang Pathum Thani	120.2	120.2	0.0	1,150	104	0	0	0	0	0	0	104	0
Sam Khok	95.0	95.0	0.0	909	82	0	0	0	0	0	0	82	0
Lat Lum Kaeo	188.1	188.1	0.0	1,800	162	0	0	0	0	0	0	162	0
Thanya Buri	112.1	8.7	103.4	1,073	97	0	0	0	0	0	0	7	89
Lam Luk Ka	297.7	6.0	291.7	2,848	256	0	0	0	0	0	0	5	251
Klong Laung	299.2	67.5	231.7	2,863	258	0	0	0	0	0	0	58	200
Nong Sua	413.6	0.0	413.6	3,957	356	0	0	0	0	0	0	0	356
Nonthaburi	622.3	273.6	348.7	3,600	324	0	0	0	0	0	0	142	182
Muang Nonthaburi	77.0	42.3	34.7	445	40	0	0	0	0	0	0	22	18
Kruai	57.4	0.0	57.4	332	30	0	0	0	0	0	0	0	30
Bang Yai	96.4	25.9	70.5	556	50	0	0	0	0	0	0	13	37
Bang Bua Thong	116.4	116.4	0.0	673	61	0	0	0	0	0	0	61	0
Pak Kret	89.0	89.0	0.0	515	46	0	0	0	0	0	0	46	0
Sai Noi	186.1	0.0	186.1	1,077	97	0	0	0	0	0	0	0	97
Sara Buri	3,576.6	186.3	3,390.3	62,200	5,598	0	41	251	0	0	0	0	5,306
Muang Sara Buri	503.8	0.0	503.8	8,761	789	0	0	0	0	0	0	0	789
Kaeng Khoi	871.1	0.0	871.1	15,149	1,363	0	0	0	0	0	0	0	1,363
Don Phunt	65.6	65.6	0.0	1,141	103	0	34	68	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,852	437	0	0	147	0	0	0	0	290
Phra Phutthabat	324.6	0.0	324.6	5,645	508	0	0	0	0	0	0	0	508
Muak Lek	752.5	0.0	752.5	13,087	1,178	0	0	0	0	0	0	0	1,178
Wihan Daeng	228.8	0.0	228.8	3,979	358	0	0	0	0	0	0	0	358
Saohai	125.1	0.0	125.1	2,176	196	0	0	0	0	0	0	0	196
Nong Khae	293.8	0.0	293.8	5,109	460	0	0	0	0	0	0	0	460
Nong Saeng	97.4	0.0	97.4	1,694	152	0	0	0	0	0	0	0	152
Nong Don	34.9	27.0	7.9	607	55	0	6	36	0	0	0	0	12
Total	18,741.8	6,037.4	12,704.4	443,400	39,906	5,325	2,942	731	104	3,391	287	1,168	25,958

Table 10.3.26 Livestock Wastewater Quantity by Sub-area (Cattle, 2001)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Cattle W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	58,400	5,256	605	0	0	109	614	0	0	3,927
Muang Chai Nat	255.4	147.0	108.4	6,039	544	73	0	0	109	131	0	0	231
Manorom	225.6	0.0	225.6	5,335	480	0	0	0	0	0	0	0	480
Wat Sing	606.3	0.0	606.3	14,337	1,290	0	0	0	0	0	0	0	1,290
Sankhaburi	354.8	249.0	105.8	8,390	755	482	0	0	0	48	0	0	225
Sanphaya	228.3	228.3	0.0	5,399	486	51	0	0	0	435	0	0	0
Hankha	799.3	0.0	799.3	18,901	1,701	0	0	0	0	0	0	0	1,701
Sing Buri	822.5	822.5	0.0	51,100	4,599	1,926	607	0	0	2,066	0	0	0
Muang Sing Buri	112.4	112.4	0.0	6,983	628	175	85	0	0	368	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	5,492	494	494	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	2,137	192	192	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	11,835	1,065	1,007	0	0	0	58	0	0	0
Phrom Buri	82.5	82.5	0.0	5,126	461	46	0	0	0	415	0	0	0
In Buri	314.3	314.3	0.0	19,527	1,757	11	522	0	0	1,224	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	205,200	18,468	0	2,401	0	0	130	0	0	15,938
Muang Lop Buri	565.6	426.8	138.8	18,720	1,685	0	1,271	0	0	0	0	0	413
Khok Samrong	982.5	17.5	965.0	32,519	2,927	0	52	0	0	0	0	0	2,875
Chai Badan	1,253.0	0.0	1,253.0	41,472	3,732	0	0	0	0	0	0	0	3,732
Tha Luang	538.9	0.0	538.9	17,836	1,605	0	0	0	0	0	0	0	1,605
Tha Wung	242.8	242.8	0.0	8,036	723	0	594	0	0	130	0	0	0
Ban Mi	585.7	162.4	423.3	19,385	1,745	0	484	0	0	0	0	0	1,261
Patlana Nikom	517.0	0.0	517.0	17,112	1,540	0	0	0	0	0	0	0	1,540
Sa Boat	304.7	0.0	304.7	10,085	908	0	0	0	0	0	0	0	908
Khok Charoen	317.1	0.0	317.1	10,495	945	0	0	0	0	0	0	0	945
Lam Sao Thi	447.0	0.0	447.0	14,795	1,332	0	0	0	0	0	0	0	1,332
Nang Muang	445.5	0.0	445.5	14,745	1,327	0	0	0	0	0	0	0	1,327
Ang Thong	968.4	888.2	80.2	42,900	3,861	2,795	0	0	0	746	0	0	320
Muang Ang Thong	102.9	102.0	0.9	4,558	410	165	0	0	0	241	0	0	4
Chaiyo	72.3	72.3	0.0	3,203	288	0	0	0	0	288	0	0	0
Pa Mok	80.9	80.9	0.0	3,584	323	106	0	0	0	217	0	0	0
Pho Thong	219.4	212.4	7.0	9,719	875	847	0	0	0	0	0	0	28
Wiset Chai Chan	224.7	189.3	35.4	9,954	896	755	0	0	0	0	0	0	141
Samko	86.9	50.0	36.9	3,850	346	199	0	0	0	0	0	0	147
Sawaengha	181.3	181.3	0.0	8,032	723	723	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	37,000	3,330	597	184	496	0	284	296	628	845
Muang Ayutthaya	130.6	130.6	0.0	1,890	170	10	9	44	0	57	50	0	0
Tha Rua	106.2	106.2	0.0	1,537	138	0	0	138	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	2,879	259	0	15	244	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,181	196	85	0	0	0	0	0	71	41
Bang Sal	219.7	219.7	0.0	3,180	286	109	0	0	0	0	2	175	0
Bang Ban	135.3	135.3	0.0	1,958	176	43	0	0	0	90	43	0	0
Bang Pahan	121.9	121.9	0.0	1,764	159	0	59	24	0	75	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,316	298	0	0	0	0	0	198	48	52
Ban Phraek	39.1	39.1	0.0	566	51	0	39	0	0	12	0	0	0
Phak Hai	189.0	189.0	0.0	2,735	246	246	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,512	136	0	0	0	0	0	0	0	136
Maharat	120.1	120.1	0.0	1,738	156	0	61	46	0	49	0	0	0
Lat Bua Luang	199.9	136.9	63.0	2,893	260	0	0	0	0	0	0	178	82
Wang Noi	219.2	0.0	219.2	3,172	286	0	0	0	0	0	0	0	286
Sena	205.6	198.9	6.7	2,976	268	103	0	0	0	0	0	156	9
Uthai	186.8	2.5	184.3	2,703	243	0	0	0	0	0	3	0	240
Pathum Thani	1,525.9	485.5	1,040.4	17,400	1,566	0	0	0	0	0	0	498	1,068
Muang Pathum Thani	120.2	120.2	0.0	1,371	123	0	0	0	0	0	0	123	0
Sam Khok	95.0	95.0	0.0	1,083	97	0	0	0	0	0	0	97	0
Lat Lum Kaeo	188.1	188.1	0.0	2,145	193	0	0	0	0	0	0	193	0
Thanya Buri	112.1	8.7	103.4	1,278	115	0	0	0	0	0	0	9	106
Lam Luk Ka	297.7	6.0	291.7	3,395	306	0	0	0	0	0	0	6	299
Klong Laung	299.2	67.5	231.7	3,412	307	0	0	0	0	0	0	69	238
Nong Sua	413.6	0.0	413.6	4,716	424	0	0	0	0	0	0	0	424
Nonthaburi	622.3	273.6	348.7	3,700	333	0	0	0	0	0	0	146	187
Muang Nonthaburi	77.0	42.3	34.7	458	41	0	0	0	0	0	0	23	19
Krual	57.4	0.0	57.4	341	31	0	0	0	0	0	0	0	31
Bang Yai	96.4	25.9	70.5	573	52	0	0	0	0	0	0	14	38
Bang Bua Thong	116.4	116.4	0.0	692	62	0	0	0	0	0	0	62	0
Pak Kret	89.0	89.0	0.0	529	48	0	0	0	0	0	0	48	0
Sai Noi	186.1	0.0	186.1	1,106	100	0	0	0	0	0	0	0	100
Sara Buri	3,576.6	186.3	3,390.3	60,700	5,463	0	40	245	0	0	0	0	5,178
Muang Sara Buri	503.8	0.0	503.8	8,550	770	0	0	0	0	0	0	0	770
Kaeng Khoi	871.1	0.0	871.1	14,784	1,331	0	0	0	0	0	0	0	1,331
Don Phunt	65.6	65.6	0.0	1,113	100	0	33	67	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,735	426	0	0	143	0	0	0	0	283
Phra Phutthabat	324.6	0.0	324.6	5,509	496	0	0	0	0	0	0	0	496
Muak Lek	752.5	0.0	752.5	12,771	1,149	0	0	0	0	0	0	0	1,149
Wihan Daeng	228.8	0.0	228.8	3,883	349	0	0	0	0	0	0	0	349
Saohai	125.1	0.0	125.1	2,123	191	0	0	0	0	0	0	0	191
Nong Khae	293.8	0.0	293.8	4,986	449	0	0	0	0	0	0	0	449
Nong Saeng	97.4	0.0	97.4	1,653	149	0	0	0	0	0	0	0	149
Nong Don	34.9	27.0	7.9	592	53	0	6	35	0	0	0	0	12
Total	18,741.8	6,037.4	12,704.4	476,400	42,876	5,923	3,231	741	109	3,840	296	1,273	27,463

Table 10.3.27 Livestock Wastewater Quantity by Sub-area (Cattle, 2011)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							Cattle W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	63,600	5,724	659	0	0	119	669	0	0	4,277
Muang Chai Nat	255.4	147.0	108.4	6,577	592	79	0	0	119	142	0	0	251
Manorom	225.6	0.0	225.6	5,810	523	0	0	0	0	0	0	0	523
Wat Sing	606.3	0.0	606.3	15,614	1,405	0	0	0	0	0	0	0	1,405
Sankhaburi	354.8	249.0	105.8	9,137	822	524	0	0	0	53	0	0	245
Sanphaya	228.3	228.3	0.0	5,879	529	55	0	0	0	474	0	0	0
Hankha	799.3	0.0	799.3	20,584	1,853	0	0	0	0	0	0	0	1,853
Sing Buri	822.5	822.5	0.0	61,400	5,526	2,314	730	0	0	2,483	0	0	0
Muang Sing Buri	112.4	112.4	0.0	8,391	755	210	102	0	0	443	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	6,599	594	594	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	2,568	231	231	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	14,221	1,280	1,210	0	0	0	70	0	0	0
Phrom Buri	82.5	82.5	0.0	6,159	554	55	0	0	0	499	0	0	0
In Buri	314.3	314.3	0.0	23,463	2,112	13	628	0	0	1,471	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	236,900	21,321	0	2,772	0	0	150	0	0	18,400
Muang Lop Buri	565.6	426.8	138.8	21,612	1,945	0	1,468	0	0	0	0	0	477
Khok Samrong	982.5	17.5	965.0	37,542	3,379	0	60	0	0	0	0	0	3,319
Chai Badan	1,253.0	0.0	1,253.0	47,878	4,309	0	0	0	0	0	0	0	4,309
Tha Luang	538.9	0.0	538.9	20,592	1,853	0	0	0	0	0	0	0	1,853
Tha Wung	242.8	242.8	0.0	9,278	835	0	685	0	0	150	0	0	0
Ban Mi	585.7	162.4	423.3	22,380	2,014	0	558	0	0	0	0	0	1,456
Pattana Nikom	517.0	0.0	517.0	19,755	1,778	0	0	0	0	0	0	0	1,778
Sa Boat	304.7	0.0	304.7	11,643	1,048	0	0	0	0	0	0	0	1,048
Khok Charoen	317.1	0.0	317.1	12,117	1,091	0	0	0	0	0	0	0	1,091
Lam San Thi	447.0	0.0	447.0	17,080	1,537	0	0	0	0	0	0	0	1,537
Nang Muang	445.5	0.0	445.5	17,023	1,532	0	0	0	0	0	0	0	1,532
Ang Thong	968.4	888.2	80.2	50,000	4,500	3,257	0	0	0	870	0	0	373
Muang Ang Thong	102.9	102.0	0.9	5,313	478	193	0	0	0	281	0	0	4
Chaiyo	72.3	72.3	0.0	3,733	336	0	0	0	0	336	0	0	0
Pa Mok	80.9	80.9	0.0	4,177	376	123	0	0	0	253	0	0	0
Pho Thong	219.4	212.4	7.0	11,328	1,020	987	0	0	0	0	0	0	33
Wisot Chai Chan	224.7	189.3	35.4	11,602	1,044	880	0	0	0	0	0	0	164
Samko	86.9	50.0	36.9	4,487	404	232	0	0	0	0	0	0	171
Sawaengha	181.3	181.3	0.0	9,361	842	842	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	39,400	3,546	636	196	528	0	302	315	669	900
Muang Ayutthaya	130.6	130.6	0.0	2,013	181	11	10	46	0	61	53	0	0
Tha Rua	106.2	106.2	0.0	1,637	147	0	0	147	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	3,065	276	0	17	259	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,322	209	90	0	0	0	0	0	75	44
Bang Sai	219.7	219.7	0.0	3,386	305	116	0	0	0	0	2	187	0
Bang Ban	135.3	135.3	0.0	2,085	188	46	0	0	0	96	46	0	0
Bang Pahan	121.9	121.9	0.0	1,879	169	0	63	26	0	80	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,531	318	0	0	0	0	0	211	51	55
Ban Phraek	39.1	39.1	0.0	603	54	0	41	0	0	13	0	0	0
Phak Hai	189.0	189.0	0.0	2,913	262	262	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,610	145	0	0	0	0	0	0	0	145
Maharat	120.1	120.1	0.0	1,851	167	0	65	49	0	52	0	0	0
Lat Bua Luang	199.9	136.9	63.0	3,081	277	0	0	0	0	0	0	190	87
Wang Noi	219.2	0.0	219.2	3,378	304	0	0	0	0	0	0	0	304
Sena	205.6	198.9	6.7	3,169	285	110	0	0	0	0	0	166	9
Uthai	186.8	2.5	184.3	2,879	259	0	0	0	0	0	3	0	256
Pathum Thani	1,525.9	485.5	1,040.4	20,900	1,881	0	0	0	0	0	0	598	1,283
Muang Pathum Thani	120.2	120.2	0.0	1,646	148	0	0	0	0	0	0	148	0
Sam Khok	95.0	95.0	0.0	1,301	117	0	0	0	0	0	0	117	0
Lat Lum Kaeo	188.1	188.1	0.0	2,576	232	0	0	0	0	0	0	232	0
Thanya Buri	112.1	8.7	103.4	1,535	138	0	0	0	0	0	0	11	127
Lam Luk Ka	297.7	6.0	291.7	4,078	367	0	0	0	0	0	0	7	360
Klong Laung	299.2	67.5	231.7	4,098	369	0	0	0	0	0	0	83	286
Nong Sua	413.6	0.0	413.6	5,665	510	0	0	0	0	0	0	0	510
Nonthaburi	622.3	273.6	348.7	4,100	369	0	0	0	0	0	0	162	207
Muang Nonthaburi	77.0	42.3	34.7	507	46	0	0	0	0	0	0	25	21
Kruai	57.4	0.0	57.4	378	34	0	0	0	0	0	0	0	34
Bang Yai	96.4	25.9	70.5	635	57	0	0	0	0	0	0	15	42
Bang Bua Thong	116.4	116.4	0.0	767	69	0	0	0	0	0	0	69	0
Pak Kret	89.0	89.0	0.0	586	53	0	0	0	0	0	0	53	0
Sai Noi	186.1	0.0	186.1	1,226	110	0	0	0	0	0	0	0	110
Sara Buri	3,576.6	186.3	3,390.3	57,700	5,193	0	38	233	0	0	0	0	4,923
Muang Sara Buri	503.8	0.0	503.8	8,128	731	0	0	0	0	0	0	0	731
Kaeng Khoi	871.1	0.0	871.1	14,053	1,265	0	0	0	0	0	0	0	1,265
Don Phunt	65.6	65.6	0.0	1,058	95	0	32	63	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,501	405	0	0	136	0	0	0	0	269
Phra Phutthabat	324.6	0.0	324.6	5,237	471	0	0	0	0	0	0	0	471
Muak Lek	752.5	0.0	752.5	12,140	1,093	0	0	0	0	0	0	0	1,093
Wihan Daeng	228.8	0.0	228.8	3,691	332	0	0	0	0	0	0	0	332
Saohai	125.1	0.0	125.1	2,018	182	0	0	0	0	0	0	0	182
Nong Khae	293.8	0.0	293.8	4,740	427	0	0	0	0	0	0	0	427
Nong Saeng	97.4	0.0	97.4	1,571	141	0	0	0	0	0	0	0	141
Nong Don	34.9	27.0	7.9	563	51	0	6	33	0	0	0	0	11
Total	18,741.8	6,037.4	12,704.4	534,000	48,060	6,866	3,735	761	119	4,473	315	1,430	30,361

Table 10.3.28 Livestock W.W. Generated BOD by Sub-area (Cattle, 1996)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Cattle BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	55,800	35,712	4,114	0	0	742	4,172	0	0	26,685
Muang Chai Nat	255.4	147.0	108.4	5,770	3,693	496	0	0	742	888	0	0	1,567
Manorom	225.6	0.0	225.6	5,097	3,262	0	0	0	0	0	0	0	3,262
Wat Sing	606.3	0.0	606.3	13,699	8,767	0	0	0	0	0	0	0	8,767
Sankhaburi	354.8	249.0	105.8	8,016	5,130	3,272	0	0	0	328	0	0	1,530
Sanphaya	228.3	228.3	0.0	5,158	3,301	346	0	0	0	2,956	0	0	0
Hankha	799.3	0.0	799.3	18,059	11,558	0	0	0	0	0	0	0	11,558
Sing Buri	822.5	822.5	0.0	42,700	27,328	11,443	3,608	0	0	12,277	0	0	0
Muang Sing Buri	112.4	112.4	0.0	5,835	3,735	1,040	505	0	0	2,190	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	4,589	2,937	2,937	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	1,786	1,143	1,143	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	9,890	6,329	5,984	0	0	0	346	0	0	0
Phrom Buri	82.5	82.5	0.0	4,283	2,741	272	0	0	0	2,469	0	0	0
In Buri	314.3	314.3	0.0	16,317	10,443	66	3,103	0	0	7,273	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	189,400	121,216	0	15,759	0	0	850	0	0	104,607
Muang Lop Buri	565.6	426.8	138.8	17,279	11,058	0	8,345	0	0	0	0	0	2,714
Khok Samrong	982.5	17.5	965.0	30,015	19,209	0	342	0	0	0	0	0	18,867
Chai Badan	1,253.0	0.0	1,253.0	38,278	24,498	0	0	0	0	0	0	0	24,498
Tha Luang	538.9	0.0	538.9	16,463	10,536	0	0	0	0	0	0	0	10,536
Tha Wung	242.8	242.8	0.0	7,417	4,747	0	3,897	0	0	850	0	0	0
Ban Mi	585.7	162.4	423.3	17,893	11,451	0	3,175	0	0	0	0	0	8,276
Pattana Nikom	517.0	0.0	517.0	15,794	10,108	0	0	0	0	0	0	0	10,108
Sa Boat	304.7	0.0	304.7	9,308	5,957	0	0	0	0	0	0	0	5,957
Khok Charoen	317.1	0.0	317.1	9,687	6,200	0	0	0	0	0	0	0	6,200
Lam San Thi	447.0	0.0	447.0	13,656	8,740	0	0	0	0	0	0	0	8,740
Nang Muang	445.5	0.0	445.5	13,610	8,710	0	0	0	0	0	0	0	8,710
Ang Thong	968.4	888.2	80.2	39,300	25,152	18,207	0	0	0	4,862	0	0	2,083
Muang Ang Thong	102.9	102.0	0.9	4,176	2,673	1,078	0	0	0	1,571	0	0	23
Chaiyo	72.3	72.3	0.0	2,934	1,878	0	0	0	0	1,878	0	0	0
Pa Mok	80.9	80.9	0.0	3,283	2,101	688	0	0	0	1,413	0	0	0
Pho Thong	219.4	212.4	7.0	8,904	5,698	5,517	0	0	0	0	0	0	182
Wisai Chai Chan	224.7	189.3	35.4	9,119	5,836	4,917	0	0	0	0	0	0	919
Samko	86.9	50.0	36.9	3,527	2,257	1,299	0	0	0	0	0	0	958
Sawaengha	181.3	181.3	0.0	7,358	4,709	4,709	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	35,800	22,912	4,106	1,264	3,411	0	1,954	2,038	4,322	5,817
Muang Ayutthaya	130.6	130.6	0.0	1,829	1,170	68	64	299	0	394	345	0	0
Tha Rua	106.2	106.2	0.0	1,487	952	0	0	952	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	2,785	1,783	0	107	1,676	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,110	1,351	583	0	0	0	0	0	486	281
Bang Sha	219.7	219.7	0.0	3,076	1,969	752	0	0	0	0	11	1,206	9
Bang Ban	135.3	135.3	0.0	1,895	1,213	298	0	0	0	617	298	0	0
Bang Pahan	121.9	121.9	0.0	1,707	1,092	0	408	167	0	518	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,208	2,053	0	0	0	0	0	1,362	332	358
Ban Phraek	39.1	39.1	0.0	548	350	0	265	0	0	85	0	0	0
Phak Hai	189.0	189.0	0.0	2,647	1,694	1,694	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,463	937	0	0	0	0	0	0	0	937
Maharat	120.1	120.1	0.0	1,682	1,076	0	420	317	0	339	0	0	0
Lat Bua Luang	199.9	136.9	63.0	2,799	1,791	0	0	0	0	0	0	1,227	565
Wang Noi	219.2	0.0	219.2	3,069	1,964	0	0	0	0	0	0	0	1,964
Sena	205.6	198.9	6.7	2,879	1,843	712	0	0	0	0	0	1,071	60
Uthai	186.8	2.5	184.3	2,616	1,674	0	0	0	0	0	22	0	1,652
Pathum Thani	1,525.9	485.5	1,040.4	14,600	9,344	0	0	0	0	0	0	2,973	6,371
Muang Pathum Thani	120.2	120.2	0.0	1,150	736	0	0	0	0	0	0	736	0
Sam Khok	95.0	95.0	0.0	909	582	0	0	0	0	0	0	582	0
Lat Lum Kaeo	188.1	188.1	0.0	1,800	1,152	0	0	0	0	0	0	1,152	0
Thanya Buri	112.1	8.7	103.4	1,073	686	0	0	0	0	0	0	53	633
Lam Luk Ka	297.7	6.0	291.7	2,848	1,823	0	0	0	0	0	0	37	1,786
Klong Laung	299.2	67.5	231.7	2,863	1,832	0	0	0	0	0	0	413	1,419
Nong Sua	413.6	0.0	413.6	3,957	2,533	0	0	0	0	0	0	0	2,533
Nonthaburi	622.3	273.6	348.7	3,600	2,304	0	0	0	0	0	0	1,013	1,291
Muang Nonthaburi	77.0	42.3	34.7	445	285	0	0	0	0	0	0	157	128
Kruai	57.4	0.0	57.4	332	213	0	0	0	0	0	0	0	213
Bang Yai	96.4	25.9	70.5	558	357	0	0	0	0	0	0	96	261
Bang Bua Thong	116.4	116.4	0.0	673	431	0	0	0	0	0	0	431	0
Pak Kret	89.0	89.0	0.0	515	330	0	0	0	0	0	0	330	0
Sai Noi	166.1	0.0	166.1	1,077	689	0	0	0	0	0	0	0	689
Sara Buri	3,576.6	186.3	3,390.3	62,200	39,808	0	288	1,765	0	0	0	0	37,734
Muang Sara Buri	503.8	0.0	503.8	8,761	5,607	0	0	0	0	0	0	0	5,607
Kaeng Khoi	871.1	0.0	871.1	15,149	9,695	0	0	0	0	0	0	0	9,695
Don Phunl	65.6	65.6	0.0	1,141	730	0	244	486	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,852	3,105	0	0	1,043	0	0	0	0	2,062
Phra Phutthabat	324.6	0.0	324.6	5,645	3,613	0	0	0	0	0	0	0	3,613
Muak Lek	752.5	0.0	752.5	13,087	8,375	0	0	0	0	0	0	0	8,375
Wihan Daeng	228.8	0.0	228.8	3,979	2,547	0	0	0	0	0	0	0	2,547
Saohai	125.1	0.0	125.1	2,176	1,392	0	0	0	0	0	0	0	1,392
Nong Khae	293.8	0.0	293.8	5,109	3,270	0	0	0	0	0	0	0	3,270
Nong Saeng	97.4	0.0	97.4	1,694	1,084	0	0	0	0	0	0	0	1,084
Nong Don	34.9	27.0	7.9	607	388	0	45	256	0	0	0	0	88
Total	18,741.8	6,037.4	12,704.4	443,400	283,776	37,870	20,919	5,196	742	24,115	2,038	8,308	184,588

Table 10.3.29 Livestock W.W. Generated BOD by Sub-area (Cattle, 2001)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Cattle BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	58,400	37,376	4,306	0	0	776	4,366	0	0	27,928
Muang Chai Nat	255.4	147.0	108.4	6,039	3,865	519	0	0	776	929	0	0	1,641
Manorom	225.6	0.0	225.6	5,335	3,414	0	0	0	0	0	0	0	3,414
Wat Sing	606.3	0.0	606.3	14,337	9,176	0	0	0	0	0	0	0	9,176
Sankhaburi	354.8	249.0	105.8	8,390	5,369	3,425	0	0	0	344	0	0	1,601
Sanphaya	228.3	228.3	0.0	5,399	3,455	362	0	0	0	3,093	0	0	0
Hankha	799.3	0.0	799.3	18,901	12,096	0	0	0	0	0	0	0	12,096
Sing Buri	822.5	822.5	0.0	51,100	32,704	13,694	4,316	0	0	14,692	0	0	0
Muang Sing Buri	112.4	112.4	0.0	6,983	4,469	1,245	604	0	0	2,620	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	5,492	3,515	3,515	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	2,137	1,368	1,368	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	11,835	7,575	7,161	0	0	0	414	0	0	0
Phrom Buri	82.5	82.5	0.0	5,126	3,280	326	0	0	0	2,954	0	0	0
In Buri	314.3	314.3	0.0	19,527	12,497	80	3,714	0	0	8,704	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	205,200	131,328	0	17,073	0	0	921	0	0	113,333
Muang Lop Buri	565.6	426.8	138.8	18,720	11,981	0	9,041	0	0	0	0	0	2,940
Khok Samrong	982.5	17.5	965.0	32,519	20,812	0	371	0	0	0	0	0	20,441
Chai Badan	1,253.0	0.0	1,253.0	41,472	26,542	0	0	0	0	0	0	0	26,542
Tha Luang	538.9	0.0	538.9	17,836	11,415	0	0	0	0	0	0	0	11,415
Tha Wung	242.8	242.8	0.0	8,036	5,143	0	4,222	0	0	921	0	0	0
Ban Mi	585.7	162.4	423.3	19,385	12,407	0	3,440	0	0	0	0	0	8,967
Pattana Nikom	517.0	0.0	517.0	17,112	10,951	0	0	0	0	0	0	0	10,951
Sa Boat	304.7	0.0	304.7	10,085	6,454	0	0	0	0	0	0	0	6,454
Khok Charoen	317.1	0.0	317.1	10,495	6,717	0	0	0	0	0	0	0	6,717
Lam San Thi	447.0	0.0	447.0	14,795	9,469	0	0	0	0	0	0	0	9,469
Nang Muang	445.5	0.0	445.5	14,745	9,437	0	0	0	0	0	0	0	9,437
Ang Thong	968.4	888.2	80.2	42,900	27,456	19,875	0	0	0	5,307	0	0	2,274
Muang Ang Thong	102.9	102.0	0.9	4,558	2,917	1,177	0	0	0	1,715	0	0	26
Chaiyo	72.3	72.3	0.0	3,203	2,050	0	0	0	0	2,050	0	0	0
Pa Mok	80.9	80.9	0.0	3,584	2,294	751	0	0	0	1,542	0	0	0
Pho Thong	219.4	212.4	7.0	9,719	6,220	6,022	0	0	0	0	0	0	198
Wiset Chai Chan	224.7	189.3	35.4	9,954	6,371	5,367	0	0	0	0	0	0	1,004
Samko	86.9	50.0	36.9	3,850	2,464	1,418	0	0	0	0	0	0	1,046
Sawaengha	181.3	181.3	0.0	8,032	5,140	5,140	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	37,000	23,680	4,244	1,306	3,525	0	2,019	2,106	4,467	6,012
Muang Ayutthaya	130.6	130.6	0.0	1,890	1,210	70	66	309	0	408	357	0	0
Tha Rua	106.2	106.2	0.0	1,537	984	0	0	984	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	2,879	1,842	0	110	1,732	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,181	1,396	603	0	0	0	0	0	502	291
Bang Shai	219.7	219.7	0.0	3,180	2,035	777	0	0	0	0	11	1,247	0
Bang Ban	135.3	135.3	0.0	1,958	1,253	308	0	0	0	638	308	0	0
Bang Pahan	121.9	121.9	0.0	1,764	1,129	0	421	172	0	535	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,316	2,122	0	0	0	0	0	1,408	344	370
Ban Phraek	39.1	39.1	0.0	566	362	0	274	0	0	88	0	0	0
Phak Hai	189.0	189.0	0.0	2,735	1,751	1,751	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,512	968	0	0	0	0	0	0	0	968
Maharat	120.1	120.1	0.0	1,738	1,112	0	434	328	0	350	0	0	0
Lat Bua Luang	199.9	136.9	63.0	2,893	1,852	0	0	0	0	0	0	1,268	584
Wang Noi	219.2	0.0	219.2	3,172	2,030	0	0	0	0	0	0	0	2,030
Sena	205.6	198.9	6.7	2,976	1,904	735	0	0	0	0	0	1,107	62
Uthai	186.8	2.5	184.3	2,703	1,730	0	0	0	0	0	23	0	1,707
Pathum Thani	1,525.9	485.5	1,040.4	17,400	11,136	0	0	0	0	0	0	3,543	7,593
Muang Pathum Thani	120.2	120.2	0.0	1,371	877	0	0	0	0	0	0	877	0
Sam Khok	95.0	95.0	0.0	1,083	693	0	0	0	0	0	0	693	0
Lat Lum Kaeo	188.1	188.1	0.0	2,145	1,373	0	0	0	0	0	0	1,373	0
Thanya Buri	112.1	8.7	103.4	1,278	818	0	0	0	0	0	0	63	755
Lam Luk Ka	297.7	6.0	291.7	3,395	2,173	0	0	0	0	0	0	44	2,129
Klong Laung	299.2	67.5	231.7	3,412	2,184	0	0	0	0	0	0	493	1,691
Nong Sua	413.6	0.0	413.6	4,716	3,018	0	0	0	0	0	0	0	3,018
Nonthaburi	622.3	273.6	348.7	3,700	2,368	0	0	0	0	0	0	1,041	1,327
Muang Nonthaburi	77.0	42.3	34.7	458	293	0	0	0	0	0	0	161	132
Kruai	57.4	0.0	57.4	341	218	0	0	0	0	0	0	0	218
Bang Yai	96.4	25.9	70.5	573	367	0	0	0	0	0	0	99	268
Bang Bua Thong	116.4	116.4	0.0	692	443	0	0	0	0	0	0	443	0
Pak Kret	89.0	89.0	0.0	529	339	0	0	0	0	0	0	339	0
Sai Noi	186.1	0.0	186.1	1,106	708	0	0	0	0	0	0	0	708
Sara Buri	3,576.6	186.3	3,390.3	60,700	38,848	0	281	1,742	0	0	0	0	36,824
Muang Sara Buri	503.8	0.0	503.8	8,550	5,472	0	0	0	0	0	0	0	5,472
Kaeng Khoi	871.1	0.0	871.1	14,784	9,462	0	0	0	0	0	0	0	9,462
Don Phunt	65.6	65.6	0.0	1,113	713	0	236	475	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,735	3,030	0	0	1,018	0	0	0	0	2,013
Phra Phutthabat	324.6	0.0	324.6	5,509	3,526	0	0	0	0	0	0	0	3,526
Muak Lek	752.5	0.0	752.5	12,771	8,173	0	0	0	0	0	0	0	8,173
Wihan Daeng	228.8	0.0	228.8	3,883	2,485	0	0	0	0	0	0	0	2,485
Saohai	125.1	0.0	125.1	2,123	1,359	0	0	0	0	0	0	0	1,359
Nong Khae	293.8	0.0	293.8	4,986	3,191	0	0	0	0	0	0	0	3,191
Nong Saeng	97.4	0.0	97.4	1,653	1,058	0	0	0	0	0	0	0	1,058
Nong Don	34.9	27.0	7.9	592	379	0	43	250	0	0	0	0	86
Total	18,741.8	6,037.4	12,704.4	476,400	304,896	42,118	22,979	5,267	776	27,306	2,106	9,051	195,291

Table 10.3.30 Livestock W.W. Generated BOD by Sub-area (Cattle, 2011)

Province / Amphoe	Area (km2)			Number of Cattle (head)	Cattle Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Cattle BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	63,600	40,704	4,689	0	0	845	4,755	0	0	30,415
Muang Chai Nat	255.4	147.0	108.4	6,577	4,209	565	0	0	845	1,012	0	0	1,787
Manorom	225.6	0.0	225.6	5,810	3,718	0	0	0	0	0	0	0	3,718
Wat Sing	606.3	0.0	606.3	15,614	9,993	0	0	0	0	0	0	0	9,993
Sankhaburi	354.8	249.0	105.8	9,137	5,848	3,730	0	0	0	374	0	0	1,744
Sanphaya	228.3	228.3	0.0	5,879	3,763	394	0	0	0	3,369	0	0	0
Hankha	799.3	0.0	799.3	20,584	13,174	0	0	0	0	0	0	0	13,174
Sing Buri	822.5	822.5	0.0	61,400	39,296	16,454	5,189	0	0	17,653	0	0	0
Muang Sing Buri	112.4	112.4	0.0	8,391	5,370	1,495	726	0	0	3,148	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	6,599	4,223	4,223	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	2,568	1,644	1,644	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	14,221	9,101	8,605	0	0	0	497	0	0	0
Phrom Buri	82.5	82.5	0.0	6,159	3,942	392	0	0	0	3,550	0	0	0
In Buri	314.3	314.3	0.0	23,463	15,016	96	4,462	0	0	10,458	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	236,900	151,616	0	19,711	0	0	1,064	0	0	130,841
Muang Lop Buri	565.6	426.8	138.8	21,612	13,832	0	10,437	0	0	0	0	0	3,394
Khok Samrong	982.5	17.5	965.0	37,542	24,027	0	428	0	0	0	0	0	23,599
Chai Badan	1,253.0	0.0	1,253.0	47,876	30,642	0	0	0	0	0	0	0	30,642
Tha Luang	538.9	0.0	538.9	20,592	13,179	0	0	0	0	0	0	0	13,179
Tha Wung	242.8	242.8	0.0	9,278	5,938	0	4,874	0	0	1,064	0	0	0
Ban Mi	585.7	162.4	423.3	22,380	14,323	0	3,971	0	0	0	0	0	10,352
Pattana Nikom	517.0	0.0	517.0	19,755	12,643	0	0	0	0	0	0	0	12,643
Sa Boat	304.7	0.0	304.7	11,643	7,451	0	0	0	0	0	0	0	7,451
Khok Charoen	317.1	0.0	317.1	12,117	7,755	0	0	0	0	0	0	0	7,755
Lam San Thi	447.0	0.0	447.0	17,080	10,931	0	0	0	0	0	0	0	10,931
Nong Muang	445.5	0.0	445.5	17,023	10,895	0	0	0	0	0	0	0	10,895
Ang Thong	968.4	888.2	80.2	50,000	32,000	23,164	0	0	0	6,186	0	0	2,650
Muang Ang Thong	102.9	102.0	0.9	5,313	3,400	1,371	0	0	0	1,999	0	0	30
Chaiyo	72.3	72.3	0.0	3,733	2,389	0	0	0	0	2,389	0	0	0
Pa Mok	80.9	80.9	0.0	4,177	2,673	876	0	0	0	1,798	0	0	0
Pho Thong	219.4	212.4	7.0	11,326	7,250	7,019	0	0	0	0	0	0	231
Wiset Chai Chan	224.7	189.3	35.4	11,602	7,425	6,255	0	0	0	0	0	0	1,170
Samko	86.9	50.0	36.9	4,487	2,872	1,652	0	0	0	0	0	0	1,219
Sawaengha	181.3	181.3	0.0	9,361	5,991	5,991	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	39,400	25,216	4,519	1,391	3,754	0	2,150	2,243	4,757	6,402
Muang Ayutthaya	130.6	130.6	0.0	2,013	1,288	75	70	329	0	434	380	0	0
Tha Rua	106.2	106.2	0.0	1,637	1,047	0	0	1,047	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	3,065	1,962	0	117	1,844	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	2,322	1,486	642	0	0	0	0	0	535	310
Bang Sai	219.7	219.7	0.0	3,386	2,167	828	0	0	0	0	12	1,328	0
Bang Ban	135.3	135.3	0.0	2,085	1,334	327	0	0	0	680	327	0	0
Bang Pahan	121.9	121.9	0.0	1,879	1,202	0	449	183	0	570	0	0	0
Bang Pa-In	229.1	189.1	40.0	3,531	2,260	0	0	0	0	0	1,499	366	395
Ban Phraek	39.1	39.1	0.0	603	386	0	292	0	0	94	0	0	0
Phak Hai	189.0	189.0	0.0	2,913	1,864	1,864	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	1,610	1,031	0	0	0	0	0	0	0	1,031
Maharat	120.1	120.1	0.0	1,851	1,185	0	463	349	0	373	0	0	0
Lat Bua Luang	199.9	136.9	63.0	3,081	1,972	0	0	0	0	0	0	1,350	621
Wang Noi	219.2	0.0	219.2	3,378	2,162	0	0	0	0	0	0	0	2,162
Sena	205.6	198.9	6.7	3,169	2,028	783	0	0	0	0	0	1,179	66
Uthai	186.8	2.5	184.3	2,879	1,842	0	0	0	0	0	25	0	1,818
Pathum Thani	1,525.9	485.5	1,040.4	20,900	13,376	0	0	0	0	0	0	4,256	9,120
Muang Pathum Thani	120.2	120.2	0.0	1,646	1,054	0	0	0	0	0	0	1,054	0
Sam Khok	95.0	95.0	0.0	1,301	833	0	0	0	0	0	0	833	0
Lat Lum Kaeo	188.1	188.1	0.0	2,576	1,649	0	0	0	0	0	0	1,649	0
Thanya Buri	112.1	8.7	103.4	1,535	983	0	0	0	0	0	0	76	906
Lam Luk Ka	297.7	6.0	291.7	4,078	2,610	0	0	0	0	0	0	53	2,557
Klong Laung	299.2	67.5	231.7	4,098	2,623	0	0	0	0	0	0	592	2,031
Nong Sua	413.6	0.0	413.6	5,665	3,626	0	0	0	0	0	0	0	3,626
Nonthaburi	622.3	273.6	348.7	4,100	2,624	0	0	0	0	0	0	1,154	1,470
Muang Nonthaburi	77.0	42.3	34.7	507	325	0	0	0	0	0	0	178	146
Kruai	57.4	0.0	57.4	378	242	0	0	0	0	0	0	0	242
Bang Yai	96.4	25.9	70.5	635	406	0	0	0	0	0	0	109	297
Bang Bua Thong	116.4	116.4	0.0	767	491	0	0	0	0	0	0	491	0
Pak Kret	89.0	89.0	0.0	586	375	0	0	0	0	0	0	375	0
Sai Noi	186.1	0.0	186.1	1,226	785	0	0	0	0	0	0	0	785
Sara Buri	3,576.6	186.3	3,390.3	57,700	36,928	0	267	1,656	0	0	0	0	35,004
Muang Sara Buri	503.8	0.0	503.8	8,128	5,202	0	0	0	0	0	0	0	5,202
Kaeng Khoi	871.1	0.0	871.1	14,053	8,994	0	0	0	0	0	0	0	8,994
Don Phunt	65.6	65.6	0.0	1,058	677	0	226	451	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	4,501	2,881	0	0	967	0	0	0	0	1,913
Phra Phutthabat	324.6	0.0	324.6	5,237	3,351	0	0	0	0	0	0	0	3,351
Muak Lek	752.5	0.0	752.5	12,140	7,769	0	0	0	0	0	0	0	7,769
Wihan Daeng	228.8	0.0	228.8	3,691	2,362	0	0	0	0	0	0	0	2,362
Saohai	125.1	0.0	125.1	2,018	1,292	0	0	0	0	0	0	0	1,292
Nong Khae	293.8	0.0	293.8	4,740	3,033	0	0	0	0	0	0	0	3,033
Nong Saeng	97.4	0.0	97.4	1,571	1,006	0	0	0	0	0	0	0	1,006
Nong Don	34.9	27.0	7.9	563	360	0	41	237	0	0	0	0	82
Total	18,741.8	6,037.4	12,704.4	534,000	341,760	48,826	26,557	5,410	845	31,808	2,243	10,167	215,903

Table 10.3.31 Livestock Wastewater Quantity by Sub-area (Swine, 1996)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine W.W. Generation (m3/day)	Breakdown by Sub-area (m3/day)							Swine W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	35,300	477	55	0	0	10	56	0	0	356
Muang Chai Nat	255.4	147.0	108.4	3,650	49	7	0	0	10	12	0	0	21
Manorom	225.6	0.0	225.6	3,225	44	0	0	0	0	0	0	0	44
Wat Sing	606.3	0.0	606.3	8,666	117	0	0	0	0	0	0	0	117
Sankhaburi	354.8	249.0	105.8	5,071	68	44	0	0	0	4	0	0	20
Sanphaya	228.3	228.3	0.0	3,263	44	5	0	0	0	39	0	0	0
Hankha	799.3	0.0	799.3	11,425	154	0	0	0	0	0	0	0	154
Sing Buri	822.5	822.5	0.0	17,100	231	97	30	0	0	104	0	0	0
Muang Sing Buri	112.4	112.4	0.0	2,337	32	9	4	0	0	18	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,838	25	25	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	715	10	10	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,961	53	51	0	0	0	3	0	0	0
Phrom Buri	82.5	82.5	0.0	1,715	23	2	0	0	0	21	0	0	0
In Buri	314.3	314.3	0.0	6,534	88	1	26	0	0	61	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	81,600	1,102	0	143	0	0	8	0	0	951
Muang Lop Buri	565.6	426.8	138.8	7,444	100	0	76	0	0	0	0	0	25
Khok Samrong	982.5	17.5	965.0	12,931	175	0	3	0	0	0	0	0	171
Chai Badan	1,253.0	0.0	1,253.0	16,492	223	0	0	0	0	0	0	0	223
Tha Luang	538.9	0.0	538.9	7,093	96	0	0	0	0	0	0	0	96
Tha Wung	242.8	242.8	0.0	3,196	43	0	35	0	0	8	0	0	0
Ban Mi	585.7	162.4	423.3	7,709	104	0	29	0	0	0	0	0	75
Pattana Nikom	517.0	0.0	517.0	6,805	92	0	0	0	0	0	0	0	92
Sa Boat	304.7	0.0	304.7	4,010	54	0	0	0	0	0	0	0	54
Khok Charoen	317.1	0.0	317.1	4,174	56	0	0	0	0	0	0	0	56
Lam San Thi	447.0	0.0	447.0	5,883	79	0	0	0	0	0	0	0	79
Nang Muang	445.5	0.0	445.5	5,864	79	0	0	0	0	0	0	0	79
Ang Thong	968.4	888.2	80.2	57,800	780	565	0	0	0	151	0	0	65
Muang Ang Thong	102.9	102.0	0.9	6,142	83	33	0	0	0	49	0	0	1
Chaiyo	72.3	72.3	0.0	4,315	58	0	0	0	0	58	0	0	0
Pa Mok	80.9	80.9	0.0	4,829	65	21	0	0	0	44	0	0	0
Pha Thong	219.4	212.4	7.0	13,095	177	171	0	0	0	0	0	0	6
Wiset Chai Chan	224.7	189.3	35.4	13,411	181	153	0	0	0	0	0	0	29
Samko	86.9	50.0	36.9	5,187	70	40	0	0	0	0	0	0	30
Sawaengha	181.3	181.3	0.0	10,821	146	146	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	68,800	929	166	51	138	0	79	83	175	236
Muang Ayutthaya	130.6	130.6	0.0	3,515	47	3	3	12	0	16	14	0	0
Tha Rua	106.2	106.2	0.0	2,858	39	0	0	39	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	5,353	72	0	4	68	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,055	55	24	0	0	0	0	0	20	11
Bang Sha	219.7	219.7	0.0	5,912	80	30	0	0	0	0	0	49	0
Bang Ban	135.3	135.3	0.0	3,641	49	12	0	0	0	25	12	0	0
Bang Pahan	121.9	121.9	0.0	3,280	44	0	17	7	0	21	0	0	0
Bang Pa-In	229.1	189.1	40.0	6,165	83	0	0	0	0	0	55	13	15
Ban Phraek	39.1	39.1	0.0	1,052	14	0	11	0	0	3	0	0	0
Phak Hai	189.0	189.0	0.0	5,086	69	69	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	2,812	38	0	0	0	0	0	0	0	38
Maharat	120.1	120.1	0.0	3,232	44	0	17	13	0	14	0	0	0
Lat Bua Luang	199.9	136.9	63.0	5,379	73	0	0	0	0	0	0	50	23
Wang Noi	219.2	0.0	219.2	5,899	80	0	0	0	0	0	0	0	80
Sena	205.6	198.9	6.7	5,533	75	29	0	0	0	0	0	43	2
Uthai	186.8	2.5	184.3	5,027	68	0	0	0	0	0	1	0	67
Pathum Thani	1,525.9	485.5	1,040.4	59,300	801	0	0	0	0	0	0	255	546
Muang Pathum Thani	120.2	120.2	0.0	4,671	63	0	0	0	0	0	0	63	0
Sam Khok	95.0	95.0	0.0	3,692	50	0	0	0	0	0	0	50	0
Lat Lum Kaeo	188.1	188.1	0.0	7,310	99	0	0	0	0	0	0	99	0
Thanya Buri	112.1	8.7	103.4	4,356	59	0	0	0	0	0	0	5	54
Lam Luk Ka	297.7	6.0	291.7	11,569	156	0	0	0	0	0	0	3	153
Klong Laung	299.2	67.5	231.7	11,628	157	0	0	0	0	0	0	35	122
Nong Sua	413.6	0.0	413.6	16,073	217	0	0	0	0	0	0	0	217
Nonthaburi	622.3	273.6	348.7	6,000	81	0	0	0	0	0	0	36	45
Muang Nonthaburi	77.0	42.3	34.7	742	10	0	0	0	0	0	0	6	5
Krusi	57.4	0.0	57.4	553	7	0	0	0	0	0	0	0	7
Bang Yai	96.4	25.9	70.5	929	13	0	0	0	0	0	0	3	9
Bang Bua Thong	116.4	116.4	0.0	1,122	15	0	0	0	0	0	0	15	0
Pak Kret	89.0	89.0	0.0	858	12	0	0	0	0	0	0	12	0
Sai Noi	186.1	0.0	186.1	1,794	24	0	0	0	0	0	0	0	24
Sara Buri	3,576.6	186.3	3,390.3	138,600	1,871	0	14	84	0	0	0	0	1,774
Muang Sara Buri	503.8	0.0	503.8	19,523	264	0	0	0	0	0	0	0	264
Kaeng Khoi	871.1	0.0	871.1	33,757	456	0	0	0	0	0	0	0	456
Don Phunt	65.6	65.6	0.0	2,542	34	0	11	23	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	10,812	146	0	0	49	0	0	0	0	97
Phra Phutthabat	324.6	0.0	324.6	12,579	170	0	0	0	0	0	0	0	170
Muak Lek	752.5	0.0	752.5	29,161	394	0	0	0	0	0	0	0	394
Wihan Daeng	228.8	0.0	228.8	8,866	120	0	0	0	0	0	0	0	120
Saohai	125.1	0.0	125.1	4,848	65	0	0	0	0	0	0	0	65
Nong Khae	293.8	0.0	293.8	11,385	154	0	0	0	0	0	0	0	154
Nong Saeng	97.4	0.0	97.4	3,774	51	0	0	0	0	0	0	0	51
Nong Don	34.9	27.0	7.9	1,352	18	0	2	12	0	0	0	0	4
Total	18,741.8	6,037.4	12,704.4	464,500	6,271	883	238	222	10	397	83	466	3,972

Table 10.3.32 Livestock Wastewater Quantity by Sub-area (Swine, 2001)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine W.W. Generation (m3/day)	Breakdown by Sub-area (m3/day)							Swine W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	33,900	458	53	0	0	10	53	0	0	342
Muang Chai Nat	255.4	147.0	108.4	3,506	47	6	0	0	10	11	0	0	20
Manorom	225.6	0.0	225.6	3,097	42	0	0	0	0	0	0	0	42
Wat Sing	606.3	0.0	606.3	8,322	112	0	0	0	0	0	0	0	112
Sankhaburi	354.8	249.0	105.8	4,870	66	42	0	0	0	4	0	0	20
Sanphaya	228.3	228.3	0.0	3,134	42	4	0	0	0	38	0	0	0
Hankha	799.3	0.0	799.3	10,971	148	0	0	0	0	0	0	0	148
Sing Buri	822.5	822.5	0.0	14,300	193	81	25	0	0	87	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,954	26	7	4	0	0	15	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,537	21	21	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	598	8	8	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,312	45	42	0	0	0	2	0	0	0
Phrom Buri	82.5	82.5	0.0	1,434	19	2	0	0	0	17	0	0	0
In Buri	314.3	314.3	0.0	5,464	74	0	22	0	0	51	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	79,000	1,067	0	139	0	0	7	0	0	920
Muang Lop Buri	565.6	426.8	138.8	7,207	97	0	73	0	0	0	0	0	24
Khok Samrong	982.5	17.5	965.0	12,519	169	0	3	0	0	0	0	0	166
Chai Badan	1,253.0	0.0	1,253.0	15,966	216	0	0	0	0	0	0	0	216
Tha Luang	538.9	0.0	538.9	6,867	93	0	0	0	0	0	0	0	93
Tha Wung	242.8	242.8	0.0	3,094	42	0	34	0	0	7	0	0	0
Ban Mi	585.7	162.4	423.3	7,463	101	0	28	0	0	0	0	0	73
Pattana Nikom	517.0	0.0	517.0	6,588	89	0	0	0	0	0	0	0	89
Sa Boat	304.7	0.0	304.7	3,883	52	0	0	0	0	0	0	0	52
Khok Charoen	317.1	0.0	317.1	4,041	55	0	0	0	0	0	0	0	55
Lam San Thi	447.0	0.0	447.0	5,696	77	0	0	0	0	0	0	0	77
Nang Muang	445.5	0.0	445.5	5,677	77	0	0	0	0	0	0	0	77
Ang Thong	968.4	888.2	80.2	73,400	991	717	0	0	0	192	0	0	82
Muang Ang Thong	102.9	102.0	0.9	7,799	105	42	0	0	0	62	0	0	1
Chaiyo	72.3	72.3	0.0	5,460	74	0	0	0	0	74	0	0	0
Pa Mok	80.9	80.9	0.0	6,132	83	27	0	0	0	56	0	0	0
Pha Thong	219.4	212.4	7.0	16,629	224	217	0	0	0	0	0	0	7
Wiset Chai Chan	224.7	189.3	35.4	17,031	230	194	0	0	0	0	0	0	36
Samko	86.9	50.0	36.9	6,587	89	51	0	0	0	0	0	0	38
Sawaengha	181.3	181.3	0.0	13,742	186	186	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	82,300	1,111	199	61	165	0	95	99	210	282
Muang Ayutthaya	130.6	130.6	0.0	4,204	57	3	3	15	0	19	17	0	0
Tha Rua	106.2	106.2	0.0	3,419	46	0	0	46	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	6,403	86	0	5	81	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,851	65	28	0	0	0	0	0	24	14
Bang Sai	219.7	219.7	0.0	7,072	95	36	0	0	0	0	1	58	0
Bang Ban	135.3	135.3	0.0	4,355	59	14	0	0	0	30	14	0	0
Bang Pahan	121.9	121.9	0.0	3,924	53	0	20	8	0	25	0	0	0
Bang Pa-In	229.1	189.1	40.0	7,375	100	0	0	0	0	0	66	16	17
Ban Phraek	39.1	39.1	0.0	1,259	17	0	13	0	0	4	0	0	0
Phak Hai	189.0	189.0	0.0	6,084	82	82	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	3,364	45	0	0	0	0	0	0	0	45
Maharat	120.1	120.1	0.0	3,866	52	0	20	15	0	16	0	0	0
Lat Bua Luang	199.9	136.9	63.0	6,435	87	0	0	0	0	0	0	59	27
Wang Noi	219.2	0.0	219.2	7,056	95	0	0	0	0	0	0	0	95
Sena	205.6	198.9	6.7	6,619	89	35	0	0	0	0	0	52	3
Uthai	186.8	2.5	184.3	6,013	81	0	0	0	0	0	1	0	80
Pathum Thani	1,525.9	485.5	1,040.4	71,000	958	0	0	0	0	0	0	305	654
Muang Pathum Thani	120.2	120.2	0.0	5,593	76	0	0	0	0	0	0	76	0
Sam Khok	95.0	95.0	0.0	4,420	60	0	0	0	0	0	0	60	0
Lat Lum Kaeo	188.1	188.1	0.0	8,752	118	0	0	0	0	0	0	118	0
Thanya Buri	112.1	8.7	103.4	5,216	70	0	0	0	0	0	0	5	65
Lam Luk Ka	297.7	6.0	291.7	13,852	187	0	0	0	0	0	0	4	183
Klong Laung	299.2	67.5	231.7	13,922	188	0	0	0	0	0	0	42	146
Nong Sua	413.6	0.0	413.6	19,245	260	0	0	0	0	0	0	0	260
Nonthaburi	622.3	273.6	348.7	7,100	96	0	0	0	0	0	0	42	54
Muang Nonthaburi	77.0	42.3	34.7	879	12	0	0	0	0	0	0	7	5
Krual	57.4	0.0	57.4	655	9	0	0	0	0	0	0	0	9
Bang Yai	96.4	25.9	70.5	1,100	15	0	0	0	0	0	0	4	11
Bang Bua Thong	116.4	116.4	0.0	1,328	18	0	0	0	0	0	0	18	0
Pak Kret	89.0	89.0	0.0	1,015	14	0	0	0	0	0	0	14	0
Sai Noi	186.1	0.0	186.1	2,123	29	0	0	0	0	0	0	0	29
Sara Buri	3,576.6	186.3	3,390.3	165,800	2,238	0	16	100	0	0	0	0	2,122
Muang Sara Buri	503.8	0.0	503.8	23,355	315	0	0	0	0	0	0	0	315
Kaeng Khoi	871.1	0.0	871.1	40,381	545	0	0	0	0	0	0	0	545
Don Phunt	65.6	65.6	0.0	3,041	41	0	14	27	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	12,934	175	0	0	59	0	0	0	0	116
Phra Phutthabat	324.6	0.0	324.6	15,047	203	0	0	0	0	0	0	0	203
Muak Lek	752.5	0.0	752.5	34,884	471	0	0	0	0	0	0	0	471
Wihan Daeng	228.8	0.0	228.8	10,606	143	0	0	0	0	0	0	0	143
Saohai	125.1	0.0	125.1	5,799	78	0	0	0	0	0	0	0	78
Nong Khae	293.8	0.0	293.8	13,620	184	0	0	0	0	0	0	0	184
Nong Saeng	97.4	0.0	97.4	4,515	61	0	0	0	0	0	0	0	61
Nong Don	34.9	27.0	7.9	1,618	22	0	3	14	0	0	0	0	5
Total	18,741.8	6,037.4	12,704.4	526,600	7,112	1,050	242	266	10	434	99	557	4,455

Table 10.3.33 Livestock Wastewater Quantity by Sub-area (Swine, 2011)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine W.W. Generation (m3/day)	Breakdown by Sub-area (m3/day)							Swine W.W. Out of Basin (m3/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	31,200	421	49	0	0	9	49	0	0	315
Muang Chai Nat	255.4	147.0	108.4	3,226	44	6	0	0	9	10	0	0	18
Manorom	225.6	0.0	225.6	2,850	38	0	0	0	0	0	0	0	38
Wat Sing	606.3	0.0	606.3	7,659	103	0	0	0	0	0	0	0	103
Sankhaburi	354.8	249.0	105.8	4,462	61	39	0	0	0	4	0	0	18
Sanphaya	228.3	228.3	0.0	2,884	39	4	0	0	0	35	0	0	0
Hankha	799.3	0.0	799.3	10,098	136	0	0	0	0	0	0	0	136
Sing Buri	822.5	822.5	0.0	12,000	162	68	21	0	0	73	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,640	22	6	3	0	0	13	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,290	17	17	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	502	7	7	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	2,779	38	35	0	0	0	2	0	0	0
Phrom Buri	82.5	82.5	0.0	1,204	16	2	0	0	0	15	0	0	0
In Buri	314.3	314.3	0.0	4,586	62	0	18	0	0	43	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	73,800	996	0	130	0	0	7	0	0	860
Muang Lop Buri	565.6	426.8	138.8	6,733	91	0	69	0	0	0	0	0	22
Khok Samrong	982.5	17.5	965.0	11,695	158	0	3	0	0	0	0	0	155
Chai Baden	1,253.0	0.0	1,253.0	14,915	201	0	0	0	0	0	0	0	201
Tha Luang	538.9	0.0	538.9	6,415	87	0	0	0	0	0	0	0	87
Tha Wung	242.8	242.8	0.0	2,890	39	0	32	0	0	7	0	0	0
Ban Mi	585.7	162.4	423.3	6,972	94	0	26	0	0	0	0	0	68
Pattana Nikom	517.0	0.0	517.0	6,154	83	0	0	0	0	0	0	0	83
Sa Boat	304.7	0.0	304.7	3,627	49	0	0	0	0	0	0	0	49
Khok Charoen	317.1	0.0	317.1	3,775	51	0	0	0	0	0	0	0	51
Lam San Thi	447.0	0.0	447.0	5,321	72	0	0	0	0	0	0	0	72
Nang Muang	445.5	0.0	445.5	5,303	72	0	0	0	0	0	0	0	72
Ang Thong	968.4	888.2	80.2	93,200	1,258	911	0	0	0	243	0	0	104
Muang Ang Thong	102.9	102.0	0.9	9,903	134	54	0	0	0	79	0	0	1
Chaiyo	72.3	72.3	0.0	6,958	94	0	0	0	0	94	0	0	0
Pa Mok	80.9	80.9	0.0	7,786	105	34	0	0	0	71	0	0	0
Pha Thong	219.4	212.4	7.0	21,115	285	276	0	0	0	0	0	0	9
Wiset Chai Chan	224.7	189.3	35.4	21,625	292	246	0	0	0	0	0	0	46
Samko	86.9	50.0	36.9	8,363	113	65	0	0	0	0	0	0	48
Sawaengha	181.3	181.3	0.0	17,449	236	236	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	98,800	1,334	239	74	199	0	114	119	252	339
Muang Ayutthaya	130.6	130.6	0.0	5,047	68	4	4	17	0	23	20	0	0
Tha Rua	106.2	106.2	0.0	4,104	55	0	0	55	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	7,687	104	0	6	98	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	5,824	79	34	0	0	0	0	0	28	16
Bang Sai	219.7	219.7	0.0	8,490	115	44	0	0	0	0	1	70	0
Bang Ban	135.3	135.3	0.0	5,229	71	17	0	0	0	36	17	0	0
Bang Pahan	121.9	121.9	0.0	4,711	64	0	24	10	0	30	0	0	0
Bang Pa-In	229.1	189.1	40.0	8,854	120	0	0	0	0	0	79	19	21
Ban Phraek	39.1	39.1	0.0	1,511	20	0	15	0	0	5	0	0	0
Phak Hai	189.0	189.0	0.0	7,304	99	99	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	4,038	55	0	0	0	0	0	0	0	55
Maharat	120.1	120.1	0.0	4,641	63	0	24	18	0	20	0	0	0
Lat Bua Luang	199.9	136.9	63.0	7,725	104	0	0	0	0	0	0	71	33
Wang Noi	219.2	0.0	219.2	8,471	114	0	0	0	0	0	0	0	114
Sena	205.6	198.9	6.7	7,945	107	41	0	0	0	0	0	62	3
Uthai	186.8	2.5	184.3	7,219	97	0	0	0	0	0	1	0	96
Pathum Thani	1,525.9	485.5	1,040.4	85,200	1,150	0	0	0	0	0	0	366	784
Muang Pathum Thani	120.2	120.2	0.0	6,711	91	0	0	0	0	0	0	91	0
Sam Khok	95.0	95.0	0.0	5,304	72	0	0	0	0	0	0	72	0
Lat Lum Kaeo	188.1	188.1	0.0	10,503	142	0	0	0	0	0	0	142	0
Thanya Buri	112.1	8.7	103.4	6,259	84	0	0	0	0	0	0	7	78
Lam Luk Ka	297.7	6.0	291.7	16,622	224	0	0	0	0	0	0	5	220
Klong Laung	299.2	67.5	231.7	16,706	226	0	0	0	0	0	0	51	175
Nong Sua	413.6	0.0	413.6	23,094	312	0	0	0	0	0	0	0	312
Nonthaburi	622.3	273.6	348.7	8,500	115	0	0	0	0	0	0	50	64
Muang Nonthaburi	77.0	42.3	34.7	1,052	14	0	0	0	0	0	0	8	6
Kruai	57.4	0.0	57.4	784	11	0	0	0	0	0	0	0	11
Bang Yai	96.4	25.9	70.5	1,317	18	0	0	0	0	0	0	5	13
Bang Bua Thong	116.4	116.4	0.0	1,590	21	0	0	0	0	0	0	21	0
Pak Kret	89.0	89.0	0.0	1,216	16	0	0	0	0	0	0	16	0
Sai Noi	186.1	0.0	186.1	2,542	34	0	0	0	0	0	0	0	34
Sara Buri	3,576.6	186.3	3,390.3	199,000	2,687	0	19	120	0	0	0	0	2,547
Muang Sara Buri	503.8	0.0	503.8	28,031	378	0	0	0	0	0	0	0	378
Kaeng Khoi	871.1	0.0	871.1	48,468	654	0	0	0	0	0	0	0	654
Don Phut	65.6	65.6	0.0	3,650	49	0	16	33	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	15,523	210	0	0	70	0	0	0	0	139
Phra Phutthabat	324.6	0.0	324.6	18,061	244	0	0	0	0	0	0	0	244
Muak Lek	752.5	0.0	752.5	41,869	565	0	0	0	0	0	0	0	565
Wihan Daeng	228.8	0.0	228.8	12,730	172	0	0	0	0	0	0	0	172
Saohai	125.1	0.0	125.1	6,960	94	0	0	0	0	0	0	0	94
Nong Khae	293.8	0.0	293.8	16,347	221	0	0	0	0	0	0	0	221
Nong Saeng	97.4	0.0	97.4	5,419	73	0	0	0	0	0	0	0	73
Nong Don	34.9	27.0	7.9	1,942	26	0	3	17	0	0	0	0	6
Total	18,741.8	6,037.4	12,704.4	601,700	8,123	1,266	244	319	9	486	119	668	5,012

Table 10.3.34 Livestock W.W. Generated BOD by Sub-area (Swine, 1996)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Swine BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	35,300	7,060	813	0	0	147	825	0	0	5,275
Muang Chai Nat	255.4	147.0	108.4	3,650	730	98	0	0	147	176	0	0	310
Manorom	225.6	0.0	225.6	3,225	645	0	0	0	0	0	0	0	645
Wat Sing	606.3	0.0	606.3	8,666	1,733	0	0	0	0	0	0	0	1,733
Sankhaburi	354.8	249.0	105.8	5,071	1,014	647	0	0	0	65	0	0	302
Sanphaya	228.3	228.3	0.0	3,263	653	68	0	0	0	584	0	0	0
Hankha	799.3	0.0	799.3	11,425	2,285	0	0	0	0	0	0	0	2,285
Sing Buri	822.5	822.5	0.0	17,100	3,420	1,432	452	0	0	1,536	0	0	0
Muang Sing Buri	112.4	112.4	0.0	2,337	467	130	63	0	0	274	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,838	368	368	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	715	143	143	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,961	792	749	0	0	0	43	0	0	0
Phrom Buri	82.5	82.5	0.0	1,715	343	34	0	0	0	309	0	0	0
In Buri	314.3	314.3	0.0	6,534	1,307	8	388	0	0	910	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	81,600	16,320	0	2,122	0	0	115	0	0	14,084
Muang Lop Buri	565.6	426.8	138.8	7,444	1,489	0	1,123	0	0	0	0	0	365
Khok Samrong	982.5	17.5	965.0	12,931	2,586	0	46	0	0	0	0	0	2,540
Chai Badan	1,253.0	0.0	1,253.0	16,492	3,298	0	0	0	0	0	0	0	3,298
Tha Luang	538.9	0.0	538.9	7,093	1,419	0	0	0	0	0	0	0	1,419
Tha Wung	242.8	242.8	0.0	3,196	639	0	525	0	0	115	0	0	0
Ban Mi	585.7	162.4	423.3	7,709	1,542	0	427	0	0	0	0	0	1,114
Pattana Nikom	517.0	0.0	517.0	6,605	1,361	0	0	0	0	0	0	0	1,361
Sa Boat	304.7	0.0	304.7	4,010	802	0	0	0	0	0	0	0	802
Khok Charoen	317.1	0.0	317.1	4,174	835	0	0	0	0	0	0	0	835
Lam San Thi	447.0	0.0	447.0	5,883	1,177	0	0	0	0	0	0	0	1,177
Nang Muang	445.5	0.0	445.5	5,864	1,173	0	0	0	0	0	0	0	1,173
Ang Thong	968.4	888.2	80.2	57,800	11,560	8,368	0	0	0	2,235	0	0	957
Muang Ang Thong	102.9	102.0	0.9	6,142	1,228	495	0	0	0	722	0	0	11
Chaiyo	72.3	72.3	0.0	4,315	863	0	0	0	0	863	0	0	0
Pa Mok	80.9	80.9	0.0	4,829	966	316	0	0	0	649	0	0	0
Pha Thong	219.4	212.4	7.0	13,095	2,619	2,535	0	0	0	0	0	0	84
Wiset Chai Chan	224.7	189.3	35.4	13,411	2,682	2,260	0	0	0	0	0	0	423
Samko	86.9	50.0	36.9	5,187	1,037	597	0	0	0	0	0	0	440
Sawaengha	181.3	181.3	0.0	10,821	2,164	2,164	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	68,800	13,760	2,466	759	2,048	0	1,173	1,224	2,596	3,494
Muang Ayutthaya	130.6	130.6	0.0	3,515	703	41	38	180	0	237	207	0	0
Tha Rua	106.2	106.2	0.0	2,858	572	0	0	572	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	5,353	1,071	0	64	1,006	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,055	811	350	0	0	0	0	0	292	169
Bang Sai	219.7	219.7	0.0	5,912	1,182	452	0	0	0	0	6	724	0
Bang Ban	135.3	135.3	0.0	3,641	728	179	0	0	0	371	179	0	0
Bang Pahan	121.9	121.9	0.0	3,280	656	0	245	100	0	311	0	0	0
Bang Pa-In	229.1	189.1	40.0	6,165	1,233	0	0	0	0	0	818	200	215
Ban Phraek	39.1	39.1	0.0	1,052	210	0	159	0	0	51	0	0	0
Phak Hai	189.0	189.0	0.0	5,086	1,017	1,017	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	2,812	562	0	0	0	0	0	0	0	562
Maharat	120.1	120.1	0.0	3,232	646	0	252	191	0	203	0	0	0
Lat Bua Luang	199.9	136.9	63.0	5,379	1,076	0	0	0	0	0	0	737	339
Wang Noi	219.2	0.0	219.2	5,899	1,180	0	0	0	0	0	0	0	1,180
Sena	205.6	198.9	6.7	5,533	1,107	427	0	0	0	0	0	643	36
Uthai	186.8	2.5	184.3	5,027	1,005	0	0	0	0	0	13	0	992
Pathum Thani	1,525.9	465.5	1,040.4	59,300	11,860	0	0	0	0	0	0	3,774	8,086
Muang Pathum Thani	120.2	120.2	0.0	4,671	934	0	0	0	0	0	0	934	0
Sam Khok	95.0	95.0	0.0	3,692	738	0	0	0	0	0	0	738	0
Lat Lum Kaeo	188.1	188.1	0.0	7,310	1,462	0	0	0	0	0	0	1,462	0
Thanya Buri	112.1	8.7	103.4	4,356	871	0	0	0	0	0	0	68	804
Lam Luk Ka	297.7	6.0	291.7	11,569	2,314	0	0	0	0	0	0	47	2,267
Klong Laung	299.2	67.5	231.7	11,628	2,326	0	0	0	0	0	0	525	1,801
Nong Sua	413.6	0.0	413.6	16,073	3,215	0	0	0	0	0	0	0	3,215
Nonthaburi	622.3	273.6	348.7	6,000	1,200	0	0	0	0	0	0	528	672
Muang Nonthaburi	77.0	42.3	34.7	742	148	0	0	0	0	0	0	82	67
Krueai	57.4	0.0	57.4	553	111	0	0	0	0	0	0	0	111
Bang Yai	96.4	25.9	70.5	929	186	0	0	0	0	0	0	50	136
Bang Bua Thong	116.4	116.4	0.0	1,122	224	0	0	0	0	0	0	224	0
Pak Kret	89.0	89.0	0.0	858	172	0	0	0	0	0	0	172	0
Sai Noi	186.1	0.0	186.1	1,794	359	0	0	0	0	0	0	0	359
Sara Buri	3,576.6	186.3	3,390.3	138,600	27,720	0	201	1,243	0	0	0	0	26,276
Muang Sara Buri	503.8	0.0	503.8	19,523	3,905	0	0	0	0	0	0	0	3,905
Kaeng Khoi	871.1	0.0	871.1	33,757	6,751	0	0	0	0	0	0	0	6,751
Don Phunt	65.6	65.6	0.0	2,542	508	0	170	339	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	10,812	2,162	0	0	726	0	0	0	0	1,436
Phra Phutthabat	324.6	0.0	324.6	12,579	2,516	0	0	0	0	0	0	0	2,516
Muak Lek	752.5	0.0	752.5	29,161	5,832	0	0	0	0	0	0	0	5,832
Wihan Daeng	228.8	0.0	228.8	8,866	1,773	0	0	0	0	0	0	0	1,773
Saohai	125.1	0.0	125.1	4,848	970	0	0	0	0	0	0	0	970
Nong Khae	293.8	0.0	293.8	11,385	2,277	0	0	0	0	0	0	0	2,277
Nong Saeng	97.4	0.0	97.4	3,774	755	0	0	0	0	0	0	0	755
Nong Don	34.9	27.0	7.9	1,352	270	0	31	178	0	0	0	0	61
Total	18,741.8	6,037.4	12,704.4	464,500	92,900	13,079	3,533	3,292	147	5,884	1,224	6,897	56,845

Table 10.3.35 Livestock W.W. Generated BOD by Sub-area (Swine, 2001)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Swine BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	33,900	6,780	781	0	0	141	792	0	0	5,066
Muang Chai Nat	255.4	147.0	108.4	3,506	701	94	0	0	141	169	0	0	298
Manorom	225.6	0.0	225.6	3,097	619	0	0	0	0	0	0	0	619
Wat Sing	606.3	0.0	606.3	8,322	1,664	0	0	0	0	0	0	0	1,664
Sankhaburi	354.8	249.0	105.8	4,870	974	621	0	0	0	62	0	0	290
Sanphaya	228.3	228.3	0.0	3,134	627	66	0	0	0	561	0	0	0
Hankha	799.3	0.0	799.3	10,971	2,194	0	0	0	0	0	0	0	2,194
Sing Buri	622.5	622.5	0.0	14,300	2,860	1,198	378	0	0	1,285	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,954	391	109	53	0	0	229	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,537	307	307	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	598	120	120	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,312	662	626	0	0	0	36	0	0	0
Phrom Buri	82.5	82.5	0.0	1,434	287	29	0	0	0	258	0	0	0
In Buri	314.3	314.3	0.0	5,464	1,093	7	325	0	0	761	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	79,000	15,800	0	2,054	0	0	111	0	0	13,635
Muang Lop Buri	565.6	426.8	138.8	7,207	1,441	0	1,088	0	0	0	0	0	354
Khok Samrong	982.5	17.5	965.0	12,519	2,504	0	45	0	0	0	0	0	2,459
Chai Badan	1,253.0	0.0	1,253.0	15,966	3,193	0	0	0	0	0	0	0	3,193
Tha Luang	538.9	0.0	538.9	6,867	1,373	0	0	0	0	0	0	0	1,373
Tha Wung	242.8	242.8	0.0	3,094	619	0	508	0	0	111	0	0	0
Ban Mi	585.7	162.4	423.3	7,463	1,493	0	414	0	0	0	0	0	1,079
Pattana Nikom	517.0	0.0	517.0	6,588	1,318	0	0	0	0	0	0	0	1,318
Sa Boat	304.7	0.0	304.7	3,883	777	0	0	0	0	0	0	0	777
Khok Charoen	317.1	0.0	317.1	4,041	808	0	0	0	0	0	0	0	808
Lam San Thi	447.0	0.0	447.0	5,696	1,139	0	0	0	0	0	0	0	1,139
Nang Muang	445.5	0.0	445.5	5,677	1,135	0	0	0	0	0	0	0	1,135
Ang Thong	968.4	888.2	80.2	73,400	14,680	10,626	0	0	0	2,838	0	0	1,216
Muang Ang Thong	102.9	102.0	0.9	7,799	1,560	629	0	0	0	917	0	0	14
Chaiyo	72.3	72.3	0.0	5,480	1,096	0	0	0	0	1,096	0	0	0
Pa Mok	80.9	80.9	0.0	6,132	1,226	402	0	0	0	825	0	0	0
Pha Thong	219.4	212.4	7.0	16,629	3,326	3,220	0	0	0	0	0	0	106
Wiset Chai Chan	224.7	189.3	35.4	17,031	3,406	2,870	0	0	0	0	0	0	537
Samko	86.9	50.0	36.9	6,587	1,317	758	0	0	0	0	0	0	559
Sawaengha	181.3	181.3	0.0	13,742	2,748	2,748	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	82,300	16,460	2,950	908	2,450	0	1,404	1,464	3,105	4,179
Muang Ayutthaya	130.6	130.6	0.0	4,204	841	49	46	215	0	283	248	0	0
Tha Rua	106.2	106.2	0.0	3,419	684	0	0	684	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	6,403	1,281	0	77	1,204	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,851	970	419	0	0	0	0	0	349	202
Bang Shai	219.7	219.7	0.0	7,072	1,414	540	0	0	0	0	8	867	0
Bang Ban	135.3	135.3	0.0	4,355	871	214	0	0	0	444	214	0	0
Bang Pahan	121.9	121.9	0.0	3,924	785	0	293	120	0	372	0	0	0
Bang Pa-In	229.1	189.1	40.0	7,375	1,475	0	0	0	0	0	979	239	258
Ban Phraek	39.1	39.1	0.0	1,259	252	0	191	0	0	61	0	0	0
Phak Hai	189.0	189.0	0.0	6,084	1,217	1,217	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	3,364	673	0	0	0	0	0	0	0	673
Maharat	120.1	120.1	0.0	3,866	773	0	302	228	0	243	0	0	0
Lat Bua Luang	199.9	136.9	63.0	6,435	1,287	0	0	0	0	0	0	881	406
Wang Noi	219.2	0.0	219.2	7,056	1,411	0	0	0	0	0	0	0	1,411
Sena	205.6	198.9	6.7	6,619	1,324	511	0	0	0	0	0	769	43
Uthai	186.8	2.5	184.3	6,013	1,203	0	0	0	0	0	16	0	1,187
Pathum Thani	1,525.9	485.5	1,040.4	71,000	14,200	0	0	0	0	0	0	4,518	9,682
Muang Pathum Thani	120.2	120.2	0.0	5,593	1,119	0	0	0	0	0	0	1,119	0
Sam Khok	95.0	95.0	0.0	4,420	884	0	0	0	0	0	0	884	0
Lat Lum Kaeo	188.1	188.1	0.0	8,752	1,750	0	0	0	0	0	0	1,750	0
Thanya Buri	112.1	8.7	103.4	5,216	1,043	0	0	0	0	0	0	81	962
Lam Luk Ka	297.7	6.0	291.7	13,852	2,770	0	0	0	0	0	0	56	2,715
Klong Laung	299.2	67.5	231.7	13,922	2,784	0	0	0	0	0	0	628	2,156
Nong Sua	413.6	0.0	413.6	19,245	3,849	0	0	0	0	0	0	0	3,849
Nonthaburi	622.3	273.6	348.7	7,100	1,420	0	0	0	0	0	0	624	796
Muang Nonthaburi	77.0	42.3	34.7	879	176	0	0	0	0	0	0	97	79
Krusi	57.4	0.0	57.4	655	131	0	0	0	0	0	0	0	131
Bang Yai	96.4	25.9	70.5	1,100	220	0	0	0	0	0	0	59	161
Bang Bua Thong	116.4	116.4	0.0	1,328	266	0	0	0	0	0	0	266	0
Pak Kret	89.0	89.0	0.0	1,015	203	0	0	0	0	0	0	203	0
Sai Noi	186.1	0.0	186.1	2,123	425	0	0	0	0	0	0	0	425
Sara Buri	3,576.6	186.3	3,390.3	165,800	33,160	0	240	1,467	0	0	0	0	31,453
Muang Sara Buri	503.8	0.0	503.8	23,355	4,671	0	0	0	0	0	0	0	4,671
Kaeng Khoi	871.1	0.0	871.1	40,381	8,076	0	0	0	0	0	0	0	8,076
Don Phunt	65.6	65.6	0.0	3,041	608	0	203	405	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	12,934	2,587	0	0	869	0	0	0	0	1,718
Phra Phutthabat	324.6	0.0	324.6	15,047	3,009	0	0	0	0	0	0	0	3,009
Muak Lek	752.5	0.0	752.5	34,884	6,977	0	0	0	0	0	0	0	6,977
Wihan Daeng	228.8	0.0	228.8	10,606	2,121	0	0	0	0	0	0	0	2,121
Saohai	125.1	0.0	125.1	5,799	1,160	0	0	0	0	0	0	0	1,160
Nong Khae	293.8	0.0	293.8	13,620	2,724	0	0	0	0	0	0	0	2,724
Nong Saeng	97.4	0.0	97.4	4,515	903	0	0	0	0	0	0	0	903
Nong Don	34.9	27.0	7.9	1,618	324	0	37	213	0	0	0	0	73
Total	18,741.8	6,037.4	12,704.4	526,800	105,360	15,555	3,580	3,938	141	6,429	1,464	8,248	66,006

Table 10.3.36 Livestock W.W. Generated BOD by Sub-area (Swine, 2011)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine Generated BOD (kg/day)	Breakdown by Sub-area (kg/day)							Swine BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	31,200	6,240	719	0	0	130	729	0	0	4,663
Muang Chai Nat	255.4	147.0	108.4	3,226	645	87	0	0	130	155	0	0	274
Manorom	225.6	0.0	225.6	2,850	570	0	0	0	0	0	0	0	570
Wat Sing	606.3	0.0	606.3	7,659	1,532	0	0	0	0	0	0	0	1,532
Sankhaburi	354.8	249.0	105.8	4,482	896	572	0	0	0	57	0	0	267
Sanphaya	228.3	228.3	0.0	2,884	577	60	0	0	0	516	0	0	0
Hankha	799.3	0.0	799.3	10,098	2,020	0	0	0	0	0	0	0	2,020
Sing Buri	822.5	822.5	0.0	12,000	2,400	1,005	317	0	0	1,078	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,640	328	91	44	0	0	192	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,290	258	258	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	502	100	100	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	2,779	556	526	0	0	0	30	0	0	0
Phrom Buri	82.5	82.5	0.0	1,204	241	24	0	0	0	217	0	0	0
In Buri	314.3	314.3	0.0	4,586	917	6	273	0	0	639	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	73,800	14,760	0	1,919	0	0	104	0	0	12,738
Muang Lop Buri	565.6	426.8	138.8	6,733	1,347	0	1,016	0	0	0	0	0	330
Khok Samrong	982.5	17.5	965.0	11,695	2,339	0	42	0	0	0	0	0	2,297
Chai Badan	1,253.0	0.0	1,253.0	14,915	2,983	0	0	0	0	0	0	0	2,983
Tha Luang	538.9	0.0	538.9	6,415	1,283	0	0	0	0	0	0	0	1,283
Tha Wung	242.8	242.8	0.0	2,890	578	0	474	0	0	104	0	0	0
Ban Mi	585.7	162.4	423.3	6,972	1,394	0	387	0	0	0	0	0	1,008
Pattana Nikom	517.0	0.0	517.0	6,154	1,231	0	0	0	0	0	0	0	1,231
Sa Boat	304.7	0.0	304.7	3,627	725	0	0	0	0	0	0	0	725
Khok Charoen	317.1	0.0	317.1	3,775	755	0	0	0	0	0	0	0	755
Lam San Thi	447.0	0.0	447.0	5,321	1,064	0	0	0	0	0	0	0	1,064
Nang Muang	445.5	0.0	445.5	5,303	1,061	0	0	0	0	0	0	0	1,061
Ang Thong	968.4	888.2	80.2	93,200	18,640	13,493	0	0	0	3,603	0	0	1,544
Muang Ang Thong	102.9	102.0	0.9	9,903	1,981	799	0	0	0	1,165	0	0	17
Chaiyo	72.3	72.3	0.0	6,958	1,392	0	0	0	0	1,392	0	0	0
Pa Mok	80.9	80.9	0.0	7,786	1,557	510	0	0	0	1,047	0	0	0
Pha Thong	219.4	212.4	7.0	21,115	4,223	4,088	0	0	0	0	0	0	135
Wiset Chai Chan	224.7	189.3	35.4	21,625	4,325	3,644	0	0	0	0	0	0	681
Samko	86.9	50.0	36.9	8,363	1,673	962	0	0	0	0	0	0	710
Sawaengha	181.3	181.3	0.0	17,449	3,490	3,490	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	98,800	19,760	3,541	1,090	2,942	0	1,685	1,758	3,728	5,017
Muang Ayutthaya	130.6	130.6	0.0	5,047	1,009	59	55	258	0	340	298	0	0
Tha Rua	106.2	106.2	0.0	4,104	821	0	0	821	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	7,687	1,537	0	92	1,445	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	5,824	1,165	503	0	0	0	0	0	419	243
Bang Sai	219.7	219.7	0.0	8,490	1,698	648	0	0	0	0	9	1,040	0
Bang Ban	135.3	135.3	0.0	5,229	1,046	257	0	0	0	533	257	0	0
Bang Pahan	121.9	121.9	0.0	4,711	942	0	352	144	0	447	0	0	0
Bang Pa-In	229.1	189.1	40.0	8,854	1,771	0	0	0	0	0	1,175	287	309
Ban Phraek	39.1	39.1	0.0	1,511	302	0	229	0	0	73	0	0	0
Phak Hai	189.0	189.0	0.0	7,304	1,461	1,461	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	4,038	808	0	0	0	0	0	0	0	808
Maharat	120.1	120.1	0.0	4,641	928	0	362	274	0	292	0	0	0
Lat Bua Luang	199.9	136.9	63.0	7,725	1,545	0	0	0	0	0	0	1,058	487
Wang Noi	219.2	0.0	219.2	8,471	1,694	0	0	0	0	0	0	0	1,694
Sena	205.6	198.9	6.7	7,945	1,589	614	0	0	0	0	0	924	52
Uthai	186.8	2.5	184.3	7,219	1,444	0	0	0	0	0	19	0	1,424
Pathum Thani	1,525.9	485.5	1,040.4	85,200	17,040	0	0	0	0	0	0	5,422	11,618
Muang Pathum Thani	120.2	120.2	0.0	6,711	1,342	0	0	0	0	0	0	1,342	0
Sam Khok	95.0	95.0	0.0	5,304	1,061	0	0	0	0	0	0	1,061	0
Lat Lum Kaeo	188.1	188.1	0.0	10,503	2,101	0	0	0	0	0	0	2,101	0
Thanya Buri	112.1	8.7	103.4	6,259	1,252	0	0	0	0	0	0	97	1,155
Lam Luk Ka	297.7	6.0	291.7	16,622	3,324	0	0	0	0	0	0	67	3,257
Klong Laung	299.2	67.5	231.7	16,706	3,341	0	0	0	0	0	0	754	2,587
Nong Sua	413.6	0.0	413.6	23,094	4,619	0	0	0	0	0	0	0	4,619
Nonthaburi	622.3	273.6	348.7	8,500	1,700	0	0	0	0	0	0	747	953
Muang Nonthaburi	77.0	42.3	34.7	1,052	210	0	0	0	0	0	0	116	95
Kruai	57.4	0.0	57.4	784	157	0	0	0	0	0	0	0	157
Bang Yai	96.4	25.9	70.5	1,317	263	0	0	0	0	0	0	71	193
Bang Bua Thong	116.4	116.4	0.0	1,590	318	0	0	0	0	0	0	318	0
Pak Kret	89.0	89.0	0.0	1,216	243	0	0	0	0	0	0	243	0
Sai Noi	186.1	0.0	186.1	2,542	508	0	0	0	0	0	0	0	508
Sara Buri	3,576.6	186.3	3,390.3	199,000	39,800	0	288	1,785	0	0	0	0	37,727
Muang Sara Buri	503.8	0.0	503.8	28,031	5,606	0	0	0	0	0	0	0	5,606
Kaeng Khoi	871.1	0.0	871.1	48,468	9,694	0	0	0	0	0	0	0	9,694
Don Phunt	65.6	65.6	0.0	3,650	730	0	244	486	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	15,523	3,105	0	0	1,043	0	0	0	0	2,062
Phra Phutthabat	324.6	0.0	324.6	18,061	3,612	0	0	0	0	0	0	0	3,612
Muak Lek	752.5	0.0	752.5	41,869	8,374	0	0	0	0	0	0	0	8,374
Wihan Daeng	228.8	0.0	228.8	12,730	2,546	0	0	0	0	0	0	0	2,546
Saohai	125.1	0.0	125.1	6,960	1,392	0	0	0	0	0	0	0	1,392
Nong Khae	293.8	0.0	293.8	16,347	3,269	0	0	0	0	0	0	0	3,269
Nong Saeng	97.4	0.0	97.4	5,419	1,084	0	0	0	0	0	0	0	1,084
Nong Don	34.9	27.0	7.9	1,942	388	0	45	256	0	0	0	0	88
Total	18,741.8	6,037.4	12,704.4	601,700	120,340	18,758	3,614	4,727	130	7,199	1,758	9,897	74,250

Table 10.3.37 Livestock W.W. Discharged BOD by Sub-area (Swine, 1996)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine Discharged BOD (kg/day)	Breakdown by Sub-area (kg/day)							Swine BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	35,300	3,530	407	0	0	73	412	0	0	2,638
Muang Chai Nat	255.4	147.0	108.4	3,650	365	49	0	0	73	88	0	0	155
Manorom	225.6	0.0	225.6	3,225	322	0	0	0	0	0	0	0	322
Wat Sing	606.3	0.0	606.3	8,666	867	0	0	0	0	0	0	0	867
Sankhaburi	354.8	249.0	105.8	5,071	507	323	0	0	0	32	0	0	151
Sanphaya	228.3	228.3	0.0	3,263	326	34	0	0	0	292	0	0	0
Hankha	799.3	0.0	799.3	11,425	1,142	0	0	0	0	0	0	0	1,142
Sing Buri	822.5	822.5	0.0	17,100	1,710	716	226	0	0	768	0	0	0
Muang Sing Buri	112.4	112.4	0.0	2,337	234	65	32	0	0	137	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,838	184	184	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	715	72	72	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,961	396	374	0	0	0	22	0	0	0
Phrom Buri	82.5	82.5	0.0	1,715	172	17	0	0	0	154	0	0	0
In Buri	314.3	314.3	0.0	6,534	653	4	194	0	0	455	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	81,600	8,160	0	1,061	0	0	57	0	0	7,042
Muang Lop Buri	565.6	426.8	138.8	7,444	744	0	562	0	0	0	0	0	183
Khok Samrong	982.5	17.5	965.0	12,931	1,293	0	23	0	0	0	0	0	1,270
Chai Badan	1,253.0	0.0	1,253.0	16,492	1,649	0	0	0	0	0	0	0	1,649
Tha Luang	538.9	0.0	538.9	7,093	709	0	0	0	0	0	0	0	709
Tha Wung	242.8	242.8	0.0	3,196	320	0	262	0	0	57	0	0	0
Ban Mi	585.7	162.4	423.3	7,709	771	0	214	0	0	0	0	0	557
Pattana Nikom	517.0	0.0	517.0	6,805	680	0	0	0	0	0	0	0	680
Sa Boat	304.7	0.0	304.7	4,010	401	0	0	0	0	0	0	0	401
Khok Charoen	317.1	0.0	317.1	4,174	417	0	0	0	0	0	0	0	417
Lam San Thi	447.0	0.0	447.0	5,883	588	0	0	0	0	0	0	0	588
Nang Muang	445.5	0.0	445.5	5,864	586	0	0	0	0	0	0	0	586
Ang Thong	968.4	888.2	80.2	57,600	5,760	4,184	0	0	0	1,117	0	0	479
Muang Ang Thong	102.9	102.0	0.9	6,142	614	248	0	0	0	361	0	0	5
Chaiyo	72.3	72.3	0.0	4,315	432	0	0	0	0	432	0	0	0
Pa Mok	80.9	80.9	0.0	4,829	483	158	0	0	0	325	0	0	0
Pha Thong	219.4	212.4	7.0	13,095	1,310	1,268	0	0	0	0	0	0	42
Wiset Chai Chan	224.7	189.3	35.4	13,411	1,341	1,130	0	0	0	0	0	0	211
Samko	86.9	50.0	36.9	5,187	519	298	0	0	0	0	0	0	220
Sawaengha	181.3	181.3	0.0	10,821	1,082	1,082	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	68,800	6,880	1,233	379	1,024	0	587	612	1,298	1,747
Muang Ayutthaya	130.6	130.6	0.0	3,515	351	20	19	90	0	118	104	0	0
Tha Rua	106.2	106.2	0.0	2,858	286	0	0	286	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	5,353	535	0	32	503	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,055	406	175	0	0	0	0	0	146	84
Bang Sha!	219.7	219.7	0.0	5,912	591	226	0	0	0	0	3	362	0
Bang Ban	135.3	135.3	0.0	3,641	364	89	0	0	0	185	89	0	0
Bang Pahan	121.9	121.9	0.0	3,280	328	0	122	50	0	156	0	0	0
Bang Pa-In	229.1	189.1	40.0	6,165	617	0	0	0	0	0	409	100	108
Ban Phraek	39.1	39.1	0.0	1,052	105	0	80	0	0	26	0	0	0
Phak Hai	189.0	189.0	0.0	5,086	509	509	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	2,812	281	0	0	0	0	0	0	0	281
Maharat	120.1	120.1	0.0	3,232	323	0	126	95	0	102	0	0	0
Lat Bua Luang	199.9	136.9	63.0	5,379	538	0	0	0	0	0	0	368	170
Wang Noi	219.2	0.0	219.2	5,899	590	0	0	0	0	0	0	0	590
Sena	205.6	198.9	6.7	5,533	553	214	0	0	0	0	0	322	16
Uthai	188.8	2.5	184.3	5,027	503	0	0	0	0	0	7	0	496
Pathum Thani	1,525.9	485.5	1,040.4	59,300	5,930	0	0	0	0	0	0	1,887	4,043
Muang Pathum Thani	120.2	120.2	0.0	4,671	467	0	0	0	0	0	0	467	0
Sam Khok	95.0	95.0	0.0	3,692	369	0	0	0	0	0	0	369	0
Lat Lum Kaeo	188.1	188.1	0.0	7,310	731	0	0	0	0	0	0	731	0
Thanya Buri	112.1	8.7	103.4	4,356	436	0	0	0	0	0	0	34	402
Lam Luk Ka	297.7	6.0	291.7	11,569	1,157	0	0	0	0	0	0	23	1,134
Klong Laung	299.2	67.5	231.7	11,628	1,163	0	0	0	0	0	0	262	900
Nong Sua	413.6	0.0	413.6	16,073	1,607	0	0	0	0	0	0	0	1,607
Nonthaburi	622.3	273.6	348.7	6,000	600	0	0	0	0	0	0	264	336
Muang Nonthaburi	77.0	42.3	34.7	742	74	0	0	0	0	0	0	41	33
Krual	57.4	0.0	57.4	553	55	0	0	0	0	0	0	0	55
Bang Yai	96.4	25.9	70.5	929	93	0	0	0	0	0	0	25	68
Bang Bua Thong	116.4	116.4	0.0	1,122	112	0	0	0	0	0	0	112	0
Pak Kret	89.0	89.0	0.0	858	86	0	0	0	0	0	0	86	0
Sai Noi	186.1	0.0	186.1	1,794	179	0	0	0	0	0	0	0	179
Sara Buri	3,576.6	186.3	3,390.3	138,600	13,860	0	100	622	0	0	0	0	13,138
Muang Sara Buri	503.8	0.0	503.8	19,523	1,952	0	0	0	0	0	0	0	1,952
Kaeng Khoi	871.1	0.0	871.1	33,757	3,376	0	0	0	0	0	0	0	3,376
Don Phunt	65.6	65.6	0.0	2,542	254	0	85	169	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	10,812	1,081	0	0	363	0	0	0	0	718
Phra Phutthabat	324.6	0.0	324.6	12,579	1,258	0	0	0	0	0	0	0	1,258
Muak Lek	752.5	0.0	752.5	29,161	2,916	0	0	0	0	0	0	0	2,916
Wihan Daeng	228.8	0.0	228.8	8,866	887	0	0	0	0	0	0	0	887
Saohai	125.1	0.0	125.1	4,846	485	0	0	0	0	0	0	0	485
Nong Khae	293.8	0.0	293.8	11,385	1,139	0	0	0	0	0	0	0	1,139
Nong Saeng	97.4	0.0	97.4	3,774	377	0	0	0	0	0	0	0	377
Nong Don	34.9	27.0	7.9	1,352	135	0	16	89	0	0	0	0	31
Total	18,741.8	6,037.4	12,704.4	464,500	46,450	6,540	1,766	1,646	73	2,942	612	3,446	29,423

Table 10.3.38 Livestock W.W. Discharged BOD by Sub-area (Swine, 2001)

Province / Amphoe	Area (km2) Admin. Total	Within Basin	Out of Basin	Number of Swine (head)	Swine Discharged BOD (kg/day)	Breakdown by Sub-area (kg/day) Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Swine BOD Out of Basin (kg/day)
Chai Nat	2,469.7	624.3	1,845.4	33,900	3,390	391	0	0	70	396	0	0	2,533
Muang Chai Nat	255.4	147.0	108.4	3,506	351	47	0	0	70	84	0	0	149
Manorom	225.6	0.0	225.6	3,097	310	0	0	0	0	0	0	0	310
Wat Sing	606.3	0.0	606.3	8,322	832	0	0	0	0	0	0	0	832
Sankhaburi	354.8	249.0	105.8	4,870	487	311	0	0	0	31	0	0	145
Sanphaya	228.3	228.3	0.0	3,134	313	33	0	0	0	281	0	0	0
Hankha	799.3	0.0	799.3	10,971	1,097	0	0	0	0	0	0	0	1,097
Sing Buri	822.5	822.5	0.0	14,300	1,430	599	189	0	0	642	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,954	195	54	26	0	0	115	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,537	154	154	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	598	60	60	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	3,312	331	313	0	0	0	18	0	0	0
Phrom Buri	82.5	82.5	0.0	1,434	143	14	0	0	0	129	0	0	0
In Buri	314.3	314.3	0.0	5,464	546	3	162	0	0	381	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	79,000	7,900	0	1,027	0	0	55	0	0	6,818
Muang Lop Buri	565.6	426.8	138.8	7,207	721	0	544	0	0	0	0	0	177
Khok Samrong	982.5	17.5	965.0	12,519	1,252	0	22	0	0	0	0	0	1,230
Chai Badan	1,253.0	0.0	1,253.0	15,966	1,597	0	0	0	0	0	0	0	1,597
Tha Luang	538.9	0.0	538.9	6,867	687	0	0	0	0	0	0	0	687
Tha Wung	242.8	242.8	0.0	3,094	309	0	254	0	0	55	0	0	0
Ban Mi	585.7	162.4	423.3	7,463	746	0	207	0	0	0	0	0	539
Pattana Nikom	517.0	0.0	517.0	6,588	659	0	0	0	0	0	0	0	659
Sa Boat	304.7	0.0	304.7	3,883	388	0	0	0	0	0	0	0	388
Khok Charoen	317.1	0.0	317.1	4,041	404	0	0	0	0	0	0	0	404
Lam San Thi	447.0	0.0	447.0	5,696	570	0	0	0	0	0	0	0	570
Nang Muang	445.5	0.0	445.5	5,677	568	0	0	0	0	0	0	0	568
Ang Thong	968.4	888.2	80.2	73,400	7,340	5,313	0	0	0	1,419	0	0	608
Muang Ang Thong	102.9	102.0	0.9	7,799	780	315	0	0	0	459	0	0	7
Chaiyo	72.3	72.3	0.0	5,480	548	0	0	0	0	548	0	0	0
Pa Mok	80.9	80.9	0.0	6,132	613	201	0	0	0	412	0	0	0
Pha Thong	219.4	212.4	7.0	16,629	1,663	1,610	0	0	0	0	0	0	53
Wiset Chai Chan	224.7	189.3	35.4	17,031	1,703	1,435	0	0	0	0	0	0	268
Samko	86.9	50.0	36.9	6,587	659	379	0	0	0	0	0	0	280
Sawaengha	181.3	181.3	0.0	13,742	1,374	1,374	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	82,300	8,230	1,475	454	1,225	0	702	732	1,553	2,090
Muang Ayutthaya	130.6	130.6	0.0	4,204	420	24	23	108	0	142	124	0	0
Tha Rua	106.2	106.2	0.0	3,419	342	0	0	342	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	6,403	640	0	38	602	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	4,851	485	210	0	0	0	0	0	174	101
Bang Shai	219.7	219.7	0.0	7,072	707	270	0	0	0	0	4	433	0
Bang Ban	135.3	135.3	0.0	4,355	436	107	0	0	0	222	107	0	0
Bang Pahan	121.9	121.9	0.0	3,924	392	0	146	60	0	186	0	0	0
Bang Pa-In	229.1	189.1	40.0	7,375	738	0	0	0	0	0	489	119	129
Ban Phraek	39.1	39.1	0.0	1,259	126	0	95	0	0	31	0	0	0
Phak Hai	189.0	189.0	0.0	6,084	608	608	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	3,364	336	0	0	0	0	0	0	0	336
Maharat	120.1	120.1	0.0	3,866	387	0	151	114	0	122	0	0	0
Lat Bua Luang	199.9	136.9	63.0	6,435	644	0	0	0	0	0	0	441	203
Wang Noi	219.2	0.0	219.2	7,056	706	0	0	0	0	0	0	0	706
Sena	205.6	198.9	6.7	6,619	662	256	0	0	0	0	0	385	22
Uthai	186.8	2.5	184.3	6,013	601	0	0	0	0	0	8	0	593
Pathum Thani	1,525.9	485.5	1,040.4	71,000	7,100	0	0	0	0	0	0	2,259	4,841
Muang Pathum Thani	120.2	120.2	0.0	5,593	559	0	0	0	0	0	0	559	0
Sam Khok	95.0	95.0	0.0	4,420	442	0	0	0	0	0	0	442	0
Lat Lum Kaeo	188.1	188.1	0.0	8,752	875	0	0	0	0	0	0	875	0
Thanya Buri	112.1	8.7	103.4	5,216	522	0	0	0	0	0	0	40	481
Lam Luk Ka	297.7	6.0	291.7	13,852	1,385	0	0	0	0	0	0	28	1,357
Klong Laung	299.2	67.5	231.7	13,922	1,392	0	0	0	0	0	0	314	1,078
Nong Sua	413.6	0.0	413.6	19,245	1,924	0	0	0	0	0	0	0	1,924
Nonthaburi	622.3	273.6	348.7	7,100	710	0	0	0	0	0	0	312	398
Muang Nonthaburi	77.0	42.3	34.7	879	88	0	0	0	0	0	0	48	40
Krual	57.4	0.0	57.4	655	65	0	0	0	0	0	0	0	65
Bang Yai	96.4	25.9	70.5	1,100	110	0	0	0	0	0	0	30	80
Bang Bua Thong	116.4	116.4	0.0	1,328	133	0	0	0	0	0	0	133	0
Pak Kret	89.0	89.0	0.0	1,015	102	0	0	0	0	0	0	102	0
Sai Noi	186.1	0.0	186.1	2,123	212	0	0	0	0	0	0	0	212
Sara Buri	3,576.6	186.3	3,390.3	165,800	16,580	0	120	744	0	0	0	0	15,716
Muang Sara Buri	503.8	0.0	503.8	23,355	2,335	0	0	0	0	0	0	0	2,335
Kaeng Khoi	871.1	0.0	871.1	40,381	4,038	0	0	0	0	0	0	0	4,038
Don Phut	65.6	65.6	0.0	3,041	304	0	102	203	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	12,934	1,293	0	0	434	0	0	0	0	859
Phra Phutthabat	324.6	0.0	324.6	15,047	1,505	0	0	0	0	0	0	0	1,505
Muak Lek	752.5	0.0	752.5	34,884	3,488	0	0	0	0	0	0	0	3,488
Wihan Daeng	228.8	0.0	228.8	10,606	1,061	0	0	0	0	0	0	0	1,061
Saohai	125.1	0.0	125.1	5,799	580	0	0	0	0	0	0	0	580
Nong Khae	293.8	0.0	293.8	13,620	1,362	0	0	0	0	0	0	0	1,362
Nong Saeng	97.4	0.0	97.4	4,515	452	0	0	0	0	0	0	0	452
Nong Don	34.9	27.0	7.9	1,618	162	0	19	107	0	0	0	0	37
Total	18,741.8	6,037.4	12,704.4	526,800	52,680	7,778	1,790	1,969	70	3,215	732	4,124	33,003

Table 10.3.39 Livestock W.W. Discharged BOD by Sub-area (Swine, 2011)

Province / Amphoe	Area (km2)			Number of Swine (head)	Swine Discharged BOD (kg/day)	Breakdown by Sub-area (kg/day)							Swine BOD Out of Basin (kg/day)
	Admin. Total	Within Basin	Out of Basin			Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	2,469.7	624.3	1,845.4	31,200	3,120	359	0	0	65	364	0	0	2,331
Muang Chai Nat	255.4	147.0	108.4	3,226	323	43	0	0	65	78	0	0	137
Manorom	225.6	0.0	225.6	2,850	285	0	0	0	0	0	0	0	285
Wat Sing	606.3	0.0	606.3	7,659	766	0	0	0	0	0	0	0	766
Sankhaburi	354.8	249.0	105.8	4,482	448	286	0	0	0	29	0	0	134
Sanphaya	228.3	228.3	0.0	2,884	288	30	0	0	0	258	0	0	0
Hankha	799.3	0.0	799.3	10,098	1,010	0	0	0	0	0	0	0	1,010
Sing Buri	822.5	822.5	0.0	12,000	1,200	502	158	0	0	539	0	0	0
Muang Sing Buri	112.4	112.4	0.0	1,640	164	46	22	0	0	96	0	0	0
Khai Bang Rachan	88.4	88.4	0.0	1,290	129	129	0	0	0	0	0	0	0
Tha Chang	34.4	34.4	0.0	502	50	50	0	0	0	0	0	0	0
Bang Rachan	190.5	190.5	0.0	2,779	278	263	0	0	0	15	0	0	0
Phrom Buri	82.5	82.5	0.0	1,204	120	12	0	0	0	108	0	0	0
In Buri	314.3	314.3	0.0	4,566	459	3	136	0	0	319	0	0	0
Lop Buri	6,199.8	849.5	5,350.3	73,800	7,380	0	959	0	0	52	0	0	6,369
Muang Lop Buri	565.6	426.8	138.8	6,733	673	0	508	0	0	0	0	0	165
Khok Samrong	982.5	17.5	965.0	11,695	1,170	0	21	0	0	0	0	0	1,149
Chai Badan	1,253.0	0.0	1,253.0	14,915	1,492	0	0	0	0	0	0	0	1,492
Tha Luang	538.9	0.0	538.9	6,415	641	0	0	0	0	0	0	0	641
Tha Wung	242.8	242.8	0.0	2,890	289	0	237	0	0	52	0	0	0
Ban Mi	585.7	162.4	423.3	6,972	697	0	193	0	0	0	0	0	504
Pattana Nikom	517.0	0.0	517.0	6,154	615	0	0	0	0	0	0	0	615
Sa Boat	304.7	0.0	304.7	3,627	363	0	0	0	0	0	0	0	363
Khok Charoen	317.1	0.0	317.1	3,775	377	0	0	0	0	0	0	0	377
Lam San Thi	447.0	0.0	447.0	5,321	532	0	0	0	0	0	0	0	532
Nang Muang	445.5	0.0	445.5	5,303	530	0	0	0	0	0	0	0	530
Ang Thong	968.4	888.2	80.2	93,200	9,320	6,747	0	0	0	1,802	0	0	772
Muang Ang Thong	102.9	102.0	0.9	9,903	990	399	0	0	0	582	0	0	9
Chaiyo	72.3	72.3	0.0	6,958	696	0	0	0	0	696	0	0	0
Pa Mok	80.9	80.9	0.0	7,786	779	255	0	0	0	524	0	0	0
Pha Thong	219.4	212.4	7.0	21,115	2,112	2,044	0	0	0	0	0	0	67
Wiset Chai Chan	224.7	189.3	35.4	21,625	2,163	1,822	0	0	0	0	0	0	341
Samko	86.9	50.0	36.9	8,363	836	481	0	0	0	0	0	0	355
Sawaengha	181.3	181.3	0.0	17,449	1,745	1,745	0	0	0	0	0	0	0
Ayutthaya	2,556.6	1,907.5	649.1	98,800	9,880	1,771	545	1,471	0	842	879	1,864	2,508
Muang Ayutthaya	130.6	130.6	0.0	5,047	505	29	27	129	0	170	149	0	0
Tha Rua	106.2	106.2	0.0	4,104	410	0	0	410	0	0	0	0	0
Nakhorn Luang	198.9	198.9	0.0	7,687	769	0	46	723	0	0	0	0	0
Bang Sai	150.7	119.3	31.4	5,824	582	252	0	0	0	0	0	209	121
Bang Sai	219.7	219.7	0.0	8,490	849	324	0	0	0	0	5	520	0
Bang Ban	135.3	135.3	0.0	5,229	523	128	0	0	0	266	128	0	0
Bang Pahan	121.9	121.9	0.0	4,711	471	0	176	72	0	223	0	0	0
Bang Pa-In	229.1	189.1	40.0	8,854	885	0	0	0	0	0	587	143	155
Ban Phraek	39.1	39.1	0.0	1,511	151	0	114	0	0	37	0	0	0
Phak Hai	189.0	189.0	0.0	7,304	730	730	0	0	0	0	0	0	0
Phachi	104.5	0.0	104.5	4,038	404	0	0	0	0	0	0	0	404
Maharat	120.1	120.1	0.0	4,641	464	0	181	137	0	146	0	0	0
Lat Bua Luang	199.9	136.9	63.0	7,725	773	0	0	0	0	0	0	529	243
Wang Noi	219.2	0.0	219.2	8,471	847	0	0	0	0	0	0	0	847
Sena	205.6	198.9	6.7	7,945	795	307	0	0	0	0	0	462	26
Uthai	186.8	2.5	184.3	7,219	722	0	0	0	0	0	10	0	712
Pathum Thani	1,525.9	485.5	1,040.4	85,200	8,520	0	0	0	0	0	0	2,711	5,809
Muang Pathum Thani	120.2	120.2	0.0	6,711	671	0	0	0	0	0	0	671	0
Sam Khok	95.0	95.0	0.0	5,304	530	0	0	0	0	0	0	530	0
Lat Lum Kaeo	188.1	188.1	0.0	10,503	1,050	0	0	0	0	0	0	1,050	0
Thanya Buri	112.1	8.7	103.4	6,259	626	0	0	0	0	0	0	49	577
Lam Luk Ka	297.7	6.0	291.7	16,622	1,662	0	0	0	0	0	0	34	1,629
Klong Luang	299.2	67.5	231.7	16,706	1,671	0	0	0	0	0	0	377	1,294
Nong Sua	413.6	0.0	413.6	23,094	2,309	0	0	0	0	0	0	0	2,309
Nonthaburi	622.3	273.6	348.7	8,500	850	0	0	0	0	0	0	374	476
Muang Nonthaburi	77.0	42.3	34.7	1,052	105	0	0	0	0	0	0	58	47
Kruai	57.4	0.0	57.4	784	78	0	0	0	0	0	0	0	78
Bang Yai	96.4	25.9	70.5	1,317	132	0	0	0	0	0	0	35	96
Sang Bua Thong	116.4	116.4	0.0	1,590	159	0	0	0	0	0	0	159	0
Pak Kret	89.0	89.0	0.0	1,216	122	0	0	0	0	0	0	122	0
Sai Noi	186.1	0.0	186.1	2,542	254	0	0	0	0	0	0	0	254
Sara Buri	3,576.6	186.3	3,390.3	199,000	19,900	0	144	892	0	0	0	0	18,863
Muang Sara Buri	503.8	0.0	503.8	28,031	2,803	0	0	0	0	0	0	0	2,803
Kaeng Khoi	871.1	0.0	871.1	48,468	4,847	0	0	0	0	0	0	0	4,847
Don Phunt	65.6	65.6	0.0	3,650	365	0	122	243	0	0	0	0	0
Ban Mo	279.0	93.7	185.3	15,523	1,552	0	0	521	0	0	0	0	1,031
Phra Phutthabat	324.6	0.0	324.6	18,061	1,806	0	0	0	0	0	0	0	1,806
Muak Lek	752.5	0.0	752.5	41,869	4,187	0	0	0	0	0	0	0	4,187
Wihan Daeng	228.8	0.0	228.8	12,730	1,273	0	0	0	0	0	0	0	1,273
Saohai	125.1	0.0	125.1	6,960	696	0	0	0	0	0	0	0	696
Nong Khae	293.8	0.0	293.8	16,347	1,635	0	0	0	0	0	0	0	1,635
Nong Saeng	97.4	0.0	97.4	5,419	542	0	0	0	0	0	0	0	542
Nong Don	34.9	27.0	7.9	1,942	194	0	22	128	0	0	0	0	44
Total	18,741.8	6,037.4	12,704.4	601,700	60,170	9,379	1,807	2,363	65	3,599	879	4,948	37,129

Table 10.3.40 Slaughterhouse Generated Wastewater Quantity by Sub-area (1996)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(m3/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	19,991	15,977	4,014	1,330	390	18,560	76	0	0	0	61	0	0	0	15
Muang Chai Nat	15,977	15,977	0	1,063	312	14,833	61	0	0	0	61	0	0	0	0
Wat Sing	4,014	0	4,014	267	78	3,727	15	0	0	0	0	0	0	0	15
Sing Buri	25,085	25,085	0	70	390	5,060	21	0	0	0	0	21	0	0	0
Muang Sing Buri	25,085	25,085	0	70	390	5,060	21	0	0	0	0	21	0	0	0
Lop Buri	56,646	40,036	16,610	190	6,150	27,650	149	0	105	0	0	0	0	0	44
Muang Lop Buri	40,036	40,036	0	134	4,347	19,542	105	0	105	0	0	0	0	0	0
Khok Samrong	10,553	0	10,553	35	1,146	5,151	28	0	0	0	0	0	0	0	28
Ban Mi	6,057	0	6,057	20	658	2,957	16	0	0	0	0	0	0	0	16
Ang Thong	23,413	23,413	0	1,060	1,100	29,870	116	0	0	0	0	116	0	0	0
Muang Ang Thong	11,782	11,782	0	533	554	15,031	58	0	0	0	0	58	0	0	0
Pa Mok	11,631	11,631	0	527	546	14,839	58	0	0	0	0	58	0	0	0
Ayutthaya	98,627	98,627	0	8,400	9,980	54,600	351	19	0	36	0	296	0	0	0
Muang Ayutthaya	83,138	83,138	0	7,081	8,413	46,025	296	0	0	0	0	296	0	0	0
Tha Rua	10,057	10,057	0	857	1,018	5,568	36	0	0	36	0	0	0	0	0
Sena	5,432	5,432	0	463	550	3,007	19	19	0	0	0	0	0	0	0
Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	754	0	0	0	0	0	0	754	0
Muang Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	754	0	0	0	0	0	0	754	0
Nonthaburi	510,255	411,080	99,175	4,800	4,070	47,760	238	0	0	0	0	0	0	238	0
Muang Nonthaburi	330,584	231,409	99,175	3,110	2,637	30,943	154	0	0	0	0	0	0	154	0
Bang Bua Thong	52,607	52,607	0	495	420	4,924	24	0	0	0	0	0	0	24	0
Pak Kret	127,064	127,064	0	1,195	1,014	11,893	59	0	0	0	0	0	0	59	0
Sara Buri	154,625	0	154,625	2,060	3,450	60,610	246	0	0	0	0	0	0	0	246
Muang Sara Buri	82,512	0	82,512	1,099	1,841	32,343	131	0	0	0	0	0	0	0	131
Kaeng Khoi	15,122	0	15,122	201	337	5,928	24	0	0	0	0	0	0	0	24
Phra Phutthabat	41,247	0	41,247	550	920	16,168	66	0	0	0	0	0	0	0	66
Nong Khae	15,744	0	15,744	210	351	6,171	25	0	0	0	0	0	0	0	25
Total	909,746	635,322	274,424	43,730	44,900	344,700	1,951	19	105	36	61	432	0	992	305

Table 10.3.41 Slaughterhouse Generated Wastewater Quantity by Sub-area (2001)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity Out of Basin
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)		Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	21,196	17,203	3,993	1,020	330	20,140	77	0	0	0	63	0	0	0	15
Muang Chai Nat	17,203	17,203	0	828	268	16,346	63	0	0	0	63	0	0	0	0
Wat Sing	3,993	0	3,993	192	62	3,794	15	0	0	0	0	0	0	0	15
Sing Buri	28,375	28,375	0	60	330	4,320	18	0	0	0	0	18	0	0	0
Muang Sing Buri	28,375	28,375	0	60	330	4,320	18	0	0	0	0	18	0	0	0
Lop Buri	60,842	42,918	17,924	130	5,090	29,360	144	0	101	0	0	0	0	0	42
Muang Lop Buri	42,918	42,918	0	92	3,590	20,711	101	0	101	0	0	0	0	0	0
Khok Samrong	11,363	0	11,363	24	951	5,483	27	0	0	0	0	0	0	0	27
Ban Mi	6,561	0	6,561	14	549	3,166	16	0	0	0	0	0	0	0	16
Ang Thong	25,387	25,387	0	940	940	34,970	130	0	0	0	0	130	0	0	0
Muang Ang Thong	13,327	13,327	0	493	493	18,358	68	0	0	0	0	68	0	0	0
Pa Mok	12,060	12,060	0	447	447	16,612	62	0	0	0	0	62	0	0	0
Ayutthaya	115,942	115,942	0	10,690	12,560	60,490	416	22	0	42	0	352	0	0	0
Muang Ayutthaya	98,140	98,140	0	9,049	10,632	51,202	352	0	0	0	0	352	0	0	0
Tha Rua	11,657	11,657	0	1,075	1,263	6,082	42	0	0	42	0	0	0	0	0
Sena	6,145	6,145	0	567	666	3,206	22	22	0	0	0	0	0	0	0
Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	728	0	0	0	0	0	0	728	0
Muang Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	728	0	0	0	0	0	0	728	0
Nonthaburi	634,326	507,268	127,058	4,100	3,470	54,640	247	0	0	0	0	0	0	247	0
Muang Nonthaburi	423,528	296,470	127,058	2,737	2,317	36,482	165	0	0	0	0	0	0	165	0
Bang Bua Thong	60,396	60,396	0	390	330	5,202	24	0	0	0	0	0	0	24	0
Pak Kret	150,402	150,402	0	972	823	12,955	59	0	0	0	0	0	0	59	0
Sara Buri	181,872	0	181,872	2,300	2,830	70,690	275	0	0	0	0	0	0	0	275
Muang Sara Buri	100,401	0	100,401	1,270	1,562	39,024	152	0	0	0	0	0	0	0	152
Kaeng Khoi	17,961	0	17,961	227	279	6,981	27	0	0	0	0	0	0	0	27
Phra Phutthabat	45,525	0	45,525	576	708	17,695	69	0	0	0	0	0	0	0	69
Nong Khae	17,985	0	17,985	227	280	6,990	27	0	0	0	0	0	0	0	27
Total	1,092,850	762,003	330,847	40,510	40,810	393,010	2,035	22	101	42	63	499	0	975	332

Table 10.3.42 Slaughterhouse Generated Wastewater Quantity by Sub-area (2011)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(m3/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	23,681	19,765	3,916	690	280	23,280	84	0	0	0	70	0	0	0	14
Muang Chai Nat	19,765	19,765	0	576	234	19,430	70	0	0	0	70	0	0	0	0
Wat Sing	3,916	0	3,916	114	46	3,850	14	0	0	0	0	0	0	0	14
Sing Buri	35,973	35,973	0	50	280	3,700	15	0	0	0	0	15	0	0	0
Muang Sing Buri	35,973	35,973	0	50	280	3,700	15	0	0	0	0	15	0	0	0
Lop Buri	70,011	49,320	20,691	110	3,050	32,790	135	0	95	0	0	0	0	0	40
Muang Lop Buri	49,320	49,320	0	77	2,149	23,099	95	0	95	0	0	0	0	0	0
Khok Samrong	13,056	0	13,056	21	569	6,115	25	0	0	0	0	0	0	0	25
Ban Mi	7,635	0	7,635	12	333	3,576	15	0	0	0	0	0	0	0	15
Ang Thong	29,753	29,753	0	700	800	45,180	159	0	0	0	0	159	0	0	0
Muang Ang Thong	16,896	16,896	0	398	454	25,657	90	0	0	0	0	90	0	0	0
Pa Mok	12,857	12,857	0	302	346	19,523	69	0	0	0	0	69	0	0	0
Ayutthaya	158,840	158,840	0	12,590	16,460	72,270	509	25	0	50	0	435	0	0	0
Muang Ayutthaya	135,531	135,531	0	10,742	14,045	61,665	435	0	0	0	0	435	0	0	0
Tha Rua	15,519	15,519	0	1,230	1,608	7,061	50	0	0	50	0	0	0	0	0
Sena	7,790	7,790	0	617	807	3,544	25	25	0	0	0	0	0	0	0
Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	714	0	0	0	0	0	0	714	0
Muang Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	714	0	0	0	0	0	0	714	0
Nonthaburi	985,488	776,941	208,547	3,510	2,970	68,400	281	0	0	0	0	0	0	281	0
Muang Nonthaburi	695,157	486,610	208,547	2,476	2,095	48,249	198	0	0	0	0	0	0	198	0
Bang Bua Thong	79,604	79,604	0	284	240	5,525	23	0	0	0	0	0	0	23	0
Pak Kret	210,727	210,727	0	751	635	14,626	60	0	0	0	0	0	0	60	0
Sara Buri	250,753	0	250,753	2,780	1,770	90,850	334	0	0	0	0	0	0	0	334
Muang Sara Buri	147,426	0	147,426	1,634	1,041	53,414	196	0	0	0	0	0	0	0	196
Kaeng Khoi	25,127	0	25,127	279	177	9,104	33	0	0	0	0	0	0	0	33
Phra Phutthabat	54,949	0	54,949	609	388	19,909	73	0	0	0	0	0	0	0	73
Nong Khae	23,251	0	23,251	258	164	8,424	31	0	0	0	0	0	0	0	31
Total	1,587,020	1,103,113	483,907	33,150	36,100	490,470	2,230	25	95	50	70	608	0	995	388

Table 10.3.43 Slaughterhouse Discharged Wastewater Quantity by Sub-area (1996)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity Out of Basin
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)		Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	19,991	15,977	4,014	1,330	390	18,560	94	0	0	0	75	0	0	0	19
Muang Chai Nat	15,977	15,977	0	1,063	312	14,833	75	0	0	0	75	0	0	0	0
Wat Sing	4,014	0	4,014	267	78	3,727	19	0	0	0	0	0	0	0	19
Sing Buri	25,085	25,085	0	70	390	5,060	26	0	0	0	0	26	0	0	0
Muang Sing Buri	25,085	25,085	0	70	390	5,060	26	0	0	0	0	26	0	0	0
Lop Buri	56,646	40,036	16,610	190	6,150	27,650	185	0	131	0	0	0	0	0	54
Muang Lop Buri	40,036	40,036	0	134	4,347	19,542	131	0	131	0	0	0	0	0	0
Khok Samrong	10,553	0	10,553	35	1,146	5,151	35	0	0	0	0	0	0	0	35
Ban Mi	6,057	0	6,057	20	658	2,957	20	0	0	0	0	0	0	0	20
Ang Thong	23,413	23,413	0	1,060	1,100	29,870	144	0	0	0	0	144	0	0	0
Muang Ang Thong	11,782	11,782	0	533	554	15,031	73	0	0	0	0	73	0	0	0
Pa Mok	11,631	11,631	0	527	546	14,839	72	0	0	0	0	72	0	0	0
Ayutthaya	98,627	98,627	0	8,400	9,980	54,600	436	24	0	44	0	367	0	0	0
Muang Ayutthaya	83,138	83,138	0	7,081	8,413	46,025	367	0	0	0	0	367	0	0	0
Tha Rua	10,057	10,057	0	857	1,018	5,568	44	0	0	44	0	0	0	0	0
Sena	5,432	5,432	0	463	550	3,007	24	24	0	0	0	0	0	0	0
Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	938	0	0	0	0	0	0	938	0
Muang Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	938	0	0	0	0	0	0	938	0
Nonthaburi	510,255	411,080	99,175	4,800	4,070	47,760	295	0	0	0	0	0	0	295	0
Muang Nonthaburi	330,584	231,409	99,175	3,110	2,637	30,943	191	0	0	0	0	0	0	191	0
Bang Bua Thong	52,607	52,607	0	495	420	4,924	30	0	0	0	0	0	0	30	0
Pak Kret	127,064	127,064	0	1,195	1,014	11,893	74	0	0	0	0	0	0	74	0
Sara Buri	154,625	0	154,625	2,060	3,450	60,610	306	0	0	0	0	0	0	0	306
Muang Sara Buri	82,512	0	82,512	1,099	1,841	32,343	164	0	0	0	0	0	0	0	164
Kaeng Khoi	15,122	0	15,122	201	337	5,928	30	0	0	0	0	0	0	0	30
Phra Phutthabat	41,247	0	41,247	550	920	16,168	82	0	0	0	0	0	0	0	82
Nong Khae	15,744	0	15,744	210	351	6,171	31	0	0	0	0	0	0	0	31
Total	909,746	635,322	274,424	43,730	44,900	344,700	2,426	24	131	44	75	537	0	1,234	380

Table 10.3.44 Slaughterhouse Discharged Wastewater Quantity by Sub-area (2001)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(m3/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	21,196	17,203	3,993	1,020	330	20,140	96	0	0	0	78	0	0	0	18
Muang Chai Nat	17,203	17,203	0	828	268	16,346	78	0	0	0	78	0	0	0	0
Wat Sing	3,993	0	3,993	192	62	3,794	18	0	0	0	0	0	0	0	18
Sing Buri	28,375	28,375	0	60	330	4,320	22	0	0	0	0	22	0	0	0
Muang Sing Buri	28,375	28,375	0	60	330	4,320	22	0	0	0	0	22	0	0	0
Lop Buri	60,842	42,918	17,924	130	5,090	29,360	179	0	126	0	0	0	0	0	53
Muang Lop Buri	42,918	42,918	0	92	3,590	20,711	126	0	126	0	0	0	0	0	0
Khok Samrong	11,363	0	11,363	24	951	5,483	33	0	0	0	0	0	0	0	33
Ban Mi	6,561	0	6,561	14	549	3,166	19	0	0	0	0	0	0	0	19
Ang Thong	25,387	25,387	0	940	940	34,970	161	0	0	0	0	161	0	0	0
Muang Ang Thong	13,327	13,327	0	493	493	18,358	85	0	0	0	0	85	0	0	0
Pa Mok	12,060	12,060	0	447	447	16,612	77	0	0	0	0	77	0	0	0
Ayutthaya	115,942	115,942	0	10,690	12,560	60,490	517	27	0	52	0	438	0	0	0
Muang Ayutthaya	98,140	98,140	0	9,049	10,632	51,202	438	0	0	0	0	438	0	0	0
Tha Rua	11,657	11,657	0	1,075	1,263	6,082	52	0	0	52	0	0	0	0	0
Sena	6,145	6,145	0	567	666	3,206	27	27	0	0	0	0	0	0	0
Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	906	0	0	0	0	0	0	906	0
Muang Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	906	0	0	0	0	0	0	906	0
Nonthaburi	634,326	507,268	127,058	4,100	3,470	54,640	307	0	0	0	0	0	0	307	0
Muang Nonthaburi	423,528	296,470	127,058	2,737	2,317	36,482	205	0	0	0	0	0	0	205	0
Bang Bua Thong	60,396	60,396	0	390	330	5,202	29	0	0	0	0	0	0	29	0
Pak Kret	150,402	150,402	0	972	823	12,955	73	0	0	0	0	0	0	73	0
Sara Buri	181,872	0	181,872	2,300	2,830	70,690	342	0	0	0	0	0	0	0	342
Muang Sara Buri	100,401	0	100,401	1,270	1,562	39,024	189	0	0	0	0	0	0	0	189
Kaeng Khoi	17,961	0	17,961	227	279	6,981	34	0	0	0	0	0	0	0	34
Phra Phutthabat	45,525	0	45,525	576	708	17,695	86	0	0	0	0	0	0	0	86
Nong Khae	17,985	0	17,985	227	280	6,990	34	0	0	0	0	0	0	0	34
Total	1,092,850	762,003	330,847	40,510	40,810	393,010	2,530	27	126	52	78	621	0	1,213	413

Table 10.3.45 Slaughterhouse Discharged Wastewater Quantity by Sub-area (2011)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			Total S.H. W.W. Quantity (m3/day)	Breakdown by Sub-area (m3/day)							S.H. W.W. Quantity Out of Basin
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)		Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	23,681	19,765	3,916	690	280	23,280	104	0	0	0	87	0	0	0	17
Muang Chai Nat	19,765	19,765	0	576	234	19,430	87	0	0	0	87	0	0	0	0
Wat Sing	3,916	0	3,916	114	46	3,850	17	0	0	0	0	0	0	0	17
Sing Buri	35,973	35,973	0	50	280	3,700	19	0	0	0	0	19	0	0	0
Muang Sing Buri	35,973	35,973	0	50	280	3,700	19	0	0	0	0	19	0	0	0
Lop Buri	70,011	49,320	20,691	110	3,050	32,790	168	0	118	0	0	0	0	0	50
Muang Lop Buri	49,320	49,320	0	77	2,149	23,099	118	0	118	0	0	0	0	0	0
Khok Samrong	13,056	0	13,056	21	569	6,115	31	0	0	0	0	0	0	0	31
Ban Mi	7,635	0	7,635	12	333	3,576	18	0	0	0	0	0	0	0	18
Ang Thong	29,753	29,753	0	700	800	45,180	197	0	0	0	0	197	0	0	0
Muang Ang Thong	16,896	16,896	0	398	454	25,657	112	0	0	0	0	112	0	0	0
Pa Mok	12,857	12,857	0	302	346	19,523	85	0	0	0	0	85	0	0	0
Ayutthaya	158,840	158,840	0	12,590	16,460	72,270	633	31	0	62	0	540	0	0	0
Muang Ayutthaya	135,531	135,531	0	10,742	14,045	61,665	540	0	0	0	0	540	0	0	0
Tha Rua	15,519	15,519	0	1,230	1,608	7,061	62	0	0	62	0	0	0	0	0
Sena	7,790	7,790	0	617	807	3,544	31	31	0	0	0	0	0	0	0
Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	888	0	0	0	0	0	0	888	0
Muang Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	888	0	0	0	0	0	0	888	0
Nonthaburi	985,488	776,941	208,547	3,510	2,970	68,400	349	0	0	0	0	0	0	349	0
Muang Nonthaburi	695,157	486,610	208,547	2,476	2,095	48,249	246	0	0	0	0	0	0	246	0
Bang Bua Thong	79,604	79,604	0	284	240	5,525	28	0	0	0	0	0	0	28	0
Pak Kret	210,727	210,727	0	751	635	14,626	75	0	0	0	0	0	0	75	0
Sara Buri	250,753	0	250,753	2,780	1,770	90,850	415	0	0	0	0	0	0	0	415
Muang Sara Buri	147,426	0	147,426	1,634	1,041	53,414	244	0	0	0	0	0	0	0	244
Kaeng Khoi	25,127	0	25,127	279	177	9,104	42	0	0	0	0	0	0	0	42
Phra Phutthabat	54,949	0	54,949	609	388	19,909	91	0	0	0	0	0	0	0	91
Nong Khae	23,251	0	23,251	258	164	8,424	38	0	0	0	0	0	0	0	38
Total	1,587,020	1,103,113	483,907	33,150	36,100	490,470	2,774	31	118	62	87	756	0	1,237	482

Table 10.3.46 Slaughterhouse Generated BOD by Sub-area (1996)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Generated	Breakdown by Sub-area (kg/day)							S.H. Gen.
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	BOD (kg/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	BOD Out of Basin
Chai Nat	19,991	15,977	4,014	1,330	390	18,560	143	0	0	0	114	0	0	0	29
Muang Chai Nat	15,977	15,977	0	1,063	312	14,833	114	0	0	0	114	0	0	0	0
Wat Sing	4,014	0	4,014	267	78	3,727	29	0	0	0	0	0	0	0	29
Sing Buri	25,085	25,085	0	70	390	5,060	39	0	0	0	0	39	0	0	0
Muang Sing Buri	25,085	25,085	0	70	390	5,060	39	0	0	0	0	39	0	0	0
Lop Buri	56,646	40,036	16,610	190	6,150	27,650	281	0	199	0	0	0	0	0	82
Muang Lop Buri	40,036	40,036	0	134	4,347	19,542	199	0	199	0	0	0	0	0	0
Khok Samrong	10,553	0	10,553	35	1,146	5,151	52	0	0	0	0	0	0	0	52
Ban Mi	6,057	0	6,057	20	658	2,957	30	0	0	0	0	0	0	0	30
Ang Thong	23,413	23,413	0	1,060	1,100	29,870	219	0	0	0	0	219	0	0	0
Muang Ang Thong	11,782	11,782	0	533	554	15,031	110	0	0	0	0	110	0	0	0
Pa Mok	11,631	11,631	0	527	546	14,839	109	0	0	0	0	109	0	0	0
Ayutthaya	98,627	98,627	0	8,400	9,980	54,600	661	36	0	67	0	558	0	0	0
Muang Ayutthaya	83,138	83,138	0	7,081	8,413	46,025	558	0	0	0	0	558	0	0	0
Tha Rua	10,057	10,057	0	857	1,018	5,568	67	0	0	67	0	0	0	0	0
Sena	5,432	5,432	0	463	550	3,007	36	36	0	0	0	0	0	0	0
Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	1,423	0	0	0	0	0	0	1,423	0
Muang Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	1,423	0	0	0	0	0	0	1,423	0
Nonthaburi	510,255	411,080	99,175	4,800	4,070	47,760	448	0	0	0	0	0	0	448	0
Muang Nonthaburi	330,584	231,409	99,175	3,110	2,637	30,943	290	0	0	0	0	0	0	290	0
Bang Bua Thong	52,607	52,607	0	495	420	4,924	46	0	0	0	0	0	0	46	0
Pak Kret	127,064	127,064	0	1,195	1,014	11,893	112	0	0	0	0	0	0	112	0
Sara Buri	154,625	0	154,625	2,060	3,450	60,610	465	0	0	0	0	0	0	0	465
Muang Sara Buri	82,512	0	82,512	1,099	1,841	32,343	248	0	0	0	0	0	0	0	248
Kaeng Khoi	15,122	0	15,122	201	337	5,928	45	0	0	0	0	0	0	0	45
Phra Phutthabat	41,247	0	41,247	550	920	16,168	124	0	0	0	0	0	0	0	124
Nong Khae	15,744	0	15,744	210	351	6,171	47	0	0	0	0	0	0	0	47
Total	909,746	635,322	274,424	43,730	44,900	344,700	3,680	36	199	67	114	815	0	1,872	576

Table 10.3.47 Slaughterhouse Generated BOD by Sub-area (2001)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Generated BOD	Breakdown by Sub-area (kg/day)							S.H. Gen. BOD
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(kg/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	21,196	17,203	3,993	1,020	330	20,140	146	0	0	0	118	0	0	0	27
Muang Chai Nat	17,203	17,203	0	828	268	16,346	118	0	0	0	118	0	0	0	0
Wat Sing	3,993	0	3,993	192	62	3,794	27	0	0	0	0	0	0	0	27
Sing Buri	28,375	28,375	0	60	330	4,320	33	0	0	0	0	33	0	0	0
Muang Sing Buri	28,375	28,375	0	60	330	4,320	33	0	0	0	0	33	0	0	0
Lop Buri	60,842	42,918	17,924	130	5,090	29,360	271	0	191	0	0	0	0	0	80
Muang Lop Buri	42,918	42,918	0	92	3,590	20,711	191	0	191	0	0	0	0	0	0
Khok Samrong	11,363	0	11,363	24	951	5,483	51	0	0	0	0	0	0	0	51
Ban Mi	6,561	0	6,561	14	549	3,166	29	0	0	0	0	0	0	0	29
Ang Thong	25,387	25,387	0	940	940	34,970	245	0	0	0	0	245	0	0	0
Muang Ang Thong	13,327	13,327	0	493	493	18,358	128	0	0	0	0	128	0	0	0
Pa Mok	12,060	12,060	0	447	447	16,612	116	0	0	0	0	116	0	0	0
Ayutthaya	115,942	115,942	0	10,690	12,560	60,490	785	42	0	79	0	664	0	0	0
Muang Ayutthaya	98,140	98,140	0	9,049	10,632	51,202	664	0	0	0	0	664	0	0	0
Tha Rua	11,657	11,657	0	1,075	1,263	6,082	79	0	0	79	0	0	0	0	0
Sena	6,145	6,145	0	567	666	3,206	42	42	0	0	0	0	0	0	0
Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	1,374	0	0	0	0	0	0	1,374	0
Muang Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	1,374	0	0	0	0	0	0	1,374	0
Nonthaburi	634,326	507,268	127,058	4,100	3,470	54,640	466	0	0	0	0	0	0	466	0
Muang Nonthaburi	423,528	296,470	127,058	2,737	2,317	36,482	311	0	0	0	0	0	0	311	0
Bang Bua Thong	60,396	60,396	0	390	330	5,202	44	0	0	0	0	0	0	44	0
Pak Kret	150,402	150,402	0	972	823	12,955	111	0	0	0	0	0	0	111	0
Sara Buri	181,872	0	181,872	2,300	2,830	70,690	519	0	0	0	0	0	0	0	519
Muang Sara Buri	100,401	0	100,401	1,270	1,562	39,024	286	0	0	0	0	0	0	0	286
Kaeng Khoi	17,961	0	17,961	227	279	6,981	51	0	0	0	0	0	0	0	51
Phra Phutthabat	45,525	0	45,525	576	708	17,695	130	0	0	0	0	0	0	0	130
Nong Khae	17,985	0	17,985	227	280	6,990	51	0	0	0	0	0	0	0	51
Total	1,092,850	762,003	330,847	40,510	40,810	393,010	3,839	42	191	79	118	942	0	1,840	626

Table 10.3.48 Slaughterhouse Generated BOD by Sub-area (2011)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Generated BOD	Breakdown by Sub-area (kg/day)							S.H. Gen. BOD
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(kg/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	23,681	19,765	3,916	690	280	23,280	158	0	0	0	132	0	0	0	26
Muang Chai Nat	19,765	19,765	0	576	234	19,430	132	0	0	0	132	0	0	0	0
Wat Sing	3,916	0	3,916	114	46	3,850	26	0	0	0	0	0	0	0	26
Sing Buri	35,973	35,973	0	50	280	3,700	28	0	0	0	0	28	0	0	0
Muang Sing Buri	35,973	35,973	0	50	280	3,700	28	0	0	0	0	28	0	0	0
Lop Buri	70,011	49,320	20,691	110	3,050	32,790	255	0	179	0	0	0	0	0	75
Muang Lop Buri	49,320	49,320	0	77	2,149	23,099	179	0	179	0	0	0	0	0	0
Khok Samrong	13,056	0	13,056	21	569	6,115	48	0	0	0	0	0	0	0	48
Ban Mi	7,635	0	7,635	12	333	3,576	28	0	0	0	0	0	0	0	28
Ang Thong	29,753	29,753	0	700	800	45,180	299	0	0	0	0	299	0	0	0
Muang Ang Thong	16,896	16,896	0	398	454	25,657	170	0	0	0	0	170	0	0	0
Pa Mok	12,857	12,857	0	302	346	19,523	129	0	0	0	0	129	0	0	0
Ayutthaya	158,840	158,840	0	12,590	16,460	72,270	961	47	0	94	0	820	0	0	0
Muang Ayutthaya	135,531	135,531	0	10,742	14,045	61,665	820	0	0	0	0	820	0	0	0
Tha Rua	15,519	15,519	0	1,230	1,608	7,061	94	0	0	94	0	0	0	0	0
Sena	7,790	7,790	0	617	807	3,544	47	47	0	0	0	0	0	0	0
Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	1,348	0	0	0	0	0	0	1,348	0
Muang Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	1,348	0	0	0	0	0	0	1,348	0
Nonthaburi	985,488	776,941	208,547	3,510	2,970	68,400	529	0	0	0	0	0	0	529	0
Muang Nonthaburi	695,157	486,610	208,547	2,476	2,095	48,249	373	0	0	0	0	0	0	373	0
Bang Bua Thong	79,604	79,604	0	284	240	5,525	43	0	0	0	0	0	0	43	0
Pak Kret	210,727	210,727	0	751	635	14,626	113	0	0	0	0	0	0	113	0
Sara Buri	250,753	0	250,753	2,780	1,770	90,850	630	0	0	0	0	0	0	0	630
Muang Sara Buri	147,426	0	147,426	1,634	1,041	53,414	370	0	0	0	0	0	0	0	370
Kaeng Khoi	25,127	0	25,127	279	177	9,104	63	0	0	0	0	0	0	0	63
Phra Phutthabat	54,949	0	54,949	609	388	19,909	138	0	0	0	0	0	0	0	138
Nong Khae	23,251	0	23,251	258	164	8,424	58	0	0	0	0	0	0	0	58
Total	1,587,020	1,103,113	483,907	33,150	36,100	490,470	4,208	47	179	94	132	1,148	0	1,877	731

Table 10.3.49 Slaughterhouse Discharged BOD by Sub-area (1996)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Disc'd BOD (kg/day)	Breakdown by Sub-area (kg/day)							S.H. Disc. BOD Out of Basin
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)		Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	19,991	15,977	4,014	1,330	390	16,560	10	0	0	0	8	0	0	0	2
Muang Chai Nat	15,977	15,977	0	1,063	312	14,833	8	0	0	0	8	0	0	0	0
Wat Sing	4,014	0	4,014	267	78	3,727	2	0	0	0	0	0	0	0	2
Sing Buri	25,085	25,085	0	70	390	5,060	3	0	0	0	0	3	0	0	0
Muang Sing Buri	25,085	25,085	0	70	390	5,060	3	0	0	0	0	3	0	0	0
Lop Buri	56,646	40,036	16,610	190	6,150	27,650	20	0	14	0	0	0	0	0	6
Muang Lop Buri	40,036	40,036	0	134	4,347	19,542	14	0	14	0	0	0	0	0	0
Khok Samrong	10,553	0	10,553	35	1,146	5,151	4	0	0	0	0	0	0	0	4
Ban Mi	6,057	0	6,057	20	658	2,957	2	0	0	0	0	0	0	0	2
Ang Thong	23,413	23,413	0	1,060	1,100	29,870	16	0	0	0	0	16	0	0	-0
Muang Ang Thong	11,782	11,782	0	533	554	15,031	8	0	0	0	0	8	0	0	0
Pa Mok	11,631	11,631	0	527	546	14,839	8	0	0	0	0	8	0	0	0
Ayutthaya	98,627	98,627	0	8,400	9,980	54,600	48	3	0	5	0	41	0	0	0
Muang Ayutthaya	83,138	83,138	0	7,081	8,413	46,025	41	0	0	0	0	41	0	0	0
Tha Rua	10,057	10,057	0	857	1,018	5,568	5	0	0	5	0	0	0	0	0
Sena	5,432	5,432	0	463	550	3,007	3	3	0	0	0	0	0	0	0
Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	104	0	0	0	0	0	0	104	0
Muang Pathum Thani	21,104	21,104	0	25,820	19,370	100,590	104	0	0	0	0	0	0	104	0
Nonthaburi	510,255	411,080	99,175	4,800	4,070	47,760	33	0	0	0	0	0	0	33	0
Muang Nonthaburi	330,584	231,409	99,175	3,110	2,637	30,943	21	0	0	0	0	0	0	21	0
Bang Bua Thong	52,607	52,607	0	495	420	4,924	3	0	0	0	0	0	0	3	0
Pak Kret	127,064	127,064	0	1,195	1,014	11,893	8	0	0	0	0	0	0	8	0
Sara Buri	154,625	0	154,625	2,060	3,450	60,610	34	0	0	0	0	0	0	0	34
Muang Sara Buri	82,512	0	82,512	1,099	1,841	32,343	18	0	0	0	0	0	0	0	18
Kaeng Khoi	15,122	0	15,122	201	337	5,928	3	0	0	0	0	0	0	0	3
Phra Phutthabat	41,247	0	41,247	550	920	16,168	9	0	0	0	0	0	0	0	9
Nong Khae	15,744	0	15,744	210	351	6,171	3	0	0	0	0	0	0	0	3
Total	909,746	635,322	274,424	43,730	44,900	344,700	268	3	14	5	8	59	0	136	42

Table 10.3.50 Slaughterhouse Discharged BOD by Sub-area (2001)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Disc'd BOD	Breakdown by Sub-area (kg/day)							S.H. Disc. BOD
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)	(kg/day)	Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	Out of Basin
Chai Nat	21,196	17,203	3,993	1,020	330	20,140	11	0	0	0	9	0	0	0	2
Muang Chai Nat	17,203	17,203	0	828	268	16,346	9	0	0	0	9	0	0	0	0
Wat Sing	3,993	0	3,993	192	62	3,794	2	0	0	0	0	0	0	0	2
Sing Buri	28,375	28,375	0	60	330	4,320	2	0	0	0	0	2	0	0	0
Muang Sing Buri	28,375	28,375	0	60	330	4,320	2	0	0	0	0	2	0	0	0
Lop Buri	60,842	42,918	17,924	130	5,090	29,360	20	0	14	0	0	0	0	0	6
Muang Lop Buri	42,918	42,918	0	92	3,590	20,711	14	0	14	0	0	0	0	0	0
Khok Samrong	11,363	0	11,363	24	951	5,483	4	0	0	0	0	0	0	0	4
Ban Mi	6,561	0	6,561	14	549	3,166	2	0	0	0	0	0	0	0	2
Ang Thong	25,387	25,387	0	940	940	34,970	18	0	0	0	0	18	0	0	0
Muang Ang Thong	13,327	13,327	0	493	493	18,358	9	0	0	0	0	9	0	0	0
Pa Mok	12,060	12,060	0	447	447	16,612	8	0	0	0	0	8	0	0	0
Ayutthaya	115,942	115,942	0	10,690	12,560	60,490	57	3	0	6	0	48	0	0	0
Muang Ayutthaya	98,140	98,140	0	9,049	10,632	51,202	48	0	0	0	0	48	0	0	0
Tha Rua	11,657	11,657	0	1,075	1,263	6,082	6	0	0	6	0	0	0	0	0
Sena	6,145	6,145	0	567	666	3,206	3	3	0	0	0	0	0	0	0
Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	100	0	0	0	0	0	0	100	0
Muang Pathum Thani	24,910	24,910	0	21,270	15,260	118,400	100	0	0	0	0	0	0	100	0
Nonthaburi	634,326	507,268	127,058	4,100	3,470	54,640	34	0	0	0	0	0	0	34	0
Muang Nonthaburi	423,528	296,470	127,058	2,737	2,317	36,482	23	0	0	0	0	0	0	23	0
Bang Bua Thong	60,396	60,396	0	390	330	5,202	3	0	0	0	0	0	0	3	0
Pak Kret	150,402	150,402	0	972	823	12,955	8	0	0	0	0	0	0	8	0
Sara Buri	181,872	0	181,872	2,300	2,830	70,690	38	0	0	0	0	0	0	0	38
Muang Sara Buri	100,401	0	100,401	1,270	1,562	39,024	21	0	0	0	0	0	0	0	21
Kaeng Khoi	17,961	0	17,961	227	279	6,981	4	0	0	0	0	0	0	0	4
Phra Phutthabat	45,525	0	45,525	576	708	17,695	9	0	0	0	0	0	0	0	9
Nong Khae	17,985	0	17,985	227	280	6,990	4	0	0	0	0	0	0	0	4
Total	1,092,850	762,003	330,847	40,510	40,810	393,010	279	3	14	6	9	69	0	134	46

Table 10.3.51 Slaughterhouse Discharged BOD by Sub-area (2011)

Province / Municipality	Population in 1992			No. of Slaughtered Livestock			S.H. Disc'd BOD (kg/day)	Breakdown by Sub-area (kg/day)							S.H. Disc. BOD Out of Basin
	Admin. Total	Within Basin	Out of Basin	Buffaloes (head)	Cattle (head)	Swine (head)		Noi River	Lop Buri River	Pasak River	Main R. (R0-R1)	Main R. (R1-R2)	Main R. (R2-R3)	Main R. (R3-R4)	
Chai Nat	23,681	19,765	3,916	690	280	23,280	11	0	0	0	10	0	0	0	2
Muang Chai Nat	19,765	19,765	0	576	234	19,430	10	0	0	0	10	0	0	0	0
Wat Sing	3,916	0	3,916	114	46	3,850	2	0	0	0	0	0	0	0	2
Sing Buri	35,973	35,973	0	50	280	3,700	2	0	0	0	0	2	0	0	0
Muang Sing Buri	35,973	35,973	0	50	280	3,700	2	0	0	0	0	2	0	0	0
Lop Buri	70,011	49,320	20,691	110	3,050	32,790	19	0	13	0	0	0	0	0	5
Muang Lop Buri	49,320	49,320	0	77	2,149	23,099	13	0	13	0	0	0	0	0	0
Khok Samrong	13,056	0	13,056	21	569	6,115	3	0	0	0	0	0	0	0	3
Ban Mi	7,635	0	7,635	12	333	3,576	2	0	0	0	0	0	0	0	2
Ang Thong	29,753	29,753	0	700	800	45,180	22	0	0	0	0	22	0	0	0
Muang Ang Thong	16,896	16,896	0	398	454	25,657	12	0	0	0	0	12	0	0	0
Pa Mok	12,857	12,857	0	302	346	19,523	9	0	0	0	0	9	0	0	0
Ayutthaya	158,840	158,840	0	12,590	16,460	72,270	70	3	0	7	0	60	0	0	0
Muang Ayutthaya	135,531	135,531	0	10,742	14,045	61,665	60	0	0	0	0	60	0	0	0
Tha Rua	15,519	15,519	0	1,230	1,608	7,061	7	0	0	7	0	0	0	0	0
Sena	7,790	7,790	0	617	807	3,544	3	3	0	0	0	0	0	0	0
Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	98	0	0	0	0	0	0	98	0
Muang Pathum Thani	32,521	32,521	0	12,720	10,490	154,000	98	0	0	0	0	0	0	98	0
Nonthaburi	985,488	776,941	208,547	3,510	2,970	68,400	39	0	0	0	0	0	0	39	0
Muang Nonthaburi	695,157	486,610	208,547	2,476	2,095	48,249	27	0	0	0	0	0	0	27	0
Bang Bua Thong	79,604	79,604	0	284	240	5,525	3	0	0	0	0	0	0	3	0
Pak Kret	210,727	210,727	0	751	635	14,626	8	0	0	0	0	0	0	8	0
Sara Buri	250,753	0	250,753	2,780	1,770	90,850	46	0	0	0	0	0	0	0	46
Muang Sara Buri	147,426	0	147,426	1,634	1,041	53,414	27	0	0	0	0	0	0	0	27
Kaeng Khoi	25,127	0	25,127	279	177	9,104	5	0	0	0	0	0	0	0	5
Phra Phutthabat	54,949	0	54,949	609	386	19,909	10	0	0	0	0	0	0	0	10
Nong Khae	23,251	0	23,251	258	164	8,424	4	0	0	0	0	0	0	0	4
Total	1,587,020	1,103,113	483,907	33,150	36,100	490,470	306	3	13	7	10	83	0	137	53

11.3 Computation for Required Pollution Load to be Reduced

Table 11.3.1 Required Pollution Load Reduction (1996, Category A)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	508	0.852	433	–	–
	Total	508	–	433	1,818	−1,385
R2	C2	360	0.292	105	–	–
	C3	1,234	0.479	591	–	–
	C4	46	0.604	28	–	–
	C5	998	0.685	684	–	–
	C6	2,775	0.962	2,669	–	–
	Total	5,413	–	4,077	9,556	−5,479
R3	P1	128	0.766	98	–	–
	P2	1,020	0.838	855	–	–
	(Pasak ST)	1,148	–	953	–	–
	L1	111	0.383	42	–	–
	L2	2,631	0.499	1,313	–	–
	L3	15	0.811	12	–	–
	L4	264	0.911	240	–	–
	(L.B. ST)	3,020	–	1,607	–	–
	N1	324	0.692	224	–	–
	N2	695	0.747	519	–	–
	N3	1,123	0.817	918	–	–
	N4	1,234	0.909	1,122	–	–
	(Noi ST)	3,376	–	2,782	–	–
	C7	395	1.000	395	–	–
	Total	7,939	–	5,738	6,231	−493
R4	C8	412	0.727	299	–	–
	C9	9,543	0.849	8,102	–	–
	C10	23,041	1.000	23,041	–	–
	Total	32,995	–	31,442	7,718	23,724

(1): from Table 10.4.1 of Main Report
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.2 Required Pollution Load Reduction (2001, Category A)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	553	0.852	471	–	–
	Total	553	–	471	1,818	-1,347
R2	C2	376	0.292	110	–	–
	C3	1,379	0.479	660	–	–
	C4	52	0.604	31	–	–
	C5	1,086	0.685	744	–	–
	C6	3,265	0.962	3,141	–	–
	Total	6,157	–	4,686	9,556	-4,870
R3	P1	129	0.766	99	–	–
	P2	1,135	0.838	951	–	–
	(Pasak ST)	1,264	–	1,050	–	–
			0.499	0	–	–
	L1	119	0.383	46	–	–
	L2	2,952	0.499	1,473	–	–
	L3	14	0.811	11	–	–
	L4	286	0.911	261	–	–
	(L.B. ST)	3,371	–	1,791	–	–
			0.747	0	–	–
	N1	340	0.692	235	–	–
	N2	750	0.747	560	–	–
	N3	1,184	0.817	967	–	–
	N4	1,326	0.909	1,205	–	–
	(Noi ST)	3,600	–	2,968	–	–
	C7	427	1.000	427	–	–
	Total	8,662	–	6,236	6,231	5
R4	C8	426	0.727	310	–	–
	C9	11,129	0.849	9,448	–	–
	C10	29,595	1.000	29,595	–	–
	Total	41,150	–	39,353	7,718	31,635

(1): from Table 10.4.2
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.3 Required Pollution Load Reduction (2011, Category A)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	653	0.852	556	-	-
	Total	653	-	556	1,818	-1,262
R2	C2	401	0.292	117	-	-
	C3	1,713	0.479	821	-	-
	C4	63	0.604	38	-	-
	C5	1,278	0.685	875	-	-
	C6	4,508	0.962	4,337	-	-
	Total	7,962	-	6,187	9,556	-3,369
R3	P1	117	0.766	90	-	-
	P2	1,398	0.838	1,171	-	-
	(Pasak ST)	1,515	-	1,261	-	-
	L1	133	0.383	51	-	-
	L2	3,650	0.499	1,821	-	-
	L3	11	0.811	9	-	-
	L4	339	0.911	309	-	-
	(L.B. ST)	4,133	-	2,190	-	-
	N1	362	0.692	251	-	-
	N2	861	0.747	643	-	-
	N3	1,299	0.817	1,062	-	-
	N4	1,529	0.909	1,390	-	-
	(Noi ST)	4,052	-	3,345	-	-
	C7	487	1.000	487	-	-
	Total	10,185	-	7,282	6,231	1,051
R4	C8	440	0.727	320	-	-
	C9	14,322	0.849	12,159	-	-
	C10	48,689	1.000	48,689	-	-
	Total	63,451	-	61,168	7,718	53,450

(1): from Table 10.4.3
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) - (4)

Table 11.3.4 Required Pollution Load Reduction (1996, Category B)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	172	0.852	147	–	–
	Total	172	–	147	460	-313
R2	C2	91	0.292	26	–	–
	C3	825	0.479	395	–	–
	C4	0	0.604	0	–	–
	C5	567	0.685	388	–	–
	C6	1,997	0.962	1,921	–	–
	Total	3,480	–	2,731	4,912	-2,181
R3	P1	0	0.766	0	–	–
	P2	1,600	0.838	1,340	–	–
	(Pasak ST)	1,600	–	1,340	–	–
	L1	91	0.383	35	–	–
	L2	664	0.499	331	–	–
	L3	0	0.811	0	–	–
	L4	49	0.911	45	–	–
	(L.B. ST)	804	–	411	–	–
	N1	51	0.692	35	–	–
	N2	188	0.747	141	–	–
	N3	226	0.817	185	–	–
	N4	897	0.909	816	–	–
	(Noi ST)	1,362	–	1,176	–	–
	C7	266	1.000	266	–	–
	Total	4,032	–	3,193	3,839	-646
R4	C8	452	0.727	329	–	–
	C9	8,338	0.849	7,079	–	–
	C10	4,764	1.000	4,764	–	–
	Total	13,554	–	12,171	2,768	9,403

(1): from Table 10.4.1
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.5 Required Pollution Load Reduction (2001, Category B)

Water Quality Checking Point	Sub-area	Sub-area Conc'd BOD Load (kg/day)	Pollution Load Remaining Ratio	Sub-area Run-off BOD Load (kg/day)	Allowable Pollution Load (kg/day)	Required Run-off Load Reduc'n
R1	C1	260	0.852	221	–	–
	Total	260	–	221	460	-239
R2	C2	130	0.292	38	–	–
	C3	1,217	0.479	583	–	–
	C4	0	0.604	0	–	–
	C5	799	0.685	548	–	–
	C6	3,028	0.962	2,913	–	–
	Total	5,174	–	4,082	4,912	-830
R3	P1	0	0.766	0	–	–
	P2	2,204	0.838	1,847	–	–
	(Pasak ST)	2,204	–	1,847	–	–
	L1	130	0.383	50	–	–
	L2	994	0.499	496	–	–
	L3	0	0.811	0	–	–
	L4	55	0.911	50	–	–
	(L.B. ST)	1,179	–	596	–	–
	N1	72	0.692	50	–	–
	N2	268	0.747	200	–	–
	N3	307	0.817	251	–	–
	N4	1,266	0.909	1,151	–	–
	(Noi ST)	1,914	–	1,652	–	–
	C7	296	1.000	296	–	–
	Total	5,593	–	4,391	3,839	552
R4	C8	575	0.727	418	–	–
	C9	9,036	0.849	7,672	–	–
	C10	5,165	1.000	5,165	–	–
	Total	14,775	–	13,254	2,768	10,486

(1): from Table 10.4.2
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.6 Required Pollution Load Reduction (2011, Category B)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	452	0.852	385	–	–
	Total	452	–	385	460	-75
R2	C2	207	0.292	60	–	–
	C3	2,067	0.479	990	–	–
	C4	0	0.604	0	–	–
	C5	1,312	0.685	898	–	–
	C6	5,685	0.962	5,469	–	–
	Total	9,271	–	7,418	4,912	2,506
R3	P1	0	0.766	0	–	–
	P2	3,322	0.838	2,784	–	–
	(Pasak ST)	3,322	–	2,784	–	–
	L1	201	0.383	77	–	–
	L2	1,720	0.499	858	–	–
	L3	0	0.811	0	–	–
	L4	24	0.911	22	–	–
	(L.B. ST)	1,945	–	957	–	–
	N1	116	0.692	80	–	–
	N2	414	0.747	309	–	–
	N3	455	0.817	372	–	–
	N4	2,038	0.909	1,852	–	–
	(Noi ST)	3,023	–	2,613	–	–
	C7	131	1.000	131	–	–
	Total	8,421	–	6,486	3,839	2,647
R4	C8	694	0.727	505	–	–
	C9	13,374	0.849	11,354	–	–
	C10	7,651	1.000	7,651	–	–
	Total	21,719	–	19,510	2,768	16,742

(1): from Table 10.4.3
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.7 Required Pollution Load Reduction (1996, Category C)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	8	0.852	7	–	–
	Total	8	–	7	32	-25
R2	C2	46	0.292	13	–	–
	C3	80	0.479	38	–	–
	C4	6	0.604	4	–	–
	C5	114	0.685	78	–	–
	C6	63	0.962	60	–	–
	Total	309	–	194	463	-269
R3	P1	62	0.766	48	–	–
	P2	106	0.838	89	–	–
	(Pasak ST)	168	–	136	–	–
	L1	23	0.383	9	–	–
	L2	113	0.499	56	–	–
	L3	10	0.811	8	–	–
	L4	42	0.911	38	–	–
	(L.B. ST)	187	–	111	–	–
	N1	46	0.692	32	–	–
	N2	77	0.747	57	–	–
	N3	428	0.817	350	–	–
	N4	191	0.909	174	–	–
	(Noi ST)	742	–	613	–	–
	C7	64	1.000	64	–	–
	Total	1,161	–	924	805	119
R4	C8	186	0.727	135	–	–
	C9	508	0.849	432	–	–
	C10	93	1.000	93	–	–
	Total	788	–	660	160	500

(1): from Table 10.4.1
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.8 Required Pollution Load Reduction (2001, Category C)

Water Quality Checking Point	Sub-area	Sub-area Concent'd BOD Load (kg/day) (1)	Pollution Load Remaining Ratio (2)	Sub-area Run-off BOD Load (kg/day) (3)	Allowable Pollution Load (kg/day) (4)	Required Run-off Load Reduction (5)
R1	C1	8	0.852	7	–	–
	Total	8	–	7	32	−25
R2	C2	44	0.292	13	–	–
	C3	67	0.479	32	–	–
	C4	6	0.604	4	–	–
	C5	145	0.685	99	–	–
	C6	74	0.962	71	–	–
	Total	336	–	219	463	−244
R3	P1	74	0.766	57	–	–
	P2	126	0.838	106	–	–
	(Pasak ST)	200	–	163	–	–
	L1	20	0.383	7	–	–
	L2	109	0.499	54	–	–
	L3	12	0.811	10	–	–
	L4	49	0.911	45	–	–
	(L.B. ST)	190	–	116	–	–
	N1	45	0.692	31	–	–
	N2	65	0.747	48	–	–
	N3	541	0.817	442	–	–
	N4	216	0.909	196	–	–
	(Noi ST)	866	–	717	–	–
	C7	76	1.000	76	–	–
	Total	1,332	–	1,072	805	267
R4	C8	211	0.727	154	–	–
	C9	583	0.849	495	–	–
	C10	103	1.000	103	–	–
	Total	897	–	751	160	591

(1): from Table 10.4.2
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

Table 11.3.9 Required Pollution Load Reduction (2011, Category C)

Water Quality Checking Point	Sub-area	Sub-area Conc'd BOD Load (kg/day)	Pollution Load Remaining Ratio	Sub-area Run-off BOD Load (kg/day)	Allowable Pollution Load (kg/day)	Required Run-off Load Reduc'n
R1	C1	8	0.852	6	–	–
	Total	8	–	6	32	-26
R2	C2	41	0.292	12	–	–
	C3	57	0.479	27	–	–
	C4	6	0.604	3	–	–
	C5	183	0.685	125	–	–
	C6	88	0.962	85	–	–
	Total	374	–	252	463	-211
R3	P1	89	0.766	68	–	–
	P2	151	0.838	126	–	–
	(Pasak ST)	240	–	195	–	–
	L1	16	0.383	6	–	–
	L2	102	0.499	51	–	–
	L3	14	0.811	12	–	–
	L4	58	0.911	53	–	–
	(L.B. ST)	191	–	122	–	–
	N1	42	0.692	29	–	–
	N2	55	0.747	41	–	–
	N3	684	0.817	559	–	–
	N4	245	0.909	223	–	–
	(Noi ST)	1,026	–	852	–	–
	C7	90	1.000	90	–	–
	Total	1,547	–	1,259	805	454
R4	C8	243	0.727	176	–	–
	C9	673	0.849	572	–	–
	C10	115	1.000	115	–	–
	Total	1,031	–	863	160	703

(1): from Table 10.4.3
(2): from Table 11.3.4
(3): (1) x (2)
(4): from Table 11.2.2
(5): (3) – (4)

PART 2

SEWERAGE MASTER PLAN FOR THE EIGHT MUNICIPALITIES/AREAS

2.1.1 Major Contents of Relevant Sewerage Projects

(1) Lower Chao Phraya River Basin Water Pollution Control Master Plan

1) Objective of the Study

- To come up with recommendations on water pollution control in the study area highlighted to the Chao Phraya river and the The Chin river
- To prepare master plan for sewerage management of the study area

2) Study Area and Target Years

- Metropolitan Bangkok and its vicinity areas including five provinces; Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon and Nakhon Pathom
- Base and target years: 1990, 2000, 2010 and 2020

3) Project Status

Study was completed by the local consultants and under review by the PCD.

4) Study Contents (by Chao Phraya river and Tha Chin river)

- General conditions on the study area
- General conditions on the water resources
- Technical concepts for sewerage management
- Population projection by amphoe and by province
- Projection of wastewater quantity and BOD loading: projection results only without study on concerned factors
- Flood control and drainage systems
- Canal systems and water pollution status comparing water quality standards
- Conceptual study of sewerage system with design criteria
- Water quality projection using mathematical model (differential equation) for the specified section of the Chao Phraya river

(2) Comprehensive Study of Sewerage System for the First Group Area (5 provinces)

1) Objective of the Study

- To prepare Master Plan (M/P) and Feasibility Study (F/S) of the sewerage system for (1) water pollution control in the public water bodies and (2) improvement of living standards

2) Study Area and Target Years

- Ayutthaya, Pathum Thani, Samut Sakhon, Kanchanaburi and Rayong provinces
  M/P: DTCP area including future expansion area of present municipality
  F/S: Present municipality area
- Base year and target years:
  1991, 2001 and 2011 for M/P and not specified for F/S

3) Project Status

The study was completed in 1992 including plan of sewerage system for Ayutthaya and Pathum Thani municipalities. Further data required are identified.

4) Study Contents

M/P and F/S Composition

- Investigation on existing sewerage facilities identifying problem areas
- Sewerage planning/preliminary design
- Cost estimates both for construction and O&M
- Financial and economic study entailing sewerage charge collection
- Institutional and management study
- Project implementation plan
- Environmental impact study

Common/Combined Study for the Study Provinces

- Land use:

  Information from DTCP and municipalities/S.Ds

- Population:

  DTCP projection up to 2011

  Non-registered population: 20-45% of registered population based on field survey

- Wastewater sources:

  Resident, factory, restaurant, fresh market, hospital, hotel and institutional BLDG.

- Projection of wastewater quantity and quality:

  Every 5 years up to 2011

- Water consumption and wastewater quantity:

  Wastewater quantity is assumed to be 80-90% of water consumption

  Groundwater infiltration into sewers (max. 30% of discharged sewage amount)

- Hydrology:

  Rainfall intensity - duration by frequency; khlongs, trunk sewer - 10 years, sub-main sewer - 5 years, stormwater run-off calculation - rational formula

- Socio-economic study

- Preliminary environmental study

- Laws and institutional structures

- Financial and economic study

- Planning of sewerage systems

- Water quality model study: Finite difference equation method

Ayutthaya Municipality

a) Study Area:

Ayutthaya municipality, Ayutthaya S.D. and 14 tambols, average elevation of 3.5 m amsl, historical area of 290 ha and DTCP area of 56 km^2

b) Population:

Summation of registered, non-registered (25%), and temporary population, design population 82,300 in 2011.

c) Administrative Arrangements:

Laws & regulations; solid waste disposal, business activities, public and private market, food & ice manufacturers

Organization; S.D. - sanitation section, Technical Department is in charge of sewerage projects

d) Sewerage Projects (Five-Year Development Plan, 1992-1996):

M/P; Two sewerage systems, west and east bank areas of Pasak river, combined collection system

F/S; Area is selected with priority (three-stage implementation, 1993-1996).

Wastewater treatment: OD method (domestic and industrial wastewater)

Present wastewater volume - 8,000 m^3/d (85% of water consumption)

Design wastewater volume - 63,000 m^3/d in 2011

BOD 146 - 150 mg/l (120 mg/l in 1992), SS 150 mg/l

e) Design Conditions for Sewerage planning

- Water consumption rate in 1992

  Residents; F/S area 320 lpcd, M/P area 150 lpcd

  Other sources; Institutional area 25 lpcd, Hotel 1,350 l/room/d, Restaurant 45 l/seat/d and Hospital 1,000 l/bed/d

  Factories; 10m^3/d per factory, average BOD 1,500 mg/l

- Water consumption rate for the future

  Domestic, commercial and others; 2%/year increase for 1st decade and 1% /year increase for 2nd decade

  Hospital; 1%/year increase up to 2011

  Industry; 2%/year increase in volume, BOD-constant, No. of factories - constant up to 2011

- Groundwater infiltration rate: 25% of discharged volume

- Wastewater collection ratio by land use type:

Commercial & high population density area	100%
Medium population density area	90%
Low population density area	80%
Rural area	70%

Pathum Thani Municipality

a) Study Area:

Pathum Thani municipality, Bang Luang S.D. and part of 7 tambols, average elevation of 2.3 m amsl (groundwater level 1-2 m bgl), DTCP area of 41 km^2 covering rapid housing development area during last 5 years

b) Population:

Summation of registered, non-registered and temporary population (20-35% of census population), design population 32,500 in 2011

c) Administrative Arrangements:

Laws & regulations; Similar to Ayutthaya municipality

Organization; ditto.

d) Sewerage Projects (Five Year Development Plan, 1992-1996):

M/P; Two sewerage systems, west and east bank areas of Chao Phraya river, combined collection system

Design flow - Khlongs and pump station 10 year return period; main sewers 5 year return period

F/S; Area covers present municipality area and its surroundings

Wastewater treatment; A.S. method (domestic, commercial and industrial wastewater), T.P. site (100 rai) is owned by Thai Plywood Co., Ltd.

Design wastewater volume - 23,000 m^3/d in 2011 (85 % of water consumption)

BOD 150 mg/l, SS 150 mg/l

e) Design Conditions for Sewerage Planning

- Future frame values

Fresh market; 2 %/year increase for 1st decade and 1 % for 2nd decade

Slaughterhouse; 20 %/year increase

- Water consumption rate in 1992

Residents:

Low population density area	120 lpcd, BOD 100 mg/l
Medium population density area	200 lpcd, BOD 110 mg/l
Commercial & high population density area	290 lpcd, BOD 125 mg/l
Housing estate	320 lpcd, BOD 125 mg/l
Institutional area	25 lpcd, BOD 125 mg/l
Hotel	650 lpcd/room/d, BOD 125 mg/l
Hospital	1,800 l/bed/d, BOD 20 mg/l
Fresh market	50 - 260 m^3/m^2/d, BOD 125 - 500 mg/l
Slaughterhouse	320 l/m^2/d, BOD 112 mg/l (25 % of influent BOD)

- Water consumption rate for the future

  Commercial & residential area; 2 %/year increase for 1st decade and 1 %/year for 2nd decade

  Fresh market; constant through the future for high consumption market and same increase as residential area for low consumption market

  Hospital; 1 %/year increase up to 2011

  Institutional & hotel; same as residential area

  Slaughterhouse; constant

- Groundwater infiltration rate; 25 % of discharged volume

- Wastewater collection ratio by land use type; same as Ayutthaya plan

(3) Flood Control, Drainage and Sewerage System for Nonthaburi Province

1) Objective of the study

- To prepare Master Plan (M/P) on flood protection and drainage systems for Nonthaburi municipality, Pak Kret municipality, Amphoe Bang Bua Thong, Amphoe Bang Yai and Amphoe Bang Krung

- To conduct Feasibility Study (F/S) on flood protection and drainage systems for Nonthaburi and Pak Kret municipalities

- To prepare M/P on sewerage system for Nonthaburi and Pak Kret municipalities

- To conduct F/S on sewerage systems for Nonthaburi municipality

2) Study Area and Target Years

M/P of flood protection and drainage systems: two municipalities and three amphoes, 246 km^2

F/S of flood protection and drainage systems: two municipalities, 73.5 km^2

M/P of sewerage systems: two municipalities, 73.5 km^2

F/S of Sewerage systems: Nonthaburi municipality, 38.96 km^2

Three target stages are established as follows:

- Short term period - The areas to solve problems immediately
- Medium term period - 10 years
- Long term period - 20 years

3) Project Status

Progress report was completed by the local consultants on May, 1992 and under the review by PWD.

4) Study Contents

Composition of plans

- Data collection and survey: topography, wastewater quantity and quality, and socio-economy
- Hydrological study
- Flood protection system: preliminary study and concept in planning
- Drainage system: east and west bank areas of Chao Phraya river, concept for study of drainage system
- Sanitary sewerage system: existing sewers and water pollution status, sanitary sewerage systems in Nonthaburi and its vicinity
- Wastewater treatment plant: design concept of WWTP, location of WWTP
- City planning and population

- Socio-economy, financial & economic conditions, and organization

- Environmental study

- Implementation schedule

a) Wastewater Quantity and Quality

- Pollution in the khlongs connected to the Chao Phraya river

- Pollution sources (referring to "F/S on the construction of WWTP for Muang Nonthaburi municipality, 1989 by the Mahidol University)

Source	Wastewater (m^3/d)	BOD (mg/l)	BOD loading (kg/d)
Community	8,626 (41,828 x 210 lpcd)	150	1,294
Market (2 markets)	172 ($4,828\ m^2$)	1,416	244
Slaughterhouse	444 ($1,784\ m^2$; swine 85, cow 23 and buffalo 14)	1,020	460
Jail (2 Jails)	998 (5,800 persons; 2,000 pig feeding)	142	142

- Industry: No. of factories and industrial wastewater volume;
  Nonthaburi municipality - 489; 107 m^3/d
  Pak Kret municipality - 178; 59 m^3/d

- Sampling at eight points were conducted along rivers

- Previous study results on sanitary wastewater (prepared by the Mahidol University and Bangkok WWTP project by JICA, 1981) are referred to

b) Plan of WWTP

Wastewater volume comprises discharged amount plus groundwater inflow (30% of discharged amount); respective WWTPs for Nonthaburi

and Pak Kret are considered. Several alternative locations of WWTP are discussed giving priority to governmental land.

(4) Pre-Feasibility Study of Domestic Wastewater Management for Pathum Thani Municipality

1) Objective of the Study

- To study on quality and quantity of domestic wastewater in Pathum Thani municipality
- To specify types and alignment of the sewerage system
- To conduct feasibility study on sewerage system
- To establish short and long term plan in terms of regulations and operation of facilities
- To conduct feasibility study on management of solid waste disposal

2) Study Area and Target Year

Study area: present municipality area of 7.1 km^2
Base year : 1991
Final target year: 20-year later from present (2011)

3) Status of the Project

The following reports were prepared as of now:
Inception Report
First Progress Report
Second Progress Report
Draft Final Report - Under review by PCD

4) Contents of the Report

Composition of the study

- Study methodology
- Physiographic features
- Social conditions
- Economic conditions
- Laws and regulations for water quality management
- Reconnaissance for engineering and related fields
- Identification of problems
- Alternative sewage collection system
- Beneficiaries' participation
- Wastewater management recommendations

a) Social conditions:

- Population projection (base year 1991, 1996, 2001, 2006 and 2011):

  Growth rate 0.05 is employed from 1991 to 2011 (exponential curve model).

b) Economic conditions:

- Commercial and service business;

  653 establishments (50% is located in the municipality)

- Industry and factories;

  In Amphoe Bang Luang and Thanyaburi, 170 factories

c) Laws and regulations:

Domestic; real estate and wastewater discharge system; industrial wastewater; and water quality and effluent standards

d) Reconnaissance for engineering and related fields:

- Existing drainage and sewerage facilities; septic tank/cesspool, dia. of sewers - 0.20 - 1.20 m

- Wastewater sources; house, commercial establishment, factory, institutional building and agriculture

- Wastewater quantity; 2,500 m^3/d (from water consumption data), but about 4,000 m^3/d may be discharged (inclusion of different water sources)

- Water quality (conducted at 19 points)

e) Identification of problems:

Related laws and regulations

f) Alternative sewerage systems:

- Design criteria;
  Design year; 20 years later
  Population density; 6,000 person/km^2 in 2011
  Water consumption rate; 200 lpcd
  Groundwater inflow rate; 500-1,000 $m^3/d/km^2$
  Max. depth of sewer invert level; 6 m.

g) Conceptual design of wastewater treatment plant:

- OD method is recommended.

h) Beneficiaries' participation:

- Questionnaire survey was conducted to come up with recommendations on wastewater management.

(5) Pre-Feasibility Study of Domestic Wastewater Management for Ayutthaya Municipality

1) Objective of the Study

Same as those for Pathum Thani municipality

2) Study Area and Target Year

Study area : Ayutthaya municipality (14 km^2) and its vicinity area; some part of Ayutthaya S.D., Khlong Suan Poo, Khlong Sa Kaew, Bankoh, Ban Pom, Pak Ron, Phu Kao Thong, Loom Plee, Suan Prik, Sam Pas Lom, etc. (94,941 persons in 1989)

Base year : 1991

Target year : 2011

3) Status of the Project

The status of this project is the same as Pathum Thani case.
D/F report is under review by PCD.

4) Contents of the Report

Components of the report is same as those for Pathum Thani report.

a) Social conditions:

- Population projection (base year 1991, 1996, 2001, 2006 and 2011); growth rate 0.01/year from 1991 to 2011 (exponential curve model)

b) Economic conditions:

- Commercial and service business; 1,037 in 1991 (85% is located in the municipality)

- Industry; 322 establishments (156 in the municipality)

c) Reconnaissance for engineering and related fields:

- Existing drainage and sewerage facilities

- Wastewater sources; house, boat people, industry, dumped refuse and agriculture

- Wastewater quantity; at least 8,800 m^3/d (80% of water consumption)

- Wastewater quality; water sampling at 7 points (summer season) and 15 points (rainy season) along rivers, industrial wastewater; food industry w/treatment plant(more than 30 m^3/d discharge) for sampling

d) Identification of problems:

Same results as Pathum Thani Study

e) Alternative sewerage systems:

- Design criteria
  Design year; 20 years later from present
  Population density; 5,000 person/km^2 in 2011
  Water consumption; 200 lpcd
  Groundwater inflow rate; 500 $m^3/d/km^2$
  Max. earth cover; 5 m

f) Conceptual design of sewerage system:

Comparative study on separate and combined systems was made.

Mixed or separate system is recommended as follows:

1st stage (1-5 years future); mixed system

2nd stage (after 5 years); replacement of combined system and house connections be constructed within 10 years

Construction method:

Open cut method for excavation
RC pipe for ϕ 30 cm or larger
PVC or AC pipe for ϕ 20 cm

g) Conceptual design of wastewater treatment plant:

- Comparative study between SP, AS, RBC and OD was made without final selection

- TP site is recommended in Tambol Phu Kao Thong (right bank of Chao Phraya river)

h) Conceptual design of solid waste treatment system:

Detailed study was made.

(6) Detailed Design of Wastewater Treatment Plant for Rangsit Area

1) Objective of the Study

- To get agreement from concerned authorities on the concept and plan for the wastewater collection and treatment systems

- To collect data as required for preparation of detailed design of the sewerage system

- To prepare implementation program for construction of facilities

2) Study Area

The study area covers Rangsit area in Pathum Thani province. There are about 200 factories and wastewater volume is estimated at about 45,000 m^3.

3) Status of the Project

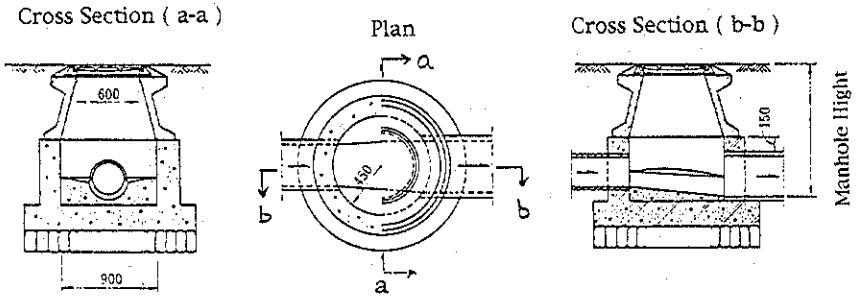
Detailed design of the sewerage facilities was finished and under review by DIW.

4) Contents of the D/D Works

- Collection and analysis of data
- Estimation of waste loads at present and in the future (organic and hazardous wastes)
- Rationales for development objectives of the project; design period, wastewater volume, type of industries, area coverage, and standards and levels of services
- Design concept, approach and criteria; treatment method, sewer system and sludge disposal method
- Design of facilities
- On-the-job training for technical staff of DIW
- Cost estimates of the project
- Financial analysis; alternative financial objectives, wastewater tariff structure, FIRR
- Economic analysis
- Institutional and management; private and public management
- Implementation plan
- Environmental impact of the project

2.3.9 Standard Drawing of Manhole

NO.1



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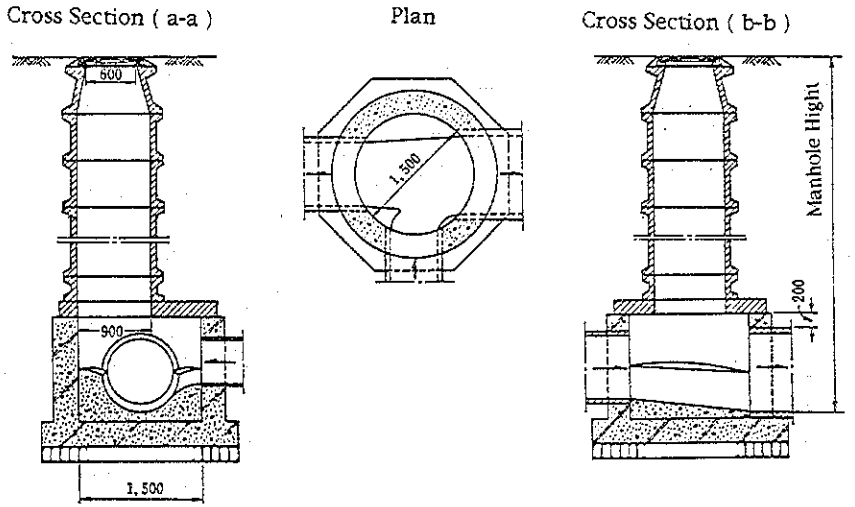

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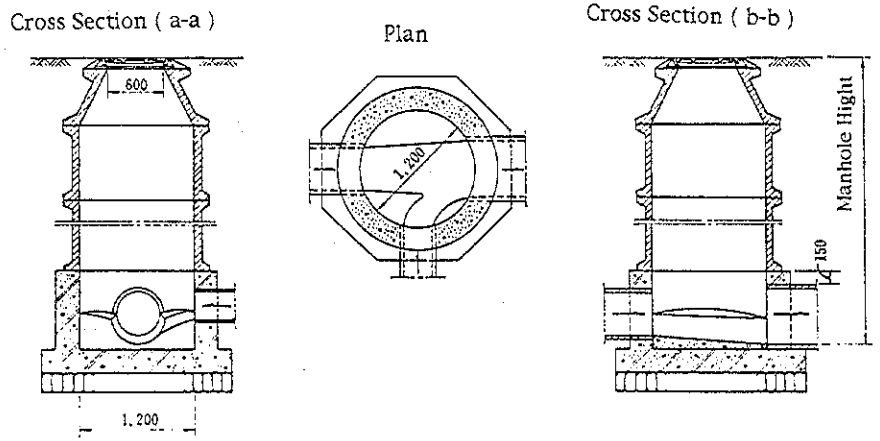
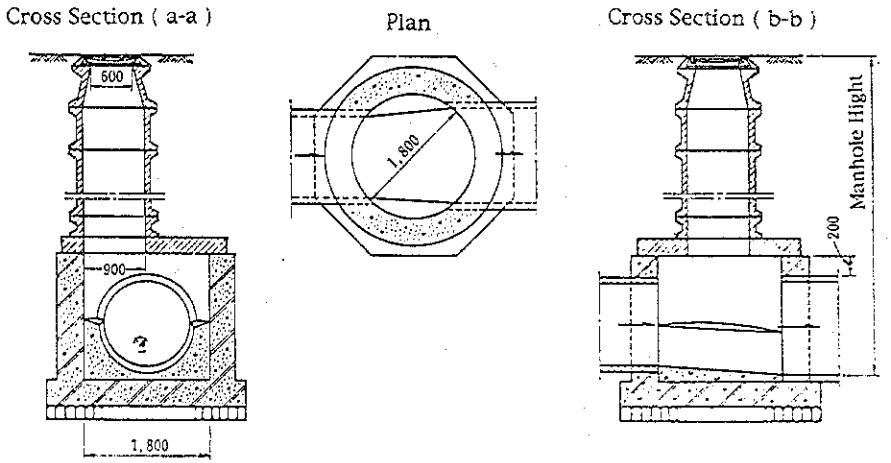


NO.4



2.3.13 Contents of Japan Sewage Works Law and Japan Sewage Works Agency Law

Japan Sewage Works Law

Chapter 1 General

- Section 1 Purpose
- Section 2 Definition of Terminology

Chapter 2 Public Sewage Works

- Section 3 Management
- Section 4 Approval of Implementation Plan
- Section 5 Items to be included in Implementation Plan
- Section 6 Approval Criteria
- Section 7 Structure Standards
- Section 8 Effluent Standards
- Section 9 Announcement of Service Start
- Section 10 Installation of Discharge Facilities
- Section 11 Tolerance Obligation of Discharge
- Section 12 Installation of Damage Alleviating Facilities
- Section 13 Inspection of Discharge Facilities
- Section 14 Use Limitation
- Section 15-17 (omitted)
- Section 18 Damage Compensation
- Section 19 Construction Cost Share
- Section 20 User's Charge
- Section 21 Water Quality Inspection of Effluent
- Section 22 Qualification of Designers
- Section 23 Documentation of public Sewage Works
- Section 24 Actions to be limited
- Section 25 Items to be included in Regulations

Chapter 3 (omitted)

- Section 26-31 (omitted)

Chapter 4 Others

- Section 31 Cost Sharing of Municipality
- Section 32-38 (OMITTED)
- Section 39 Reporting
- Section 40 Authority Mandate
- Section 41-44 (omitted)

Chapter 5 Punishment

- Section 45-51 (omitted)

Japan Sewage Works Agency Law

2.3.14 Projection of Water Quality After Provision of Sewerage Systems

Table 2.3.14.1 (1) Concentrated BOD Load by Sub-area after Provision of Counter Measures (2011)

Water Quality Checking Point	Sub-area Code	Category A				Category B				Category C				Categ'y D	TOTAL
		Domestic	Fresh Market	Red'n by Swerage S.	Total	Factory	Slaughter-house	Red'n by C.measures	Total	Live-stock	Fish Pond	Red'n by C.measures	Total	Natural Pollution	
R1	C1	633.1	20.0	-407.0	246.1	449.8	2.0	0.0	449.8	6.5	1.0	0.0	7.5	26.0	729.4
R2	C2	401.0	0.0	0.0	401.0	206.8	0.0	-38.0	168.8	36.4	4.5	0.0	40.9	144.0	754.7
	C3	1,693.2	20.0	-779.0	934.2	2,067.0	0.4	-528.0	1,539.4	53.9	3.2	0.0	57.1	185.0	2,715.7
	C4	62.6	0.0	0.0	62.6	0.0	0.0	0.0	0.0	5.2	0.3	0.0	5.5	22.0	90.1
	C5	1,237.7	40.0	-494.0	783.7	1,307.2	4.4	-229.0	1,082.6	180.2	2.6	0.0	182.8	94.0	2,143.1
	C6	4,487.8	20.0	-2,048.0	2,459.8	5,673.4	12.0	-2,167.0	3,518.4	84.2	3.8	0.0	88.0	109.0	6,175.2
	Total	7,882.3	80.0	-3,321.0	4,641.3	9,254.4	16.8	-2,962.0	6,309.2	359.9	14.4	0.0	374.3	554.0	11,878.8
R3	C7	486.5	0.0	0.0	486.5	131.2	0.0	0.0	131.2	87.9	2.3	-40.0	50.2	114.0	781.9
	N1	362.1	0.0	0.0	362.1	115.6	0.0	-55.0	60.6	35.9	5.6	0.0	41.5	142.0	606.2
	N2	861.2	0.0	0.0	861.2	414.2	0.0	-193.0	221.2	50.2	4.9	0.0	55.1	172.0	1,309.5
	N3	1,299.4	0.0	0.0	1,299.4	455.0	0.0	-174.0	281.0	674.7	9.4	-339.0	345.1	351.0	2,276.5
	N4	1,508.8	20.0	-173.0	1,355.8	2,037.2	0.6	-981.0	1,056.8	177.1	68.1	-80.0	165.2	229.0	2,806.8
	N ST.	4,031.5	20.0	-173.0	3,878.5	3,022.0	0.6	-1,403.0	1,619.6	937.9	88.0	-419.0	606.9	894.0	6,999.0
	P1	117.0	0.0	0.0	117.0	0.0	0.0	0.0	0.0	89.2	0.0	-40.0	49.2	80.0	246.2
	P2	1,377.5	20.0	0.0	1,397.5	3,320.6	1.4	-1,439.0	1,883.0	147.1	3.5	-68.0	82.6	190.0	3,553.1
	P ST.	1,494.5	20.0	0.0	1,514.5	3,320.6	1.4	-1,439.0	1,883.0	236.3	3.5	-108.0	131.8	270.0	3,799.3
	L1	132.7	0.0	0.0	132.7	201.2	0.0	-102.0	99.2	15.8	0.6	0.0	16.4	54.0	302.3
	L2	3,629.7	20.0	-115.0	3,534.7	1,717.2	2.8	-966.0	754.0	95.9	6.4	0.0	102.3	403.0	4,794.0
	L3	11.3	0.0	0.0	11.3	0.0	0.0	0.0	0.0	14.4	0.0	-7.0	7.4	13.0	31.7
	L4	338.9	0.0	0.0	338.9	24.2	0.0	0.0	24.2	54.5	3.8	-24.0	34.3	71.0	468.4
	L ST.	4,112.6	20.0	-115.0	4,017.6	1,942.6	2.8	-1,068.0	877.4	180.6	10.8	-31.0	160.4	541.0	5,596.4
	Total	10,125.1	60.0	-288.0	9,897.1	8,416.4	4.8	-3,910.0	4,511.2	1,442.7	104.6	-598.0	949.3	1,819.0	17,176.6
R4	C8	440.4	0.0	0.0	440.4	694.0	0.0	-591.0	103.0	186.4	56.1	-198.0	44.5	241.0	828.9
	C9	14,286.0	36.0	-12,186.0	2,136.0	13,324.5	49.0	-11,477.0	1,896.5	542.2	131.0	-550.0	123.2	486.0	4,641.7
	C10	48,580.5	108.0	-35,882.0	12,806.5	7,631.5	19.5	-6,569.0	1,082.0	74.8	40.4	-92.0	23.2	274.0	14,185.7
	Total	63,306.9	144.0	-48,068.0	15,382.9	21,650.0	68.5	-18,637.0	3,081.5	803.4	227.5	-840.0	190.9	1,001.0	19,656.3
GRAND TOTAL		81,947.4	304.0	-52,084.0	30,167.4	39,770.6	92.1	-25,509.0	14,351.7	2,612.5	347.5	-1,438.0	1,522.0	3,400.0	49,441.1

Table 2.3.14.1 (2) Concentrated BOD Load by Sub-area after Provision of Counter Measures (2011)

Current Point No.	Next Point No.	W. Q. C. P.	Distance from Estuary (km)	Section Length (km)	Average Velocity (m/sec)	Time of Flow (day) to next Point	Time of Flow (day) to next W.Q.C.P.	Run-off BOD from Upstream (kg/day)	Concent'd BOD Load (kg/day)	Diverted BOD Load (kg/day)	BOD Load at Current Pt. (kg/day)	Purified BOD Load (kg/day)	P. Load at Next Pt. (kg/day)	at Next Point: Planned Flow per second (m3/sec)	at Next Point: Planned Flow per day (M m3/day)	at Next Point: Calc'd Quality (mg/lit.)	P. L. Remaining Ratio to next Point	P. L. Remaining Ratio to next W.Q.C.P.	kr Value
R0	C1		283.0	2.0	0.08	0.289	1.157	11,445.0	0.0	0.0	11,445.0	594.1	10,850.9	–	–	–	0.948	0.808	0.08
C1	R1 (J1)	*	281.0	6.0	0.08	0.868	0.868	10,850.9	729.4	0.0	11,580.3	1,711.3	9,869.1	89.40	7.72	1.3	0.852	0.852	0.08
R1 (J1)	SP1		275.0	0.5	0.08	0.072	7.273	9,869.1	0.0	0.0	9,869.1	130.6	9,738.5	–	–	–	0.987	0.262	0.08
SP1	IP1		274.5	2.4	0.08	0.347	7.201	9,738.5	0.0	756.9	8,981.6	556.5	8,425.1	–	–	–	0.938	0.265	0.08
IP1	SP2		272.1	0.1	0.08	0.014	6.854	8,425.1	0.0	0.0	8,425.1	22.4	8,402.7	82.40	7.12	1.2	0.997	0.283	0.08
SP2	C2		272.0	3.0	0.22	0.158	6.839	8,402.7	0.0	0.0	8,402.7	240.8	8,161.9	–	–	–	0.971	0.284	0.08
C2	J2		269.0	48.0	0.22	2.525	6.681	8,161.9	754.7	0.0	8,916.6	3,316.7	5,599.9	–	–	–	0.628	0.292	0.05
J2	C3		221.0	3.0	0.22	0.158	4.156	5,599.9	0.0	0.0	5,599.9	160.5	5,439.4	–	–	–	0.971	0.465	0.08
C3	C4		218.0	24.0	0.22	1.263	3.998	5,439.4	2,715.7	0.0	8,155.1	1,692.3	6,462.8	–	–	–	0.792	0.479	0.08
C4	C5		194.0	13.0	0.22	0.684	2.736	6,462.8	90.1	0.0	6,552.9	775.7	5,777.2	–	–	–	0.882	0.604	0.08
C5	C6		181.0	35.0	0.22	1.841	2.052	5,777.2	2,143.1	0.0	7,920.3	2,278.3	5,642.0	–	–	–	0.712	0.685	0.08
C6	R2 (J3)	*	146.0	4.0	0.22	0.210	0.210	5,642.0	6,175.2	0.0	11,817.2	449.3	11,367.9	128.00	11.06	1.0	0.962	0.962	0.06
R2 (J3)	SP4		142.0	0.5	0.22	0.026	2.119	11,367.9	0.0	0.0	11,367.9	0.0	11,367.9	–	–	–	1.000	1.000	0.00
L0	L1		251.0	20.0	0.04	5.787	28.743	0.0	0.0	0.0	0.0	0.0	0.0	–	–	–	0.756	0.293	0.02
L1	L2		231.0	20.0	0.04	5.787	22.956	0.0	302.3	0.0	302.3	70.7	231.6	–	–	–	0.766	0.383	0.02
L2	J7		211.0	2.0	0.04	0.579	17.169	231.6	4,794.0	0.0	5,025.6	132.2	4,893.4	–	–	–	0.974	0.499	0.02
J7	L3		209.0	43.0	0.05	9.954	16.590	4,893.4	0.0	0.0	4,893.4	1,799.3	3,094.1	–	–	–	0.632	0.513	0.02
L3	L4		166.0	13.0	0.06	2.508	6.636	3,094.1	31.7	0.0	3,125.8	340.9	2,784.9	–	–	–	0.891	0.811	0.02
L4	J8		153.0	7.5	0.06	1.447	4.128	2,784.9	468.4	0.0	3,253.3	209.7	3,043.6	5.30	0.46	6.6	0.936	0.911	0.02
J8	SP3'		145.5	0.5	0.07	0.083	2.682	3,043.6	0.0	0.0	3,043.6	11.6	3,032.0	–	–	–	0.996	0.973	0.02
P0	P1		203.5	17.5	0.09	2.251	10.122	0.0	0.0	0.0	0.0	0.0	0.0	–	–	–	0.902	0.691	0.02
P1	P2		186.0	15.0	0.09	1.929	7.872	0.0	246.2	0.0	246.2	20.9	225.3	–	–	–	0.915	0.766	0.02
P2	J9		171.0	25.8	0.09	3.318	5.943	225.3	3,553.1	0.0	3,778.4	535.4	3,243.0	9.30	0.80	4.0	0.858	0.858	0.02
J9	SP3'		145.2	0.2	0.09	0.026	2.625	3,243.0	0.0	0.0	3,243.0	3.8	3,239.2	–	–	–	0.999	0.976	0.02
SP3'	SP3		145.0	0.0	0.08	0.000	2.599	6,271.2	0.0	0.0	6,271.2	0.0	6,271.2	14.60	1.26	5.0	1.000	0.977	0.02
SP3	SP4		145.0	3.5	0.08	0.506	2.599	6,271.2	0.0	0.0	6,271.2	144.5	6,126.7	–	–	–	0.977	0.977	0.02
SP4	J4		141.5	0.5	0.15	0.039	2.093	17,494.6	0.0	0.0	17,494.6	0.0	17,494.6	142.60	12.32	1.4	1.000	1.000	0.00
J4	C7		141.0	13.0	0.14	1.075	2.054	17,494.6	0.0	0.0	17,494.6	0.0	17,494.6	–	–	–	1.000	1.000	0.00
C7	SP5		126.0	10.5	0.13	0.935	0.979	17,494.6	781.9	0.0	18,276.5	0.0	18,276.5	147.60	12.75	1.4	1.000	1.000	0.00
N0 (J6)	N1		277.0	37.0	0.27	1.586	9.638	756.9	0.0	0.0	756.9	53.3	703.6	(at N0 7.00 m3/s or 0.60 M.m3/d)			0.930	0.643	0.02
N1	N2		240.0	33.0	0.23	1.661	8.052	703.6	606.2	0.0	1,309.8	96.4	1,213.3	–	–	–	0.926	0.692	0.02
N2	N3		207.0	34.0	0.20	1.968	6.391	1,213.3	1,309.5	0.0	2,522.8	218.5	2,304.3	–	–	–	0.913	0.747	0.02
N3	N4		173.0	32.0	0.16	2.315	4.423	2,304.3	2,276.5	0.0	4,580.8	463.2	4,117.6	–	–	–	0.899	0.817	0.02
N4	IP2		141.0	5.0	0.14	0.413	2.109	4,117.6	2,806.8	0.0	6,924.4	130.6	6,793.8	–	–	–	0.981	0.909	0.02
IP2	J10		136.0	18.0	0.13	1.603	1.695	6,793.8	0.0	0.0	6,793.8	483.3	6,310.5	25.90	2.24	2.8	0.929	0.927	0.02
J10	SP5		118.0	0.5	0.12	0.048	0.093	6,310.5	0.0	0.0	6,310.5	14.0	6,296.5	–	–	–	0.998	0.998	0.02
SP5	R3	*	117.5	0.5	0.13	0.045	0.045	24,573.0	0.0	0.0	24,573.0	0.0	24,573.0	173.50	14.99	1.6	1.000	1.000	0.00
R3	C8		117.0	3.0	0.13	0.267	5.681	24,573.0	0.0	0.0	24,573.0	0.0	24,573.0	–	–	–	1.000	1.000	0.00
C8	IP3		114.0	16.0	0.12	1.543	5.414	24,573.0	828.9	0.0	25,401.9	0.0	25,401.9	208.30	18.00	1.4	1.000	1.000	0.00
IP3	C9		98.0	5.0	0.12	0.482	3.870	25,401.9	0.0	3,655.0	21,746.8	0.0	21,746.8	–	–	–	1.000	1.000	0.00
C9	IP4		93.0	19.0	0.11	1.999	3.388	21,746.8	4,641.7	0.0	26,388.5	0.0	26,388.5	221.30	19.12	1.4	1.000	1.000	0.00
IP4	C10		74.0	11.0	0.10	1.273	1.389	26,388.5	0.0	3,988.6	22,399.9	0.0	22,399.9	–	–	–	1.000	1.000	0.00
C10	R4 (J5)	*	63.0	1.0	0.10	0.116	0.116	22,399.9	14,165.7	0.0	36,565.6	0.0	36,565.6	198.10	17.12	2.1	1.000	1.000	0.00
R4 (J5)	–		62.0	–	–	–	–	36,565.6	0.0	0.0	36,565.6	–	–	–	–	–	–	–	–

R0–R4: Water quality checking point
C1–C10, L1–L4, P1–P2, N0–N4: Polution load inflow point
IP1–IP4: Water intake point
SP1–SP5: Temporary point for computation
J1–J10: Survey points by JICA team

3.1.6 Design of Wastewater Collection System

Table 3.1.6 (1) Distribution of Population and Wastewater Quantity (CHAI NAT)

No.of Sewers		Commercial Area			Residential Area (Medium)			Residential Area (Low)			Public Land		Industrial Area		Vacant Area		Service Area			Adopted		
Current Sewer	Down-stream	Area (ha)	P.Dens. (p./ha)	Design P. (person)	Area (ha)	P.Dens. (p./ha)	Design P. (person)	Area (ha)	P.Dens. (p./ha)	Design P. (person)	Area (ha)	Design P. (person)	Area (ha)	Design P. (person)	Area (ha)	Design P. (person)	Area (ha)	P.Dens. (p./ha)	Design P. (person)	Area (ha)	P.Dens. (p./ha)	Design P. (person)
1/1		0.00	120	0	0.00	60	0	46.20	20	924	3.20	0	0.00	0	17.10	0	66.50	13.89	924	66.50	12.58	837
1/2		0.00	120	0	27.40	60	1,644	27.10	20	542	2.60	0	0.00	0	0.00	0	57.10	38.28	2,186	57.10	40.40	2,307
1/3		41.80	120	5,016	49.60	60	2,976	15.30	20	306	38.60	0	0.00	0	0.00	0	145.30	57.11	8,298	145.30	50.23	7,298
1/4		0.00	120	0	0.00	60	0	30.20	20	604	5.10	0	0.00	0	0.00	0	35.30	17.11	604	35.30	40.49	1,429
	1/5																					
2/1		0.00	120	0	0.00	60	0	36.60	20	732	8.70	0	0.00	0	7.80	0	53.10	13.79	732	53.10	16.16	858
2/2		0.00	120	0	0.00	60	0	10.20	20	204	0.00	0	0.00	0	27.20	0	37.40	5.45	204	37.40	0.00	0
	2/3																					
3/1		0.00	120	0	23.90	60	1,434	38.90	20	778	8.60	0	0.00	0	0.00	0	71.40	30.98	2,212	71.40	32.63	2,330
2/3		7.40	120	888	0.00	60	0	8.40	20	168	0.00	0	0.00	0	0.00	0	15.80	66.84	1,056	15.80	32.63	515
	2/4																					
4/1		0.00	120	0	22.00	60	1,320	35.00	20	700	0.00	0	0.00	0	20.90	0	77.90	25.93	2,020	77.90	20.00	1,558
2/4		0.00	120	0	24.40	60	1,464	2.30	20	46	0.00	0	0.00	0	0.00	0	26.70	56.55	1,510	26.70	20.00	534
	2/5																					
5/1		5.50	120	660	13.90	60	834	22.80	20	456	0.00	0	0.00	0	22.60	0	64.80	30.09	1,950	64.80	20.00	1,296
2/5		0.00	120	0	0.00	60	0	2.30	20	46	0.00	0	0.00	0	0.00	0	2.30	20.00	46	2.30	41.91	96
1/5		0.00	120	0	0.00	60	0	2.90	20	58	0.00	0	0.00	0	33.50	0	36.40	1.59	58	36.40	41.73	1,519
1/6	T.P	0.00	120	0	0.00	60	0	0.00	20	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0	0.00	0.00	0
Total		54.70		6,564	161.20		9,672	278.20		5,564	66.80		0.00		129.10		690.00	31.59	21,800	690.00	29.32	20,578
Adopted		31.80			94.50			197.00			61.90		0.00		304.80		690.00		21,800			

Table 3.1.6 (2) Hydraulic Calculation for Design of Sewers (CHAI NAT)

No. of Sewers	Downstream Sewers No.	Drainage Area		Length		Concentrated Time	Run-off Storm				Wastewater Flow				Other W.W		Grand Total Design Flow	Designing of Sewers							Remarks
		Area	Total	Length	Total		Rainfall	Run-off Coeffi.	Arranged Area		Rainfall	Pop. Density	Population		Design Flow	Sewer	Total		Diameter	Slope	Velocity	Flow	Elevation	Invert Level	Earth Cover	
									Area	Total			Sewer	Total												
		ha	ha	m	m	min	m³/sec-ha		ha	ha	m³/sec	Per/ha	Person		m³/sec	m³/sec	m³/sec	m³/sec	mm	‰	m/sec	m³/sec	M	M	m	
1-1		6650	6650	670	670							12.58	837	837	0012			0012	300	200	061	0043	1840 1875	17070 15551	100 287	
1-2		5710	12350	1000	1670							40.40	2307	3144	0046			0046	400	150	064	0081	1875 1688	15451 13445	236 300	
1-3A		14530	26890	0	1670							50.23	7298	10442	0152			0152	400	140	062	0078	1688 1688	13492 15392	295 105	P.U
1-3B		000	26890	1470	3140							0.00	0	10442	0152			0152	600	130	078	0221	1688 1724	15192 12907	104 358	
1-4	1-5	3530	30420	380	3520							40.49	1430	11872	0173			0173	600	130	078	0221	1724 1601	12897 12304	359 306	
2-1		5310	5310	520	520							16.16	859	859	0013			0013	300	200	061	0043	1700 1891	15570 14504	130 408	
2-2A		000	5310	30	550							0.00	0	859	0013			0013	300	200	061	0043	1891 1930	14494 14434	409 454	
2-2B		000	5310	0	550							0.00	0	859	0013			0013	300	200	061	0043	1930 1930	14434 17934	454 104	P.U
2-2C	2-3	3740	9050	850	1400							32.63	1220	2079	0030			0030	300	200	061	0043	1930 1760	17924 16018	105 125	
3-1		7140	7140	650	650							32.63	2330	2330	0034			0034	300	200	061	0043	1782 1760	16490 15036	130 223	
2-3	2-4	1580	17770	320	1720							32.63	515	4924	0072			0072	400	150	064	0081	1760 1754	14936 14386	223 272	
4-1		7790	7790	1200	1200							20.00	1558	1558	0023			0023	300	200	061	0043	1774 1754	16410 13720	130 349	
2-4	2-5	2670	28230	1350	3070							20.00	534	7016	0102			0102	500	130	069	0136	1754 1591	13520 11416	348 395	

Table 3.1.6 (3) Hydraulic Calculation for Design of Sewers (CHAI NAT)

No. of Sewers	Downstream Sewers No.	Drainage Area		Length		Concentrated Time	Run-off Storm					Wastewater Flow				Other W.W		Grand Total Design Flow	Designing of Sewers							Remarks
		Area	Total	Length	Total		Rainfall	Run-off Coeffi.	Arranged Area		Rainfall	Pop. Density	Population		Design Flow	Sewer	Total		Diameter	Slope	Velocity	Flow	Elevation	Invert Level	Earth Cover	
									Area	Total			Sewer	Total												
		ha	ha	m	m	min	m³/sec·ha	-	ha	ha	m³/sec	Pey/ha	Person		m³/sec	m³/sec	m³/sec	m³/sec	mm	‰	m/sec	m³/sec	M	M	m	
5-1		6480	6480	830	830							20.00	1296	1296	0.019			0.019	300	200	0.61	0.043	1750 1591	16170 14278	100 130	
2-5		230	34940	210	3280							41.91	97	8409	0.122			0.122	500	130	0.69	0.136	1591 1601	11406 11074	395 439	
1-5		3640	69000	550	4070							41.73	1518	21799	0.317			0.317	800	130	0.95	0.477	1601 1600	10774 9392	437 514	
1-6	T.PLANT	000	69000	40	4110							0.00	0	21799	0.317			0.317	800	130	0.95	0.477	1600 1600	9382 9330	515 520	

3.A.6 Specification of Pump Station

CHAI NAT

	Item	Unit	No.1 1−3A	No.2 2−2B
Condition	Area Coverage	ha	268.90	53.10
	Design Population	person	10,442	859
	Wastewater Flow	m3/min.	9.12	0.78
Invert Level	Upstream	m	13.49	14.43
	Downstream	m	15.39	17.93
Total Head	Actual Head	m	1.9	3.5
	Loss surrounding Pump	m	1.5	1.5
	Total	m	3.4	5.0
Specifications	Diameter	mm	200	80
	Flow	m3/min./unit	3.04	0.39
	Output	kw	5.5	0.55
	Number	unit	3	2

SING BURI

	Item	Unit	No.1 1−1B	No.2 1−3A	No.3 1−5B	No.4 2−3A	No.5 2−4B	No.6 3−5A
Condition	Area Coverage	ha	126.90	188.40	288.70	242.50	277.10	315.60
	Design Population	person	856	5,216	10,037	770	879	25,080
	Wastewater Flow	m3/min.	0.72	4.56	8.76	0.66	0.78	21.90
Invert Level	Upstream	m	6.11	6.90	5.51	7.98	5.91	3.93
	Downstream	m	9.72	10.12	9.40	11.41	10.66	8.90
Total Head	Actual Head	m	3.6	3.2	3.9	3.4	4.8	5.0
	Loss surrounding Pump	m	1.5	1.5	1.5	1.5	1.5	1.5
	Total	m	5.1	4.7	5.5	4.9	6.3	6.5
Specifications	Diameter	mm	80	150	200	80	80	250
	Flow	m3/min./unit	0.36	1.52	2.92	0.33	0.39	5.48
	Output	kw	0.55	2.20	5.50	0.55	0.75	11.00
	Number	unit	2	3	3	2	2	4

LOP BURI

	Item	Unit	No.1 1-4B	No.2 2-2B	No.3 5-2A	No.4 5-4A	No.5 6-1B	No.6 6-2A	No.7 7-1B
Condition	Area Coverage	ha	511.70	132.6	72.10	317.00	104.40	157.00	60.60
	Design Population	person	38,476	5,152	1,684	16,650	4,183	6,290	1,005
	Wastewater Flow	m3/min.	33.60	4.5	1.50	14.52	3.66	5.52	0.90
Invert Level	Upstream	m	4.50	5.79	5.38	7.45	6.80	8.31	5.78
	Downstream	m	8.80	9.60	12.10	12.30	9.80	12.80	8.40
Total Head	Actual Head	m	4.3	3.8	6.7	4.9	3.0	4.5	2.6
	Loss surrounding Pump	m	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	Total	m	5.8	5.3	8.2	6.4	4.5	6.0	4.1
Specifications	Diameter	mm	300	150	100	200	150	150	80
	Flow	m3/min./unit	8.40	1.50	0.75	3.63	1.22	1.84	0.45
	Output	kw	15.00	2.20	2.20	7.50	1.50	3.70	0.55
	Number	unit	4	3	2	4	3	3	2

ANG THONG

	Item	Unit	No.1 1-3A	No.2 1-3C	No.3 1-4B	No.4 1-5A	No.5 1-7A	No.6 5-2B
Condition	Area Coverage	ha	146.8	146.8	161.9	314.5	518.0	74.3
	Design Population	person	2,455	2,455	2,707	5,259	13,500	2,392
	Wastewater Flow	m3/min.	2.16	2.16	2.34	4.62	11.82	2.10
Invert Level	Upstream	m	2.60	3.48	3.13	4.42	3.43	0.98
	Downstream	m	5.98	6.22	6.16	8.00	5.91	5.80
Total Head	Actual Head	m	3.4	2.7	3.0	3.6	2.5	4.8
	Loss surrounding Pump	m	1.5	1.5	1.5	1.5	1.5	1.5
	Total	m	4.9	4.2	4.5	5.1	4.0	6.3
Specifications	Diameter	mm	150	150	150	150	200	150
	Flow	m3/min./unit	1.08	1.08	1.17	1.54	2.96	1.05
	Output	kw	1.5	1.5	1.5	2.2	3.7	2.2
	Number	unit	2	2	2	3	4	2

PA MOK

	Item	Unit	No.1 1−3B	No.2 3−1B	No.3 3−4B
Condition	Area Coverage	ha	178.3	116.7	240.3
	Design Population	person	3,138	2,653	5,302
	Wastewater Flow	m3/min.	2.76	2.34	4.62
Invert Level	Upstream	m	2.16	2.66	1.04
	Downstream	m	5.05	4.70	4.34
Total Head	Actual Head	m	2.9	2.0	3.3
	Loss surrounding Pump	m	1.5	1.5	1.5
	Total	m	4.4	3.5	4.8
Specifications	Diameter	mm	150	150	150
	Flow	m3/min./unit	1.38	1.17	1.54
	Output	kw	2.2	1.1	2.2
	Number	unit	2	2	2

SENA

	Item	Unit	No.1 1−1B	No.2 2−3B
Condition	Area Coverage	ha	52.40	35.10
	Design Population	person	2,476	1,659
	Wastewater Flow	m3/min.	2.16	1.44
Invert Level	Upstream	m	1.50	−1.66
	Downstream	m	5.13	2.21
Total Head	Actual Head	m	3.6	3.9
	Loss surrounding Pump	m	1.5	1.5
	Total	m	4.1	5.4
Specifications	Diameter	mm	150	100
	Flow	m3/min./unit	1.08	0.72
	Output	kw	1.5	1.1
	Number	unit	2	2

RANGSIT

	Item	Unit	No.1 1−3A	No.2 1−7A	No.3 4−4A	No.4 6−3A	No.5 6−8A	No.6 6−12A	No.7 6−13A	No.8 8−2A	No.9 10−2A
Condition	Area Coverage	ha	1,025.20	1,461.20	221.3	227.80	740.10	833.70	1,305.10	219.9	233
	Design Population	person	74,813	90,591	3,519	11,049	40,979	46,340	51,969	2,617	1,939
	Wastewater Flow	m3/min.	105.84	123.54	3.96	12.42	46.02	52.02	68.70	2.94	2.16
Invert Level	Upstream	m	−3.70	−2.80	−2.79	−4.43	−2.09	−4.00	−1.73	−2.52	−2.27
	Downstream	m	−0.65	0.23	1.38	0.08	0.26	0.53	0.50	0.65	1.1
Total Head	Actual Head	m	3.1	3.0	4.2	4.5	2.4	4.5	2.2	3.2	3.4
	Loss surrounding Pump	m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	Total	m	4.6	4.5	5.7	6.0	3.9	6.0	3.7	4.7	4.9
Specifications	Diameter	mm	500	600	150	200	350	350	400	150	150
	Flow	m3/min./unit	26.46	30.89	1.98	4.14	11.51	13.01	17.18	1.47	1.08
	Output	kw	30.0	37.0	3.7	7.5	11.0	22.0	15.0	2.2	1.5
	Number	unit	4	4	2	3	4	4	4	2	2

BANG BUA THONG

	Item	Unit	No.1 1−2A	No.2 1−8A	No.3 3−3A	No.4 3−5A	No.5 4−3A	No.6 4−4A	No.7 5−3A	No.8 6−4A
Condition	Area Coverage	ha	113.4	366.5	71.7	127.2	85.8	252.8	44.9	238.7
	Design Population	person	11,443	38,811	1,858	3,295	1,631	4,895	907	11,500
	Wastewater Flow	m3/min.	12.84	43.56	2.1	3.72	1.86	5.52	1.02	12.9
Invert Level	Upstream	m	−2.64	−3.29	−2.58	−2.13	−3.87	−2.59	−1.18	−2.30
	Downstream	m	0.80	0.32	1.10	1.00	0.05	0.90	1.15	0.80
Total Head	Actual Head	m	3.4	3.6	3.7	3.1	3.9	3.5	2.3	3.1
	Loss surrounding Pump	m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	Total	m	4.9	5.1	5.2	4.6	5.4	5.0	3.8	4.6
Specifications	Diameter	mm	250	350	150	150	100	150	80	250
	Flow	m3/min./unit	4.28	10.89	1.05	1.86	0.93	1.84	0.51	4.30
	Output	kw	5.50	15.00	1.50	2.20	1.50	3.70	0.55	5.50
	Number	unit	3	4	2	2	2	3	2	3

3.B.6 Specification of Siphon

LOPBURI

	Item	Unit	No.1 1-3B	No.2 1-5
Condition	Area Coverage	ha	170.50	545.10
	Design Population	person	7,247	40,853
	Wastewater Flow	m3/s	0.106	0.595
Dia	Upstream	mm	500	1,000
	Shiphon	mm	300x2 line	600x2 line
	Downstream	mm	500	1,000
Length		m	60.0	45.0
Velocity	Upstream	m/s	0.69	1.10
	Shiphon	m/s	0.87	1.10
	Downstream	m/s	0.69	1.10
Full Flow	Upstream	m3/s	0.14	0.86
	Shiphon	m3/s	0.12	0.60
	Downstream	m3/s	0.14	0.86
Desing Flow	Upstream	m3/s	0.11	0.60
	Shiphon	m3/s	0.11	0.60
	Downstream	m3/s	0.11	0.60
Invert Elevation	Upstream	mm	10.26	8.23
	Shiphon	mm	4.31	4.40
	Downstream	mm	9.76	7.95
Water Level	Upstream	m	10.58	8.81
	Shiphon	m	0.35	0.25
	Downstream	m	10.23	8.56

RANGSIT

	Item	Unit	No.1 1-5	No.2 6-13	No.3 6-16	No.4 7-3	No.5 9-3
Condition	Area Coverage	ha	1,130.0	1,305.1	1,566.3	159.7	131.8
	Design Population	person	80,797	51,969	54,240	7,251	1,582
	Wastewater Flow	m3/s	1.876	1.145	1.187	0.136	0.202
Dia	Upstream	mm	1,500	1,200	1,200	500	600
	Shiphon	mm	1000x2 line	800x2 line	800x2 line	300x2 line	400x2 line
	Downstream	mm	1,500	1,200	1,200	500	600
Length		m	71.00	57.00	43.00	54.00	40.00
Velocity	Upstream	m/s	1.39	1.19	1.19	0.77	0.87
	Shiphon	m/s	1.62	1.34	1.39	0.97	0.98
	Downstream	m/s	1.39	1.19	1.19	0.77	0.87
Full Flow	Upstream	m3/s	2.45	1.35	1.35	0.15	0.25
	Shiphon	m3/s	2.54	1.35	1.40	0.14	0.25
	Downstream	m3/s	2.45	1.35	1.35	0.15	0.25
Desing Flow	Upstream	m3/s	1.88	1.15	1.19	0.14	0.20
	Shiphon	m3/s	1.88	1.15	1.19	0.14	0.20
	Downstream	m3/s	1.88	1.15	1.19	0.14	0.20
Invert Elevation	Upstream	mm	-1.33	0.50	-0.24	-0.41	-0.79
	Shiphon	mm	-3.76	-4.65	-4.17	-4.22	-3.35
	Downstream	mm	-2.04	0.10	-0.60	-1.65	-1.04
Water Level	Upstream	m	-0.36	1.34	0.64	-0.03	-0.38
	Shiphon	m	0.44	0.33	0.31	0.39	0.22
	Downstream	m	-0.78	1.01	0.32	-0.43	-0.60

BAHGBUATHONG

	Item	Unit	No.1 1-3
Condition	Area Coverage	ha	143.70
	Design Population	person	14,500
	Wastewater Flow	m3/s	0.27
Dia	Upstream	mm	600
	Shiphon	mm	400x2 line
	Downstream	mm	600
Length		m	38.00
Velocity	Upstream	m/s	0.87
	Shiphon	m/s	1.05
	Downstream	m/s	1.05
Full Flow	Upstream	m3/s	0.25
	Shiphon	m3/s	0.27
	Downstream	m3/s	0.53
Desing Flow	Upstream	m3/s	0.24
	Shiphon	m3/s	0.27
	Downstream	m3/s	0.33
Invert Elevation	Upstream	mm	-0.16
	Shiphon	mm	-3.62
	Downstream	mm	-0.45
Water Level	Upstream	m	0.32
	Shiphon	m	0.28
	Downstream	m	0.04