Tables

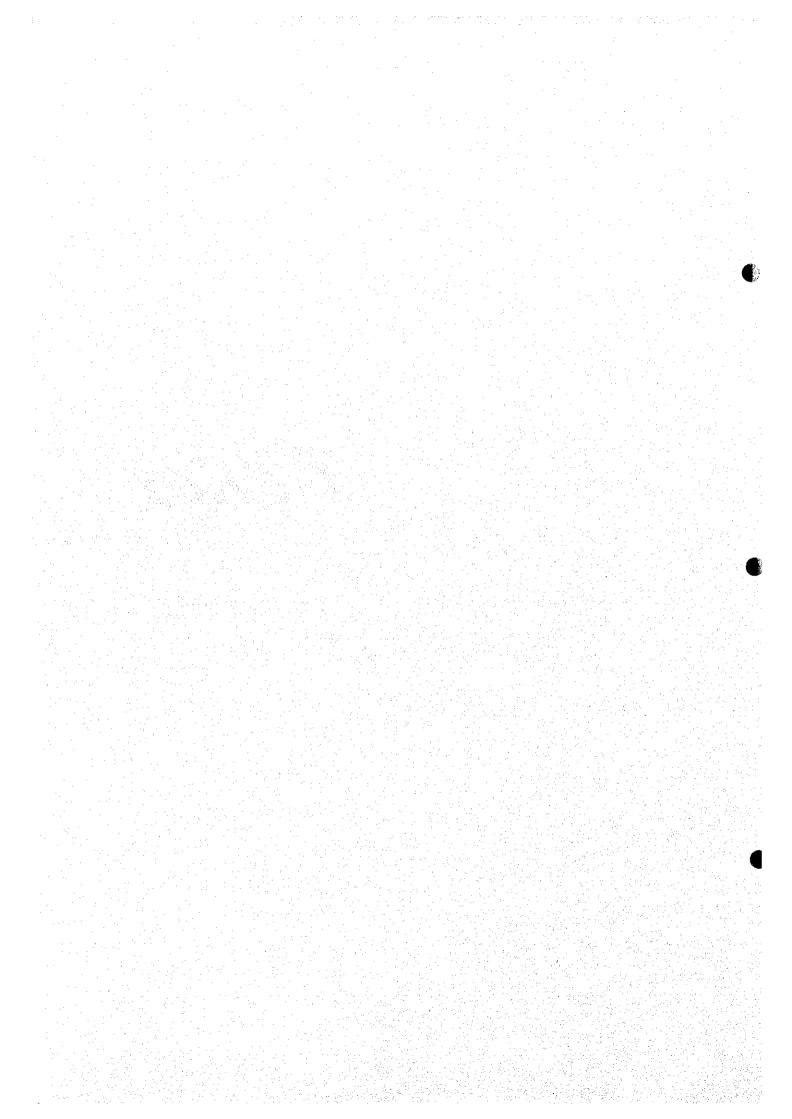


Table 2.1.1(1/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

5-46-14-	CODE	STATION_NAME	TLATITU	LONGI	51521515151515151595959696959596969595959595
1	07013	A. Muang	18.64	98.96	A A A A A A A A A A A A A A A A A A A
	07032	A. Sarapi A. San Kamphaeng	18.71	99.04	A A A A A B B B A A A B B B B B A A A A
1-1-	07042 07052	A San Sal A Doi Saket	18,85	99.05 99.14	
	07072	A. Hano Dong	18.69	96.92	
1+	07062	A. San Pa Yong A. Hot	18.63		
1	07112	A. Mae Taeng	19.12	96.95	
1	07122	A. Phreo A. Chieng Dao	19.36		A A A A A A A A A A A A A A A A B A A A A B B B B A A A A B B B B A A A A B B B B B A A A A B B B B B A A A A B B B B B A B A A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B A B B B B B A B
1	07142	A Samoeng	16.65		
1-1-	07152 07162	A Mae Chaens A Crekol	18.50		8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
1 -	07182 07192	A. Chom Thong Ban Aen. A. Dof Tao	18.42 18.05	98.68 98.65	A A A A A A A A B B A A A A A A A A A A
1	07232	Dol Chians Dol Develop Settlement	19.26	98.92	BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1-1-		Dol Suthep-Pul National Perk Dol Chiang Dao Watershed Research	18.80	98.93 98.96	
這	07262	Prophing Reicheniwel Palace	18.81	96.90	BAABBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1-1	07272 07262	Huel Khok Me Watershed Research Doi So Kaso Seed-Multiplication. A. Hot	18.83	96.87 96.39	
1_	07292	San Pe Tong Rice Experimental Station	18.51	96.90	
1	07331	Mae Cho Agromeleorological Station. A. San Kaeng Kut (P.13). A. Mae Taeng	18.90	99.01 96.67	AAAAAAAAAAAB BOABB
1	07341	Mee Kuang (P.25). A. Doi Saket	18.92	99.13	BAAAAAABAAAAABAAAABAAAABB
1		RID Office Unit 1. A. Muang Hual Mae Faek Siphon. A. San Sal	18,79 19.00	99,02 96.98	A A A A A A A B B B B B B B B B B B B B
1	07430	Huel Mee Cho Siphon	18.90	99.02	<u> </u>
1 1	07450	Huel Keec Siphon Huel Mee Teo Hei Siphon	19.04 18.93	98.96 99.00	A B B B B B B A A A A B A B A B A A A A
1		Tal Regulator Of Mas Fask Project	18.88	99.09	AAAABABAAAAAAAAAAAAAAAAABAAAABB
士		Bhumiphol Dem Develop Settlement. A. Dol T Sinthulit Priche Weir (Mee Fack Proj.)	17.92 19.10	98.66 96.96	A A A A A A A A A A A A A A A A A A A
1 1	07502	Mae Ho Phra Forest Plantation, A. Mae Taen Ping River Old Project	19.07 18.69	99.22 98.97	
1	07520	Mae Yeeng Headwork	19.15	98.92	B A A B A A A A A A A A A A B B B
1-1-	07530	Mae Hong Hek Siphon, A. Doi Seket Mae Pong Siphon, A. Dol Saket	18.88	99.15 99.16	
1	07550	Ban Lom Wuz Daeng, A. San Kamphaeng	18.74	99.16	BAAAAAAAAAAAAAAAAAAABAAABBB
1		Samoong Mine Industry Centre Barn Pang Toem (P.41) A. San Pa Thong	18.82	98.57 98.75	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
1	07605	Muang Khong, A. Chiang Dao	19.30	90,72	BAAAAAAAAAAAAAAAAAA
1-1-		Kut Project, A. Mee Teeng Huel Mee Ke . A. Mee Cheem	19.23	96.61 96.32	
1	07634	Mae Chaem. A. Mae Chaem	18.50	96.36	
1		Keeng Ob Luang. A. Mae Chaem Mae Ngat Dam	19.15	98.47	BAAAAAAAAAAAAAAA
1	16062	A. Hang Chat	18,42	99.22	
1-1-	17012	A. Muang	18,58 17,60	99.01 98.95	ALABA A BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1	17032	A. Pa Sang (Pak Bong)	18.52	96.94	
11	17042	A. Mae The A. Ben Hong	16.46	99.14 96.82	
1	17062	Ban Ke. A. Li	17.66	96.78	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1-1-	17000	Ben Don Mun (P.42). K.A. Thung Hua Chang Lamphun Agrometeological Station	17,89 18.58	99.09 99.03	
1	17101	Ban Nong Hoi (P.44). A. Muang	18.59	99,16	
		A. Sam Ngao Bhumibol Dam	17.24 17.24	99.02 99.06	
1	63111	Wang Kra Chao (P.12). A. Sam Ngao	17.24	99.01	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
- 1 -	07581	Ban Samong, A. Sam Ngao Huai Mae Lai (P.36) A. San Kamphaeng	17.33 18.66	98.88	AAAAAAAA BAAAAAAAAAAAAAAAAAAAAAAAAAAAA
2	16013	A. Muang	18.29	99.51	
2		A. Chee Horn A. Ko Kha	18.70 18.19	99.57 99.40	
2		A. Mae The	18.13	99.52	
2	16062	A. Thoun A. Mae Phrik	17.61 17.45	99.22 99.12	
2 2		A. Wang Nua	19.15	99.52	
2	16140	Mae Wang, Headwork, A. Muang Mae Wang, (W.1), A. Muang	18.44	99.50 99.50	B B A A A A A A A A A A A A A A A A A A
2	16151	Mae Chang. (W.15). A. Mae Tha Mae Mai forest Plantation, A. Muano	16.14 16.49	99,58	
2	16180	Mae Suk (W.16). A. Chee Hom	16.60	99.65	
		Mae Moh Forest Plantation, A. Mueng Mae Chang Forest Plantation, A. Mae The	18.41 18.41		
2	16214	Mine Sal Khern Forest Plantation. A. Chee Ho	18.50	99.53	
2		Husi Luting Reservoir, A. Musing EGAT Lignite Office, A. Mass Moh	18.31 18.28		
2	16265	Ban The Si. A. Mae Moh	18.43	99.76	
2	16265	Ban Dorg Mae Moh Reservoir Ban Mae Chang Darreile, A. Mae Moh	18.27 18.30	99.81	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3	16303	Lempeng Agromeleorogocal Station A. Muang	18.30 15.48	99,30	A A A A A A A A B A
3	12022	A. Khlong Khlung	16.21	99.72	
3	12032	A. Piwan Kratai A. Kharu Woralakburi	16.66 16.06	99.50	
3	12061	Khlong Suanmak (P.26), A. Muano	16.45	99.43	
3	12091	Ban Pang Wai (P.35), Khlong Khumg Ban Pong Nam Ron (P.47) A. Khlong Lan	16.07 16.33	- 99,41	BABAAAAABBAAAAAAA
3	26062	A. Beriphot Phise:	15.93	99.90	A A A A B A B A A A A A A A A A A A A A
- 3	63022	A. Museng A. Ban Yak	16.88 17.05		
3	63120	Huai Mae Rakam (P.32). A. Muang	16.92	99.30	
-3	03152 73032	Tak Animat Supporter A. Pong	16,92 19.14	99.12 100.28	
5	07062	A. Mae Rim	18.91	99.95	
5	16102	A. Ngao Huet Thek Plantation, A. Ngao	18.71 18.67		
5	16220	Ban Mae Phu (Y.26). A. Thouri	17.33	99.46	
5	40022	A Musing A Sung Men	18.05	100.15	
5	40032	A. Rong Kwang A. Long	18,34	100.32	
5	40062	A. Wang Chirs	18.07 17.90	99.61	
5	40072	Huai Rai Khao Phung Teak Plantation, A. De Forest Protected Unit 15. A. Song	17.98	100.10 100.17	
5		A Den Chal	17.96	100.05	
A:C		_			

Table 2.1.1(2/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

	ODE			ONG1 51	52[53]54 5 56 57 56 58 60 61 62 83 64 65 66 65 66 69 70 71 72 73 74 75 76 77 76 76 00 61 62 83 64 65 66 67 66 69 90 91 92 93 94 95 96
5 40	3124 H	om River (Y.20). A. Song Oun Mae Khemmi Forest Plantation. A.Rong	18.38	00.37	
		Georg Sus Yen. A. Song Muang	18.65	99.63	
5 59	9022 #	L Si Salchanafai	17.52 17.32	99.76 99.84	A A A A A A A A A A A A A A A A A A A
		k Sawankhalok k Ban Dan Lan Hoi	17.00	99.50	
		Si Sam Rong Agrometeological Station A. Thung Saliam	17.17	99.87	
5 5	9104	Si Sam Rong	17,16	99.87	
		long Pta Mo Project, A. Sawankhalok Geng Luang (Y.6), A. Si Salchanalai	17.26	99.96	
5 5	9131	Don Rabiang (Y.14). A. Si Salchanafai	17,60	99.72 99.82	
		Si Chaliang Weir. A. Si Salchanalal Ban Dan Lan Hoi Forest Plantation	17.58	99.57	
		Olong Pak Reo Outlet, A. Si Satchanalai Sukhothal Agricultural Office, A. Muang	17.49	99.76 99.83	
6 1	2052	Thung Pho Thale Self-Supporting Settlement	16.47	99,65	
		A. Sai Ngam A. Pho Thale	16.45	100.27	
6 3	6052	A. Sam Ngam	16,51	100.21	
6 3	9022	A. Pho Prethep Chang A. Beng Rakem	16.76	100.12	
· nummer or		A. Kong Kralel A. Krimat	16.95	99,96	
	26013	A. Muang	18.78	100.77 100.75	
7 2		A. Na Noi	18.33	100.72	
	28042	A. Pue A. Thung Chang	19.10	100.92	
7 2	20062	Mae Salthon Forest Protected Station Unit5.	18.53	100.75	
		A. The Wang Phe A. Chieng (Geng	19.12	100.61 100.87	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
7	28111	Ban Hal Khao San (N.42). A. Sa	18.57 18.40	100.87	
7	28142	Yan Sarung (N.35). A. Sa Nan Agromateorological Station	18.87	100.75	B A A A A A A A A A A A A A A A A A A B B A A A A A A A A A A B B A A A A A A A A B B A A A A A A B B A A A A A A A A A B B A A A A A A B B B A A A A A A A B B B A A A A A A B B B A A A A A A A A B B B A A A A A A A A A A A A A A A B B B A
		A. Mee Charim A. The Pia	18.73 17.79	101.02	
7	70101	Tha Pla. (N.6A)	17.60	100,53	
8	39142	A Nakhon Thei A Chatrakan	17.10 17.28	100.64 100.55	
	39013 39052	A. Muang A. Phrom Phiram	16.82 17.05	100.26	
9	39072	A. Wat Bot	15.99	100.31	
	39062 39091	Phitsenulok Agriculture Experimental Station Ban Yang (N.22). A. Wat Bol.	16.85 17.03	100.35 100.37	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
9	39151 39161	Nan River Aller Condition Unit(N.5A), A Mus Ban Nong Bon (N.40). A. Wat Bot	16.62	100.25	
9	39180	Naresuen Dem. A. Phrom Phirem	17.05	100.18	
9	59162 70013	A. Si Nakhon A. Muang	17.45 17.63	99.97 100.10	
9	70022 70042	A, Nam Pat A, Phichai	17.73 17.28	100.09	
9	70052	A. Tron	17.48	100.12	
9	70072	A Fak The Bung Phat Self-aupporting Seltlement, A Tro	17.42	100.88	
9	70131		17.74		
9	70151 70170	Nam Rit RID Office. A. Muang	17.63	100.11	
9	70180 70192		18.04		A A A A A A A A A A A A A A A A A A A
9	70202	A Ban Khok	18.00		
10	70221 26022	A. Chumeneng	15.80	100.31	
10	31122	Overseas Radio Receiving Station, A. Muan A. Chon Daen	16.80		A A A A A A A A A A A A A A A A A A A
10	36104 36155	Pine Camp. A. Khao Kho	16.7. 16.80		
10	38012	A Musing	16.4	100.35	
10		A. Bang Mun Nak A. Taphan Hin	16.0		
10	3807	A. Warro Sel Phun Khao Sel School , A. Thep Khio		100.55 7 100.55	
10	3903	A. Wang Thong	16.8	2 100.43	
10	3910	2 A. Beng Krathum 1 Wang Nok Aen (N.24), A. Wang Thong	16,8	8 100.30 4 100.52	
10	3913	2 Khao Krayang Forest Plantation 5 Nam Khak, A. Wang Thong	16.8 16.8	7 100.73	
11	2603	2 A. The Teko	15.6	4 100.49	
11		2 A. Lat Yao 2 Animat Food Division Unit2, A. Muang	15.7 15.8	5 100.17	
11	2610	2 A Hong Bus 2 Khao Bo Keeo Settlement	15.8 15.4	6 100.54	
11	2612	2 A. Phaisali	15.0	0 100.6	
12	0425	2 Chai Nat Rice Experimental Station 0 Upper 2R Canal (CPK.1)	15.3 15.3	4 100.1	
12	0429	0 Manorom Regulator (CPK 25) 1 Ban Pangmakha (Ct.SA). A. Khanu Worala	15.3	4 100.1	
12	2601	3 A. Muang	15.7	0 100.1	
12	260	2 A. Krok Pira 2 A. Phayuha Khiri	15.4	5 100.1	
12	261	70 Upper Ban Lek Canal (CPA.1) 52 Ban San Chao Kai To	15.7 15.1	8 99.6	
12	262	70 Husi Mae Wong (CL4). A. Lat Yao	15.	78 99.6	
12		81 Khiowg Pho (Ct.7). Ban Hang Rai. A. Lai. 00 Khai Chira Prawat (C.2). A.Muang	15.	100.1	1 CARLES BARRAN
12	690	22 A. Thap Than 32 A. Nong Kha Yang	15. 15.	16 99.8	
12	690	42 A. Nong Chang	15.	39 . 99.8	4 교사사이어 사이스
12	691	62 A Sawang Arom 64 Huai Rabam Forest Plantation Station	15. 15.	48 99.4	
12	691	21 Ban Bung Al Chlam (Ct.9). A. Lam Sak 32 A. Lan Sak	15. 15.	53 99.4 47 99.5	
12	691	44 Thei Plywood Company Limited	15.	43 99.7	
12	691	50 Ban Sa MO Thong (C.30). A. Ban Rai 95 Ban Nong Samun. A. Dan Sai	15. 17.	34 101.	
		52 A. Chai Badan	15.	20 101.1 26 101.1	
13		13 A. Bue Chum		07 101.	

Table 2.1.1(3/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

SAME CODE	STATION NAME	LATITULI	LONGL	515253 5415 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 60 61 62 63 84 85 66 87 86 69 50 91 92 93 94 95 96
13 19351		15.34]	101.38 101.28	
13 36013 13 36023	A. Muung	16.42	101.16 101.25	
13 36032 13 36043	A Lom Kao	15.68	101.23 101.11	
13 36062	Nal Chun Farm	16.26	101.05	
13 36062 13 36092	A. Hong Phai	15.99	101.07 101.08	
13 36122 13 36141			101.27	
13 70032 14 19092	A. Laplan	16.16	101.27 100.99	
14 25172		14.63	101.30 101.30	
14 42032	A. The Rus	14.56	100.73	
	The Luang Headwork (RPP,1)	14.56	100.61 100.76	
	A. Muang A. Seo Hei		100.91	<u> 수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수수</u>
	A. Keeng Khol Phu Khee Botanical Garden		101,00	
	Music Lak Forest Research Station	14.65	101.20 101.08	▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲
14 54112	Thap Knwang Animals Conservation	14.62	101.05	
14 54300		14,63	101.07	AAAAAAABBBBAAAA ABB
14 54310 15 01012	Khlong Phriso Headwork, A. Muang A. Muang		100,94 100,48	
	A. Chałyo A. Pa Mok		100.47 100.45	
15 01180	Mahanam Siphon (CPA 9) Bangsala Siphon (CPA 10)	14.71	100.44 100.46	
15 01180	Bang Kaso Siphon (CPA 11)	14.59	100.46	8 4 4 4 4 4 8 4 4 4 4 4 4 4 4 4 4 4 4 4
15 04012		15.18	100.44 100.13	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
	Upper 3R 2 Canal (CPK2)	15.26	100.09	A A A A A A A A A A A A A A A A A A A
	Uper 4R Canal (CPK 3) Upper 6R Canal (CPK 4)	15.26 15.25	100.25 100.30	
	Upper Therrmentun Canal (CPA.2) Ta Suk Siphon (CPA.3)	15.27	100.08 100.25	
15 19013	A. Mueng A. The Wung	14,80	100.66	
15 1903	A. Ban Mi		100.52 100.54	
	A. Khok Servrong Lop Burl Self-Supporting Settlement	14.80	100.73 100.75	
15 19072 15 19082	1	14.75 15.07	100.83	
	Mehe Pho. A. Sa Bol Upper 14R Canel (CPK.11), A. Ben Mi	15.28	100.87 100.57	
15 19146	Upper 16R Canal (CPIC 12), A. Ban Mi	15.01	100.58	
15 19160	Upper 1L-18R Canal (CPK.13), A. Ban Mi Upper 3R-16R Canal (CPK.14), A. Ban Mi	14,96	100.53	
15 19180	Upper 17R Canaf (CPK 15), A. Sen Mi Upper 19R Canaf (CPK 18), A. Muang	14.89	100.59 100.60	
	Upper 20R Canal (CPK 17), A. Muang Upper 22R Carul (CPK 18), A. Muang	14.52	100.63	
	D Khok Kra Thlam Regulator (CPK.27), A. Mua 3 Upper 11R Canal (CPK.36), A. Ban Mi	14.90 15.12	100.60 100.51	
15 19240	Lop Buri Siphon (LOP.1). A. Muang 2R-1R-21R Cenal (LOP.2). A. Muang	14.79	100.51 100.57	
15 19260	Ngiu Rai Siphon (LOP.3). A. Muang	14.72	100.61	
15 19310	Upper 3L-21R Canal (LOP.7) Upper 1R-1L-8L Canal (CPA.33). A. Tha Wun		100.59 100.51	
	Upper 1R-8i, Canal (CPA 34) 2 A. Takhi	14.73 15.26	100,51 100,35	
	2 Yak Fa Agrometeorological Station D Upper 6R Canal (CPA.5)	15.35 15.24	100.50	
15 2619	Upper 7R Canal (CPA.6) Upper 8R Canal (CPA.7)	15.22 15.17	100.35 100.40	
15 2621	0 Upper 1R-9R Canal (CPA-8) 0 Upper 2R-9R Canal (CPA-9)	15.12	100.42 100.42	
15 2623	Chong Khee Regulator (CPA.26) Z. A. Muang	15.15	100.41	A A A A A A A A A A A A A A A A A A A
15 4202	2 A. Maha Rat	14,54	100.58	
15 4214	2 A. Bang Pahan 2 A. Ban Pfraek	14.64	100.55 100.58	
15 4234	0 Upper SR-24R Cenef (LOP.8) 0 Upper 1L-24R Cenef (LOP.9)	14.43	100.54 100.56	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15 4236	0 Upper 1R-24R Cenal (CPK 21) 0 Upper 2R-24R Cenal (CPK 22)	14.56 14.52	100.69	
15 4237	0 Upper 3R-24R Canal (CPK23) 0 Upper 4R-24R Canal (CPK24)	14,50		
15 4247	0 Khok Maii Outlet 0 Bang Nang Ra Regutator (REG.45)	14.49	100.45 100.53	
15 4255	0 3L.21R Canal (LOP.5)	14.64	100.58	A A A A A A A A A A A A A A A A A A A
15 5404	0 Nam Chon Sipton (LOP.5) 2 A Ben Mo	14.61	100.55	
15 5415	Phys Phulthebal Self-supporting Seitlement A. Nong Don	14,72 14,68	100.80	
15 5424	0 Upper 3R-23R Canal (CPK 19) A Bart Mo 0 Upper 4R-23R Canal (CPK 20)	14.61 14.59	100.68	
15 5426	0 Roang Rang Regulator (CPK 28), A. Ban Mo 0 Upper 1R-23R Canal (CPK 29), A. Ban Mo	14.64 14.62	100.74	BABBABAA AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
15 5420	0 Upper 2R-23R Canal (CPK.30). A. Ban Mo 0 Upper 24R Canal (CPK.31). A. Ban Mo	14.62 14.50	100.09	
15 5433	0 22R Ben Kleb Siphon (CPK 33). A. Nong Don	14.71	100.74	
15 5603	2 A. Mueng 2 A. Phrom Buri	14.09 14.79	100.41 100.46	
15 5606	0 Upper 3R-9R Canal (CPK 10), A. In Buri 0 Somei Siphon (CPA.4), A. In Buri	15,05 15,05	100,45 100,33	
15 5607	0 Ban Rai Siphon (CPA.5). A. In Buri 0 Sing Buri Siphon (CPA.7). A. Muang	14.96 14.86	100.37	
15 5610	0 Upper 10L canal (CPA.5). A. Phrom Buri 2 A. Hankha		100,44	
16 0409	O Upper Makhem Theo-U-Thong Canal (SUP.2	15.22	100.07	A A A A A A A A A A A A A A A A A A A
	0 2R Phon Thep Canel (SUP.3) 0 The Bot Regulator (SUP.24)	15.18 15.06	100.06 100.02	A A A A A A A A A A A A A A A A A A A
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Table 2.1.1(4/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

sые но СОО	E STATION_NAME	LAYMULC	NGI IS	1 52 53 54 5 56 57 56 59 60 61 62 63 64 65 66 67 66 69 70 71 72 73 74 75 76 77 78 79 30 81 82 83 36 65 66 67 38 89 90 90 90 90 90 90 90 90 90 90 90 90 90
16 0418		15,03	99.91 99.91	B A B B A A A A A A A A A A A A A A A A
	0 Ban Wang Kho Hai. A. Hankha	14.96	99.86 99.70	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
16 1334	12 A. Leo Khuen	14,60	99.77 00.07	A A A A A A A A A A A A A A A A A A A
16 2302	22 A Nakhon Chaisi	13.80 1	00.19	
16 230 16 230	52 A. Kamphaeng Saen	14.00	99,99	
16 230 16 230	Mae Klong Yal Irrigaled Agri . Exp. Station	13.95	00.18 99.97	
	50 Thap Yai Thao (Km. 31+596) Sec. 1 50 9R-St. Canal (Km. 40+240) Sec. 2	13.87 1	00.00 00.06	
	90 10R-5L Canal (Km. 46+500) Sec. 4 02 A Dontum	13.96 1	00.14	
16 262 16 520	92 A. Kao Lleo 22 A. Ban Phaeo		00.08	
16 520	50 Bang Yang Regulator (SUP.49) 13 A. Mueng		00.20 00.12	A A A B A A A A A B A A A A A A A A A A
16 600	22 A U Thong 42 A Song Phi Nong	14.37	99.89 00.02	
16 600	52 A. Si Prachen	14.62	100.15 100.10	A A B A A A B A A A A A A A A A A A A A
16 600	72 A Sam Chuk 62 Sugar Factory	14.73	100.10	
16 600 16 601	02 Suphan Buri Rice Experimental Station	14.47	100.12	
16 601 16 601	50 Upper 2R Canal (SUP.12)		99.70 100.07	BAAAAAAAAAAAAAAAAAAAAAAA
16 601	70 Upper 1R-1R Canal (SUP.14) 90 Upper 1L-1R Canal (SUP.16)	14.66	100.10 100.11	
16 602	100 Upper 212R-11. Canal (SUP.17) 210 Upper 10L Canal (SUP.18)		100.15 100.02	S D A A A A A A A A A A A A A A A A A A
16 807	220 Upper 2L-1R Canal (SUP.19) 230 Upper 3L-1R Canal (SUP.20)	14.62 14.59	100.09	B B A A A A A A A A A A A A A A A A A A
15 600	240 Upper 15L Canal (SUP.21) 250 Middle Of 2R Drop Canal (SUP.22)		100,00	
16 600	280 Sarn Chuk Regulator (SUP.25)	14.77	100.09	
16 60	310 Beng Sakes Regulator (SUP.37)	14.24	100.12	B B A B A B A A A A A A A A A A A A A A
16 60	330 Bang Mee Mai Regulator (SUP.39) 370 Lower Song Phi Hong canal Regulator	14.37	99.94	
16 60	400 Upper 8L M-U Canal (SUP.54) 430 Maitham Lom Road Outlet (SUP.59)	14.79 14.38	100.01 100.07	
	440 Lower Suan Teeng Canal (SUP.60) 450 Pa Philik Outlet (SUP.62)	14.41	100.00	BAAAAAAAAAAABBAB
	460 Khu Bus Outlet (SUP.63) 460 Upper 1R-2L-1R Cenel (SUP.66)	14.34	100.00	
16 60	490 Wang Nam Yen Outlet (SUP.61) 500 Don Krabuang Outlet (SUP.64)	14.37 14.49	100.04	
16 60	522 U Thong Agrometeorological Station 560 Upper St. Canal (SUP.33)	14.30 14.84	99.80	<u> </u>
16 69	052 A. Bart Rai	15.08 14.66	99.57 100.41	<u> </u>
17 01	032 A. Pho Thong 042 A. Wisel Chai Chan	14.59	100.30	
17 01	062 A. Sawaengha 070 7L-1R Canal (NOI.9) A. Pho Thong	14.64	100.30	
17 01	060 8L-1R Canal (NOI.10) A. Sam Ko 1090 SL-1R Canal (NOI.11)	14.59 14.54	100.2	A A A A A A A A A A A A A A A A A A A
	100 Muang Tie Siphon (NOI.12) 110 Khlong Chorakhe Siphon (NOI.13)	14,62 14,57	100.3	<u> </u>
	120 Lower 2R-3L Cenal (NOI,14) 130 3R-3L Cenal (NOI,15)	14.54 14.59		BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
	140 Yangmani Regulator, (NOI.18) 1150 Upper 2R-3L Canel (NOI.20)	14,75	100.4	
17 0	1190 Section 3 Project, A. Pa Mok 1200 St-1R Canal (NOI.26) A. Pho Thong	14.49		B B A A A A A A A B B B B B A A
17 0	1210 1R Canal (NOI 31) A. Savaengha 1220 3R-1R Canal (NOI 33) A. Pho Thong	14,72		
17 0	1230 1R-3L Censi (NOI.35) A. Sawsengha	14.79	100.3	
17 0	1240 2L Canal (SUP-66) A. Sem Ko 3022 A. Phanom Sarakham	13.75		
17 0	4022 A. Sanphaya 4042 A. Sanburi	15.00	100.1	<u> </u>
17 0	4080 Upper Thung Rahan Cenal (SUP.1) 4110 Upper 2L Rahan Cenal (SUP.4)	15.14	100.0	6 B A A A A A A A A A
17 0	4120 Upper 1L-1R Canal (SUP.5) 4130 2L Rahan Cenel (SUP.5)	15.12	100.0	milian in the company of the company
17 0	4140 Upper 3L Rahers Cenel (SUP.7) 4150 Upper 1L-2L Cenel (SUP.8)	15.00	100.0	8 A A A A A A A A A A A A A B A A A A A
17 0 17 0	4160 Phon Thep Regulator (SUP 23) 4170 The Bot Regulator (SUP 24)	15.05	100.0	
17 (M190 3t, M-U Canal (SUP.28) M300 Upper 3R-1R Canal (NOL1)	15.00	100.	B B B A A A A A A A A A A A B B A A A A
17 0	04310 Upper 3L-1R Cerell (NOI.2) 04320 Borommethal Regulator (NOI.18)	15.0	100. 100.	14 15 A A A D B B B B B B A A A A A A A A A A
17	M350 Ptio Ngam M361 Chao Phraya Dam	14.9	8 100. 7 100.	
17	34382 Chai Nat Agromateorological Station 23042 A. Bang Len	15.1	5 100. 2 100.	
17	23070 Phrs Phimon Regulator (SUP.42)	14.0	3 100. 6 100.	
17	23100 Bang Phasi Regulator (SUP.46) 23110 Khlong Yong Regulator (SUP.46)	13.8	3 100	
17	23120 Maha Sawat Regulator (SUP.47) 23130 Beng Sai Pe Regulator (SUP.52)	13.8	9 100	TE AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
17_	23140 Yipun Tai Regulator 23170 Lam Phays Régulator (SUP .44)	13.9		
17	23210 Bang Wai Regulator 31012 A. Muang	13.6	4 100	
	31032 A. Bang Kruai 31042 A. Bang Yal	13.6	0 100 5 100	
17	31052 A. Bang Bua Thong 31070 Bang Bua Thong Regulator (CPA 28)		1 100	<u> </u>
17	31060 Phra Udom, Regulator 31090 Thewiwathena Regulator	13.9	7 100 8 100	
17	31100 Bang Yai Regulator (CPA.30) 31110 Chimphii Regulator (CPA.31)		5 100	
- 17 - 17	31132 A. Sal Noi 32012 A. Muang	13.1	100	
17	32022 A. Lai Lum Kaso	14.0	100	AS ALARAMANANANANANANANANANANANANANANANANANAN

Table 2.1.1(5/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

SLAR HO CODE	STAYION NAME	LÁTITÜ	LONGI [152 53 54 5 [56 57 58 59 60 61 62 63 64 65 66 67 66 69 70 71 72 73 74 76 76 77 76 79 60 61 62 63 64 85 86 67 68 69 90 91 92 93 94 95 96
17 32140	A Sam Khok Kangkhlong Khutmai (New Canal) Reg. (NR	14.07 14.01 13.70	100.53 100.39 100.46	
17 41182	A. Yaling Chan A. Bang Khun Thlan	13.70 13.60	100.47	
17 41202	A. Nong Khaem	13.66	100.35	
17 41230	Phasi Charoan Regulator (CPA 32)	13.72	100.47	
17 42062	A. Phak Hat	14.46	100.37	
17 42102	A Sens	14,33	100,41	
17 42152	A Beng Ben A Let Bus Luang A Bang Sel (Left)	14.16	100.33 100.31	
17 42390	Phak Hai Regulator (NOI.19)	14.43 14.46	100,38	
17 42420	Singhanat Regulator (CPA 27)	14.15	100.48 100.35	
17 42440	Lak Khon Regulator Nam Sonthi Regulator (CPA.29)	14.13	100,49 100,37	
17 42460	Khlong San Regulator The Chang Regulator (NOI.24)	14.30	100.46	
17 42490	Phul Phra Regulator (NOI.22) Bars Khaek Regulator (NOI.23)	14.23	100,48	
17 42540		14.42	100.48	
17 42580	Lat Bus Luieng Resiletor Bang Sei Regulator	14.17 14.33	100.30	
17 51042	Khanom Chin Regulator A. Phra Pradaeng	14.32 13.66	100.54	
17 52012 17 52032 17 52040	A. Krathum Been	13.55 13.65 13.64	100,28 100,27 100,24	
17 52062 17 54192	Coop. Unit Ban Rai Dev. Settlement. A. Muan	13.52 14.66	100,30	A B A B A A A A A A B A A A A A A A A A
17 56022 17 56042	A. Beng Rachen	14,89 15,01	100.20 100.32 100.33	
17 56080	Upper 4R-1L Canal (CPA.6), A. Muang	14.90	100.37	BAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
17 56120	Phra Ngam Regulator (CPA 26) Upper 4L-1R Canal (NOI.3)	14,75	100.43 100.20 100.22	B A A B A B A B A B A B A B A B A B A B
17 56140	Upper 1R-1R Cenal (NOI.4) Upper 1L Canal (NOI.5)	14.90 14.86	100.37	BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
17 56160	Upper 2R-1L-1R Canel (NOI.6) Upper 3R-1R Canel (NOI.7)	14.82 14.73	100.36	
17 56180	Pho Prechak Regulator (NOI.8) Chansasut Regulator (NOI.17)	14.78		B B A A A A A A A A A A A A A A A A A A
17 56200	1R-1L Cenel (NOI:25). A. Beng Rechen 2L-1R Cenel (NOI:27). A. Beng Rechen	14.91	100.34	8 A A A A A A A A A B B B A A A A B B B B A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B A A A B B B B A A A B B B B A A A B B B B A A A A B B B B A A A A B B B B A A A A B B B B B A A A B B B B A A A B B B B B A A A B B B B A A A B B B B B A A A B B B B B A A A B B B B B A A A B B B B B A A A B B B B B A A B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B A A B B B B B B A B
17 56220	3L-1R Cenef (NOI.29), A. Beng Rachen 2L-1R Cenef Km. 10.080 (NOI.30), A. Beng R		100.26	B B A A A A A A A A A B B B A A B A A A A A A A B B B B A A
17 60032	IL-1R Canal (NOI,32) A. Bang Pla Ma	14.87	100.33	A B B A A A A A A A A A A A A A A A A A
17 60120	A. Doembarg Nangbuat Upper 1R-1L Canal (SUP.9)	14.84	100,10	B A A A A A A A A A A A A A A A A A A A
17 60140	Upper 1L Canel (SUP.10) Upper 3R-1L Canel (SUP.11)	14.79	100.14	
17 60180	Upper IL-2R-1L Canal (SUP.13) Upper 4R-1L Canal (SUP.15)	14,74	100.14	B A A A A A A A A A A A A A A A A A A A
17 60280	Pho Phraya Regulator (SUP.26) Middle Of 1L Cenal (SUP.34)	14.53 14.79 14,44	100,13	
17 6032	Pho Khoi Regulator (SUP.36) Bang Yihon Regulator (SUP.36)	14.39		
17 60350	Bang Seli Regulator (SUP.40) Phraya Bantu Regulator (SUP.41)	14,16	100,14	
17 60410) YI Pun Nua Regulator Middle Of 1L-1L Canal (SUP,56)) Lower 1L-1L Canal (SUP,57)	14.55	100.25	
17 6047	Upper 11-11. Cenet (SUP.65) Ben Hue Rehem (SUP.65)	14,49 14,57 14,84	100.22 100.15 100.18	B B B A B B A A A A A A A A A A A A B A B B B A A A A A A A A A A A A B A
17 6053	Upper 7L-1L Cenef (SUP.30) Upper 7L-1L Cenef (SUP.31)	14.95	100.08	B A A B B A A A A A A A A A A A A A A A
17 6055	Upper 1R-1L CANAL (SUP.32) Middle Of Salt Canal	14,84	100.10	8 A A B B B B A A A A A A A B B B B A A A A B B A A A A B A A A A A A A A A A A A A A B B B B A
17 6056	Lower Seli Canel Bang So Regulator	14.29	100.15 100.13	
17 6060	Dap Ngoen Regulator 2 A. Muang	14.34	100.15	A A A A A A A A A A A A A A A A A A A
18 00003	2 A. Beng Nem Priso 2 Bang Pakong Agricutture Settlement	13,85	101.06	
18 0307	Phra-ong Chalys Office D Bang Khanak Regulator (CKD.2)	13.70	100.87	
18 0309	0 Thakhai Regulator (CKD.3) 1 Thakhai Regulator (CKD.4)	13.69	101.07 101.05	A A A A B B B A A A A A A A A A A A A A
18 0312	0 Thep Rangsan Regulator (CKD.6) 0 Narry Hong Regulator (CKD.7)	13.49	100.96 100.82	
18 0014	0 Phraya Waut Regulator (CKD.10) 0 Beng Rong Regulator (CKD.11)	13.47	100.91	
18 0316	0 Ben Mci Regulator (CKD.12) 0 Sombum Regulator (NRK-0)	13.70	101.08 101.14	
1 18 10320	0 17 Canal Regulator (SRS.3) 2 A Bang Paleong	13.88	100.97 101.02	
	2 A. Ongitharak 0 Khlong 16 Regulator (SRS.2)	14.12 13.96	101.01	
16 2214	0 Saowaphaphongsi Regulator (NNK.10) 0 Bang Plakol Regulator (NNK.11)	14.12		
18 2224	0 Cenal 14 Regulator (NNK 20) 2 A. Pak Krel	14.13	100.92	
18 3204	2 A. Thanyaburi 2 A. Nong Sua	14.02	100.74	
18 3206	2 A. Lem Luk Ka Z. A. Khlong Luang	13,93	100.75	
18 3208	2 Rangsit Rice Experimental Station 7 Khlong Luang Rice Experimental Sta	14.07	100,65	
18 3210	0 Chulatongtorn Regulator (SRS.1) 0 Raphiphal 6R Canal (NRS.2)	13.96	100.62	
18 3212	0 Rephiphel 3R Canal (NRS.4) 0 Rephiphel Regulator (NRS.5)	14,22	100.77	
18 3215	0 Salairu Regulator (NRS.7) 0 Km. 15.300 Regulator (NRS.8)	14.27	100.90	
A Compl				

Table 2.1.1(6/6) INVENTORY OF RAINFALL STATIONS IN CHAO PHRAYA RIVER BASIN

			441411	LANGLIE	displayia ila laciaviania o ani esteptania di esteptania di pri pri pri pri pri pri pri pri pri pr
	CODE			100.65	1 52 53 54 5 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 60 61 82 83 84 85 86 87 88 89 90 91 92 93 94 95
		Krn. 16 500 Regulator (NRS.9)	14.14	100.90	
		Phra Thammaracha Regulator (NRS . 10)			
		Rangsil 1t. Canal (NRS.11)	14.06	100.67	
		Rangsil 5L Canal (NRS 12)	14.11	100.74	
		Rangsit 7L Canal (NRS.13)	14.14	100.81	
18	32220	Km. 22.100 Regulator (NRS.14)	14.14	100.90	
18	32230	Km. 11,700 Regulator (NRS.15)	14.20	100.90	
18	32250	Chiang Rak Yak Regulator (CPA 19)	14.05	100.60	
18	32262	Land Development Center, A. Thanyaburi	14.12		
18	41013	Meleorological Department	13.73	100.57	
	41022	A. Bang Kapi	13.76	100.65	A A A A A A A A A A A A A A A A A A A
	41032	A, Lat Krabang	13.72	100.79	
	41042		13.85	100.07	
	41052	A. Min Buri	13.61		· 이 시스
		Don Muang Air Port	13,92		
	41072		13.85		
			13.67		
		Bangna Agromateorological Station	13.79		
	41111	RID Office Sameen (C.12). A. Dusk	13.85		
		Bang Khen Regulator (CPA 20)	13.82		
		Khlong Prem Bangeue Regulator (CPA 21)			
		Pathumwan Regulator (CPA 22)	13.75		
		Phra Khanono Regulator (CPA 23)	13.71		
18		Khiong Sam Wa Regulator (SRS.4)	13.80		
18	42012	A. Muang	14.30		
16	42032	A. Tha Rua	14.50		
18	42052	A. Ulhai	14.36	100.67	
18	42062	A. Wang Noi	14.2	100.72	
18		A. Sang Pa-In	14.23	100.58	
10		A Phachi	14.45		
18		Hantra Agricultura Exp.	14.30		
18		Khiong Sewat Regulator (CPA 12)	14.34		
	42190		14.3		
18			14,3		
18		Ban Pho Regulator (CPA 14)	14.2		
18	42210				
18	42220		14.2		
18	42230		14.2		
18		Chlang Raknol Regulator (CPA 18)	14.1		
18		Phra firracha Regulator (NRS,1)	14.1		
18	42260	Nakhon Luang Headwork (NRS .3)	14.2		
18	42270	Nakhon Luang Regulator (NKG.1)	14.4		
18		Upper 2R Censi (NKG.2)	14,3		
18		Upper 3R Canal (NKG.3)	14.2	7 100.72	
18		Upper 4R Canal (NKG.4)	14.2	3 100.72	
18		Lower Nakhon Luang Canal (NKG.5)	14.1	8 100.62	
18	4232		14.5		
18	4253		14.4		AAAAABABBBAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
16	5101		13.6		
18	5102		13.6		
18	5103		13.5		A A A A B A A A A A A A A A A A A A A A
18	5106		13.5		BAAAAAAAAABABAABBAAABAAABAAAAAAAAAAAAA
18	5107		13,5		
16			13.5		
	5100		13.6		
18	5109				
18		0 Bank Ping Regulator (CPA 25)	13.0		
18	5405		14,3		
16			14.4		
18	5412		4.3		
18	5421	0 Phra Ekatholsarol Regulator (RPP.3). A. Hon	14.4		
18	5422	0 Phra Si Sin Regulator (RPP.4). A. Nong Khae	14.3		
			14.3	24 100.83	
18	5423	0 Khlong 10 Cross (RPP.5). A. Nong Khae	14.3		

Table 2.1.2 CATCHMENT AREA OF SUBBASIN

No.	Name of Subbasin	Area (km2)
1	Bhumipol Dam Basin	26,386
2	Wang River Basin	11,708
3	Ping River Residual Basin	9,632
4	Kaeng Sua Ten Dam	3,583
5	Sukhothai Residual Basin Y.4	14,148
6	Yom River Residual Basin	6,989
7.	Sirikit Dam Basin	13,130
8	Kwae Noi Dam	4,254
9	Phisanulok Residual Basin N.5A	7,902
10	Nan River Residual Baisn	9,291
11	Bung Boraphet Basin	3,546
12	Chainat Residual Basin	7,910
13	Pasak Dam	12,929
14	Pasak River Residual Basin	2,277
15	North East Delta	6,010
16	West Delta	9,943
17	Central Delta	6,780
18	South East Delta	6,380
	Total	162,798

Table 2.1.3 BASIN MEAN RAINFALL (1952 TO 1996)

Unit:(mm) Subbasin Subbasin Mar. Total Jul. Aug. Sep. Oct. Nov. Dee. Геb, No. May Jun. Apr. Included /Catchment 139.1 188.0 208.7 119.7 36.3 10.8 7.3 5.3 13.6 1,047.4 124.1 148 0 16.1 1,065.0 28.8 7,8 5.5 7.6 18.5 212.6 115.1 58.5 156.8 125.5 132.8 195.4 11.6 1,068.3 117.2 145.8 233,8 162.8 39.0 4.0 5.5 20.1 157.2 125.7 3 45.6 7.0 22.8 1,174.1 251.5 207.0 96.9 23.1 8.i 8.3 179.2 88.8 163.5 117.9 5.8 8.2 19,5 1,131.0 113.8 5.9 137.2 152.1 215.7 228.2 22.1 55.9 166.5 135.3 149.2 194.5 227.2 126.8 21.3 3.7 7.4 12.0 23.7 1,101.4 155.0 6 45.5 7.0 7.6 11.1 29.4 1,199.2 83.3 162.4 146.1 200.6 264.6 200.6 69.9 16.7 273.7 265.3 83.4 15.8 3.2 6.4 19.4 37.2 1,366.6 189.0 202.5 192.5 8 78.3 6.0 12.8 26.6 1,221.9 242.8 102.5 19.1 4.3 235.1 9 60,3 176.2 163.5 172.9 32.7 1,257.2 25.8 3.8 6.0 16.0 164.7 177.4 223.7 258.1 121.3 62.6 165.1 10 129.8 4.4 7.6 16.3 34.3 1,102.2 136.3 177.9 233.8 65.6 126.2 11 144.7 12.7 33.3 1,107.4 160.3 160.7 35.1 4.0 6.7 255.6 57.1 139.9 113.5 128.3 12 3.7 42.7 1,150.2 5.9 143.0 153.0 200.9 242.6 102.0 16.2 16.2 71.9 151.9 13 222.9 283.6 155.4 34.9 6.7 5.8 17.5 36.3 1,357.2 186.4 178.9 14 74.5 1542 5,6 11.4 27.2 1,081.6 27.8 5.5 143.8 15 53.7 134.5 124.2 136.9 158.7 252.3 110.5 126.5 245.3 174.8 34.9 5.3 4.0 8.1 20.9 986.6 97.0 45.0 114.2 16 172.7 33.1 5,4 5.2 10.8 23.9 1,050.2 143.9 254.0 17 48.6 122.8 107.6 122.3 6.9 6.3 15.0 22.3 1,233.9 144,4 157.7 185.4 279.0 176.0 34.2 18 59.7 147.0 214.7 127.3 35.0 8.7 6.5 7.2 16.1 1,055.9 1 to 3 49.2 152.0 124.8 133.2 181.3 Ping R. 22.0 5,6 6.6 9.1 21.1 1,128.9 4 to 6 115.0 214.9 224.8 57.7 162.8 133.9 155.2 Yom R. 13.8 1.240.6 7 to 10 5.1 67 30.6 71.8 170.0 160.3 188.2 248.0 233.7 92.8 19.6 Nan R. 19.0 4.1 5.9 16.4 41.8 1,181.2 13to14 204.2 248.8 110.0 152.2 148.4 158.0 Pasak 72.3 Nakhon 6.9 13.8 33.6 1,105.8 11 to 12 248.9 151.2 32.2 4.1 130.8 165.8 117.4 59.7 141.4 Sawan Area i to 11 6.7 1,131.5 27.0 6.6 10.0 22.4 58.7 159.8 138.0 155.4 209.6 223.5 113.8 C.2 117.0 10.2 1,129.9 1 to 12 27.5 6.6 6.6 23.1 225.7 C.13 58.6 158.5 136.3 153.6 206.3 Lower 15 to 18 5.7 5.1 10.9 23.2 1,075.2 256.2 168.2 32.8 127.6 115.5 129.1 150.1 Central Plair 6.3 10.9 24,9 27.7 1,124.9 1 to 18 149.6 196.0 233.3 125.5 58.5 152.4 133.7 EntireBasin

Table 2.1.4 PROBABLE SIX MONTH RAINFALL (JULY TO DECEMBER)

	Subbasin	Proba	ble Six Mo	nth Rainfal	by Return	Period (m	n)
Area	Nos.	2-уг	5-yr	10-yr	25-yr	50-yr	100-yr
Ping River Basin	1 to 3	730	770	820	860	890	920
Yom River Basin	4 to 6	750	830	880	960	1,020	1,060
Nan River Basin	7 to 10	800	870	930	1,000	1,050	1,110
Pasak River Basin	11 to 12	750	830	890	950	1,000	1,050
Nakhon Sawan Area	13 to 14	750	850	920	1,020	1,080	1,150
Lower Central Plain	15 to 18	730	860	950	1,070	1,150	1,230
Entire Basin	1 to 18	750	810	850	900	940	970

Table 2.2.1 (1/2) HYDROLOGICAL DATA AVAILABILITY

(Discharge)

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(DIS	charge)			,																																						
,	River	Locat	ios	Catchment	L											D	t (a	ı	A ·	vai	l a	bì	lit	ıу		bу		/e	a r									_				٦
		Lat. N	Long. E	Area (km2)	525	3 5 4	55	565	75	359	60	616	26	364	65	66	76	T	Т	71	Ŧ	3 74		П	Ţ	Ť	Т	Г	Г	83	84	35.2	68	785	89	200	5	92	93	04	,,	-
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C.4	Chao Phraya	13 44 15	100 29 55	Flood Plain	-		-			-	-	+	- -	H	Н	-	+	-	_	-		1	H	4	4	-	-	_	-			-	+	- -	Ш			<u> </u>	- -	4	4	-
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C.13	Chao Phraya	15 09 37	100 11 32	120,693	4	A	Δ	4	A /	Δ	△	Α.	<u> </u>	Δ	Α	A	4 /	Α	Α	<u> </u>	A /	A	A	A	A	۱A	A	A	Δ	A	A	4	\A	A	Α	Δ	Δ	Α	A	A /	3/	4
C.22	Chao Phraya	13 53 47	100 29 39	Flood Plain		 		4	+	H	H		+			-	+	-	-	4	-	1			4		-		-		4	- -	1.	-	L		-		4	4	4	_
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A: Available

Table 2.2.1 (2/2) HYDROLOGICAL DATA AVAILABILITY

(Water Level)

Code	er Level	Locatio	B	Catchment												D	a	i a		١v	a i	la	b i i	i i	у	b	y	``	/ c	ar										_			
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N.40	Khwae Noi	17 13 14	100 21 10	4,34	0				<u> </u>	L.								v	v			v	v	٧	v	v	v	٧	v	<u>v </u>	٧v	v	v	v	ν	v	v,	٧V	/ v	ĺν	v	v	ŀ
N.60	Nan	17 24 50	100 07 50	18,69	2			1					1						1	_					ļ		Ш	\perp	1	_	1	\perp	Ļ.	V	ν	v	v.	v y	4v	/B	В	В	ļ
C.2	Chao Phraya	15 40 15	100 06 45	110,58	9 V	v	\mathbf{v}	vĮ۷	ν	v	v	٧	<u>yl</u> :	νĮν	v	VF	F	F	F	1	F	F	F	F	F	F	F	F	F.	E !	FE	E	F	F	F	F	F	F J	F F	E	F	F	
C.3	Chao Phraya	14 53 44	100 24 14	Flood Plai	n V	v	v	v	νV	v	v	v	v.	v v	v	v	v	v	٧ļ٧	4	v	٧	<u>v</u>	v.	٧V	v	v	v	v	<u>v</u>	٧N	Įν	įν	v	٧	v	v.	v,	<u>vļ v</u>	<u>'</u>	ų	V	٠,
C.4	Chao Phraya	13 44 15	100 29 55	Flood Pla	n F	F	F	F	FF	F	F	F	F	F	F	F	F	F	F	F 1	F	F	F	F	F	E	F	F	E	F	F	F	F	F	F	F	F	F	FF	F	F	F	
C.7A	Chao Ptwaya	14 35 05	100 27 12	Flood Pla	n					. _			1		L	L			_ .	-	v	v	v	v	٧	/ B	В	В	В	в	٧V	/ v	<u>/</u> <u>v</u>	v	v	v	v	v.	4	/\v	v	y	1
C.12	Chao Phraya	13 47 14	100 30 56	Flood Pla	in F	F	F	F	FF	F	F	F	F	FF	F	F	Ŀ	F	F	<u> </u>	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	1
C.13	Chao Phraya	15 09 57	100 11 32	120,69	3 1	ν	v	vļ.	v s	/ v	v	٧	y	v s	v	v	v	v	v.	<u>v</u> v	<u>/</u> v	ν	v	v	٧	/\v	\v	v	Y	Y	٧þ	1	4	v	V	v	<u>v</u>	v.	y):	/ Y	v	1	1
C.22	Chao Phraya	13 53 47	100 29 39	Flood Pla	ı										F																												
C.28	K. Bang Kaco	14 35 32	100 28 23	Flood Pia	ia				_	_	_		Ĺ	1	1	<u> </u>	_	Ц	_	v ·	<u> </u>	v	v	v	Y	y v	Y	٧		4	1	_ _	- -	Įν	v	v	ľ	Ý	Ϋ́	<u>/</u>	/v	1	4
C.29	Chao Phraya	14 11 33	100 30 23	Flood Pla	<u>in </u>	1		_	_	1_	_			1	_	1	-		1	1		4.	\sqcup		_ .	-	<u> </u> _	Y	¥	Y	<u>v</u>	1	- -	1		Ц		4	-	1	1	1	+
C.31	Chao Pinaya	14 01 12	100 32 22	2 Flood Pla	in .	<u> </u> _	Ц	_	1	_	<u> </u>		_	1	1	1	_		_	-	- -	-			4	1	1					_ \	v v	/\v	v	v	v	v	٧	۷þ	/\v	4	4
C.34	Chao Phraya	14 20 19	100 32 50	5 Flood Pla	-1	1	Ц	1	1	1	-	_		1	1	ļ			Ц	1	1	Ļ	\perp	Ц	4	1	1	<u> </u>		Ц	1	4	1	1	1	L	Ц	\sqcup	4	ļ	+-	4	Ť
\$.2	Pasak	14 35 32	101 00 2	3 Flood Pta	in \	v	y	Ϋ́	y :	٧V	v	ν	v	٧ļ٠	٧V	/ v	v	VΙ	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	FY	v	V	Ÿ	v.	4	<u>/</u> Y	4	4
8.5	Pasak	14 21 32	100 36 0	2 Flood Pla	in !	/ v	v	v	v ·	v v	<u> </u> y	Y	v	v ·	vļ.	/ v	v	F	F	F	F	F	F	E	F	F	F	F	F	<u> </u>	FΥ	٧	V	ВЕ	В	В	В	В	В	BE	3 B	3 [3
_ S.9	Pasak	14 37 33	101 01 0	0 14,3	74		ĺ		_	1	1	L		- j	- -	1.	ļ_	L	Ш	_	_ -	-	Y	<u> v</u>	v	y y	/y	v	v	ľ	v	v !	v	<u> </u>	Įν	v	y	[v]	Y.	νĮ	<u>/</u> v	4	4
\$.26	Pasak_	14 33 22	100 43 3	8 Flood Pla	<u>in </u>	1	_	Ц	1	1	1		Ц	-	ļ	1		L	Ц	1	\downarrow	1	Ļ	Ц		1	1	<u> </u>	Ц	Ш	1	1	ī	i	$\overline{}$	v	<u>lv</u>	V	ν	٧ļ	ᅻ-	+	+
L.2A	Lop Busi	14 47 37	100 36 3	4 Flood Pla	in	_	_	Ц		1	-	Ļ		v.	y y	y v	/v	Y	v	v	<u>v </u> :	/\v	/v	ĮΥ	v	٧V	/\v	v	Y	y	v	y !	v	y \	4	-			1	\downarrow	٧V	4	2
L.5	Lop Buri	14 38 40	100 34 4	6 Flood Pl	\neg	1	1	Ц	Ц	1	1	L	Ц	1	1	1	1	1	Ц	_	4	+	1		Ц	4	1	1	<u> </u>	Н	_ [1	T		$\overline{}$	1	1	П	\neg	y)	7	$\overline{}$	┪
T.1	Tha Chin	13 47 55	100 11 2	8 Flood Pi	ain [<u>v v</u>	v	v	v	٧V	ďν	lv	ν	ν	٧V	VΝ	/ v	Ίv			\perp		В	В	В	В	BE	В	В	B	В	В	В	в	3 B	В	В	В	В	8 1	в в	В	В

Legent

V: Vertical staff gage, B: Recorder(Bubble gage), F: Recorder(Float Gage)

Table 2.2.2 RUNOFF RATIO AT PRINCIPAL STATIONS

River	Station	Catchment Area	Data Period	Runof	f Ratio
		(km²)		6 months (Jul. to Dec.)	12 months (Apr. to Mar.)
Ping River	Bhumipol Dam P.7A	26,386 42,700	1975 to 1995 1963 to 1995	0.27 0.16	0,21 0,17
Yom River	Y.17	21,415	1967 to 1995	0.18	0.13
Nan River	Sirikit Dam N.14A	13,130 33,182	1974 to 1995 1972 to 1981 & 1991 to 1995	0.45 0.29	0.34 0.25
Pasak River	S.9	14,374	1974 to 1995	0.20	0.14
Chao Phraya River	C.2	110,569	1956 to 1995	0.20	0.18

Table 2.3.1 WATER LEVEL STATIONS ON LOWER CHAO PHRAYA RIVER

Station	River	Distance from	Managing	Observation Period
		River Mouth	Org.	
Bangkok Bar	Chao Phraya	-	PAT	1940 to date
Pom Phrachul	Do	0 km	PAT	1940 to date
Pak Nam	Do	7 km	PAT	1940 to date
Pra Pha Daeng	Do	18 km	PAT	1940 to date
Bangkok Port	Do	27 km	PAT	1940 to date
Sathu Pradit	Do	37 km	PAT	1976 to date
C.4 (Memorial Br.)	Do	48 km	RID	1914 to date
Hydrographic Dept.	Do	49 km	RTN	1940 to date
C.12 (Samsen)	Do	55 km	RID	1942 to date
C.22 (Pak Krat)	Do	72 km	RID	1953 to date
C.31 (Pathum Thani)	Do	87 km	RID	1984 to date
Bansai	Do	111 km	PAT	1940 to date
Samut Sakhon	Tha Chin	1 km	HD	1977 to date

Table 2.3.2 OBSERVED ANNUAL MAXIMUM WATER LEVELS ALONG LOWER CHAO PHRAYA RIVER (Befor adjustment of land subsidence and guage movement)

	Pom Phrachul	Pak Nam	Phra Pradaeng	Bangkok Port	Sathu Pradit	Memorial Bridge (C.4)	Sam Sen (C.12)	Pak Kret (C.22
1914						1.46	ļ	
1915						1.56		
1916 1917						1.87	·	
1917						1.53		-·
1919						1.17		
1920						1.43		
1921						1.40		
1922						1.57		
1923						1.37		
1924						1.53	ļ	
1925						1.35	<u> </u>	ļ
1926						1.44		
1927						1.43		
1928 1929				<u> </u>		1.54	1	
1930						1.57	ļ	
1931						1.45		
1932				· · · · · · · · · · · · · · · · · · ·		1.52		
1933						1.61	1	
1934		1		1		1.54		<u> </u>
1935			1			1.65	<u> </u>	
1936		1				1.45		.
1937		<u> </u>		1	.	1.59	ļ	1
1938			ļ	ļ	- 	1.69		
1939		L	1.50	1.49		1.68	!	
1940	1.60	1.56	1.50	1.49		1.45		
1941 1942	1.53	1.59	1.73	1.80	-}	2.27	2.60	·
1942	1.61 1.71	1.61	1.73	1.69	-	1.55	1.61	1
1944	1.80	1.69	1.62	1.71	 	1.68	1.60	1
1945	1.75	1.62	1.65	1.64	-	1.58	1.65	
1946	1.81	1.74	1.67	1.65		1.75	1.61	
1947	1.89	1.82	1.75	1.66		1.59	1.60	
1948	1.64	1.62	1.70	1.65		1.64	1.60	
1949	1.88	1.87	1.90	1.86		1.84	1.88	_
1950	1.73	1.74	1.80	1.74		1.75	1.80	
1951	1.80	1.73	1.80	1.75		1.76	1.95	-
1952	1.78	1.65	2.02	1.73		1.68	1.99 1.60	1.75
1953	1.65	1.60	1.70	1.75		1.65 1.70	1.73	1.77
1954	1.69 1.59	1.70	1.57	1.73		1.64	1.70	177
1955 1956	1.59	1.64	1.58	1.66		1.66	1.97	1.90
1957	1.62	1.60	1.61	1.61		1.65	1.60	1.77
1958	1.70	1.62	1.59	1.41		1.36	1.38	1.77
1959	1.77	1.70	1.61	1.66		1.73	1.73	2.02
1960	1.62	1.53	1.54	1.59		1.58	1.60	1.89
1961	1.67	1.58	1.64	1.66		1.69	1.72	1.90
1962	1,60 .	1.56	1.58	1.58	_	1.69	1.72	1.90
1963	1.63	1.81	1.63	1.64		1.70	1.68	1.85
1964	1.73	1.66	1.65	1.74		1.75	1.45	1.59
1965	1.77	1.65	1.59	1.61	<u> </u>	1.62	1.62	1.74
1966 1967	1.84	1.74	1.62	1.56		1.60	1.49	1.42
1968	1.82	1.70	1.59	1.60		1.41	1.73	1.16
1969	1.92	1.80	1.62	1.61	-	1.62	1.63	1.78
1970	2.20	2.04	1.93	1.89	_	1.86	1.84	2.03
1971	1.85	1.76	1.65	1.68		1.65	1.58	1.84
1972	2.01	1.85	1.70	1.86		1.60	1.63	1.60
1973	1.93	1.82	1.66	1.70		1.69	1.72	1.74
1974	1.95	1.75	1.64	1.76		1.79	1.81	1.37
1975	2.04	1.90	1.87	1.90	_	2.05	2.08	2.26
1976	2.07	1.81	1.80	1.73	1.56	1.78	1.81	1.82
1977	1.89	1.81	1.80	1.65	1.96	2.05	2.15	2.22
1978	2.04	2.01	1.68	1.93	1.66	1.64	1.69	1.52
1979	1.92	1.75	1.88	1.88	1.88	1.99	2.05	2.21
1981	2.12	2.04	1.90	1.90	1.83	1.58	1.64	1.60
1982	2.09	2.06	1.94	1.94	1.77	1.49	1.60	1.50
1983	2.23	2.10	2.10	2.10	2,01	1.93	2.04	2.17
1984	2.10	2.02	2.02	2.02	1.80	J.46	1.50	1.34
1985	2.24	2.17	2.07	2.07	1.95	1.78	1.80	1.68
1986	2.28	2.17	2.00	2.00	1.78	1.44	1.55	1.40
1987		2.12	2.05	2.05	1.80	1.50	1.55	1.56
1988	2.19	2.13	2.11	2.11	1.95	1.75	1.80	1.88
1989	2.26	2.16	2.06	2.06	1.84	1.48	1.48	1.48
1990		2.11	2.09	2.09	1.88	1.67	1.70	1.70
1991		2.20	2.09	2.09	1.83	1.56	1.43	1.37
1992		2.14	2,05	2.05	1.80 1.75	1.39	1.46 1.36	1.38
1993		2.20	2.02	2.02	1.73	1.13	1.84	1.94
1994		2.15	2.11	2.11 2.43	2.28	2.06	2.38	2.65
1995 1996		2.28	2.43	2.43	2.28	1.99	2.14	2.34
Max.		2.38	2.43	2.42	2.28	2.27	2.60	2.65
Ave.	1.92	1.84	1.80	1.80	T.85	1.62	1.73	1.77
							1.36	

Table 2.3.3 SUMMARY OF FIRST ORDER LEVELING

Station	Managing		Elevation n MSL)	Difference	Measured Level
	Org.	By this Survey	By Managing Org.	(m)	
Pom Phrachul	PAT	3.0096	3.60	-0.5904	Top of gage casing
Pak Nam	PAT	1.5770	2.08	-0.5030	Top of gagecasing 1
Pra Pha Daeng	PAT	2.8876	3.40	-0.5133	Top of gage casing
Bangkok Port	PAT	1.9112	2.38	-0.4208	Top of gage casing
Sathu Pradit	PAT	2.2041	2.51	-0.2959	Top of gage casing
C.4 (Memorial Bridge)	RID	2.1274	2.00	0.1274<2	Top of staff gage
Hydrographic Dept. <3	RTN	2.3672	2.3629	0.0043	BM near port of HD
C.12 (Samsen)	RID	2.9102	3.00	-0.0898	Top of staff gage
C.22 (Pak Kret)	RID	2.8731	3.00	-0.1269	Top of staff gage

<1: Base level of added casing
<2: This result shows that the past gauge lifting was excessive.
<3: The leveling survey result can not be applied for adjustment of old data because this station is a temporary station made in 1997.

 ${\bf Table~2.3.4} \quad {\bf ANNUAL~CORRECTION~VALUES~OF~OBSERVED~WATERLEVELS~AFFECTED~BY~LAND~SUBSIDENCE~}$

Year	Pom Phracul	Pak Nam	Phra Padaeng	Bangkok Port	Sathu Pradit	Memori	al Bridge	(C.4)	RID S	amsen (C	.12)	RID	Pak Krat (G	C.22)
	Land Subs.	Land Subs.	Land Subs.	Land Subs.	Land Subs.	Land Subs.	Gauge Adj.	Sum	Land Subs.	Gauge Adj.	Sum	Land Subs.	Gauge Adj.	Sum
1965	0.000	0.000	0.000	0,000		0.000		0.000	0.000	*	0.000	0.000	-	0.000
1966	-0.018	-0.016	-0.016	-0.015		-0.005		-0.005	-0.016		-0.016	-0.008		-0.008
1967	-0.037	-0.031	-0.032	-0.029		-0.009		-0.009	-0.031		-0.031	-0.016		-0.016
1968	-0.055	-0.047	-0.048	-0.044		-0.014		-0.014	-0.047		-0.047	-0.023		-0.023
1969	-0.074	-0.063	-0.064	-0.059		-0.019		-0.019	-0.062		-0.062	-0.031		-0.031
1970	-0.092	-0.079	-0.080	-0.073		-0.024		-0.024	-0.078		-0.078	-0.039		-0.039
1971	-0.111	0.094	-0.096	-0.088		-0.028		-0.028	-0.094		-0.094	-0.047		-0.047
1972	-0.129	-0.110	-0.112	-0.103		-0.033		-0.033	-0.109		-0.109	-0.054		-0.054
1973	-0.148	-0.126	-0.128	-0.117		-0.038		-0.038	-0.125		-0.125	-0.062		-0.062
1974	-0.166	-0.141	-0.144	-0.132		-0.042		-0.042	-0.140		-0.140	-0.070		-0.070
1975	-0.184	-0.157	-0.160	-0.147		-0.047		-0.047	-0.156		-0.156	-0.078		-0.078
1976	-0.203	-0.173	-0.176	-0.161	0.000	-0.052		-0.052	-0.172		-0.172	-0.086		-0.086
1977	-0.221	-0.189	-0.192	-0.176	-0.015	-0.057		-0.057	-0.187		-0.187	-0.093		-0.093
1978	-0.240	-0.204	-0.208	-0.191	-0.029	-0.061		-0.061	-0.203		-0.203	-0.101		-0.101
1979	-0.258	-0.220	-0.224	-0.205	-0.044	-0.066		-0.066	-0.218		-0.218	-0.109		-0.109
1980	-0.277	-0.236	-0.240	-0.220	-0.058	-0.071		-0.071	-0.234	0.110	-0.124	-0.117		-0.117
1981	-0.295	-0.252	-0.256	-0.235	-0.073	-0.076	0.198	0.123	-0.250	0.300	0.051	-0.125	0.150	0.026
1982	-0.313	-0.267	-0.272	-0.249	-0.087	-0.080	0.198	0.118	-0.265	0.300	0.035	-0.132	0.150	0.018
1983	-0.332	-0.283	-0.288	-0.264	-0.102	-0.085	0.198	0.113	-0.281	0.300	0.019	-0.140	0.150	0.010
1984	-0.350	-0.299	-0.304	-0.278	-0.117	-0.090	0.198	0.108	-0.296	0.300	0.004	-0.148	0.150	0.002
1985	-0.369	-0.314	-0.320	-0.293	-0.131	-0.094	0.198	0.104	-0.312	0.300	-0.012	-0.156	0.150	-0.006
1986	-0.387	-0.330	-0.336	-0.308	-0.146	-0.099	0.278	0.179	-0.327	0.410	0.083	-0.163	0.122	-0.041
1987	-0.406	-0.346	-0.352	-0.322	-0.160	-0.104	0.278	0.174	-0.343	0.410	0.067	-0.171	0.122	-0.049
1988	-0.424	-0.362	-0.368	-0.337	-0.175	-0.109	0.278	0.169	-0.359	0.410	0.051	-0.179	0.122	-0.057
1989	-0.443	-0.377	-0.384	-0.352	-0.189	-0.113	0.278	0.165	-0.374	0.410	0.036	-0.187	0.122	-0.065
1990	-0.461	-0.393	-0.400	-0.366	-0.204	-0.118	0.278	0.160	-0.390	0.410	0.020	-0.195	0.122	-0.073
1991	-0.479	0.409	-0.416	-0.381	-0.219	-0.123	0.278	0.155	-0.405	0.410	0.005	-0.202	0.122	-0.080
1997	-0.498	-0.424	-0.432	-0.396	-0.233	-0.127	0.278	0.151	-0.421	0.410	-0.011	-0.210	0.122	-0.088
199	-0.516	-0.440	-0.448	-0.410	-0.248	-0.132	0.278	0.146	-0.437	0.410	-0.027	-0.218	0.122	-0.096
199	-0.535	-0.456	-0.464	-0.425	-0.262	-0.137	0.278	0.141	-0.452	0.410	-0.042	-0.226	0.122	-0.104
199	-0.553	-0.472	-0.480	-0.440	-0.277	-0.142	0.278	0.136	-0.468	0.410	-0.058	-0.233	0.122	-0.111
199	-0.572	-0.487	-0.496	-0.454	-0.291	-0.146	0.278	0.132	-0.483	0.410	-0.073	-0.241	0.122	-0.119
199	7 -0.590	-0.503	-0.512	-0.469	-0.306	-0.151	0.278	0.127	-0.499	0.410	-0.089	-0.249	0.122	-0.127

Table 2.3.5 ADJUSTED ANNUAL MAXIMUM WATER LEVELS ALONG LOWER CHAO PHRAYA RIVER (After adjustment of land subsidence and guage movement)

Year 1914	Pom Phrachul	Pak Nam	Phra Pradaeng	Bangkok Port	Sathu Pradit	Memorial Bridge (C.4)	Sam Sen (C.12)	Pak Kret (C.2
1915			 			1.46		
1916			 			1.56		
1917						1.87		
1918						1.53	ļ	
1919			l			1.17		
1920				·		1.43	l	Į
1921						1.40		ļ
1922						1.57		
1923			1			1.37		ļ
1924						1.53		l
1925						1.35		[
1926		~~~~				1.50		
1927						1.44		
1928						1.43		I
1929 1930					·	1.54	ļ <u> </u>	
1930			ļ			1.57		<u></u>
1932						1.45]
1933						1.52		
1934			·			1.61		
1935						1.54 1.65		
1936						1.03		
1937			ļi			1.59		
1938						1.69	ļ	ļ
1939						1.68	!	ļ
1940	1.60	1.56	1.50	1.49		1.50	 	
1941	1.53	1.59	1.55	1.54	· · ·	1.45	 	 -
1942	1.61	1.66	1.73	1.80		2.27	2.60	<u> </u>
1943	1.71	1.61	1.54	1.69		1.55	1.61	
1944	1.80	1.69	1.62	1.71		1.68	1.60	
1945	1.75	1.62	1.65	1.64		1.58	1.65	
1946	1.81	1.74	1.67.	1.65		1.75	1.61	
1947	1.89	1.82	1.75	1.66		1.59	1.60	
1948	1.64	1.62	1.70	1.65		1.64	1.60	
1949	1.88	1.87	1.90	1.86		1.84	1.88	
1950	1.73	1.74	1.80	1.74		1.75	1.80	
1951	1.80	1.73	1.80	1.75		1.76	1.95	
1952	1.78	1.65	2.02	1.73		1.68	1.99	
1953	1.65	1.60	1.70	1.75		1.65	1.60	1.75
1954	1.69	1.70	1.57	1.73		1.70	1.73	1.77
1955	1.59	1.66	1.65	1.72		1.64	1.70	. 1.77
1956 1957	1.60 1.62	1.64	1.58	1.66		1.66	1.97	1.90
1958	1.70	1.62	1.61	1.61 1.41		1.65	1.60	1.77
1959	1.77	1.70	1.61	1.66		1.36 1.73	1.38	1.77
1960	1.62	1.53	1.54	1.59		1.73	1.73	2.02
1961	1.67	1.58	1.64	1.66		1.56	1.60 1.72	1.89
1962	1.60	1.56	1.58	1.58		1.69	1.72	1.90
1963	1.63	1.81	1.63	1.64		1.70	1.68	1.85
1964	1.73	1.66	1.65	1.74		1.75	1.77	2.12
1965	1.77	1.65	1.59	1.61		1.43	1.45	1.59
1966	1.82	1.72	1.60	1.66		1.62	1.60	1.73
1967	18.1	1.57	1.54	1.53		1.59	1.46	1.40
1968	1.76	1.65	1.54	1.56		1.40	1.68	1.14
1969	1.83	1.74	1.56	1.55		1.60	1.57	1.75
1970	2.11	1.96	1.85	1.82		1.84	1.76	1.99
1971	1.74	1.67	1.55	1.59		1.62	1.49	1.79
1972	1.88	1.74	1.59	1.76		1.57	1.52	1.55
1973	1.78	1.69	1.53	1.58		1.65	1.60	1.68
1974	1.78	1.61	1.50	1.63	i	1.75	1.67	1.30
1975 1976	1.86	1.74	1.71	1.75		2,00	1.92	2.18
1976	1.87	1.64	1.62 1.61	1.57	1.56	1.73	1.64	1.73
1977	1.80	1.02	1.72	1.47	1.60	1.56	1.47	1.51
1979	1.66	1.53	1.72	1.47	1.62	1.99	1.95 1.47	2.12
1980	1.77	1.71	1.64	1.66	1.82	1.92	1.93	1.41 2.09
1981	1.83	1.79	1.64	1.67	1.76	1.70	1.69	1.63
1982	1.78	1.79	1.67	1.69	1.68	1.61	1.63	1.52
1983	1.90	1.82	1.81	1.84	1.91	2.04	2.06	2.18
1984	1.75	1.72	1.72	1.74	1.68	1.57	1.50	1.34
1985	1.87	1.86	1.75	1.78	1.82	1.88	1.79	1.67
1986	1.89	1.84	1.66	1.69	1.63	1.62	1.63	1.36
1987	1.92	1.77	1.70	1.73	1.64	1.67	1.62	1.51
1988	1.77	1.77	1.74	1.77	1.78	1.92	1.85	1.82
1989	1.82	1.78	1.68	1.71	1.65	1.64	1.52	1.42
1990	1.80	1.72	1.69	1.72	1.68	1.83	1.72	1.63
1991	1.85	1.79	1.67	1.71	1.61	1.72	1.43	1.29
1992	1.75	1.72	1.62	1.65	1.57	1.54	1.45	1.29
1993	1.64	1.76	1.57	1.61	1.50	1.30	1.33	1.51
1994	1.77	1.69	1.65	1.68	1.47	1.78	1.80	1.84
1995	1.97	1.81	1.95	1.99	2.00	2.20	2.32	2.54
	1.88	1.89	1.84	1.97	1.91	2.12	2.07	2.22
1996								
Max. Avc.	2.11 1.76	1.96 1.70	1.66	1.99 1.68	2.00 1.71	1.64	2.60	2.54 1.73

Table 2.3.6 MONTHLY MAXIMUM TIDE LEVEL AT POM PHRACHUL STATION (AFTER ADJUSTMENT)
Unit: (m MSL)

Year July Peb Max May May July Mug Algo Sup Oct Nov Dec Max Mosen Multiple 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													UIII	: (m M		
1940	7/	I n.e.	Eloh	Mor	Anv	May	Iun	Int	Aug	Sen	Oct	Nov	Dec		Annual	
1947	Year	Jan	reb	Mar	- 1	way						j				
1941	1940	1.53	1.38	1.43	1.48	1,36	1,42	1.35	1.53		1.46	1.54	1.60			
1942 1.42 1.50 1.54 1.33 1.44 1.58 1.42 1.46 1.33 1.51 1.61 1.67 1.61 1.46 1.33 1.34 1.59 1.50 1.31 1.44 1.32 1.33 1.35 1.32 1.47 1.32 1.34 1.35 1.35 1.39 1.50 1.38 1.53 1.44 1.58 1.73 1.80 1.80 1.51 1.35 1.35 1.39 1.50 1.38 1.55 1.44 1.55 1.44 1.75 1.44 1.75 1.40 1.49 1.46 1.44 1.75 1.44 1.45 1.40	1941	1.44	1.40	1.40	1.41	1.44	1.33	1.47	1.46	1.24	1.33					
1943 1.56			1.50	1.34	1.33	1,44	1.58	1.42	1.46	1.33	1.51		1.57	1.61		
150									1.33	1.35	1.52	1.52	1.58	1.71	1.47	1.32
1945												1.73	1.80	1.80	1.51	1.35
1946 1.50 1.50 1.23 1.23 1.47 1.58 1.62 1.57 1.41 1.49 1.65 1.60 1.65 1.50 1.75 1.34 1.49 1.65 1.60 1.65 1.50 1.75 1.32 1.45 1.47 1.53 1.52 1.45															1,54	1.40
1945 1.66																
1949	1.															
1.64																
1950 1.66 1.67 1.61 1.38 1.59 1.52 1.52 1.52 1.77 1.50 1.40 1.53 1.72 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.73 1.73 1.55 1.40 1.95 1.74 1.57 1.32 1.73 1.73 1.55 1.40 1.95 1.74 1.57 1.32 1.74 1.75																
1952 1.73 1.73 1.73 1.52 1.36 1.48 1.40 1.71 1.32 1.44 1.74 1.67 1.70 1.75																
1952 1,73																
1953 1.78																
1954																
1955							1.44	1.58		1.32						
1956	1954	1.65	1.48		1.51											
1957	1955	1.45	1,60	1.45		1.42										
1958 1.60 1.53 1.38 1.26 1.48 1.34 1.30 1.30 1.62 1.62 1.40 1.62 1.43 1.26 1.89 1.60 1.57 1.59 1.35 1.60 1.57 1.39 1.39 1.70 1.55 1.32 1.42 1.33 1.52 1.40 1.42 1.32 1.55 1.65 1.77 1.77 1.50 1.32 1.960 1.48 1.42 1.29 1.36 1.55 1.44 1.40 1.42 1.32 1.55 1.65 1.77 1.77 1.50 1.32 1.960 1.48 1.42 1.29 1.36 1.55 1.44 1.40 1.43 1.47 1.60 1.59 1.62 1.62 1.47 1.29 1.960 1.48 1.42 1.50 1.51 1.61 1.50 1.59 1.61 1.64 1.65 1.65 1.49 1.34 1.39 1.42 1.56 1.52 1.65 1.47 1.29 1.960 1.48 1.48 1.42 1.60 1.59 1.55 1.65 1.49 1.34 1.39 1.49 1.28 1.60 1.55 1.67 1.55 1.42 1.60 1.59 1.52 1.50 1.63 1.50 1.55 1.67 1.55 1.42 1.60 1.59 1.52 1.56 1.63 1.52 1.50 1.63 1.49 1.28 1.40 1.45 1.40 1.4	1956	1.42	1.30	1.29	1.28	1.37	1.34	1.36	1.42	1.29		1.60	1.53	1.60		
1958 1,60							1.48	1.34	1.30	1.30						
1950 1.70	1				1.46						1.42	1.56	1.52	1.60		1.34
1960																1.32
142	3															
1962 1.67 1.54 1.56 1.42 1.50 1.51 1.61 1.50 1.50 1.63 1.60 1.55 1.67 1.55 1.42 1963 1.47 1.48 1.28 1.48 1.42 1.62 1.50 1.56 1.36 1.63 1.52 1.50 1.63 1.49 1.28 1965 1.58 1.50 1.47 1.48 1.48 1.56 1.59 1.52 1.54 1.46 1.57 1.73 1.64 1.73 1.58 1.46 1965 1.58 1.50 1.47 1.48 1.48 1.56 1.49 1.54 1.50 1.59 1.53 1.77 1.77 1.54 1.47 1966 1.61 1.58 1.42 1.43 1.45 1.54 1.58 1.64 1.58 1.53 1.67 1.82 1.57 1.42 1966 1.70 1.51 1.66 1.55 1.44 1.47 1.35 1.43 1.60 1.60 1.60 1.81 1.81 1.56 1.35 1968 1.71 1.74 1.54 1.70 1.54 1.66 1.62 1.62 1.37 1.49 1.59 1.83 1.61 1.37 1969 1.82 1.64 1.62 1.54 1.54 1.57 1.71 1.63 1.54 1.52 1.31 1.74 1.58 1.69 1.67 1.75 1970 1.81 1.76 1.55 1.51 1.54 1.75 1.71 1.63 1.54 1.52 1.91 1.52 1.11 2.11 1.69 1.51 1971 1.65 1.56 1.48 1.43 1.61 1.47 1.43 1.33 1.40 1.49 1.67 1.74 1.74 1.52 1.33 1972 1.65 1.54 1.49 1.54 1.41 1.56 1.38 1.53 1.50 1.74 1.88 1.85 1.88 1.59 1.38 1973 1.75 1.33 1.49 1.56 1.55 1.59 1.64 1.53 1.31 1.76 1.65 1.78 1.88 1.85 1.75 1.78 1.68 1.79 1973 1.75 1.33 1.49 1.56 1.55 1.59 1.44 1.45 1.53 1.75 1.53 1.78 1.78 1.78 1.78 1975 1.64 1.64 1.58 1.55 1.60 1.46 1.53 1.50 1.49 1.45 1.41 1.56 1.56 1.53 1.50 1.74 1.88 1.85 1.75 1.78 1.58 1.75 1976 1.49 1.49 1.45 1.53 1.55 1.50 1.49 1.43 1.50 1.86 1.78 1.78 1.78 1.78 1977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.55 1.56 1.65 1.53 1.40 1978 1.60 1.76 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.55 1.50 1.40 1.40 1978 1.60 1.74 1.43 1.51 1.50 1.77 1.54 1																
1963																
1964 1.46																
1965																
1966						1										
1967 1.70	1															
1968 1.71 1.74 1.54 1.70 1.54 1.46 1.42 1.52 1.31 1.74 1.58 1.76 1.76 1.59 1.31 1969 1.82 1.64 1.62 1.54 1.54 1.69 1.62 1.62 1.37 1.49 1.59 1.83 1.83 1.61 1.37 1970 1.81 1.76 1.55 1.51 1.54 1.75 1.71 1.63 1.54 1.52 1.91 2.11 2.11 1.69 1.51 1971 1.65 1.56 1.48 1.43 1.61 1.47 1.43 1.33 1.40 1.49 1.67 1.74 1.74 1.74 1.52 1.33 1972 1.65 1.54 1.49 1.54 1.41 1.56 1.38 1.53 1.50 1.74 1.88 1.85 1.88 1.59 1.38 1973 1.75 1.53 1.49 1.56 1.55 1.59 1.64 1.53 1.37 1.65 1.63 1.78 1.78 1.59 1.37 1974 1.58 1.75 1.49 1.46 1.53 1.50 1.49 1.43 1.52 1.41 1.57 1.78 1.58 1.59 1.43 1975 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.60 1.86 1.78 1.86 1.59 1.43 1976 1.49 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.50 1.65 1.67 1.67 1.53 1.40 1978 1.69 1.47 1.43 1.51 1.50 1.77 1.64 1.45 1.59 1.80 1.58 1.80 1.58 1.80 1980 1.64 1.50 1.38 1.52 1.42 1.36 1.65 1.65 1.59 1.45 1.62 1.60 1.70 1.54 1981 1.59 1.45 1.47 1.46 1.61 1.49 1.59 1.49 1.48 1.83 1.82 1.81 1.56 1.45 1982 1.73 1.63 1.57 1.63 1.72 1.58 1.81 1.59 1.74 1.77 1.83 1.90 1.90 1.71 1.56 1983 1.78 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.90 1.71 1.54 1985 1.71 1.68 1.71 1.66 1.66 1.66 1.65 1.59 1.67 1.65 1.67 1.78 1.78 1.65 1.49 1986 1.73 1.63 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.90 1.71 1.54 1987 1.86 1.77 1.58 1.66 1.66 1.66 1.66 1.65 1.51 1.52 1.85 1.80 1.77 1.78 1.65 1						L										
1969 1.82																
1970																
1971 1.65 1.56 1.48 1.43 1.61 1.47 1.43 1.33 1.40 1.49 1.67 1.74 1.74 1.52 1.33 1972 1.65 1.54 1.49 1.54 1.41 1.56 1.38 1.53 1.50 1.74 1.88 1.85 1.88 1.59 1.38 1973 1.75 1.53 1.49 1.56 1.55 1.59 1.64 1.53 1.37 1.65 1.63 1.78 1.75 1.78 1.59 1.37 1974 1.58 1.75 1.49 1.46 1.53 1.50 1.49 1.43 1.52 1.64 1.78 1.75 1.78 1.58 1.75 1975 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.60 1.86 1.78 1.86 1.59 1.43 1976 1.49 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.52 1.56 1.67 1.67 1.53 1.40 1978 1.69 1.47 1.43 1.51 1.50 1.77 1.64 1.45 1.59 1.88 1.58 1.58 1.58 1.58 1979 1.58 1.70 1.40 1.41 1.56 1.56 1.56 1.55 1.50 1.45 1.59 1.45 1.51 1980 1.64 1.50 1.38 1.52 1.42 1.36 1.46 1.48 1.44 1.42 1.63 1.77 1.77 1.51 1.36 1981 1.59 1.45 1.47 1.46 1.61 1.49 1.53 1.51 1.49 1.48 1.83 1.82 1.83 1.56 1.45 1982 1.73 1.63 1.57 1.63 1.72 1.59 1.49 1.65 1.66 1.64 1.74 1.75 1.80 1.64 1.79 1983 1.78 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.90 1.71 1.54 1984 1.80 1.80 1.72 1.19 1.66 1.66 1.59 1.67 1.50 1.64 1.74 1.75 1.80 1.64 1.19 1985 1.71 1.68 1.71 1.60 1.63 1.80 1.58 1.53 1.67 1.65 1.45 1.98 1.88 1.43 1987 1.86 1.77 1.58 1.56 1.78 1.56 1.65 1.61 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.59 1.50 1.71 1.50 1.71 1.50 1.78 1.50 1.78 1.50 1.74 1.77 1.74 1.77 1.78 1.50 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79 1.79	1969	1.82		1.62	1.54											
1972 1.65 1.54 1.49 1.54 1.41 1.56 1.38 1.53 1.50 1.74 1.88 1.85 1.88 1.59 1.38 1.97 1.58 1.75 1.53 1.49 1.46 1.55 1.59 1.64 1.53 1.37 1.65 1.63 1.78 1.78 1.78 1.59 1.37 1.97 1.58 1.75 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.43 1.60 1.86 1.78 1.75 1.78 1.58 1.43 1.975 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.43 1.60 1.86 1.78 1.86 1.59 1.43 1.976 1.49 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1.977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.52 1.56 1.67 1.67 1.67 1.53 1.40 1.979 1.58 1.70 1.40 1.41 1.56 1.55 1.50 1.77 1.64 1.45 1.59 1.80 1.58 1.58 1.88 1.58 1.43 1.979 1.58 1.70 1.40 1.41 1.56 1.55 1.56 1.46 1.48 1.44 1.42 1.63 1.77 1.77 1.51 1.36 1.98 1.59 1.45 1.47 1.46 1.61 1.49 1.53 1.51 1.49 1.48 1.83 1.82 1.83 1.56 1.45 1.98 1.98 1.73 1.63 1.57 1.63 1.72 1.59 1.49 1.65 1.66 1.66 1.76 1.78 1.78 1.69 1.71 1.54 1.58 1.59 1.71 1.66 1.66 1.66 1.59 1.67 1.53 1.40 1.74 1.75 1.80 1.64 1.99 1.98 1.71 1.66 1.71 1.60 1.63 1.80 1.58 1.53 1.66 1.65 1.87 1.87 1.87 1.69 1.53 1.98 1.77 1.68 1.77 1.58 1.56 1.72 1.59 1.45 1.59 1.45 1.47 1.46 1.61 1.49 1.55 1.55 1.66 1.65 1.87 1.80 1.64 1.99 1.88 1.70 1.66 1.66 1.66 1.59 1.67 1.50 1.64 1.74 1.75 1.80 1.64 1.99 1.98 1.71 1.66 1.71 1.60 1.63 1.80 1.58 1.53 1.67 1.65 1.87 1.87 1.80 1.64 1.99 1.98 1.71 1.68 1.71 1.60 1.63 1.80 1.58 1.53 1.67 1.65 1.87 1.87 1.87 1.69 1.53 1.98 1.77 1.58 1.65 1.78 1.77 1.74 1.66 1.66 1.67 1.74 1.66 1.66 1.74 1.75 1.80 1.64 1.99 1.	1970	1.81	1.76	1.55	1.51	1.54		1.71								
1973 1.75 1.53 1.49 1.56 1.55 1.59 1.64 1.53 1.37 1.65 1.63 1.78 1.78 1.59 1.37 1974 1.58 1.75 1.49 1.46 1.53 1.50 1.49 1.43 1.52 1.64 1.78 1.75 1.78 1.58 1.43 1975 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.60 1.86 1.78 1.75 1.78 1.58 1.43 1976 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.55 1.52 1.56 1.67 1.67 1.53 1.40 1978 1.69 1.47 1.43 1.51 1.50 1.77 1.64 1.45 1.59 1.80 1.58 1.58 1.80 1.58 1.43 1979 1.58 1.70 1.40 1.41 1.56 1.56 1.65 1.39 1.45 1.51 1.62 1.60 1.70 1.54 1.39 1980 1.64 1.59 1.45 1.47 1.46 1.61 1.49 1.53 1.51 1.49 1.48 1.83 1.82 1.83 1.56 1.45 1982 1.73 1.63 1.57 1.63 1.72 1.59 1.49 1.45 1.50 1.64 1.76 1.78 1.78 1.65 1.49 1983 1.78 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.90 1.71 1.54 1984 1.80 1.80 1.72 1.19 1.66 1.66 1.59 1.67 1.50 1.64 1.45 1.81 1.89 1.80 1.58 1.81 1.59 1985 1.71 1.68 1.71 1.60 1.63 1.80 1.58 1.53 1.46 1.45 1.81 1.89 1.89 1.89 1.90 1.70 1.71 1.54 1985 1.75 1.68 1.77 1.60 1.66 1.87 1.76 1.55 1.68 1.45 1.81 1.89 1.89 1.89 1.85 1.65 1.65 1.99 1.75 1.68 1.77 1.58 1.66 1.72 1.64 1.55 1.56 1.65 1.55 1.51 1.41 1.55 1.55 1.55 1.55 1.55 1.55 1.56 1.65 1.55 1.56 1.65 1.55 1.	1971	1.65	1.56	1.48	1.43	1.61	1,47	1.43	1.33			1.67				
1973 1.75	1972	1.65	1.54	1.49	1.54	1.41	1.56	1.38	1.53	1.50	1.74	1.88	1.85	1.88	1.59	1.38
1974 1.58 1.75 1.49 1.46 1.53 1.50 1.49 1.43 1.52 1.64 1.78 1.75 1.78 1.58 1.43 1.97 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.60 1.86 1.78 1.86 1.59 1.43 1.97 1.60 1.49 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1.97 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.52 1.56 1.67 1.67 1.67 1.53 1.40 1.91 1.97 1.58 1.70 1.40 1.41 1.56 1.56 1.65 1.63 1.39 1.45 1.51 1.62 1.60 1.70 1.54 1.39 1.980 1.64 1.50 1.38 1.52 1.42 1.36 1.65 1.63 1.48 1.44 1.42 1.63 1.77 1.77 1.51 1.36 1.981 1.59 1.45 1.51 1.62 1.60 1.70 1.54 1.39 1.982 1.73 1.63 1.77 1.63 1.72 1.59 1.49 1.65 1.66 1.64 1.76 1.78 1.78 1.65 1.45 1.49 1.98 1.78 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.90 1.71 1.54 1.98 1.984 1.80 1.80 1.72 1.19 1.66 1.66 1.59 1.67 1.50 1.64 1.74 1.75 1.80 1.64 1.19 1.985 1.71 1.68 1.71 1.60 1.63 1.80 1.58 1.53 1.45 1.45 1.45 1.45 1.45 1.45 1.81 1.99 1.92 1.70 1.45 1.98 1.98 1.68 1.74 1.58 1.56 1.72 1.69 1.76 1.53 1.46 1.45 1.81 1.99 1.81 1.92 1.92 1.70 1.45 1.98 1.98 1.68 1.74 1.58 1.56 1.72 1.69 1.61 1.50 1.76 1.53 1.46 1.45 1.81 1.99 1.92 1.70 1.45 1.98 1.98 1.68 1.72 1.58 1.56 1.72 1.69 1.61 1.50 1.76 1.53 1.46 1.45 1.79 1.81 1.79 1.78 1.63 1.60 1.65 1.66 1.55 1.50 1.51 1.50 1.76 1.65 1.66 1.65 1.50 1.70 1.45 1.99 1.71 1.70 1.73 1.58 1.60 1.65 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.61 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.		1		1.49	1.56	1.55	1.59	1.64	1.53	1.37	1.65	1.63	1.78	1.78	1.59	1.37
1975 1.64 1.64 1.58 1.55 1.60 1.46 1.51 1.43 1.43 1.60 1.86 1.78 1.86 1.59 1.43 1976 1.49 1.49 1.45 1.53 1.55 1.50 1.87 1.53 1.41 1.57 1.68 1.63 1.87 1.56 1.41 1977 1.60 1.56 1.53 1.52 1.59 1.45 1.40 1.40 1.55 1.52 1.56 1.67 1.57 1.58 1978 1.69 1.47 1.43 1.51 1.50 1.77 1.64 1.45 1.59 1.80 1.58 1.58 1.58 1.58 1.58 1979 1.58 1.70 1.40 1.41 1.56 1.56 1.65 1.65 1.39 1.45 1.51 1.62 1.60 1.70 1.54 1.39 1980 1.64 1.50 1.38 1.52 1.42 1.36 1.46 1.48 1.44 1.42 1.63 1.77 1.77 1.51 1.36 1981 1.59 1.45 1.47 1.46 1.61 1.49 1.53 1.51 1.49 1.48 1.83 1.82 1.83 1.56 1.45 1982 1.73 1.63 1.57 1.63 1.72 1.59 1.49 1.65 1.66 1.64 1.76 1.78 1.78 1.65 1.49 1983 1.78 1.72 1.55 1.54 1.58 1.81 1.59 1.74 1.71 1.77 1.83 1.90 1.71 1.51 1984 1.80 1.80 1.72 1.19 1.66 1.66 1.59 1.67 1.50 1.64 1.74 1.75 1.80 1.64 1.74 1985 1.71 1.68 1.71 1.60 1.63 1.80 1.58 1.53 1.67 1.65 1.81 1.92 1.92 1.70 1.45 1987 1.86 1.74 1.58 1.56 1.72 1.64 1.55 1.68 1.45 1.79 1.81 1.92 1.92 1.70 1.45 1988 1.86 1.77 1.58 1.56 1.72 1.64 1.55 1.68 1.45 1.79 1.81 1.92 1.92 1.70 1.45 1990 1.78 1.71 1.50 1.76 1.69 1.61 1.46 1.40 1.61 1.69 1.65 1.72 1.74 1.75 1.80 1.77 1.85 1.66 1.50 1992 1.67 1.59 1.45 1.53 1.58 1.60 1.52 1.48 1.55 1.50 1.72 1.76 1.69 1.61 1.46 1.40 1.61 1.69 1.65 1.72 1.74 1.60 1.45 1993 1.73 1.49 1.50 1.63 1.60 1.52 1.48 1.55 1.50 1.51 1.52 1.85 1.80 1.77 1.85 1.66 1.50 1993 1.73 1.49 1.50 1.63 1.60 1.52 1.48 1.55 1.55 1.52 1.81 1.97 1.81 1.70 1.74 1.60 1.45 1								1.49		1.52	1.64	1.78	1.75	1.78	1.58	1.43
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Min 1.42 1.30 1.23 1.19 1.26 1.33 1.30 1.30 1.23 1.31 1.49 1.40 1.53 1.39 1.19															1	
	Min	1.4	2 1.3	0 1.23	1.19	1.26	1.33	1.30	1.30	1.23	1.3	1.49	1.4	0 1.5	3 1.39	1.19

Table 2.3.7 MONTHLY MEAN TIDE LEVEL AT POM PHRACHUL STATION (AFTER ADJUSTMENT)

Unit: (m MSL)

			·····			·····		,		,	, ,	Un	it : (m M	(21°)	
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Annual	Annua)
				_			L			L			Max	Mean	Min
1940	-0.06	0.15	0.10	0.09	-0.05	-0.08	-0.08	0.06	0.00	0.10	0.15	0.13	0.15	0.04	-0.08
1941	0.09	0.13	0.14	0.10	0.02	-0.13	-0,08	0.01	-0.09	0.04	0.15	0.15	0.15	0.04	-0.13
1942	0.12	0.14	0.14	0.01	0.10	0.01	0.02	0.01	0.03	0.21	0.20	0.31	0.31	0.11	0.01
1943	0.17	0.15	0.06	0.03	0.11	-0.07	-0.04	-0.07	-0.06	0.08	0.13	0.13	0.17	0.05	-0.07
1944	0.18	0.25	0.23	0.09	0.02	-0.07	-0.12	-0.03	0.04	0.19	0.28	0.25	0.28	0.11	-0.12
1945	0.19	0.24	0.17	0.08	0.06	0.06	0.03	0.15	0.01	0.04	0.11	0.08	0.24	0.10	0.01
1946	0.08	0.10	0.07	0.11	0.15	0.03	0.04	0.01	0.04	0.21	0.19	0.16	0.21	0.10	0.01
1947	0.24	0.28	0.19	0.18	0.01	-0.03	0.04	0.06	0.08	0.18	0.29	0.27	0.29	0.15	-0.03
1948	0.28	0.23	0.23	0.06	0.01	-0.07	-0.01	0.00	0.04	0.08	0.29	0.19	0.29	0.11	-0.07
1949	0.23	0.14	0.11	0.19	0.04	-0.13	-0.12	0.01	0.05	0.15	0.27	0.26	0.27	0.11	-0.13
1950	0.12	0.22	0.20	0.19	0.04	-0.06	-0.05	0.00	0.08	-0.20	0.29	0.21	0.27	0.10	
1951	0.17	0.20	0.22	0.12	0.02	-0.03	-0.06	0.00	0.16	0.18	0.29	0.27	0.29		-0.20
1952	0.24	0.34	0.20	0.17	0.02	-0.06	-0.02	-0.02	0.10	0.18				0.13	-0.06
1953	0.30	0.28	0.18	0.19	0.04	0.03		-0.02			0.37	0.31	0.37	0.15	-0.06
1954	0.30	0.19	0.10				0.04		0.05	0.15	0.22	0.19	0.30	0.14	-0.01
l	l1			0.05	-0.02	-0.09	-0.07	-0.02	0.14	0.29	0.25	0.30	0.30	0.11	-0.09
1955	0.26	0.24	0.24	0.13	0.06	-0.05	-0.14	-0.08	-0.02	0.12	0.72	0.12	0.72	0.13	-0.14
1956	0.13	0.08	0.08	-0.05	-0.11	-0.15	-0.12	-0.07	0.00	0.21	0.25	0.08	0.25	0.03	-0.15
1957	0.03	0.22	0.18	0.08	0.09	-0.16	-0.08	-0.10	0.09	0.18	0.29	0.18	0.29	0.08	-0.16
1958	0.32	0.26	0.17	0.15	0.03	0.00	-0.03	0.01	0.01	0.16	0.18	0.17	0.32	0.12	-0.03
1959	0.26	0.20	0.23	0.08	0.03	-0.14	-0.09	-0.02	0.08	0.24	0.31	0.24	0.31	0.12	-0.14
1960	0.25	0.33	0.14	0.17	0.09	-0.06	-0.01	0.01	0.02	0.20	0.20	0.26	0.33	0.13	-0.06
1961	0.22	0.29	0.20	0.14	0.07	-0.05	-0.02	0.03	0.06	0.16	0.33	0.32	0.33	0.15	-0.05
1962	0.37	0.26	0.26	0.18	0.10	-0.03	-0.02	0.04	0.05	0.22	0.30	0.22	0.37	0.16	-0.03
1963	0.23	0.27	0.23	0.15	0.06	-0.09	-0.01	0.05	0.09	0.24	0.23	0.23	0.27	0.14	-0.09
1964	0.32	0.43	0.29	0.19	0.08	0.00	0.02	-0.05	0.07	-0.21	-0.30	0.28	0.43	0.10	-0.30
1965	0.22	0.22	0.28	0.19	0.10	0.05	0.02	0.18	0.15	0.21	-0.22	0.28	0.73	0.10	-0.22
1966	0.23	0.25	0.19	0.18	0.01	0.00	0.02	0.12	0.13	0.21	-0.30	0.28	0.28	0.14	-0.22
1967	0.31	0.35	0.30	0.20	0.12	0.04	-0.04	-0.01	0.16	0.28	0.38	0.40	0.40	0.11	
1968	0.34	0.41	0.33	0.28	0.01	0.11	-0.09	-0.08	-0.03	0.22	0.31	0.40	0.41	0.21	-0.04
1969	0.28	0.33	0.30	0.22	0.13	0.06	0.06	-0.03	0.05	0.23					-0.09
1970	0.31	0.30	0.30	0.22	0.13	0.05	0.03	0.05	0.03	0.23	0.37	0.30	0.37	0.19	-0.03
1971	0.30	0.30	0.30	0.18			-0.04		1		0.36	0.29	0.36	0.20	0.03
1972	0.30	0.21	0.26	0.18	0.08	-0.07		-0.04	0.11	0.20	0.24	0.31	0.31	0.15	-0.07
1973					0.01	-0.04	-0.01	0.08	0.13	0.23	0.29	0.31	0.31	0.17	-0.04
	0.25	0.25	0.28	0.16	0.11	0.11	-0.03	0.03	0.06	0.28	0.31	0.34	0.34	0.18	-0.03
1974	0.29	0.35	0.29	0.18	0.13	-0.01	-0.05	-0.04	0.13	0.11	0.33	0.31	0.35	0.17	-0.05
1975	0.24	0.27	0.11	0.19	0.13	0.02	0.01	0.06	0.17	0.20	0.37	0.34	0.37	0.18	0.01
1976	0.24	0.25	0.27	0.21	0.10	0.02	0.05	-0.48	0.09	0.21	0.20	0.26	0.27	0.12	-0.48
1977	0.26	0.35	0.26	0.18	0.08	-0.04	0.01	0.07	0.14	0.19	0.25	0.27	0.35	0.17	-0.04
1978	0.25	0.34	0.26	0.18	0.16	0.05	0.03	-0.02	0.13	0.33	0.31	0.30	0.34	0.19	-0.02
1979	0.24	0.27	0.25	0.18	0.07	0.08	0.04	0.05	0.15	0.30	0.30	0.26	0.30	0.18	0.04
1980	0.22	0.28	0.17	0.15	0.07	-0.13	-0.14	-0.03	0.11	0.20	0.32	0.36	0.36	0.13	-0.14
1981	0.24	0.20	0.21	0.19	0.15	0.03	0.09	0.03	0.06	0.05	0.47	0.47	0.47	0.18	0.03
1982	0.38	0.40	0.30	0.35	0.24	0.16	0.18	0.15	0.19	0.33	0.40	0.43	0.43	0.29	0.15
1983	0.37	0.31	0.32	0.27	0.20	0.08	0.05	0.22	0.25	0.34	0.50	0.51	0.51	0.29	0.05
1984	0.44	0.46	0.39	0.27	0.22	0.10	0.14	0.13	0.20	0.22	0.39	0.38	0.46	0.28	0.10
1985	0.37	0.33	0.42	0.23	0.20	0.07	0.07	0.07	0.19	0.30	0.38	0.37	0.42	0.25	0.07
1986	0.31	0.27	0.25	0.18	0.21	0.16	0.09	0.05	0.16	0.25	0.34	0.33	0.34	0.23	0.05
1987	0.38	0.38	0.24	0.21	0.16	0.15	0.01	0.06	0.04	0.26	0.32	0.42	0.42	0.22	0.03
1988	0.39	0.38	0.29	0.32	0.21	0.11	0.12	0.21	0.16	0.21	0.32	0.42	0.42	0.26	
1989	0.39	0.33	0.31	0.10	0.07	0.05	0.12	0.21	0.17	0.30	0.37	0.41		0.26	0.11
1990	0.40	0.40	0.24	0.18	0.19	0.05	-0.01	0.00	0.17	0.30	0.39		0.39		0.05
1991	0.40	0.25	0.24	0.18	0.19	0.05						0.37	0.40	0.20	-0.01
1992	0.23	0.23	0.33	0.23			0.04	0.15	0.16	0.32	0.39	0.35	0.39	0.23	0.04
1992				L	0.13	0.03	0.04	-0.01	0.07	0.23	0.35	0.21	0.35	0.18	-0.01
	0.36	0.24	0.27	0.19	0.14	0.00	0.01	0.04	0.12	0.27	0.32	0.32	0.36	0.19	0.00
1994	0.32	0.25	0.36	0.22	0.09	0.11	0.16	0.12	0.14	0.30	0.31	0.31	0.36	0.22	0.09
1995	0.40	0.40	0.40	0.31	0.20	0.10	0.18	0.20	0.24	0.35	0.43	0.37	0.43	0.30	0.10
1996				1		2 1			0.19	0.34	0.36	0.35			
Max	0.44	0.46	0.42	0.35	0.24	0.16	0.18	0.22	0.25	0.35	0.72	0.51	0.72	0.30	0.15
Mean	0.26	0.27	0.24	0.17	0.09	0.00	0.00	0.02	0.09	0.20	0.28	0.28	0.34	0.16	-0.05
Min	-0.06	80.0	0.06	-0.05	-0.11	-0.16	-0.14	-0.48	-0.09	-0.21	-0.30	0.08	0.15	0.03	-0.48
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Table 2.3.8 MONTHLY MINIMUM TIDE LEVEL AT POM PHRACHUL STATION (AFTER ADJUSTMENT)
Unit: (m MSL)

Part Part													Om	; (m M	327)	
1.48	Year	Jan	Peb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		į.	
1441 1451 1491 1491 1491 1491 1492	1940	-1,48	-1.46	-1.26	-1.35	-1.48	-1.40	-1.36	-1.33	-1.20	-1.07					
1945 1.48		-1.43	-1.30	-1.15												
1945																
1965																
1946																
1967 1.40																
1948																
1949			t													
1950 1.58 1.51 1.34 1.37 1.50 1.55 1.54 1.43 1.32 1.16 1.16 1.16 1.14 1.16 1.41 1.58 1951 1.50 1.41 1.36 1.48 1.55 1.50 1.51 1.31 1.21 1.19 1.06 1.04 1.04 1.34 1.52 1953 1.57 1.39 1.22 1.47 1.51 1.57 1.48 1.32 1.40 1.37 1.28 1.44 1.15 1.57 1953 1.37 1.38 1.26 1.47 1.51 1.57 1.48 1.52 1.40 1.37 1.28 1.44 1.24 1.35 1955 1.53 1.56 1.26 1.43 1.60 1.61 1.65 1.57 1.42 1.33 1.36 1.46 1.44 1.24 1.35 1955 1.53 1.50 1.26 1.43 1.60 1.61 1.65 1.57 1.42 1.33 1.68 1.26 1.49 1.68 1955 1.57 1.50 1.46 1.62 1.12 1.68 1.79 1.59 1.44 1.24 1.23 1.62 1.65 1.79 1957 1.70 1.50 1.30 1.46 1.68 1.72 1.68 1.79 1.59 1.44 1.24 1.23 1.62 1.45 1.55 1.16 1958 1.36 1.24 1.20 1.44 1.52 1.65 1.75 1.65 1.75 1.65 1.75 1958 1.36 1.24 1.20 1.44 1.52 1.56 1.65 1.57 1.45 1.41 1.40 1.50 1.46 1.44 1.42 1.36 1958 1.36 1.24 1.20 1.44 1.62 1.45 1.65 1.65 1.65 1.65 1.65 1.65 1.65 1.65 1.36 1.36 1.22 1.22 1.24 1.45 1.40 1.40 1.50 1.40 1.44 1.50 1.44 1.50 1960 1.36 1.26 1.20 1.42 1.62 1.65 1.76 1.64 1.44 1.35 1.40 1.44 1.45 1.40 1.44 1.50 1961 1.36 1.28 1.27 1.42 1.62 1.65 1.								-1.58							-1.36	
1952 1.55		-1.58	-1.51													
1953		-1.50														
1954																
1955			l							-1.40						
1956										1.42		-1.57				
1957 1.70					1							-1 32				
1958 -1.56																
1959																
1960								-1.66				-1.16			-1.44	-1.73
1962								-1.61	-1.42	-1.36						
1963 -1.46 -1.26 -1.28 -1.48 -1.66 -1.67 -1.66 -1.43 -1.46 -1.12 -1.21 -1.61 -1.12 -1.44 -1.67 1964 -1.46 -1.22 -1.27 -1.36 -1.55 -1.63 -1.66 -1.77 -1.50 -1.23 -1.13 -1.51 -1.13 -1.44 -1.77 1965 -1.58 -1.48 -1.27 -1.36 -1.50 -1.56 -1.58 -1.48 -1.52 -1.50 -1.52 -1.53 -1.44 -1.64 -1.66 1966 -1.50 -1.46 -1.42 -1.46 -1.66 -1.66 -1.63 -1.51 -1.29 -1.26 -1.50 -1.52 -1.26 -1.46 -1.66 1967 -1.47 -1.36 -1.38 -1.47 -1.64 -1.66 -1.70 -1.66 -1.70 -1.66 -1.70 -1.66 -1.70 1968 -1.42 -1.30 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.31 -1.51 -1.78 1969 -1.52 -1.41 -1.25 -1.47 -1.55 -1.55 -1.55 -1.52 -1.62 -1.54 -1.47 -1.40 -1.47 -1.55 -1.52 -1.61 1970 -1.46 -1.31 -1.31 -1.31 -1.31 -1.51 -1.78 -1.65 -1.74 -1.72 -1.66 -1.49 -1.55 -1.59 -1.44 -1.45 -1.35 -1.59 -1.62 -1.59 -1.44 -1.45 -1.35 -1.55 -1.55 -1.57 -1.74 -1.72 -1.66 -1.49 -1.55 -1.59 -1.44 -1.45 -1.35 -1.55 -1.55 -1.57 -1.74 -1.72 -1.66 -1.47 -1.55 -1.58 -1.41 -1.55 -1.57 -1.74 -1.73 -1.51 -1.68 -1.72 -1.65 -1.72 -1.66 -1.47 -1.55 -1.58 -1.43 -1.35 -1.55 -1.73 -1.51 -1.68 -1.67 -1.75 -1.75 -1.60 -1.55 -1.58 -1.43 -1.35 -1.55 -1.73 -1.59 -1.44 -1.55 -1.55 -1.35 -1.55 -1.57 -1.67 -1.75	1961	-1.36														
1964 -1.46 -1.22 -1.27 -1.36 -1.55 -1.63 -1.66 -1.77 -1.50 -1.23 -1.13 -1.51 -1.13 -1.44 -1.77 1965 -1.58 -1.48 -1.27 -1.36 -1.55 -1.56 -1.58 -1.41 -1.26 -1.42 -1.54 -1.26 -1.46 -1.68 -1.69 -1.66 -1.67 -1.66 -1.67 -1.28 -1.27 -1.26 -1.49 -1.66 -1.67 -1.66 -1.67 -1.28 -1.28 -1.26 -1.49 -1.66 -1.67 -1.36 -1.37 -1.36 -1.38 -1.47 -1.64 -1.66 -1.67 -1.66 -1.78 -1.66 -1.78 -1.64 -1.65 -1.44 -1.50 -1.54 -1.26 -1.28 -1.26 -1.28 -1.26 -1.26 -1.28 -1.26 -1.28 -1.26 -1.28 -1.26 -1.28 -1.26 -1.28															1	
1965																
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1966	B				1											
1968					1										.!	
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1973 -1.61 -1.45 -1.35 -1.51 -1.68 -1.67 -1.73 -1.59 -1.60 -1.52 -1.58 -1.43 -1.35 -1.56 -1.73 -1.74 -1.59 -1.60 -1.72 -1.60 -1.72 -1.67 -1.75 -1.75 -1.60 -1.75 -1.60 -1.72 -1.60 -1.75 -1.75 -1.75 -1.60 -1.75 -1.75 -1.75 -1.50 -1.44 -1.76 -1.40 -1.48 -1.14 -1.55 -1.87 -1.75 -1.75 -1.60 -1.72 -1.60 -1.72 -1.60 -1.75 -1.75 -1.75 -1.75 -1.75 -1.50 -1.60 -1.72 -1.60 -1.72 -1.60 -1.71 -1.40 -1.40 -1.32 -1.52 -1.82 -1.82 -1.64 -1.76 -1.72 -1.66 -1.21 -1.40 -1.46 -1.24 -1.21 -1.49 -1.76 -1.72 -1.66 -1.21 -1.40 -1.46 -1.24 -1.21 -1.49 -1.76 -1.78 -1.55 -1.56 -1.37 -1.24 -1.40 -1.46 -1.24 -1.49 -1.76 -1.78 -1.54 -1.55 -1.54 -1.55 -1.54 -1.55 -1.58 -1.61 -1.64 -1.64 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 -1.84 -1.51 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 -1.84 -1.51 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 -1.84 -1.51 -1.54 -1.54 -1.54 -1.55 -1.54 -1.51 -1.84 -1.51 -1.84 -1.61 -1.32 -1.26 -1.37 -1.33 -1.26 -1.51 -1.84 -1.84 -1.61 -1.32 -1.26 -1.37 -1.33 -1.26 -1.51 -1.84 -1.84 -1.84 -1.61 -1.52 -1.54 -1.44 -1.50 -1.16 -1.50 -1.78 -1.84 -1.53 -1.55 -1.54 -1.55 -1.55 -1.58 -1.58 -1.58 -1.58 -1.58							-1.74		-1.66	-1.49	-1.55		·		_1	
1974 -1.59 -1.41 -1.37 -1.14 -1.87 -1.77 -1.79 -1.59 -1.44 -1.76 -1.40 -1.48 -1.14 -1.55 -1.87 1975 -1.60 -1.39 -1.60 -1.72 -1.67 -1.75 -1.75 -1.73 -1.62 -1.30 -1.28 -1.18 -1.46 -1.18 -1.53 -1.75 1976 -1.55 -1.37 -1.32 -1.55 -1.63 -1.82 -1.66 -1.47 -1.41 -1.50 -1.41 -1.49 -1.32 -1.52 -1.82 1977 -1.46 -1.24 -1.22 -1.50 -1.64 -1.76 -1.72 -1.66 -1.27 -1.46 -1.47 -1.47 -1.54 -1.21 -1.49 -1.76 1978 -1.52 -1.43 -1.34 -1.56 -1.78 -1.64 -1.62 -1.56 -1.37 -1.24 -1.40 -1.46 -1.24 -1.49 -1.78 1980 -1.54 -1.50 -1.16 -1.45 -1.78 -1.58 -1.61 -1.64 -1.42 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 1981 -1.57 -1.54 -1.21 -1.38 -1.58 -1.66 -1.80 -1.70 -1.41 -1.47 -1.19 -1.32 -1.19 -1.38 1981 -1.57 -1.54 -1.21 -1.38 -1.58 -1.66 -1.80 -1.70 -1.41 -1.47 -1.19 -1.32 -1.19 -1.48 -1.80 1982 -1.34 -1.36 -1.25 -1.45 -1.38 -1.81 -1.49 -1.57 -1.41 -1.47 -1.19 -1.32 -1.19 -1.48 -1.80 1983 -1.52 -1.40 -1.21 -1.39 -1.56 -1.73 -1.68 -1.47 -1.43 -0.42 -1.01 -1.17 -0.42 -1.33 -1.73 1984 -1.46 -1.40 -1.23 -1.46 -1.55 -1.58 -1.60 -1.60 -1.53 -1.44 -1.47 -1.47 -1.47 -1.47 -1.47 -1.47 1985 -1.49 -1.42 -1.21 -1.51 -1.60 -1.60 -1.60 -1.53 -1.40 -1.41 -1.47 -1.47 -1.47 -1.21 -1.48 -1.61 1986 -1.52 -1.40 -1.59 -1.57 -1.62 -1.71 -1.61 -1.64 -1.41 -1.44 -1.48 -1.47 -1.21 -1.48 -1.62 -1.71 -1.81 -				-1.26		-1.73				1			J			
1975 -1.60 -1.39 -1.60 -1.72 -1.67 -1.75 -1.73 -1.62 -1.30 -1.28 -1.18 -1.46 -1.18 -1.53 -1.75 1976 -1.55 -1.37 -1.32 -1.55 -1.63 -1.82 -1.66 -1.47 -1.41 -1.50 -1.41 -1.49 -1.32 -1.52 -1.82 1977 -1.46 -1.24 -1.22 -1.50 -1.64 -1.76 -1.72 -1.66 -1.21 -1.46 -1.47 -1.54 -1.21 -1.49 -1.76 1978 -1.52 -1.43 -1.34 -1.56 -1.78 -1.64 -1.62 -1.56 -1.37 -1.24 -1.40 -1.46 -1.24 -1.49 -1.76 1979 -1.54 -1.50 -1.16 -1.45 -1.78 -1.58 -1.61 -1.64 -1.42 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 1980 -1.54 -1.42 -1.33 -1.46 -1.79 -1.81 -1.84 -1.61 -1.32 -1.26 -1.37 -1.38 -1.26 -1.51 -1.84 1981 -1.57 -1.54 -1.21 -1.38 -1.53 -1.66 -1.80 -1.70 -1.41 -1.47 -1.19 -1.32 -1.19 -1.48 -1.80 1982 -1.34 -1.36 -1.25 -1.45 -1.38 -1.81 -1.49 -1.37 -1.33 -1.23 -1.38 -1.23 -1.40 -1.81 1983 -1.52 -1.40 -1.21 -1.39 -1.56 -1.73 -1.68 -1.47 -1.43 -1.42 -1.36 -1.23 -1.40 -1.81 1984 -1.46 -1.40 -1.23 -1.46 -1.55 -1.73 -1.68 -1.47 -1.43 -1.42 -1.36 -1.23 -1.48 -1.61 1.76 -1.59 -1.57 -1.50																
1976												*	1	_1		
1977			_1			1			1							
1978		- }											1			1.82
1979 -1.54 -1.50 -1.16 -1.45 -1.78 -1.58 -1.61 -1.64 -1.42 -1.45 -1.44 -1.50 -1.16 -1.50 -1.78 1980 -1.54 -1.42 -1.33 -1.46 -1.79 -1.81 -1.84 -1.61 -1.32 -1.26 -1.37 -1.38 -1.26 -1.51 -1.84 1981 -1.57 -1.54 -1.21 -1.38 -1.53 -1.66 -1.80 -1.70 -1.41 -1.47 -1.19 -1.32 -1.19 -1.48 -1.80 1982 -1.34 -1.36 -1.25 -1.45 -1.38 -1.81 -1.49 -1.37 -1.33 -1.23 -1.38 -1.35 -1.23 -1.40 -1.81 1983 -1.52 -1.40 -1.21 -1.39 -1.56 -1.73 -1.68 -1.47 -1.43 -1.42 -1.01 -1.17 -0.42 -1.33 -1.73 1984 -1.46 -1.40 -1.23 -1.46 -1.55 -1.58 -1.60 -1.60 -1.53 -1.41 -1.76 -1.42 -1.36 -1.23 -1.48 -1.76 1985 -1.49 -1.42 -1.21 -1.51 -1.60 -1.60 -1.60 -1.60 -1.53 -1.41 -1.76 -1.42 -1.33 -1.47 -1.21 -1.48 -1.62 1986 -1.52 -1.40 -1.59 -1.57 -1.62 -1.71 -1.61 -1.64 -1.41 -1.48 -1.49 -1.56 -1.40 -1.55 -1.71 1987 -1.53 -1.29 -1.53 -1.48 -1.58 -1.78 -1.81 -1.53 -1.50 -1.52 -1.60 -1.60 -1.60 -1.60 -1.60 -1.60 -1.50 -1.51 -1.60 -1.60 -1.60 -1.60 -1.60 -1.50 -1.51 -1.60		_										<u> </u>	1			-1.78
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Table 3.3.1 (1/2) SUMMARY OF MODEL CALIBRATION

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2.3

(1) Upper Basin (Upstream of Nakhon Sawan)

Crotion	Looption	101	1005	101	1006
Station	LUCALIOII	17	7.7	17	OK.
		Discharge	Water Level	Discharge	Water Level
Y.4	Sukhothai	Hydrograph shape well	Hydrograph shape well Peaks water levels match Hydrograph shape well Peak water levels match	Hydrograph shape well	Peak water levels match
		reproduced, but flows well, recession	well, recession too	reproduced, but flow well, recession too high,	well, recession too high,
		underestimated by 50 high, overdamped	high, overdamped	underestimated by 50	overdamped slightly.
		m3/s.	slightly.	m3/s.	1
Y.17	-	Peak match well, but	Peak water level is 1m	Peak arrives slightly too Peak	Peak water level
		flows either side of peak	flows either side of peak too high, water levels late, pre peak discharge matches, but pre and	late, pre peak discharge	matches, but pre and
		are overestimated.	either side of peak too	underestimated by 200	post peak levels up to
			low.	m3/s.	2.5 m too low.
N.SA	Pitsanulok	Good match	Good match	Peak overestimated by Good match	Good match
				100 m3/s	
N.7	Pichit	Peaks overestimated by Peak water	Peak water levels	Peak overestimated by Peak water	Peak water levels
		200 m3/s, pre and	underestimated by 0.5m.	100 m3/s, pre and	underestimated by 0.5m.
		particularly post-peak	post-peak Pre and post peak water	particularly post-peak	post-peak Pre and post peak water
		discharges	levels underestimated.	discharges	levels underestimated by
	-	underestimated by 200-		underestimated by 200-	up to 3m.
		500 m3/s.		500 m3/s.	
C.2	Nakhon Sawan	Peak discharge	Boundary Condition	Peak discharge occurs	Boundary Condition
		underestimated by 800		much too early,	
		m3/s. Pre peak flow		additional flood storage	
		overestimated by upto		Ping-Nan confluence is	
		500 m3/s.		needed.	

Table 3.3.1 (2/2) SUMMARY OF MODEL CALIBRATION

am of Nakhon Sawan)	1995	Discharge Water Level Discharge	Boundary Condition Peak simulated by 1.0 m Boundary Condition	too low.	to 1.0m too low.	Good match Good match Peaks underestimated by Peak undersimulated by	500m3/s owing to water 1.0m too low.	 Shape of simulation Low flows up to 1.0m	differs from observed, too high.		imbalance upstream.	a No DATA Water levels consistently No Data No Data	around 0.5 m higher than	observed. (Datum should	be checked.)	No DATA Peak and pre-peak water No DATA Good match		No DATA Slightly high at end of No DATA	low at end of October.	No DATA	Вт.)
(2) Lower Basin (Downstream of Nakhon Sawan)	Location		Nakhon Sawan Boundary Condition			Chainat Good match		Jo	differs from	(Rating curve is wron	, ,	Ayutthaya No DATA	•			Bang Sai No DATA		Pak Kret No DATA		Bangkok No DATA	(Memorial Br.)
(2) Lower Basin (Dow	Station I O		C 2 Nakh			C.13		C 7 A Ano				S.5 Av	iver)			Bano Sai Ba		C 22 Pa		C.4 Ba	

Table 4.1.1 SIMULATION CONDITION FOR FUTURE DEVELOPMENT

	Basin Condition	Model Modification	Remarks
Urban development by providing ring levee with	Urban areas presented in Fig. 4.1.1 are protected by ring dikes and drainage pumps.	 River channels where a ring levee is provided are narrowed, and spillage is not allowed over the levee. 	
	The protected urban areas are shown in Fig.	 Urban areas enclosed by ring dikes are protected free from flooding. 	
	4.1.1.	 To express increase of runoff by urbanization, runoff ratio of the urban areas is increased to about 0.5 from the calibrated ones of 0.1 to 0.3. 	
		• Runoff from the urban areas is directly drained into the rivers by	
agricultural	In addition to the condition of Casel, future	• Fruits areas in lower delta are encircled with 1 m high embankment.	
cultivation in combination with urban Development	land use is assumed as shown in Sector III.	 To express increase of runoff by urbanization, runoff ratio of urban areas is doubled to about 0.5 from the calibrated ones of 0.1 to 0.3. 	
subsidence in	In addition to the condition of Case2, future	 Ground elevations (DEM) are modified based on Fig. 4.1.2. 	
combination with urban	land subsidence is assumed as shown in Fig.	 Cross sections and elevation-area-volume relation are also regenerated. 	
development and change of agricultural cultivation	4.1.2		
Construction of dam in	In addition to the condition of Case3, three new	 Yom and Pasak River channels are extended to Kaeng Sua Ten and 	
combination with urban	dams (Kaeng Sua Ten, Kwae Noi and Pasak)	Pasak Dam respectively to include the two dams in the model. Kwae	
change of	are operated by the conventional way. Spill	Noi River channel from Kwae Noi Dam to Nan River is added to the	
cultivation	from Sirikit dam reservoir in 1995 is avoided by	model	
and land subsidence	using a newly added conduit.	• Dam outflow based on the conventional way is given as the boundary	
		condition at Strikit, Kaeng Sua 1en, Kwae Noi and Pasak dams as shown in Fig. 4.4.3. As for Bhumipol Dam, actual outflow is given.	
Construction of loop cut	This is a case for the future condition in the	• A 65 m wide channel is added to the model to allow short cut flow at	Future Basin
combination with	target year, 2018. In addition to the condition of		Condition in
development,	Case4, a loop cut channel is provided near	capacity of 640 m3/s, pumps of 338	2018
agricultural	Bangkok Fort. Moreover, 338 m3/s of	m3/s are integrated to the model.	**********
and	sgircuiturai maniage punips oy manaciar Senamchai and Cholahan Phichit 2 Projects are		(engage)
construction of dam	provided.		
Large scale development	This is a case of extreme land development.	• Link channels connecting with the development area are all removed	
of agricultural area in	2,700 km2 area (Fig.4.1.4) which is now	not to allow any spillage to the area.	
combination with urban	playing as a natural retarding area is assumed to	 Runoff generated in the area is drained into the rivers directly. 	

SUMMARY OF SIMULATION RESULT FOR FUTURE DEVELOPMENT **Table 4.1.2**

(1) Simulated Maximum Water Level

(m MSL) Mem. Bridge Nakhon Phitsanulol: Pichit Ang Thong Ayutthaya Pak Kret Sam Sen Sukhothai Sam Ngam Bung Boraphet Sawan Year Case C.13 C.22 C.12 Preset Condition 17.08 3,78 2.51 2.20 26.95 26,08 7.79 5.25 37.27 1995 49.71 39.19 46.12 Urban Development (Ring Levee + Draininge Pomp) Change of Agricultural Cultivation +Case2 Land Subsidence + 2.57 5.63 4.19 3.08 2.80 1995 50.27 39.22 27.36 26,07 17.07 7,97 27,36 26.07 17.07 7.97 4.19 2.57 37.34 1995 50.27 39.23 46.17 2.56 17.07 5.63 4.19 3,08 1995 39.22 26.07 50.27 Case3
Construction of Dams 5.58 4,14 27.05 25.74 16.77 7.91 +Case4
Future Condition
(Loopcut + Case5)
Large Scale Agricultural 1995 50.22 38.37 45.38 37.10 2.90 2.45 27.05 25.74 16.77 7.92 5.55 4.04 1995 38.37 37.10 6.15 17.22 Development + Case2

(2) Simulated Maximum Discharge

Case	Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayuithaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridee	Rama VI Barrage
No.			Y.4	Y.17	N.SA	N.7	C.2	C.13	C.7A	C.34		C.22	C.12	C.4	
1	Preset Condition	1995	350	1,360	1,960	2,070	4,600	4,440	2,910	1,210	4,150	3,540	4,250	4,350	1,320
2	Urban Development (Ring Levee + Drainage Pump)	1995	300	1,380	1,940	2,050	4,430	4,310	2,610.	1,410	4,070	4,370	4,450	4,490	1,320
3	Change of Agricultural Cultivation 1Case2	1995	300	1,380	1.940	2,050	4,430	4,310	2,610	1,410	4,070	4,370	4,160	4,490	1,320
4	Land Subsidence + Case3	1995	300	1,380	1.940	2,050	4.430	4,310	2,610	1,410	4,070	4,370	4,460	4,490	1,320
5	Construction of Dams +Case4	1995	290	1,000	1,660	2,020	4,110	3,890	2,550	1,400	4,000	4,320	4,490	4,440	1,340
6	Future Condition (Loopcut + Case5)	1995	290	1,000	1,660	2,020	4,110	3,890	2,570	1,410	3,980	4,350	4,450	4,490	1,340
7	Large Scale Agricultural Development + Case2	1995	300	1,380	1,940	2,050	4,430	4,520	3,080	1,800	4,570	4,840	4,910	4,940	1,310

(3) Simulated Inundation Area

	:			Nakhon		Lower Cent	tral Plain		
Case No.	Case	Year	Upper Central Plain	Sawan	Higher Delta	1	Lower Delta		LON
				Area	Figner Delia	BMA Area*	Others	Sub-total	
1	Preset Condition	1995	3,777	555	4,609	0	4.650	4,650	13.591
2	Urban Development (Ring Levce + Drainage Pump)	1995	3,905	570	4,639	133	3,554	3,687	12,668
3	Change of Agricultural Cultivation +Case2	1995	3,908	572	1,729	134	3.603	3,737	12,812
4	Land Subsidence + Case3	1995	3,908	572	4,740	134	3,630	3,764	12,850
5	Construction of Dams +Case4	1995	3,490	492	4,514	133	3,020	3,153	11,516
6	Future Condition (Looncut + Case5)	1995	3,490	492	4,344	66	2,436	2,502	10,762
7	Large Scale Agricultural Development + Case2	1995	3,905	570	3,883	588	3.769	1,357	12,128

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Hank = 240 m2)

				Nakhon	<u> </u>	Lower Cent	ral Plain			
Case No	Case	Year	Upper Central Plain	Sawan	Upper Delta	L	ower Delta		Total	
				Area	Opper Detta	BMA Area*	Others	Sub-total		
ı	Preset Condition	1995	5,109	1,311	7,038	0	2,48R	2,488	15,940	
2	Urban Development (Ring Levce + Drainage Pump)	1995	5.578	1,332	7,100	189	1,807	1,996	16,00	
3	Change of Agricultural Cultivation +Case2	1995	5,638	1.355	7,120	193	1,828	2,021	16.13	
4	Land Subsidence 4 Case3	1995	5,638	1,355	7,165	193	1,862	2,055	16,21	
5	Construction of Dams	1995	4,804	1,244	6,724	193	1,784	1.977	14,74	
6	Future Condition (Loopeut CaseS)	1995	4,804	1,244	6,659	46	1,352	1,398	14.10	
7	Large Scale Agricultural Development + Case2	1995	5,657	1,410	5,534	1,430	1,874	3,304	15,90	

^{* ;} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 m2)

Table 4.1.3 COMPARISON OF SIMULATION RESULT FOR URBAN DEVELOPMENT

(1) Water Level

	Extent of Ring I Lower Chao Ph	1	Maximum Water Level (m MSL)						
Case	Stretch	(km)	Bang Sai	Pak Kret C.22	Samsen C.12	Memorial Bridge C.4			
Present Condition	None	0	3.78	2.51	2.32	2.20			
Urban Development with Ring	Samut Prakan toNontha Buri	70	3.85	2.70	2.51	2.41			
Levee and Drainage Pump	Samut Prakan to Pathum Thani	90	4.19	3.08	2.81	2.57			

(2) Discharge

	Extent of Ring I Lower Chao Ph		Maximum Daily Mean Discharge (m3/s MSL)						
Case	Stretch	(km)	Bang Sai	Pak Kret C.22	Samsen C.12	Memorial Bridge C.4			
Present Condition	None	. 0	4,140	3,400	3,670	3,670			
Urban Development with Ring	Samut Prakan toNontha Buri		4,100	3,720	3,720	3,710			
Levee and Drainage Pump	Samut Prakan to Pathum Thani	90	4,080	3,960	3,970	3,970			

Table 4.1.4 (1/4) SUMMARY OF 45 YEAR RUN IN FUTURE BASIN CONDITION

		Sam	Phitsanul			Nakhon		Åna	Ayutthay		·		Mem.
Year	Sukhotahi	Ngam	ok	Pichit	Bung	Sawan	Chainat	Ang Thong	a	Bang Sai	Pak Kret	Sam Sen	Bridge
-	Y.4	Y.17	N.5A	N.7	Boraphet	C.2	C.13	C.7A	C.34		C.22	C.12	C.4
1952	50.42	37.56	43.60	34.82	25.08	23.86	14.97	7,03	4,18	2.72	2.15	2.07	2.02
1953	50.10	36,39	41.53	34.25	24.75	24.11	14.19	6,69	3,90	2.54	1.90	1.78	1,74
1954	50.37	37.71	44.13	36.59	26,60	25.41	16.36	7.70	5.31	3.81	2.64	2.35	2.18
1955	50.11	37.06	42.70	34.63	25,25	24.40	14.55	6.87	4.13	2.68	1.94	1,80	1.75
1956	50.43	38.54	44,53	36,71	25.05	24.80	15,97	7.48	4.55	3.04	2.21	2.01	1.92
1957	50,15	37.36	43.23	35.46	25.15	24.20	15.49	7.33	4.85	3.47	2.45	2.18	2.07
1958	49.88	36.01	43.01	36.04	25.30	24.18	14.68	6.91	4,23	2,74	1.91	1.76	1,72
1959	50.26	37.76	44.88	36.12	26.06	25.03	16.07	7.60	5.26	3.80	2.67	2.37	2.16
1960	49.94	36.69	43.30	34.40	24.50	23.39	13.93	6,53	3.74	2.42	1.86	1.79	1.78
1961	50.34	38.11	45.93	36.72	25.86	24.88	15.62	7.33	4.44	2.94	2.15	1.99	1.90
1962	50.30	38.14	42.60	35.65	26.46	25.32	16.38	7.72	5.15	3.63	2.63	2.36	2.19
1963	50.15	36.84	40.09	33,55	25,77	24,83	15.37	7.29	4.90	3.50	2.49	2.23	2.10
1964	50,55	37.97	44.16	36.58	26.80	25.57	16.75	7.84	5.37	3.85	2.64	2.33	2.13
1965	49.48	35.67	41.50	33.05	24.65	23.08	12.89	6,04	3.33	2.11	1.78	1.72	1,68
1966	49.87	36.76	41.42	35.02	25,62	24.71	15.13	7.19	4.38	2.93	2.07	1.92	1.87
1967	50.41	37.85	42.96	35.77	25.50	24.63	14.31	6.76	3.80	2.36	1.87	1.79	1.78
1968	46.41	33.80	39.46	32.44	24.55	22.40	11.91	5,19	2.48	1.47	1.35	1,43	1.52
1969	50,06	36,80	40.26	34.94	25.81	24.86	15,45	7.35	4.76	3.28	2,22	2.00	1.89
1970	50.48	38.75	44,60	36,52	26,35	25,25	16.17	7.59	4.79	3,32	2.34	2.12	1.99
1971	50.26	37.77	41,61	33,65	25.45	24,56	14.49	6.76	3.80	2.36	1.87	1.83	1.83
1972	49.42	35.43	39.28	31,01	24,70	23.18	13.72	6.55	3.75	2.43	2.00	1.94	1.92
1973	50.55	38.77	41.39	34.41	25,83	24.87	14.98	7.09	4.19	2.74	2.06	1.95	1.90
1974	50.29	37.51	40.84	32.02	25.56	23.63	14.57	6.85	3.91	2.54	2.07	1.98	1.94
1975	50.53	38.80	45.25	36.81	26.68	25.47	16.37	7,79	5.31	3.78	2,63	2.39	2.23
1976	50.28	38.12	43.64	35.85	26.01	25.00	15.14	7.22	4.62	3.17	2,22	2.02	1,94
1977	50.07	36.73	42.22	34.59	25.00	24.21	14.15	6.60	3.95	2.49	1.87	1.81	1.79
1978	50.41	38.00	44.96	36.88	26.84	25.59	16.61	7.86	5.59	4.05	2.87	2.60	2.43
1979	49.01	34.47	40.00	31.65	24.65	23.23	13.51	6,33	3.31	2.02	1.83	1.79	1.77
1980	50,57	38.75	45.78	36.85	26.82	25.59	16.54	7.84	5.44	3.92	2.72	2,40	2.17
1981	50.18	37.22	42.08	34.20	25.75	23.44	13,33	6.16	3.22	2.05	1.82	1.78	1.76
1982	49.47	35.73	40.66	34.26	24.95	23.57	13.48	6.32	3.73	2.45	1.87	1.80	1.79
1983	50,12	37.08	42.18	34.46	25.69	24.78	16.27	7.68	5.38	3.95	2.85	2.57	2.33
1984	50.09	36.42	40.81	33.09	24.70	23.06	12.02	5.57	3.46	2.25	1.87	1.82	1.81
1985	50.31	36.69	44.65	36.57	25.62	24.71	14,48	6.93	4,48	3.11	2.28	2,10	2.01
1986	49.92	35.50	40.03	32.28	24,55	22,86	12.70	5.78	2.94	1.69	1.57	1.59	1,65
1987	50.40	38.02	41.19	33.79	25.05	24.22	14.78	7.01	4.84	3.45	2,47	2.24	2.12
1988	49.95	35.81	40,74	32.20	25,25	24.45	15.75	7.33	4.44	3.03	2.24	2.07	1.99
1989	49.69	36.07	39.19	30.92	24.95	23.83	13.84	6.53	3,51	2.19	1.88	1.84	1.84
1990	48.75	34.67	38,96	32.25	24.75	23.29	14.16	6.68	4.17	2.81	2.06	1.97	1.93
1991	49.48	35.36	39.23	33.62	24.80	23.16	12.83	5.84	3.50	2.22	1.89	1.84	1.82
1992	50.11	36.33	40.63	32.71	25,00	23,73	14.53	6.83	3,88	2.42	1.91	1.87	1.85
1993	49.73	35.49	38.12	30,94	24.65	23.05	13.01	5.91	2.91	1.68	1.45	1.47	1.51
1994	50.28	37.79	45.03	36.85	25,80	24.84	15.17	7.19	4.50	3.06	2.23	2.06	1.98
1995	50.22	38.37	45.38	37,10	27.05	25.74	16.77	7.92	5.55	4.04	2.90	2.62	2.45
1996	50.07	37.01	45.30	36.55	26.22	25.15	16.36	7.70	5.35	3.83	2.72	2.47	2.27
MAX.	50.57	38.80	45.93	37.10	27.05	25.74	16.77	7.92	5.59	4.05	2.90	2,62	2.45
AVE.	50.00	36.97	42.29	34,55	25.50	24.31	14.79	6,95	4,30	2.90	2.17	2.02	1,94
MIN.	46,41	33.80	38.12	30.92	24.50	22.40	11.91	5,19	2.48	1.47	1.35	1.43	1.51
MIN.	40,41	33.80	38,12	30.92	24.30	22.40	11.71	1,17	2.40	1.4/	1.33	j 1.45	1.31

Table 4.1.4 (2/4) SUMMARY OF 45 YEAR RUN IN FUTURE BASIN CONDITION

(2) Simulated Maximum Discharge

(*)

(2) 5111	mateu iv	Iaxiinuiii	Discharg	36		X1.11				 	,	····		·
Year	B. Phasai	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bang Sai	Pak Kret	Sam Sen	Mem.	Rama VI
	P.17	Y,4	Y.17	N.5A	N.7	C.2	C.13	C.7A	C.34	Dang Sar	C.22	C.12	Bridge C.4	Barrage
1952	570	300	750	1,230	1,240	2,160	2,360	1,890	1,070	2,810	3,200	3,290	3,360	590
1953	1,430	290	470	810	1,010	2,330	2,010	1,640	990	2,670	3,100	3,190	3,240	810
1954	1,900	290	800	1,340	1,850	3,680	3,250	2,410	1,320	3,790	4,140	4,230	4,270	1,280
1955	1,140	280	620	1,040	1,180	2,510	2,160	1,760	1,040	2.830	3,210			
	670	300										3,300	3,340	880
1956			1,080	1,420	1,790	2,870	2,920	2,250	1,230	3,080	3,450	3,540	3,580	770
1957	730	290	700	1,120	1,310	2,330	2,620	2,090	1,140	3,290	3,810	3,910	3,990	970
1958	710	260	390	1,090	1,700	2,360	2,220	1,790	1,030	2,910	3,240	3,320	3,360	860
1959	2,860	290	810	1,540	1,610	3,170	3,000	2,300	1,230	3,710	4,100	4,200	4,270	1,290
1960	1,190	260	530	1,180	1,130	1,970	1,900	1,540	950	2,440	3,060	3,150	3,200	500
1961	950	300	930	1,890	1,850	2,990	2,690	2,110	1,180	3,040	3,400	3,470	3,510	720
1962	1,640	290	930	980	1,430	3,540	3,290	2,420	1,330	3,580	3,980	4,090	4,150	940
1963	1,590	280	560	580	830	2,910	2,550	2,020	1,120	3,430	3,860	3,940	4,000	1,240
1964	1,740	300	880	1,320	1,770	3,870	3,860	2,580	1,370	3,860	4,110	4,190	4,230	1,240
1965	990	230	330	830	830	1,850	1,480	1,230	850	2,180	2,780	2,880	2,940	740
1966	940	260	550	770	1,190	2,770	2,450	1,940	1,140	3,030	3,410	3,490	3,530	830
1967	1,430	290	840	1,060	1,550	2,700	2,060	1,650	1,030	2,560	3,000	3,080	3,120	400
1968	550	60	130	490	710	1,600	1,140	950	680	1,640	2,210	2,340	2,410	130
1969	1,610	280	550	600	1,160	2,950	2,600	2,040	1,160	3,320	3,640	3,710	3,740	980
1970	1,480	300	1,160	1,450	1,750	3,450	3,150	2,310	1,270	3,310	3,670	3,750	3,790	820
1971	2,080	290	810	840	920	2,640	2,140	1,720	1,040	2,540	3,010	3,080	3,110	460
1972	1,160	210	290	470	500	1,890	1,800	1,510	960	2,500	3,070	3,160	3,200	780
1973	2,080	300	1,180	790	1,020	2,970	2,370	1,880	1,110	2,830	3,270	3,370	3,430	
1974	1,030	290	740	720	680	2,060	2,170	1,760	1,040	2,590	3.120	3,220	3,280	·
1975	1,420	300	1,170	1,640	1,870	3,760	3,270	2,400	1,340	3,820	4,030	1	4,130	†
1976	1,580	290	930	1,210	1,450	3,130	2,440	1,940		3,210	3,570	3,650	3,680	770
1977	1,240	280	540	930	1,080	2,390	1,990	1,610	980	2,730	3,100	3,170	3.210	760
1978	1,600	300	880	1,540	1,870	3,910	3,690	2,520	1,350	4,080	4,330	4,390	4,420	1,730
1979	1,070	190	190	580	580	1,900	1,720	1,400		2,180	2,630	2,780	2,830	220
1980	1,610	300	1,160	1,840	1,940	3,880	3,600	2,490		3,900	4,180	4,270	4,320	1,200
1981	1,070	280	660	910	990	2,010	1,650	1,350			2,680	2,790	2,840	650
1982	730	220	340	650	1,040	2,080	1,710	1,390	920	2,580	3,040	3,120	3,160	890
1983	1,600	280	620	940	1,100	2,840	3,150	2,360	1,240	3,770	4,210	4,320	4,370	1,290
1984	640	280		1	820	1,860	1,170	1	1				3,010	1
1985	1,110	290			1,870	2,770	2,130		i	i '	3,510		3,630	1,170
1986	800	270			680	1,770		1,160]		
1987	1,520	290		1	900	2,380	1,410 2,270	1,820			2,420		2,560	470
1988	2,820	260		· · · · · · · · · · · · · · · · · · ·	680	2,530	2,770		1	1	3,770		3,900	1,300
1989	1,630	230			500					T	3,510	1	3,630	
1990	1,000	170			640	2,180 1,920	1,860		1		2,870		2,980	250
	640	·					1,990	1	1	1	3,360		3,500	1,290
1991	i	220	~~~~		880	1,900	1,460				2,870	1	3,020	790
1992	1,240	280		1	730	2,120	2,160				3,030	•	3,200	440
1993	770	250	1		450	1,850	1,530				2,400		2,580	120
1994	870	290	ļ		1,880	2,930	2,450		1		3,480		3,620	760
1995	1,500	290		1	2,020	4,110	3,890	1	1	i	4,350		4,490	1,340
1996	2,440	270	1		1,740	3,320	3,270		1	1	4,110		4,250	
MAX.	T	1			2,020	4,110	3,890	1			4,330		4,460	1,730
AVE.	1,320	1		i		2,650	2,390		I	T	3,380		3,520	830
MIN.	550	60	130	320	450	1,600	1,140	950	680	1,640	2,210	2,340	2,410	120

Table 4.1.4 (3/4) SUMMARY OF 45 YEAR RUN IN FUTURE BASIN CONDITION

(Million m3) (3) Simulated Inundation Area Lower Central Plain Upper Central Nakhon Total Lower Delta Year Plain Sawan Area Higher Delta BMA Area Others Sub-total 2,780 2,780 8,309 1952 2,285 216 3,027 0 1,920 6,949 270 2,807 0 1,920 1953 1,951 9,401 0 2,338 2,338 422 3,615 1954 3,026 2,134 7,561 2,949 0 2,134 284 1955 2,193 9,576 2,535 0 2,535 3,107 300 3,634 1956 11,294 277 4,741 0 4,028 4,028 1957 2,248 1958 0 2,034 2,034 6,787 257 2,862 1,634 3,113 3,113 10,648 4,413 0 1959 2,745 376 0 3,141 3,141 8,144 3,025 231 1960 1,747 1,718 1,718 7,860 2,756 0 1961 3,071 316 10,902 3,050 407 4,471 0 3,050 1962 2,974 9,633 0 3,280 3,280 1963 2,255 337 3,760 1,980 1,980 9,607 451 3,964 0 1964 3,212 2,413 6,592 215 0 2,413 2,674 1965 1,290 0 2,170 2,170 8,061 1966 2,103 291 3,497 0 1,469 1,469 6,862 2,630 299 2,464 1967 1,484 4,758 180 1,954 0 1,484 1968 1,141 8,506 0 2,423 2,423 2,280 339 3,462 1969 2,242 2,242 9,435 395 3,412 0 1970 3,386 1.978 7,449 0 1.978 2,721 1971 2,442 308 2,722 7,680 0 2,722 1972 1,283 231 3,445 1,933 8,133 3,159 347 2,695 0 1,933 1973 1974 2,142 238 3,410 0 2,673 2,673 8,463 1975 3,527 415 3,834 0 1,974 1,974 9,749 356 3,404 0 2,349 2,349 8,966 2,857 1976 0 1,336 1,336 6,000 266 2,312 1977 2,085 1,997 1.997 9,740 60 453 4,024 1978 3,207 4,888 0 1,273 1,273 1979 1,245 212 2,159 2,301 2,301 10,414 3,689 451 3,973 0 1980 1,531 6,355 2,628 0 1,531 1981 1,979 216 0 1,283 1,283 5,003 1982 1,324 205 2,191 3,651 10,701 1983 2,305 337 4,361 48 3,651 5,709 0 1,582 1,582 192 2,195 1984 1,740 1,722 7,068 0 1,722 1985 2,396 290 2,660 0 2,221 2,221 5,751 1986 1,127 175 2,228 1,670 7,200 2,507 286 2,738 0 1,670 1987 7,795 1,617 0 2,556 2,556 1988 307 3,315 1,605 1,605 5,589 1,398 251 2,336 0 1989 2,906 7,762 3,380 0 2,906 217 1990 1,259 0 1,362 1,362 4,987 190 2,158 1991 1,276 0 2,045 2,045 6,728 1992 1,798 239 2,646 4,640 1,306 1,306 1993 1,251 198 1.884 0 6,937 1994 2,714 307 2,587 0 1,330 1,330 3,490 492 4,344 66 2,436 2,502 10,827 1995 3,222 1,780 1,780 8,083 2,687 393 1 1996 4,640 1,273 0 1,273 1,127 175 1,884 Min. 2,262 299 3,119 4 2,173 2,174 7,856 Ave. 492 4,741 66 4,028 4,028 11,294 Max 3,689

*: BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 m2)

Table 4.1.4 (4/4) SUMMARY OF 45 YEAR RUN IN FUTURE BASIN CONDITION

(4) Simulated Inundation Volume (Million m3)

	Upper Central	Nakhon Sawan		Lower Central Plain							
Year	Plain	Area	Higher Delta	BMA Area*	Lower Delta Others	Sub-total	Total				
1952	2,696	389	3,040	0	1,118	1,118	7,244				
1953	2,181	575	2,774	0	645	645	6,175				
1954	4,134	1,088	4,932	0	822	822	10,976				
1955	2,515	573	3,054	0	749	749	6,891				
1956	4,382	593	4,169	. 0	1,005	1,005	10,150				
1957	2,575	502	5,501	0	2,208	2,208	10,785				
1958	1,364	474	2,988	0	671	671	5,497				
1959	3,663	946	5,488	0	1,445	1,445	11,543				
1960	1,666	479	2,525	0	1,262	1,262	5,932				
1961	4,202	670	3,485	0	613	613	8,971				
1962	4,140	996	5,592	0	1,308	1,308	12,036				
1963	2,770	772	4,149	0	1,443	1,443	9,134				
1964	4,611	1,197	5,751	0	770	770	12,329				
1965	1,029	424	2,250	0	851	851	4,555				
1966	2,144	582	3,778	0	918	918	7,421				
1967	3,360	660	2,542	0		617	7,121				
1968	845	333	1,335	0	617	550	3,063				
1969	2,787	783	3,944	0	550	1,082	8,596				
1970	5,109	944	4,407	0	1,082	968	11,428				
1971	3,190	755	2,878	0	968	748	7,572				
1972	1,051	467	3,040	0	748	1,085	5,643				
1973	4,866	860	3,039	0	1,085	788	9,553				
1974	2,557	473	3,169	0	788	1,356	7,555				
1975	5,296	1,039	5,167	0	1,356	872	12,373				
1976	3,871	819	3,784	0	872	974	9,448				
1977	2,335	553	2,446	0	974	523	5,858				
1978	4,619	1,191	6,123	32	523	852	12,784				
1979	1,018	429	1,860	0	820	472	3,778				
1980	5,696	1,192	5,432	0	472 959	959	13,279				
1981	2,350	459	2,860	0		657	6,325				
1982	1,090	400	2,300	0	657 548	548	4,337				
1983	2,798	769	5,415	23	† ··· · · · · · · · · · · · · · · · · ·	1,726	10,707				
1984	1,863	378	1,906	0	1,703 625	625	4,771				
1985	2,776	601	3,174	0	676	676	7,226				
1986	889	332	1,813	0	805	805	3,840				
1987	3,354	631	3,270	0	675	675	7.930				
1988	1,734	766	3,684	0	1,197	1,197	7,382				
1989	1,346	571	2,216	0	566	566	4,700				
1990	1,027	434	3,061	0	1,231	1,231	5,753				
1991	1,038	376	1,926	0	561	561	3,900				
1992	1,948	495	2,617	0	824	824	5,884				
1993	985	387	1,590	0	466	466	3,427				
1994	3,458	640	3,230	0		535	7,862				
1995	4,804	1,244	6,659	46	535	1,398	14,105				
1996	3,480	1.002	4,379	2	1,352 757	759	9,620				
		1			ì		3,063				
Min.	845	332	1,335	0	466	466	7,900				
Ave.	2,791	672	3,528	2	907	909	14,105				

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*: BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 m2)

Table 4.1.5 PROBABLE DISCHARGE IN FUTURE BASIN CONDITION

D:	Station		Probable l	Discharge by	Return Perio	d (m³/s)	
River	Station	2-ýr	5-yr	10-yr	25-yr	50-yr	100-yr
Ping	P.17(B.Phasai)	1,250	1,800	2,150	2,630	2,950	3,300
Yom	Y.4(Sukhothai)	280	290	295	300	305	310
1 GIII	Y.17(Sam Ngam)	610	910	1,110	1,170	1,180	1,190
Nan	N.5A(Pitsanulok)	940	1,480	1,630	1,780	1,900	2,000
rvan	N.7(Pichit)	1,220	1,840	1,900	1,970	2,020	2,080
	C.2(Nakhon Sawan)	2,520	3,320	3,810	4,000	4,100	4,200
	Ç.13(Chainat)	2,300	3,100	3,400	3,700	3,960	4,150
Chao Phraya	C.7A(Ang Thong)	1,800	2,360	2,480	2,560	2,670	2,720
	C.34(Ayutthaya)	1,050	1,250	1,350	1,400	1,440	1,470
	Bang Sai	2,900	3,600	3,850	3,980	4,070	4,170
Pasak	RamaIV Barrage	820	1,100	1,250	1,400	1,630	1,770

SIMULATION CONDITION FOR APPLICABLE MEASURE Table 4.2.1

No.	Case	Basin Condition		Model Modification from Future Basin Condition
_	Modification of Dam	Three cases of modified operation rule are applied	•	Dam outflow based on the modified rule is given as the boundary
	Operation Rule	to four dams, Sirikit, Kaeng Sua Ten, Kwae Noi and		condition at the four dams (Fig. 4.1.4).
		Pasak to increase their flood control capacities by		
		sacrificing the main purposes of irrigtion and power		
		generation to some extent.		
7	River Improvement	River Improvement by diking is made along the	•	Bed levels of link channels crossing the river improvement stretches are
	from Pathum Thani to	rivers from Nan and Yom to Pathum Thani shown in		raised as high as the design discharge (Fig. 4.2.1) can be
	Nan and Yom Rivers	Fig. 4.2.1 according to the return period.		accommodated within the river.
m	River Improvement	River Improvement by diking is made along the	•	Bed levels of link channels on the river improvement stretches are
	From Pathum Thami to			raised as high as the design discharge (Fig. 4.2.1) can be
	Chainat	4.2.1 according to the return period.		accommodated within the river.
4	Pasak-Raphipat-Sea	A flood channel is provided from Rama VI barrage	•	A diversion channel is provided from Rama VI barrage to the sea.
•	Diversion	on Pasak River to the sea along Pasak-Raphipat	•	Discharge on Pasak river is compulsorily diverted into the diversion
		Canal.		channel as much as the channel can receive upto its capacity, leaving 80
				m3/s of river maintenance flow on the river.
٠	Chainat-Pasak-	A flood channel is provided along Chainat-Pasak	•	A diversion channel is provided along Chainat-Pasak and Pasak-
	Raphipat-Sea Diversion	and Pasak-Raphipat Canals to the sea.		Raphipat Canals from Chao Phraya River to the sea.
			•	Discharge on Chao Phraya river is compulsorily diverted into the
				diversion channel as much as the channel can receive upto its capacity,
				leaving 80 m3/s of river maintenance flow on the river.
Q	Ayutthaya-East-Sea-	A flood channel is provided from Ayutthaya to	•	A diversion channel is provided from Chao Phraya River to the sea.
	Diversion	the sea, crossing the East Bank.	•	Discharge on Chao Phraya river is compulsorily diverted into the
				diversion channel as much as the channel can receive upto its capacity,
				leaving 80 m3/s of river maintenance flow on the river.
			l	

Table 4.2.2 (1/2) SUMMARY OF 45 YEAR RUN IN FULL CONFINEMENT CONDITION

(1) Simulated Maximum Water Level

Year	Sukhotahi		Phitsanul ok	Pichit	Bung	Nakhon Sawan	Chainat	Ang Thong	Ayutthay a	Bang Sai	Pak Kret	Sam Sen	Mem. Bridge
, ca.	Y.4	Y.17	N.5A	N.7	Boraphet	C.2	C.13	C.7A	C.34		C.22	C.12	C.4
1952	60.35	41.23	44,38	36.71	26,85	25,67	15.93	7.58	4.41	2,79	2.07	1.99	2.01
1953	54.13	37.70	41.66	35.08	26.82	24.93	15.26	7.31	4.56	3.00	2.00	1.82	1.72
1954	57.63	40.10	45.36	38.01	28.61	27.60	17.44	8.95	6.53	5.02	3.68	3.19	2.69
1955	54.10	38.11	43.05	36.12	26.35	25.28	15.59	7.51	4.78	3,23	2.07	1.79	1,65
1956	61.54	42.06	45,44	38.76	27.05	27.29	17.23	8.70	6.09	4.47	3.07	2.64	2.23
1957	55.80	38.89	43,44	36,50	26.79	25.18	16,36	8.06	5.70	4.20	2.94	2.57	2,27
1958	52.25	36.95	43.98	37.57	27.29	25,44	16.05	7.75	5.06	3.49	2,31	1.99	1.79
1959	56.11	39.34	45,66	38.05	26.83	26.66	16.96	8,59	6.28	4.79	3.52	3.07	2.67
1960	52.37	37.50	43,74	35.86	25.08	23.67	13.70	6.44	3.70	2,40	1,87	1.77	1,71
1961	57.38	39.93	47.93	39.85	26.76	26.55	16.54	8.10	5.08	3.41	2.27	2.00	1.84
1962	55.57	39.57	43.09	37.28	28.10	26.74	16.85	8.50	6.08	4,59	3.32	2.93	2.56
1963	54.67	38.66	40.25	34,41	27.65	26.09	16.38	8.12	5.87	4.40	3.09	2.69	2,33
1964	60.11	41.85	45.24	38.69	28.69	28.47	18.07	9,42	7.01	5.56	4.34	3.81	3.21
1965	50.36	35.89	42.00	34.26	25.84	23.03	12.88	6.12	3,44	2,16	1.78	1.67	1.61
1966	51.78	37,70	41.72	36.23	27.49	25.24	15.21	7.43	4.84	3.37	2.29	2.09	1.92
1966	57.71	40.55	43.74	37.70	26.89	27.26	16.97	8,55	5.81	4.08	2.83	2.50	2.21
1968	46.46	34.24	39.59	33,37	25.58	22.75	12.43	5.48	2.61	1.46	1.39	1.42	1.47
1969	53.45	38.09	40.50	36.16	27.40	26.38	16.37	8.18	5.78	4.16	2.81	2,46	2.13
1970	59.76	41.15	46,24	39.27	26.95	27.19	16.88	8.49	5.86	4.21	2.84	2,49	2.20
	-		42.12	34.94	26.22	26.18	16.41	8.02	5.04	3,37	2.29	2.04	1.84
1971 1972	55.77	39.30	39.39	31.65	25.91	23.95	14.04	6.80	3.95	2.61	2.05	2.00	1.96
	50,11	36.63	1	1	26.66	1	17.21	8,81	6.11	4.42	2.95	2.51	2.12
1973	60.68	41.79	41.76	35.70 33.19	25,98	27.72	14.39	6.87	3.94	2.56	2.06	1.96	1.86
1974	56,65	39.52	41.20	39.85	28.09	27.72	17.37	8.84	6.04	4.38	2.97	2.58	2,27
1975 1976	59.76	41.53 39,32	43.88	37.14	26.79	26.49	16.51	8.15	5,44	3.85	2.59	2.29	2.05
l	55.38	38,46	42.63	35.73	25.99	25,57	15.37	7.42	4.28	2.80	2.08	1.97	1.88
1977	53.55		46.18	39.23	28.25	27.87	17.86	9.52	7.90	6.71	5.68	5.07	4.26
1978	57.77 49.34	35.14	40.17	32.35	25.52	23.71	14.02	6.67	3,58	2.11	1.81	1.83	1.82
1979	-[47,70	39.87	27.67	27.65	17.31	8.83	6.02	4.42	3.11	2.68	2.34
1980	60.67	41.74 38.93	42.33	35.20	25.78	24.97	15.09	7.18	4.03	2.52	1.97	1.89	1.81
1981	54.23		40.92	35,54	26.53	24.35	14.39	6.88	4.06	2.69	1.95	1.79	1.73
1982	50.00	36.71		1		-	17.05	8.68	6.38	4.94	3.74	3.27	2.85
1983	53.86	38.29	42.63	35.80	26.96	26.07		1	1	2.47	1.98	-1	
1984	53.33	38.00	40.97		26.01	23.77	12.85	6.15	3.77	1	2.98	1.89	1.85 2.31
1985	55.99	39.48	46.22	39.30	27,40	26.70	16.74	8.43	5.93	1.93		2.63	
1986	52,37	37.10	40.12	32.94	25.57	23.57	13.50	6.33	3.31	4.66	1.61	1.63	1.63
1987	57.69	40.40	41.43	34.88	26.71	26.42	16.71	8.37	6.14		3.35	2.94	2.58
1988	52.48	37.67	41.02	33.05	26.64	25.90	16.54	8.17	5.42	3.89	2.74	2,49	2.28
1989	50.85	37.43	39.31	31.54		24,86	14.94	7.25	4.15	2.65	2.09	1.97	1,86
1990	48.98	34.99	39.02	32.75		23.48	14.15	6.76	4.19	2.80	2.01	1.91	1.85
1991	50.27	36.62	39.37	34.60		23.94	13.71	6.41	3.60	2.25	1.90	1.86	1.83
1992		38.18	40.82	33.43		24.20	14,05	6.60	3.54	2.18	1.77	1.73	1.70
1993		36.58	38.17	31,23		23.46		6.23	3.12	1,72	1.47	1.48	1.48
1994		39,49	45.67	38,60				8.20	5.50	3.85	2.54	2.26	2.05
1995		39.54	46.06	39.01		27.72	17.69	9.15	6.95	5.55	4.38	3.87	3.29
1996		38,18	45.91	38,42		27.49	17.43	8.95	6.46	4.94	3,63	3.17	2.71
MAX		42.06	47.93	39.87		28,47		9,52	7.90	6.71	5.68	5.07	4.26
AVE.			42.86					7.75	5.07	3.60	2,64	2.37	2.14
MIN.	46.46	34.24	38.17	31.23	25.08	22.75	12.43	5.48	2.61	1.46	1.39	1.42	1.47

Table 4.2.2 (2/2) SUMMARY OF 45 YEAR RUN IN FULL CONFINEMENT CONDITION

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(2) 3111	illiated ivia		Discharge								**********		
Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bang Sai	Pak Kret	Sam Sen	Mem.	Rama VI
	Y.4	Y.17	N.5A	N.7	C.2	C.13	C.7A	C.34	Dang Sai	C.22	C.12	Bridge C.4	Barrage
1952	2,040	2,100	1,410	1,410	3,250	2,890	2,180	1,330	3,030	3,320	3,400	3,440	590
1953	810	730	830	1,030	2,750	2,500	1,950	1,190	3,250	3,460	3,560	3,610	810
1954	1,420	1,540	1,680	1,840	4,750	4,570	3,190	2,040	5,580	5,690	5,730	5,750	1,450
1955	790	830	1,100	1,250	2,980	2,670	2,050	1,270	3,370	3,690	3,760	3,790	880
1956	2,330	2,520	1,640	2,140	4,490	4,450	3,020	1,890	4,770	4,930	4,980	5,020	770
1957	1,110	1,080	1,160	1,330	2,840	3,250	2,420	1,490	4,160	4,560	4,690	4,790	970
1958	520	550	1,300	1,670	3,060	2,980	2,240	1,380	3,620	3,850	3,960	4,000	860
1959	1,130	1,230	1,750	1,890	3,920	4,070	2,840	1,780	5,150	5,310	5,420	5,490	1,490
1960	530	660	1,270	1,230	2,100	1,800	1,460	920	2,430	3,080	3,190	3,270	500
1961	1,380	1,470	2,700	2,760	3,890	3,520	2,570	1,590	3,590	3,800	3,890	3,930	720
1962	1,010	1,310	1,040	1,560	4,010	3,870	2,770	1,750	4,760	5,060	5,150	5,210	940
1963	880	980	600	870	3,520	3,270	2,410	1,510	4,500	4,840	4,890	4,940	1,310
1964	1,910	2,370	1,590	2,130	5,550	5,360	3,670	2,410	6,440	6,560	6,580	6,610	1,340
1965	300	350	910	910	1,850	1,480	1,210	860	2,270	2,880	2,970	3,050	740
1966	460	700	810	1,250	2,950	2,470	1,910	1,250	3,440	3,800	3,890	3,940	830
1967	1,410	1,740	1,190	1,710	4,470	4,150	2,820	1,850	4,290	4,380	4,500	4,540	400
1968	60	160	500	740	1,740	1,330	1,080	730	1,760	2,240	2,380	2,490	130
1969	680	820	620	1,190	3,730	3,560	2,400	1,590	4,330	4,550	4,630	4,660	980
1970	1,880	2,050	1,930	2,420	4,410	3,900	2,790	1,810	4,390	4,610	4,680	4,730	820
1971	1,060	1,200	930	1,020	3,580	3,360	2,490	1,550	3,530	3,790	3,880	3,920	460
1972	270	470	480	520	2,220	1,940	1,580	1,050	2,670	3,280	3,370	3,410	780
1973	2,080	2,360	860	1,080	4,890	4,430	2,990	2,000	4,700	4,810	4,880	4,920	430
1974	1,250	1,300	770	740	2,290	2,100	1,680	1,070	2,640	3,190	3,310	3,360	390
1975	1,850	2,210	2,160	2,680	4,880	4,500	3,130	2,020	4,630	4,760	4,800	4,820	990
1976	980	1,210	1,240	1,520	3,830	3,720	2,530	1,630	3,940	4,130	4,220	4,250	770
1977	700	910	1,030	1,190	3,180	2,560	1,980	1,280	2,980	3,330	3,470	3,530	760
1978	1,430	1,680	1,900	2,400	5,000	5,110	3,580	2,290	8,580	8,370	8,400	8,410	4,000
1979	210	250	600	600	2,100	1,940	1,540	1,020	2,380	2,750	2,890	2,940	220
1980	2,080	2,340	2,600	2,740	4,820	4,450	3,070	2,030	4,570	4,830	4,890	4,940	1,240
1981	790	1,070	950	1,050	2,780	2,420	1,890	1,170	2,710	3,110	3,240	3,290	650
1982	260	480	680	1,110	2,410	2,100	1,650	1,090	2,840	3,280	3,360	3,410	890
1983	740	880	1,020	1,180	3,420	3,900	2,840	1,840	5,230	5,580	5,650	5,700	1,470
1984	670	790	720	850	2,160	1,470	1,190	840	2,600	3,110	3,190	3.240	940
1985	1,100	1,280	1,940	2,460	3,980	3,750	2,650	1,750	4,550	4,640	4,760	4,800	1,190
1986	540	580	580	690	2,060	1,720	1,390	920	2,180	2,630	2,730	2,760	470
1987	1,410	1,670	790	960	3,760	3,720	2,670	1,640	4,970	5,150	5,220	5,250	1,490
1988	540	700	740	720	3,340	3,520	2,560	1,620	3,880	4,280	4,390	4,430	670
1989	340	620	470	520	2,700	2,340	1,820	1,220	2,820	3,260	3,350	3,380	250
1990	180	240	430	640	2,000	1,990	1,620	1,000	2,900	3,410	3,520	3,570	1,390
1991	280	470	450	920	2,230	1,810	1,450	950	2,510	2,900	3,020	3,080	790
1992	770	850	690	760	2,280	1,950	1,550	1,010	2,450	2,880	2,970	3,030	440
1993	400	480	320	460	2,010	1,710	1,390	890	2,030	2,500	2,630	2,710	120
1994	1,150	1,280	1,730	2,120	4,050	3,520	2,570	1,630	3,970	4,230	4,300	4,350	760
1995	950	1,280	1,870	2,280	4,850	4,880	3,400	2,170	6,420	6,510	6,560	6,590	1,750
1996	620	- 840	1,820	2,040	4,660	4,550	3,170	2,040	5,450	5,530	5,600	5,620	1,280
MAX.	2,330	2,520	2,700	2,760	5,550	5,360	3,670	2,410	8,580	8,370	8,400	8,410	4,000
AVE.	962	1,125	1,151	1,391	3,372	3,146	2,297	1,475	3,850	4,152	4,241	4,288	914
MIN.	60	160	320	460	1,740	1,330	1,080	730	1,760		2,380		120

Table 4.2.3 PROBABLE UNDER FULL CONFINEMENT CONDITION

Discon	Station		Pro	obable Disc	charge(m³/s	3)	
River	Station	2yr	5yr	10yr	25yr	50yr	100yr
Ping	P.17(B.Phisai)	1,230	1,830	2,150	2,650	3,000	3,350
Yom	Y.4(Sukhothai)	870	1,400	1,750	2,490	2,550	2,880
10111	Y.17(Sam Ngam)	1,080	1,620	2,000	2,520	2,870	3,220
Nan	N.5A(Pitsanulok)	1,080	1,640	2,010	2,530	2,870	3,200
	N.7(Pichit)	1,270	1,900	2,320	2,860	3,230	3,610
	C.2(Nakhon Sawan)	3,400	4,600	4,900	5,150	5,350	5,500
	C.13(Chainat)	3,250	4,350	4,680	5,100	5,400	5,700
Chao Phraya	C.7A(Ang Thong)	2,340	2,950	3,250	3,600	3,900	4,200
1 maya	C.34(Ayutthaya)	1,560	1,770	2,120	2,300	2,500	2,650
	Bang Sai	3,960	5,040	6,000	7,150	8,000	8,700
Pasak	RamaIV Barrage	900	1,260	1,490	1,830	2,080	2,280

Table 4.2.4 MAGNITUDE OF REPRESENTATIVE THREE FLOODS

**********		1	983 Flood			1995 Flood			996 Flood	
Arca	Item	Estimate	d Value	Return	Estimate	ed Value	Return	Estimate	ed Value	Return
Alca	nem			Period			Period			Period
		Quantity	Unit	(57)	Quantity	Unit	(ут)	Quantity	Unit	(yr)
	July to Dec. Rainfalt*1	900	mm	8	1,111	mm	100	841	mm	6
	P.17 Discharge	1,603	m³/s	4	1,495	m³/s	3	2,436	ın³/s	18
Upper Central	Y.4 Discharge	283	m³/s	2	286	m³/s	2	273	m³/s	1.8
Plain	Y.17 Discharge	622	m³/s	2	1,003	m³/s	7	604	m³/s	2
	N.5A Discharge	936	m³/s	2	1,663	m³/s	11	1,657	m³/s	11
	N.7 Discharge	1,101	m³/s	1.8	2,023	m³/s	50	1,736	m³/s	4
Nakhon Sawan	July to Dec. Rainfall*2	1,116	mm	60	866	mm	8	740	nun	2
Arca	C.2 Discharge	2,836	m3/s	3	4,110	m3/s	50	3,319	m3/s	5
,, , ,	July to Dec. Rainfall *3	1,119	mm	35	810	mm	4	623	mm	1.2
Higher Delta of	C.13 Discharge	3,154	m3/s	. 6	3,891	m3/s	38	3,269	m3/s	6
Lower Central	C.7A Discharge	2,358	m³/s	5	2,573	m³/s	27	2,406	m³/s	6
Plain	C.34 Discharge	1,236	m³/s	4	1,404	m³/s	27	1,242	m³/s	5
	Rama IV Discharge	1,289	m³/s	12	1,337	m³/s	15	1,215	m³/s	8
_	July to Dec. Rainfall *3	1,119	ກນກ	35	810	mm	4	623	nun	1.2
Lower Delta of	Bang Sai Discharge	3,768	m3/s	7	3,972	m3/s	23	3,837	m3/s	9
Lower Central	C.22 Water Level	2.85	m MSL	23	2.90	m MSL	32	2.72	m MSL	10
Plain	C.12 Water Level	2.57	m MSL	23	2.62	m MSL	30	2,47	m MSL	11
	C.4 Water Level	2.33	m MSL	20	2.45	m MSL	35	2,27	m MSL	11
Total	July to Dec. Rainfall*4	919	num	30	903	mm	25	750	nun	2

^{*1:} Average rainfall of Nan River Basin (Sub-basins No. 7 to 10)

^{*2:} Average rainfall of subbasins No.11 o 12

^{*3:} Average rainfall of Lower Cenral Plain (Sub-basins No. 15 to 18)

^{*4:} Average rainfall of Entire Basin (Sub-basins No. 1 to 18)

Table 4.2.5 (1/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(I) MODIFICATION OF DAM OPERATION

(1) Simulated Maximum Water Level

														(m MSL)
Casc	Year	Sukhothai Y.4	Sam Ngam Y.17	Phitsanulok N.5A	Pichit N.7	Bung Boraphet	Nakhon Sawan C.2	Chainat C.13	Ang Thong C.7A	Ayutthay a C,34	Bangsai	Pak Kret C.22	Sam Sen C.12	Mem. Bridge C.4
Case-1: V≃7,400 mil m3	1995	50.22	38.40	45.21	37.00	26,96	25.68	16.74	7.90	5.53	4.02	2.88	2.59	2.43
Case-2: V=10,700 mil m3	1995	50.22	38.36	45.09	36.98	26.82	25.59	16,71	7.88	5.52	4.02	2.88	2.58	2.42
Case-3: V=14,600 mil m3	1995	50.22	38.28	45.04	36.70	26.75	25.54	16.65	7.85	5.50	3.99	2.86	2.57	2.41
Case-1: V≈7,400 mil m3	1983	50.12	37.09	42.00	34.29	25.66	24.76	16.25	7.66	5.37	3.93	2.83	2.54	2.31
Case-2: V=10,700 mil m3	1983	50.12	37.09	41.98	34.27	25.65	24.75	16.25	7.66	5.36	3.93	2.83	2.53	2.31
Case-3: V=14,600 mil m3	1983	50.12	37.09	41.96	34.25	25,64	24.75	16.24	7.65	5.36	3.92	2.82	2.52	2.31
Case-1: V=7,400 mil m3	1996	50.07	37.03	45.06	36.43	26.14	25.09	16.32	7.67	5.28	3.76	2.66	2,43	2,24
Case-2: V=10,700 mil m3	1996	50.07	37.03	45.04	36,42	26.13	25.09	16.31	7.67	5.25	3,73	2.64	2.41	2.22
Case-3: V=14,600 mil m3	1996	50.07	37.03	45.01	36,40	26.13	25.08	16.31	7.66	5.21	3.69	2.62	2.39	2.21

(2) Simulated Maximum Discharge

														(m³/s)
Case	Ycar	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan C.2	Chainat	Ang Thong	Ayuithay a	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rama VI Barrage
		Y.4	Y.17	N.5A	N.7	Sawan C.2	C.13	C.7A	C.34		C.22	C.12	C.4	
Casc-1: V=7,400 mil m3	1995	290	1,010	1,610	1,970	4,020	3,860	2,570	1,400	3,960	4,310	4,410	4,450	1,310
Case-2: V=10,700 mil m3	1995	290	1,000	1,580	1,960	3,890	3,800	2,550	1,390	3,950	4,310	4,400	4,440	1,300
Case-3: V=14,600 mil m3	1995	280	970	1,570	1,790	3,820	3,720	2,540	1,390	3,920	4,280	4,370	4,410	1,290
Case-1: V=7,400 mil m3	1983	280	620	910	1,060	2,810	3,180	2,350	1,230	3,760	4,200	4,310	4,360	1,250
Case-2: V=10,700 mil m3	1983	280	620	910	1,050	2,800	3,170	2,350	1,230	3,750	4,200	4,300	4,360	1,240
Case-3: V=14,600 mil m3	1983	280	630	900	1,050	2,800	3,170	2,350	1,230	3,750	4,190	4,300	4,360	1,230
Case-1: V=7,400 mil m3	1996	270	610	1,590	1,690	3,250	3,210	2,390	1,240	3,770	4,040	4,140	4,180	1,150
Case-2: V=10,700 mil m3	1996	270	610	1,580	1,680	3,240	3,210	2,380	1,240	3,740	4.010	4,110	4,150	1,120
Case-3: V=14,600 mil m3	1996	270	610	1,570	1,680	3,230	3,200	2,380	1.250	3,710	3,980	4,080	4,120	1,090

(3) Simulated Inundation Area

	,							(km²)
		Upper	Nakhon	I	ower Cen	tral Plain		
Case	Year	Central	Sawan			Lower Dele	la	Total
		Plain	Атса	Higer Delta	BMA Area*	Others	Sub-total	
Case-1: V=7,400 mil m3	1995	3,372	460	4,250	64	2,436	2,500	10,581
Case-2: V=10,700 mil m3	1995	3,348	450	4,179	62	2,399	2,461	10,437
Case-3: V=14,600 mil m3	1995	3.245	446	4,131	60	2,380	2,440	10,262
Case-1: V=7,400 mil m3	1983	2,228	330	4,343	0	3,651	3,651	10,553
Case-2: V=10,700 mil m3	1983	2,226	330	4,329	0	3,651	3,651	10,535
Case-3: V=14,600 mil m3	1983	2,223	329	4,325	0	3,651	3,651	10,528
Case-1: V=7,400 mil m3	1996	2,591	382	3,001	0	1,784	1,784	7,758
Case-2: V=10,700 mil m3	1996	2,589	381	2,977	0	1,784	1,784	7,732
Case-3; V=14,600 mil m3	1996	2,587	381	2,966	0	1,784	1,784	7,719

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

			· · · · · · · · · · · · · · · · · · ·				(m	llion m³)
		Upper	Nakhon	1	ower Cen	tral Plain		
Case	Year	Central	Sawan			Lower Delt	a	Total
		Plain	Arca	Higer Delta	I3MA Arca	Others	Sub-total	
Case-1: V=7,400 mil m3	1995	4,625	1,210	6,525	42	1,340	1,382	13,742
Case-2: V=10,700 mil m3	1995	4,525	1,170	6,300	38	1,323	1,361	13,356
Case-3: V=14,600 mil m3	1995	4,403	1,149	6,153	34	1,313	1,347	13,052
Case-1: V=7,400 mil m3	1983	2,773	753	5,386	0	1,701	1,701	10,614
Case-2: V=10,700 mil m3	1983	2,770	752	5,372	0	1,698	1,698	10,592
Case-3: V=14,600 mil m3	1983	2,767	750	5,358	- 0	1,696	1,696	10,571
Case-1: V=7,400 mil m3	1996	3,380	965	4,235	0	753	753	9,332
Case-2: V≃10,700 mil m3	1996	3,374	963	4,213	0	751	751	9,301
Case-3; V=14,600 mil m3	1996	3,372	962	4,188	0	749	749	9,271

^{* :} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

Table 4.2.5 (2/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(II) RIVER IMPROVEMENT FROM PATHUM THANI TO NAN AND YOM

(1) Simulated Maximum Water Level

(m MSL)

														4111 44 812 123
Case	Year	Sukhothai	Sam Ngam	Phitsanulok	Pichit	Bung	Nakhon Sawan	Chainst	Ang Thong	Ayutthaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridge
	<u> </u>	Y.4	Y.17	N.5A	N.7	Boraphet	C.2	C.13	C.7A	C.34		C.22	C.12	C.4
2-year Return Period	1995	55.08	39.42	46.06	38.71	27,41	26.53	16.91	8.21	5.94	4.50	3.31	2.97	2.65
3-year Return Period	1995	55,17	39.54	46,06	38.93	27.95	27,01	17.08	8.55	6.34	4.92	3.73	3.33	2.94
5-year Return Period	1995	55.17	39.54	46.06	38,96	28.25	27.37	17.15	8.64	6.45	5.04	3.87	3.46	3,03
2-year Return Period	1983	53.86	38.29	42.63	35.80	26.56	26.07	16.21	8.07	5.77	4.32	3.15	2.81	2.54
3-year Return Period	1983	53,86	38.29	42.63	35,80	26.80	26.07	16.25	8.16	5.87	4.45	3.27	2.91	2.60
5-year Return Period	1983	53.86	38.29	42,63	35.81	26.80	26,07	16,39	8.33	6.02	4.60	3.42	3.04	2.68
2-year Return Period	1996	53.11	38,18	45.91	38.31	26.93	26.08	16.40	7.86	5.58	4.04	2.84	2.57	2.34
3-year Return Period	1996	53.11	38.18	45.91	38.41	27.34	26.45	16.69	8,16	5.89	4.40	3.12	2.80	2,51
5-year Return Period	1996	53.11	38.18	45.91	38.42	27.35	27,24	17,05	8.34	5.90	4.42	3.15	2.83	2.54

(2) Simulated Maximum Discharge

(-3/4)

Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthay 2	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rama VI Barrage
	<u> </u>	Y.4	Y.17	N.5A	N.7	C.2	C.13	C,7A	C.34		C.22	C.12	C.4	<u></u>
2-year Return Period	1995	930	1,230	1,870	2,280	4,250	4,280	2,940	1,620	4,570	4,900	4,980	5,020	1,210
3-year Return Period	1995	950	1,280	1,870	2,280	4,290	4,320	3,160	1,790	5,200	5,470	5,550	5,580	1,450
5-year Return Period	1995	950	1,280	1,870	2,280	4,350	4,390	3,280	1,850	5,400	5,660	5,730	5,760	1,620
2-year Return Period	1983	740	880	1,020	1,180	3,420	3,610	2,660	1,530	4,250	4,690	4,790	4,840	1,180
3-year Return Period	1983	740	880	1,020	1,180	3,420	3,660	2,730	1,580	4,410	4,830	4,920	4,980	1,390
5-year Return Period	1983	740	880	1,020	1,180	3,420	3,930	2,840	1,660	4,620	5,030	5,110	5,170	1,460
2-year Return Period	1996	620	840	1,820	2,030	3,520	3,940	2,510	1,440	4,070	4,320	4,410	4,440	1,120
3-year Return Period	1996	620	840	1,820	2,040	3,920	4,020	2,740	1,560	4,530	4,730	4,810	4,840	1,270
5-year Return Period	1996	620	840	1,820	2,040	4,150	4,250	2,960	1,690	4,550	4,750	4,830	4,850	1,280

(3) Simulated Inundation Area

(km²)

								(AULI)
	Upper		Nakhon		ower Cen	tral Plain Lower Delt		
Case	Year Central Plain	Sawan Area	Higher Delta	BMA Area	Others	Sub-total	Total	
2-year Return Period	1995	2,872	443	4,259	239	2,417	2,656	10,230
3-year Return Period	1995	2,725	446	4,259	726	2,400	3,126	10,556
5-year Return Period	1995	2,516	443	4,230	981	2,389	3,370	10,559
2-year Return Period	1983	1,856	330	4,083	159	3,651	3,810	10,079
3-year Return Period	1983	1,816	321	3,623	212	3,651	3,863	9,623
5-year Return Period	1983	1,708	314	3,389	239	3,651	3,890	9,301
2-year Return Period	1996	2,220	385	2,765	18	1,780	1,798	7,169
3-year Return Period	1996	2,160	378	2,427	126	1,780	1,906	6,872
5-year Return Period	1996	2,110	370	2,203	132	1,780	1,912	6,595

^{* :} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

(4) Simulated Inundation Volume

(million m

			1	· 1	.ower Cen	tral Plain		
Case	Year	Upper Central	Nakhon Sawan			Lower Delt	a ·	Total
	Plain		Area	Higher Delta	BMA Area	Others	Sub-total	
2-year Return Period	1995	4,029	1,128	6,228	598	1,239	1,837	13,222
3-year Return Period	1995	3,629	1,139	6,199	1,720	1,220	2,940	13,906
5-year Return Period	1995	3,046	1,128	6,163	2,215	1,195	3,410	13,747
2-year Return Period	1983	1,907	755	4,523	299	1,703	2,002	9,186
3-year Return Period	1983	1,849	736	3,824	496	1,703	2,198	8,607
5-year Return Period	1983	1,656	727	3,400	622	1,703	2,325	8,108
2-year Return Period	1996	2,576	985	3,425	15	757	772	7,758
3-year Return Period	1996	2,494	970	2,983	185	757	942	7,189
5-year Return Period	1996	2,372	960	2,049	192	757	949	6,330

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

Table 4.2.5 (3/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(III) RIVER IMPROVEMENT FROM PATHUM THANI TO CHAINAT

(1) Simulated Maximum Water Level

														(m MSL)
Case	Year	Sukhothai	Sam Ngani	Phitsanulok	Pichit	Bung Boraphet	Nakhon Sawan	Chainst	Ang Thong	Ayutthaya	Bangsai	!	Sam Sen	Mem. Bridge
	<u> </u>	Y.4	Y.17	N.SA	N.7		C.2	C.13	C.7A	C.34		C.22	C.12	C.4
5-year Return Period	1995	50,22	38.37	45.38	37.10	27.05	25.74	16.78	8,08	5.79	4.33	3.13	2.81	2.52
10-year Return Period	1995	50.22	38.37	45.38	37.10	27.05	25.74	16.84	8.30	6.02	4.58	3.37	3.01	2.67
25-year Return Period	1995	50.22	38.37	45.38	37,10	27.05	25.74	16.87	8.44	6.12	4.69	3.48	3.11	2.75
5-year Return Period	1983	50.12	37.08	42.18	34.46	25.69	24.78	16.27	7,76	5.52	4.07	2.94	2.63	2.39
10-year Return Period	1983	50,12	37.08	42.18	34.46	25.69	24.78	16.28	7.81	5,57	4.11	2.97	2.66	2.42
25-year Return Period	1983	50.12	37.08	42.18	34.46	25.69	24.78	16,28	7.82	5.57	4.12	2.97	2.66	2.42
5-year Return Period	1996	50.07	37.01	45.30	36.55	26.22	25.15	16.37	7.79	5.54	4.01	2.84	2.57	2.34
10-year Return Period	1996	50,07	37.01	45.30	36.55	26.22	25.15	16,38	7.88	5,64	4.16	2.91	2.63	2.38
25-year Return Period	1996	50.07	37,01	45.30	36,55	26.22	25.15	16.38	7.89	5,64	4.10	2.92	2.63	2.38

(2) Simulated Maximum Discharge

														(m /s)
Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon	Chainat	Ang Thong	Ayutthay a	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rama VI Barrage
		Y.4	Y.17	N.5A	N.7	Sawan	C.13	C.7A	C.34		C 22	C.12	C.4	
5-year Return Period	1995	290	1,000	1,660	2,020	4,110	3,890	2,650	1,500	4,350	4,690	4,770	4,810	1,460
10-year Return Period	1995	. 290	1,000	1,660	2,020	4,110	3,890	2,770	1,630	4,690	5,000	5,080	5,110	1,600
25-year Return Period	1995	290	1,000	1,660	2,020	4,110	3,890	2,860	1,710	4,860	5,150	5,230	5,260	1,730
5-year Return Period	1983	280	620	940	1,100	2,840	3,160	2,410	1,310	3,980	4,430	4,530	4,590	1,460
10-year Return Period	1983	280	620	940	1,100	2,840	3,160	2,410	1,310	3,980	4,430	4,530	4,590	1,460
25-year Return Period	1983	280	620	940	1,100	2,840	3,160	2,410	1,310	3,980	4,430	4,530	4,590	1,470
5-year Return Period	1996	270	600	1,660	1,740	3,320	3,550	2,450	1,280	4.050	4,290	4,390	4,430	1,270
10-year Return Period	1996	270	600	1,660	1,740	3,320	3,550	2,490	1,330	4,150	4,390	4,480	4,520	1,280
25-year Return Period	1996	270	600	1,660	1,740	3,320	3,550	2,490	1,330	4,160	4,400	4,490	4,530	1,280

(3) Simulated Inundation Area

								(km²)
			N. 1. 1	I	.ower Cen	tral Plain		
Case	Year	Upper Central	Nakhon Sawan			Lower Delt	а	Total
		Plain	Area	Higher Delta	BMA Area	Others	Sub-total	•
5-year Return Period	1995	3,490	492	4,122	146	2,343	2,489	10,593
10-year Return Period	1995	3,490	492	3,841	276	2,213	2,489	10,312
25-year Return Period	1995	3,490	492	3,568	466	2,292	2,758	10,308
5-year Return Period	1983	2,305	337	3,923	80	3,210	3,290	9,855
10-year Return Period	1983	2,305	337	3,533	82	3,902	3,984	10,159
25-year Return Period	1983	2,305	337	3,219	91	3,902	3,993	9,854
5-year Return Period	1996	2,687	393	2,599	5	1,762	1,767	7,446
10-year Return Period	1996	2,687	393	2,322	50	1,767	1,817	7,219
25-year Return Period	1996	2,687	393	1,820	50	1,767	1,817	6,717

^{* :} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

			l	1	lower Cen	tral Plain		
Case	Year	Upper Central	Nakhon Sawan		1	Lower Delt	a	Total
5-year Return Period		Plain	Area	Higher Delta	BMA Area	Others	Sub-total	
5-year Return Period	1995	4,804	1,244	6.251	250	1,253	1,503	13,802
10-year Return Period	1995	4,804	1,244	5,985	753	1,162	1,915	13,948
25-year Return Period	1995	4,804	1,244	5,845	1,191	1.206	2,397	14,290
5-year Return Period	1983	2,798	769	4,324	63	1,609	1,672	9,563
10-year Return Period	1983	2.798	769	3,633	68	1,990	2,058	9,258
25-year Return Period	1983	2,798	769	3,233	90	1,994	2,084	8,884
5-year Return Period	1996	3.480	1,002	3,688	- 11	753	764	8,934
10-year Return Period	1996	3,480	1,002	2,423	26	753	778	7,683
25-year Return Period	1996	3,480	1,002	1,799	26	756	782	7,063

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

Table 4.2.5 (4/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(IV) PASAK-RAPHIPAT-SEA DIVERSION

(1) Simulated Maximum Water Level

														(m MSL)
Case	Year	Sukhothai Y.4	Sam Ngam Y.17	Phitsanulok N.5A	Pichit N.7	Bung Boraphet	Nakhon Sawan C.2	Chainat C.13	Ang Thong C.7A	Ayutthaya C.34	Bangsai	Pak Kret C.22	Sam Sen C.12	Mens. Bridge C.4
	-	1.7	1.17	N.274	39.7	 	C.2	C.13	C.7/A	C.34		C.22	C.12	<u> </u>
Q = 500 m3/s	1995	50.22	38.37	45.38	37.10	27.05	25.74	16.77	7.90	5,33	3.83	2.74	2.47	2.33
Q = 1,000 m3/s	1995	50.22	38.37	45.38	37,10	27.05	25.74	16.77	7,89	4.99	3.47	2.53	2.39	2.32
Q = 1,500 m3/s	1995	50.22	38.37	45.38	37.10	27,05	25,74	16,77	7.88	4,88	3.31	2.53	2.39	2.32
Q = 500 m3/s	1983	50.12	37.08	42.18	34.46	25.69	24.78	16.27	7.63	4.99	3.56	2.57	2.32	2.15
Q = 1,000 m3/s	1983	50.12	37.08	42.18	34.46	25.69	24.78	16.27	7,60	4.55	3.12	2.33	2.17	2.09
Q = 1,500 m3/s	1983	50,12	37.08	42.18	34.46	25.69	24.78	16.27	7.60	4.47	3.06	2.32	2.17	2.09
Q = 500 m3/s	1996	50.07	37,01	45,30	36,55	26.22	25.15	16.36	7.66	4.95	3.42	2.47	2.27	2.13
Q = 1,000 m3/s	1996	50.07	37.01	45,30	36,55	26.22	25.15	16.36	7.63	4.52	2.92	2.22	2.12	2.09
Q = 1,500 m3/s	1996	50.07	37.01	45.30	36.55	26.22	25.15	16.36	7.62	4.36	2.81	2.17	2.12	2.09

(2) Simulated Maximum Discharge

														(m³/s)
Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rama VI Barrage
Ĺ		Y.4	Y.17	N.5A	N,7	C.2	C.13	C.7A	C.34		C.22	C.12	C.4	
Q = 500 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,580	1,430	3,750	4,090	4,200	4,250	1,050
Q = 1,000 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,580	1,430	3,450	3,760	3,870	3,920	710
Q = 1,500 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,590	1,430	3,320	3,670	3,760	3,800	250
Q = 500 m3/s	1983	280	620	940	1,100	2,840	3,150	2,360	1,270	3,370	3,830	3,940	4,000	950
Q = 1,000 m3/s	1983	280	620	940	1,100	2,840	3,150	2,360	1,300	2,910	3,530	3,620	3,680	460
Q = 1,500 m3/s	1983	280	620	940	1,100	2.840	3,150	2,360	1,300	2,870	3,500	3,590	3,640	30
Q = 500 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,280	3,450	3,760	3,850	3,900	760
Q = 1,000 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,300	3,030	3,370	3,470	3,510	280
Q = 1,500 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,310	2,860	3,310	3,410	3,450	20

(3) Simulated Inundation Area

								(km²)
Case	Year	Upper Central	Nakhon Sawan	ļ	Lower Cen	tral Plain Lower Delt	*	Total
Case		Plain	Area	Higher Delta	BMA Area	Others	Sub-total	
Q = 500 m3/s	1995	3,490	492	4,143	2	2,303	2,305	10,430
Q = 1,000 n13/s	1995	3,490	492	4,092	0	2,289	2,289	10,363
Q = 1,500 m3/s	1995	3,490	492	4,072	0	2,279	2,279	10,333
Q = 500 m3/s	1983	2,305	337	4,158	0	3,567	3,567	10,367
Q = 1,000 m3/s	1983	2,305	337	4,106	0	3,544	3,544	10,292
Q = 1,500 m3/s	1983	2,305	337	4,094	0	3,521	3,521	10,257
Q = 500 m3/s	1996	2,687	393	2,993	0	1,684	1,684	7,758
Q = 1,000 m3/s	1996	2,687	393	2,906	0	1,683	1,683	7.669
Q = 1,500 m3/s	1996	2,687	393	2,902	0	1,683	1,683	7,665

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

				·			(п	ullion m³)
					ower Cer	tral Plain		
Case	Year	Upper Central	Nakhon Sawan	l j	•	Lower Delt	ا دا	Total
		Plain	Area	Higher Delta	BMA Area	Others	Sub-total	
Q = 500 m3/s	1995	4,804	1,244	6,288	5	1,207	1,212	13,548
Q = 1,000 m3/s	1995	4,804	1,244	6,168	0	1,193	1,193	13,409
Q = 1,500 m3/s	1995	4,804	1,244	6,081	. 0	1.189	1,189	13,318
Q = 500 m3/s	1983	2,798	769	5,137	0	1,976	1,976	10,680
Q = 1,000 m3/s	1983	2,798	769	4,942	0	1,962	1,962	10,471
Q = 1,500 m3/s	1983	2,798	769	4,832	00	1,960	1,960	10,359
Q = 500 m3/s	1996	3,480	1,002	4,223	0	688	688	9,393
Q = 1,000 m3/s	1996	3,480	1,002	4,082	0	672	672	9,236
Q = 1,500 m3/s	1996	3,480	1,002	4.022	0	670	670	9,174

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

Table 4.2.5 (5/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(V) CHAINAT-PASAK-RAPHIPAT-SEA DIVERSION

(1) Simulated Maximum Water Level

														(m MSL)
Case	Year	Sukhothai	Sam Ngam	Phitsanulok	Pichit	Bung Boraphet	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridge
		Y.4	Y.17	N.5A	N.7	Livinging	C.2	C,13	C.7A	C.34		C.22	C,12	C.4
Q = 500 m3/s	1995	50.22	38.37	45,38	37.10	27,04	25.73	16.49	7.79	5.36	3.88	2.78	2.51	2.35
Q = 1,000 m3/s	1995	50.22	38.37	45.38	37.10	27.03	25.72	16,17	7.57	5.07	3.65	2.63	2.38	2.24
Q = 1,500 m3/s	1995	50.22	38,37	45.38	37.10	27.03	25.71	15.27	7.20	4.62	3.25	2.38	2.18	2.13
Q = 500 m3/s	1983	50.12	37,08	42.18	34.46	25.68	24.77	15.53	7.34	4.94	3,57	2.56	2,32	2.18
Q = 1,000 m3/s	1983	50.12	37.08	42.18	34.46	25.67	24.76	14.55	6.93	4.57	3.25	2.37	2.20	2,09
Q = 1,500 m3/s	1983	50.12	37.08	42,18	34,46	25.66	24.75	13,44	6.42	4,14	2.91	2.19	2,07	1.99
Q = 500 m3/s	1996	50.07	37.01	45.30	36.55	26.22	25.14	15,91	7.48	5.02	3.54	2.53	2.31	2.14
Q = 1,000 m3/s	1996	50.07	37.01	45.30	36.55	26.21	25.13	15.01	7.09	4.59	3.16	2.33	2.16	2.05
Q = 1,500 m3/s	1996	50.07	37.01	45.30	36.55	26.21	25.13	13.92	6.57	4.11	2.75	2.15	2.05	1.96

(2) Simulated Maximum Discharge

														(m³/s)
Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rania VI Barrage
		Y.4	Y.17	N.5A	N.7	C.2	C.13	C.7A	C.34		C.22	C.12	C.4	
Q = 500 m3/s	1995	290	1,000	1,660	2,020	4,110	3,660	2,480	1,370	3,790	4,160	4,260	4,300	1,220
Q = 1,000 m3/s	1995	290	1,000	1,660	2,020	4,110	3,080	2,320	1,250	3,540	3,920	4,020	4,060	1,110
Q = 1,500 m3/s	1995	290	1,000	1,660	2,020	4,120	2,500	1,990	1,130	3,170	3,600	3,690	3,740	1,000
Q = 500 m3/s	1983	280	620	940	1,100	2,830	2,640	2,080	1,140	3,370	3,850	3,960	4,020	1,130
Q = 1,080 m3/s	1983	280	620	940	1,100	2,820	2,160	1,750	1,010	3,090	3,610	3,720	3,780	1,050
Q = 1,500 m3/s	1983	280	620	940	1,100	2,820	1,700	1,410	880	2,730	3,370	3,470	3,540	950
Q = 500 m3/s	1996	270	600	1,660	1,740	3,320	2,860	2,220	1,170	3,570	3,920	4,020	4,050	1,080
Q = 1,000 m3/s	1996	270	600	1,660	1,740	3,320	2,380	1,900	1,060	3,220	3,620	3,710	3,750	1,000
Q = 1,500 m3/s	1996	270	600	1,660	1,740	3,320	1,890	1,540	930	2,860	3,300	3,400	3,440	900

(3) Simulated Inundation Area

				-				(km²)
		Umare	Nakhon		Lower Cen	tral Plain		
Case	Year	Upper Central	Sawan			Lower Delt	la i	Total
		Plain	Area	Higher Delta	BMA Area	Others	Sub-total	
Q = 500 m3/s	1995	3,490	442	4,034	4	2,314	2,318	10,284
Q = 1,000 m3/s	1995	3,490	402	3,645	0	2,256	2,256	9,793
Q = 1,500 m3/s	1995	3,490	469	3,322	0	2,198	2,198	9,479
Q = 500 m3/s	1983	2,305	317	4,116	0	3,904	3,904	10,642
Q = 1,000 m3/s	1983	2,305	312	3,949	0	3,902	3,902	10,468
Q = 1,500 m3/s	1983	2,305	305	3,849	0	3,902	3,902	10,361
Q = 500 m3/s	1996	2,687	373	2,768	0	1,682	1,682	7,510
Q = 1,000 m3/s	1996	2,687	370	2,615	0	1,669	1,669	7,341
Q = 1,500 m3/s	1996	2,687	365	2,418	0	1,667	1,667	7,138

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

				!	.ower Cen	tral Plain		
Case	Year	Upper Central	Nakhon Sawan			Lower Delt	a	Tota1
		Plain 1995 4,804	Area	Higher Delta	BMA Area	Others	Sub-total	, , , , ,
Q = 500 m3/s	1995	4,804	1,244	5,631	10	1,203	1,213	12,892
Q = 1,000 m3/s	1995	4,804	1,244	4,652	0	1,173	1,173	11,873
Q = 1,500 m3/s	1995	4,804	1,244	3,776	0	1,056	1,056	10,880
Q = 500 ni3/s	1983	2.798	721	4,684	0	1,974	1,974	10,177
Q = 1,000 m3/s	1983	2,798	698	3,999	0	1,962	1,962	9,456
Q = 1,500 m3/s	1983	2,798	677	3,428	0	1,948	1,948	8,850
Q = 500 m3/s	1996	3,480	956	3,770	0	690	690	8,896
Q = 1,000 m3/s	1996	3,480	934	3,222	0 .	672	672	8,308
Q = 1,500 m3/s	1996	3,480	919	2,587	0 .	659	659	7,645

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

Table 4.2.5 (6/6) SUMMARY OF SIMULATION RESULTS FOR APPLICABLE MEASURES

(VI) AYUTTHAYA-EAST-SEA DIVERSION

(1) Simulated Maximum Water Level

(m MSL)

														(m vrst)
Case	Year	Sukhothai Y.4	Sam Ngam Y.17	Phitsanulok N.5A	Pichit N.7	Bung Boraphet	Nakhon Sawan C.2	Chainst C.13	Ang Thong	Ayutthaya C.34	Bangsai	Pak Kret C.22	Sant Sen C.12	Mem. Bridge C.4
Q = 500 ns3/s	1995	59.22	38.37	45,38	37.10	27,05	25.74	16.77	7.90	5.36	3.65	2.62	2.38	2.31
Q = 1,000 m3/s	1995	50.22	38.37	45.38	37.10	27.05	25.74	16.77	7.89	5.16	3.19	2.35	2.22	2.19
Q = 1,500 m3/s	1995	50.22	38,37	45.38	37.10	27,05	25.74	16.77	7.88	4.96	2.68	2.12	2.10	2.10
Q = 500 m3/s	1983	50.12	37.08	42.18	34.46	25,69	24.78	16.27	7.64	5.14	3.50	2.53	2.28	2,14
Q = 1,000 m3/s	1983	50.12	37.08	42.18	34.46	25,69	24.78	16.27	7.63	4.93	3.07	2.27	2.11	2.02
Q = 1,500 m3/s	1983	50.12	37.08	42.18	34.46	25.69	24.78	16.27	7.61	4.74	2.59	2.02	1.95	1.89
Q = 500 m3/s	1996	50,07	37.01	45.30	36.55	26,22	25.15	16.36	7,67	5.11	3.36	2.45	2.25	2.12
Q = 1,000 m3/s	1996	50.07	37.01	45,30	36.55	26.22	25.15	16,36	7.66	4.89	2.88	2.21	2.09	2.00
Q = 1,500 m3/s	1996	50.07	37.01	45.30	36.55	26.22	25.15	16.36	7.64	4.70	2.38	2.01	1.96	1.89

(2) Simulated Maximum Discharge

(m /s)

Case	Year	Sukhotahi	Sam Ngam	Phitsanulok	Pichit	Nakhon Sawan	Chainat	Ang Thong	Ayutthaya	Bangsai	Pak Kret	Sam Sen	Mem. Bridge	Rama VI Barrage
		Y.4	Y.17	N.5A	N.7	C.2	C.13	C.7A	C.34		C.22	C.12	C.4	
Q = 500 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,580	1,420	3,550	3,940	4,040	4,080	1,340
Q = 1,000 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,580	1,440	3,130	3,580	3,670	3,720	1,340
Q = 1,500 m3/s	1995	290	1,000	1,660	2,020	4,110	3,890	2,590	1,450	2,670	3,190	3,290	3,340	1,340
Q = 500 m3/s	1983	280	620	940	1,100	2,840	3,150	2,360	1,260	3,320	3,790	3,900	3,960	1,290
Q = 1,000 m3/s	1983	280	620	940	1,100	2,840	3,150	2,360	1,280	2,880	3,460	3,560	3,620	1,290
Q = 1,500 m3/s	1983	280	620	940	1,100	2,840	3,150	2,370	1,290	2,410	3,090	3,200	3,260	1,290
Q = 500 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,270	3,380	3,720	3,820	3,850	1,220
Q = 1,000 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,280	2,950	3,360	3,450	3,490	1,220
Q = 1,500 m3/s	1996	270	600	1,660	1,740	3,320	3,270	2,410	1,290	2,480	2,980	3,080	3,120	1,220

(3) Simulated Inundation Area

(km²

								(KIII.)
Case	Year	Upper Central	Nakhon Sawan] 	Lower Cer	tral Plain Lower Delt	a	Total
Case	1 Cai	Plain	Area	Higher Delta	BMA Area	Others	Sub-totat	10.21
Q = 500 m3/s	1995	3,490	492	4,238	2	2,324	2,326	10,546
Q = 1,000 m3/s	1995	3,490	492	4,197	. 0	2,213	2,213	10,392
Q = 1,500 m3/s	1995	3,490	492	4,181	0	2,028	2,028	10,191
Q = 500 m3/s	1983	2,305	337	4,327	. 0	3,583	3,583	10,552
Q = 1,000 m3/s	1983	2,305	337	4,244	0	3,411	3,411	10,297
Q = 1,500 m3/s	1983	2,305	337	4,203	O	3,301	3,301	10,146
Q = 500 m3/s	1996	2,687	393	3,046	0	1,732	1,732	7,858
Q = 1,000 m3/s	1996	2,687	393	3,013	0	1,421	1,421	7,514
Q = 1,500 m3/s	1996	2,687	393	3,000	0	1,318	1,318	7,398

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)

(4) Simulated Inundation Volume

(million m³)

Case	Year	Upper Central Plain	Nakhon Sawan Area	Lower Central Plain				
					Lower Delta			Total
				Higher Delta	BMA Area	Others	Sub-total	
Q = 500 m3/s	1995	4,804	1,244	6,396	4	1,203	1,207	13,651
Q = 1,000 m3/s	1995	4,804	1,244	6,272	0	1,123	1,123	13,443
Q = 1,500 m3/s	1995	4,804	1,244	6,167	0	1,058	1,058	13,273
Q = 500 m3/s	1983	2,798	769	5,314	0	1.620	1,620	10,501
Q = 1,000 m3/s	1983	2,798	769	5,175	0	1,541	1,541	10,283
Q = 1,500 m3/s	1983	2,798	769	5,118	0	1,478	1,478	10,163
Q = 500 m3/s	1996	3,480	1,002	4,318	0	722	722	9,522
Q = 1,000 m3/s	1996	3.480	1,002	4,274	0	699	699	9,455
Q = 1,500 m3/s	1996	3,480	1,002	4,235	0	652	652	9,369

^{*:} BMA Area to be protected by ring dikes (East Bank = 650 km2, West Bank = 240 km2)