

FIG. 7.2.1.5 RELATIONSHIP BETWEEN RAINFALL INTENSITY - DURATION BY RETURN PERIOD AT NONTHABURI

STUDY ON MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

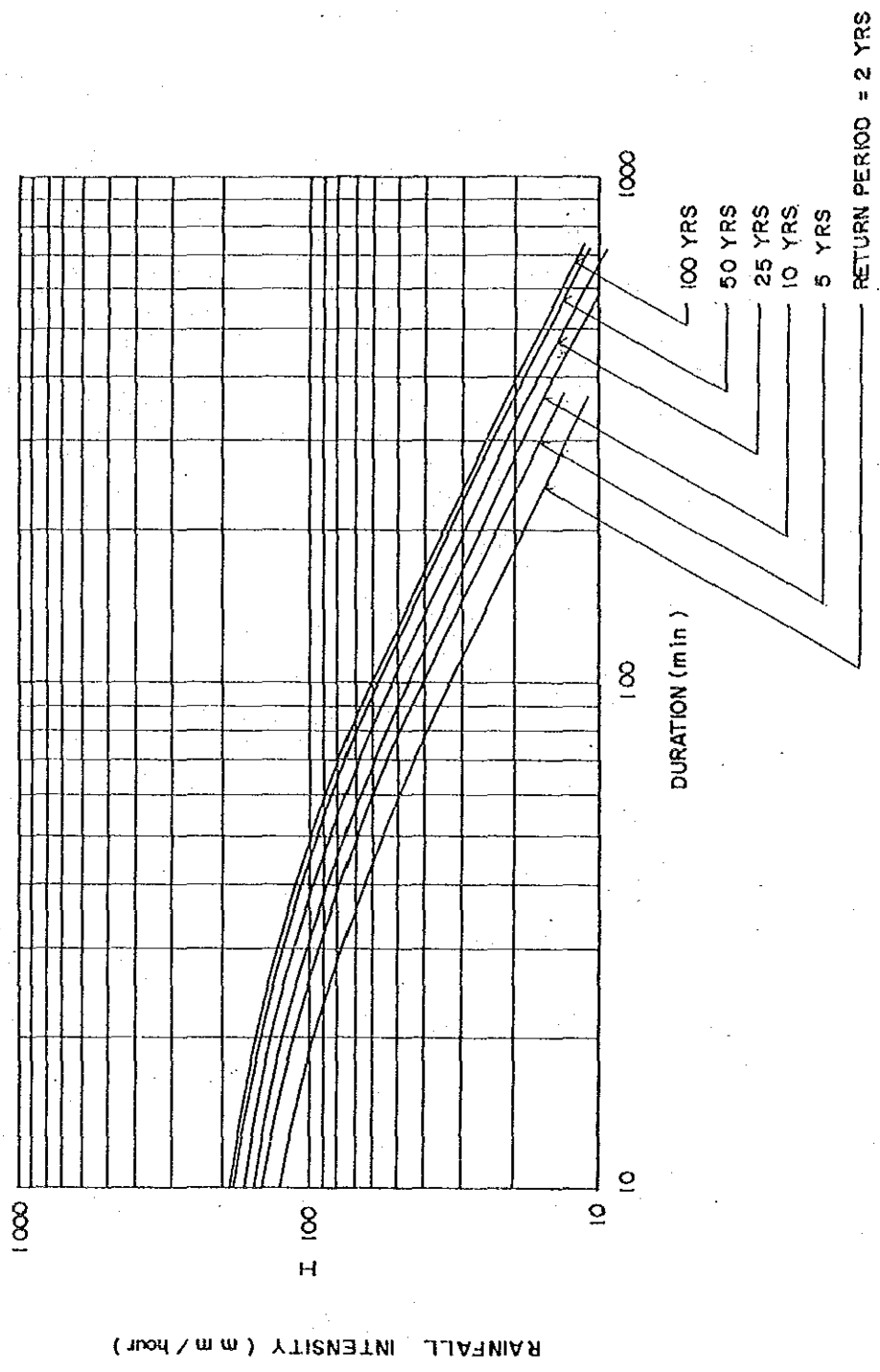


FIG. 7.2.1.6 RELATIONSHIP BETWEEN RAINFALL INTENSITY - DURATION BY RETURN PERIOD AT BANGKOK (MD)

STUDY ON MASTER PLANNING FOR THE SEWERAGE DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

7.2.2 Flow Rate and Water Level at Observation Stations of RID

Table 7.2.2.1 RID Observation Data

No.	River	Stream	Location		Approx. Lat., N-Long, E.	Map No. 1:50,000	Code	D.A. Sq. km.	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe					Type of Gage	Period		
<u>CHAO PHRAYA RIVER BASIN</u>												
1	Chao Phraya	-	Wat Phikun Ngam (Ban Tha Hot)	Wat Sing	15 ° -16' -17" 100 ° -03' -44"	S039-IV	C.1	118,816	V	1905-1959	1905-1913 1948-1954	1950-1955
2	Chao Phraya	-	Khai Chira Prawat	Muang	15 ° -40' -15" 100 ° -06' -45"	S040-II	C.2@	110,569	V F	1914-1966 1966-Cont'd	1956-Cont'd	1956-Cont'd
3	Chao Phraya	-	Ban Bang Phutsa	Muang	14 ° -53' -44" 100 ° -24' -14"	S038-I	C.3	Flood Plain	V	1950-Cont'd	-	-
4	Chao Phraya	-	Memorial Bridge	Thon Buri	13 ° -44' -15" 100 ° -29' -55"	S036-II	C.4	Flood Plain	V F	1914-1950 1950-Cont'd	-	-
5	Chao Phraya	-	Wat Kao Chang	Phrom Buri	14 ° -45' -52" 100 ° -26' -59"	S038-I	C.5	Flood Plain	V	1914-1948 1955-1956	-	-
6	Chao Phraya	-	Ban Cham Kang	Wat Sing	15 ° -13' -12" 100 ° -05' -30"	S039-II	C.6	Flood Plain	V	1928-1964	-	-
7	Chao Phraya	-	Ban Bang Kaec	Muang	14 ° -35' -03" 100 ° -27' -12"	S038-II	C.7	Flood Plain	V	1930-1970	1955-1956	1931-1975
8	Chao Phraya	-	Ban Bang Kaec	Muang	14 ° -35' -05" 100 ° -27' -12"	S038-II	C.7 A	Flood Plain	V B V	1971-1976 1977-1981 1981-Cont'd	1976-1979 1984-Cont'd	1976-Cont'd
9	Chao Phraya	-	Wat Phruan (Ban Bang Krachang)	Muang	15 ° -10' -00" 100 ° -08' -44"	S039-III	C.8	Flood Plain	V	1938-1956	-	-
10	Chao Phraya	-	Wat Borommathat	Muang	15 ° -09' -45" 100 ° -09' -28"	S039-III	C.9	Flood Plain	V	1941-1957	-	-
11	Chao Phraya	-	Wat Phrom Sakbon	Muang	14 ° -52' -11" 100 ° -24' -40"	S038-I	C.10	Flood Plain	V	1941-1948 1955-1956	1955	1942-1947 1955-1956

Table 7.2.2.2 RID Observation Data

No.	River	Stream	Location		Approx. Lat./N-Long/E.	Map No. 1:50,000	Code	D.A. Sq.km.	Type of Gage	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe						Period	Period		
12	Chao Phraya	-	Wat Sawang Aram	Muang Sing Buri	14 ° -52' -11" / 100 ° -24' -40"	5038-I	C.11	Flood Plain	V	1942-1947 1953-1956	1955	1942-1947 1953-1956	
13	Chao Phraya	-	R.I.D. Bangkok	Dusit Bangkok	13 ° -47' -14" / 100 ° -30' -36"	5136-IV	C.12*	Flood Plain	F	1942-Cont'd	-	-	
14	Chao Phraya	-	Wat Pho Ngam (Ban Re Rai)	Sanphaya Chainat	15 ° -09' -57" / 100 ° -11' -32"	5039-II	C.13*	120.693	V	1947-1970 1971-Cont'd	1953-1962 1965-1968 1972 1975-1976 1980-Cont'd	1947-Cont'd	
15	Chao Phraya	-	In Buri	In Buri	15 ° -00' -30" / 100 ° -19' -50"	5039-II	C.14	Flood Plain	V	1950-1968	1955	1950-1956 1952-1968	
16	Chao Phraya	-	Wat Chula Mani (Ban Kum)	Bang Ban Phra Nakhon Si Ayuthaya	14 ° -25' -33" / 100 ° -29' -11"	5037-I	C.15	Flood Plain	V	1950-1974 1974-1978 1978-Cont'd	1955	1950-1979	
17	Chao Phraya	-	Ban Tha Nam Oi	Phayuha Khiri Nakhon Sawan	15 ° -25' -11" / 100 ° -08' -22"	5039-IV	C.16	111.640	V	1956-1971	-	-	
18	Chao Phraya	-	Phayuha Khiri	Phayuha Khiri Nakhon Sawan	15 ° -27' -14" / 100 ° -08' -17"	5039-IV	C.17	Flood Plain	V	1956-1959	-	-	
19	Chao Phraya	-	Ban Thai Muang	Muang Chai Nat	15 ° -10' -10" / 100 ° -07' -46"	5039-III	C.18	Flood Plain	V	1956-1959	-	-	
20	Chao Phraya	-	Ban Bang Cha	Krok Phra Nakhon Sawan	15 ° -32' -54" / 100 ° -05' -09"	5040-III	C.19	111.320	V	1957-1968	-	-	
21	Chao Phraya	Khlong Hok Wa	Lam Luk Ka	Lam Luk Ka Pathum Thani	15 ° -55' -50" / 100 ° -45' -05"	5136-I	C.20	Flood Plain	V	1951-1974	-	-	

Table 7.2.2.3 RID Observation Data

No.	River	Stream	Location			Approx. Lat./N-Long./E.	Map No. 1:50,000	Code	D.A. Sq.km.	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe	Changwat					Type of Gage	Period		
22	Chao Phraya	Khlong Saen Saep	Min Buri	Min Buri	Bangkok	13 ° -48' -36" 100 ° -44' -06"	5136-IV	C.21	Flood Plain	V	1952-1974	-	
23	Chao Phraya	-	R.I.D. Pak Kret	Pak Kret	Nonthaburi	13 ° -53' -47" 100 ° -29' -39"	5036-I	C.22	Flood Plain	V F	1953-1962 1962-Cont'd	-	
24	Chao Phraya	-	Phra Ram VI Bridge	Bang Kruai	Nonthaburi	13 ° -48' -45" 100 ° -30' -53"	5136-IV	C.23	Flood Plain	V	1959-1968	-	
25	Chao Phraya	Huai Wang Krathum	Ban Wang Krathum	Khok Samrong	Lop Buri	15 ° -06' -07" 100 ° -42' -58"	5139-III	C.24	1,281	V	1966-1978 1985-Cont'd	1966-1976	
26	Khlong Wang Krathum	Huai Yai	Ban Maha Pho	Khok Samrong	Lop Buri	15 ° -15' -12" 100 ° -51' -45"	5139-I	C.25	68	V	1966-1967 1968-1972	1966-1972	
27	Suphan	Huai Nong Rong	Ban Thung Pho	Hankha	Chai Nat	15 ° -00' -15" 99 ° -47' -39"	4939-II	C.27	282	V	1969-1971	1969	
28	Chao Phraya	Khlong Bang Kaec	Ban It	Muang	Ang Thong	14 ° -35' -32" 100 ° -28' -23"	5038-II	C.28	Flood Plain	V	1969-1979 1985-Cont'd	1976, 1978, 1986 1986-1988 1990-Cont'd	
29	Chao Phraya	-	Ban Khaek	Bang Sai	Phra Nakhon Si Ayutthaya	14 ° -11' -33" 100 ° -30' -23"	5137-III	C.29	Flood Plain	V	1979-1982	-	
30	Chao Phraya	Huai Khun Kaec	Ban Samo Theng	Ban Rai	Uthai Thani	15 ° -21' -04" 99 ° -32' -22"	4939-IV	C.30*	219	V E	1982-1986 1986-Cont'd	1983-Cont'd	
31	Chao Phraya	-	Ban Prok	Muang	Pathum Thani	14 ° -01' -12" 100 ° -32' -22"	5137-III	C.31	Flood Plain	V	1984-Cont'd	-	
32	Huai Wang Krathum	Huai Hin Chaeung	Ban Phu Kachut	Khok Samrong	Lob Buri	15 ° -23' -22" 100 ° -50' -22"	5139-I	C.32	77	V	1982-1985	-	

Table 7.2.2.4 RID Observation Data

No.	River	Stream	Location		Approx. Lat. N.-Long. E.		Map No. 1:50,000	Code	D. A. Sq. km	Type of Gage	Water Level Period	Rating Operation	Discharge Data
			At or Near	Amphoe	Changwat	Lat. N.-Long. E.							
<u>NOI RIVER BASIN</u>													
1	Noi	-	Ban Hua Tako	Muang	Chai Nat	15 ° -09'-21" 100 ° -09'-11"	5039-III	Ni.2	Flood Plain	V	1914-1954	-	-
2	Noi	-	Bang Rachan	Bang Rachan	Sing Buri	14 ° -53'-18" 100 ° -19'-11"	5038-I	Ni.4	Flood Plain	V	1950-1958	-	-
3	Noi	-	Ban Yang Mani	Pho Thong	Ang Thong	14 ° -44'-46" 100 ° -25'-07"	5038-II	Ni.5	Flood Plain	V	1941-1950	-	-
4	Noi	-	Pho Thong	Pho Thong	Ang Thong	14 ° -39'-45" 100 ° -25'-05"	5038-II	Ni.6	Flood Plain	V	1950-1976	-	-

Table 7.2.2.5 RID Observation Data

No.	River	Stream	Location		Approx. Lat./N-Long./E.	Map No. 1:50,000	Code	D.A. Sq.km.	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe					Changwat	Type of Gage		
<u>PASAK RIVER BASIN</u>												
1	Pasak	-	Wat Thong Pu (Ban Khlong On)	Muang	Phra Nakhon Si Ayutthaya	S137-IV	S.1	Flood Plain	V	1914-1966	-	-
2	Pasak	-	Kaeng Khoi	Kaeng Khoi	Saraburi	S233-III	S.2	14,522	V	1914-1967 1967-1987 1987-Cont'd	1959-1962 1965-1966	1914-1982
3	Pasak	-	Ban Muang Tai	Kaeng Khoi	Saraburi	S233-III	S.2A	14,380	V	1926-1950	-	-
4	Pasak	-	Ban Tan Dieo	Lomsak	Phetchabun	S242-IV	S.3	1,047	V	1950-Cont'd	-	-
5	Pasak	-	Kiri Kha Chon Bridge	Muang	Phetchabun	S241-IV	S.4	3,566	V	1950-1965	-	-
6	Pasak	-	Phetchabun	Muang	Phetchabun	S241-IV	S.4A	3,565	V	1965-1976	-	-
7	Pasak	-	Phetchabun	Muang	Phetchabun	S241-IV	S.4B	3,566	F	1966-Cont'd	1966	1966-1981 1983-Cont'd
8	Pasak	-	Panchama Thirat Uthit Hospital	Muang	Phra Nakhon Si Ayutthaya	S137 IV	S.5	Flood Plain	V	1950-1968 1967-1982 1982-1985 1985-Cont'd	-	-
9	Pasak	-	Ban Hua Kai	Lomsak	Phetchabun	S242-I	S.6	1,006	V	1976-1989	1986-1989	1986-1989
10	Pasak	-	Irr. Headwork (Ban Wang Ku)	Lomsak	Phetchabun	S242-I	S.6A	1,007	V	1961-1967	1961-1967	1961-1967

Table 7.2.2.6 RID Observation Data

No.	River	Stream	Location		Approx. Lat N-Long.E.	Map No. 1:50,000	Code	D.A. Sy km.	Type of Gage	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe						Changwat	Period		
11	Pasak	Lam Muak Lek	Muak Lek	Saraburi	14 ° -38'-04" 101 ° -12'-37"	5238-III	S.7	177	F	1965-Cont'd	1965-Cont'd	1965-Cont'd	
12	Pasak	Lam Muak Lek	Ban Kaeng Sua Ten	Phathana Nakhom	14 ° -47'-19" 101 ° -03'-55"	5238-III	S.8	9.464	V	1970-1973	-	-	
13	Pasak	-	Ban Muang Nua	Kaeng Khoi	14 ° -37'-33" 101 ° -01'-00"	5238-III	S.9@	14.374	V	1973-Cont'd	1973-Cont'd	1973-Cont'd	
14	Pasak	Huai Nam Phung	Ban Hin Hao	Lom Kao	16 ° -56'-50" 101 ° -13'-10"	5242-IV	S.10@	268	V	1965-Cont'd	1967 1979-Cont'd	1965-1973 1979-Cont'd	
15	Pasak	Huai Pa Daeng	Ban Pa Daeng	Muang	16 ° -26'-55" 101 ° -05'-37"	5241-IV	S.11	81	V	1966-1967	1966-1967	1966 1967	
16	Pasak	Lam Kong	Ban Wang Tha Di	Nong Phai	15 ° -59'-50" 101 ° -14'-28"	5240-IV	S.12*	471	F	1978-Cont'd	1978-Cont'd	1978-Cont'd	
17	Pasak	Lam Sonthi	Ban Tha Yiam	K.A. Lam Sonthi	15 ° -20'-21" 101 ° -22'-30"	5239-I	S.13@*	359	V	1978-Cont'd	1978-Cont'd	1978-Cont'd	
18	Pasak	Lam Sonthi	Ban Na Som	Chai Badan	15 ° -13'-24" 101 ° -16'-51"	5239-II	S.14@*	1,247	V	1978-Cont'd	1980-Cont'd	1980-Cont'd	
19	Pasak	Huai Wang Chomphu	Ban Wang Chomphu	Muang	16 ° -15'-36" 101 ° -02'-07"	5241-IV	S.15	15	V	1979-Cont'd	1979-1983	1979-1987	
20	Pasak	Huai Na	Ban Huai Na	Muang	16 ° -16'-00" 101 ° -03'-32"	5241-IV	S.16@	65	V	1979-Cont'd	1979-Cont'd	1979-Cont'd	
21	Nam Phung	Huai Nam Chun	Ban Fai Wang Bon	Lom Sak	16 ° -45'-43" 101 ° -08'-44"	5242-IV	S.17@	67	V	1979-Cont'd	1979-Cont'd	1979-Cont'd	

Table 7.2.2.7 RID Observation Data

No.	River	Stream	Location		Approx. Lat./N-Long./E.	Map No. 1:50,000	Code	D.A. Sq.km.	Type of Gage	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe						Changwat	Period		
22	Pasak	Huai Nam Duk	Ban Pak Cheng	Lom Sak	16 ° -43' -05" 101 ° -20' -38"	S242-II	146	V	1979-1982	1980-1981	1981-1981		
23	Pasak	Huai Khon Kaen	Ban Wang Khon Du	Lom Sak	16 ° -49' -16" 101 ° -21' -58"	S242-I	323	V	1983-Cont'd	1983	1983		
24	Pasak	Huai Yai	Ban Sakae Ngam	Muang	16 ° -28' -14" 101 ° -19' -27"	S.20	74	V	1983-Cont'd	1983	1983		
25	Pasak	Huai Saduang Yai	Ban Tha I Bun	Lom Sak	16 ° -33' -44" 101 ° -21' -02"	S.21	97	V	1983-Cont'd	1983	1983		
26	Pasak	Khlong Ban Bong	Ban Chaliang Lao	Muang	16 ° -24' -32" 101 ° -17' -13"	S.22	77	V	1983-Cont'd	1983 1987-1989	1983 1987		
27	Pasak	Huai Yai	Ban Huai Yai Nua	Muang	16 ° -28' -10" 101 ° -18' -17"	S.23	20	V	1983-Cont'd	1983 1987-1989	1983 1987-1989		
28	Pasak	Huai Tarang	Ban Huai Yai Nua	Muang	16 ° -28' -30" 101 ° -18' -24"	S.24	79	V	1983-Cont'd	1987-1989	1987-1989		
29	Pasak	Huai Yai	Ban Hin Dat	Kaeng Khoi	14 ° -36' -42" 101 ° -02' -08"	S.25	71	V	1984-Cont'd	-	-		
30	Pasak	-	Tha Rua	Tha Rua	14 ° -33' -22" 100 ° -43' -38"	S.26	Flood Plain	V	1984-Cont'd	1983-Cont'd	1983-Cont'd		
31	Pasak	-	Ban Tha Luang	Tha Luang	15 ° -03' -58" 101 ° -05' -35"	S.27	8,126	V	1984-Cont'd	-	-		
32	Pasak	-	Ban Kaeng Sue Ten	Phanhana Nikhon	14 ° -50' -21" 101 ° -04' -08"	S.28	9,464	V	1986-Cont'd	-	-		
33	Pasak	Rian Lam Narat	Ban Lam Narat	Chan Badan	15 ° -11' -56" 101 ° -07' -42"	S.29	102	F	1986-Cont'd	-	-		

Table 7.2.2.8 RID Observation Data

No.	River	Stasiun	Location		Approx. Lat. N - Long. E.	Map No. 1:50,000	Code	D.A. Sq. km.	Type of Stage	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe						Changwat	Period		
34	Pasak	Lam Kot Thong	Dan Lam Kot Thong	Chai Badan	15 ° -07' -48" 101 ° -05' -10"	5239-III	S.30	82	F	1985-Cont'd			
35	Pasak	Lam Phaya Klang	Pan Pang Hu Sua	Chai Badan	15 ° -06' -05" 101 ° -24' -11"	5239-II	S.31 @ *	331	B	1986-Cont'd	1987-Cont'd	1987-Cont'd	
36	Pasak	-	Highway Bridge	Muang	14 ° -31' -28" 100 ° -59' -48"	5138-II	S.32	425	V	1990-Cont'd			

Table 7.2.2.9 RID Observation Data

No.	River	Stream	Location		Approx. Lat. N - Long. E.	Map No. 1:50,000	Code	D.A. Sq. km.	Water Level		Rating Operation	Discharge Data
			At or Near	Amphoe					Changwat	Type of Gage		
<u>LOP BURI RIVER BASIN</u>												
1	Lop Buri	-	Wat Noi Ban Bang Mu	Muang	14 ° -52' -27" 100 ° -25' -07"	5038-I	L.1	Flood Plain	V	1914-1949	-	-
2	Lop Buri	-	Wat Pho Ngam (Ban Bang Pi)	Muang	14 ° -47' -43" 100 ° -36' -35"	5138-IV	L.2	Flood Plain	V	1950-1962	1950	1950-1962
3	Lop Buri	-	Siphon Lop Buri (Ban Bang Pi)	Muang	14 ° -47' -37" 100 ° -36' -34"	5138-IV	L.2A	Flood Plain	V	1962-1986	-	-
4	Lop Buri	-	Siphon Maharat (Ban Ko)	Muang	14 ° -51' -36" 100 ° -24' -18"	5038-I	L.3	Flood Plain	V	1973-1979	1976	1976
5	Lop Buri	-	Ban Phraek	Ban Phraek	14 ° -38' -40" 100 ° -34' -46"	5138-III	L.5	Flood Plain	V	1984-Cont'd	1985-Cont'd	1985-Cont'd

7.2.3 Flow Rate and Water Level Along the River

TABLE 7.2.3.1 FLOW RATE IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year	Monthly average flow rate (m ³ /s)											
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Chao Phraya	1988				403.4	509.2	559.2	540.5	557.2	822.5	1,198.9	963.1	463.0
A.Muang	1989	272.3	347.8	444.3	522.6	490.9	729.5	361.8	485.6	658.8	846.3	741.2	434.7
Nakon	1990	217.6	277.4	486.5	471.1	507.0	913.2	475.6	463.0	792.1	840.4	617.8	465.6
Sawan	1991	235.9	274.2	365.2	373.0	247.0	219.0	167.0	570.0	1,168.0	919.0	589.0	384.0
(C.2)	1992	197.0	240.0	274.0									
	Avg.	230.7	284.9	392.5	442.5	438.5	605.2	386.2	519.0	860.4	951.2	727.8	436.8
Chao Phraya	1988				122.9	227.7	349.9	288.9	253.4	657.2	1,149.1	730.4	340.5
A.Muang	1989	171.0	125.1	125.3	110.7	103.0	348.3	124.6	103.7	203.3	374.7	180.6	307.6
Ang Thong	1990	148.4	110.2	130.9	143.8	189.1	544.7	135.6	137.6	177.8	846.7	272.8	281.5
(C.7A)	1991	171.6	136.8	143.9	124.6	108.8	96.0	88.4	199.1	649.7	432.9	154.6	259.9
	1992	118.8	107.4	114.4									
	Avg.	152.5	119.9	128.6	125.5	157.2	334.7	159.4	173.5	422.0	700.9	334.6	297.4
Chao Phraya	1988				54.1	209.5	367.5	311.6	261.2	781.5	1,429.6	719.0	202.9
A.Sanphaya	1989	79.1	52.6	62.8	89.1	85.7	375.4	91.5	79.4	190.4	367.8	128.6	148.9
Chai Mat	1990	50.7	49.8	93.3	93.7	149.2	574.5	104.0	91.9	167.3	806.8	204.2	153.9
(C.13)	1991	66.7	72.4	78.8	75.0	49.6	43.4	42.9	190.7	572.6	387.2	93.2	83.4
	1992	45.7	59.1	68.8									
	Avg.	60.6	58.5	75.9	78.0	123.5	340.2	137.5	155.8	428.0	747.9	286.3	147.3
Pasak	1988				28.5	48.1	51.2	38.9	74.6	97.6	221.4	142.9	80.2
A.Thu Rua	1989	38.1	27.6	28.2	33.5	29.7	86.8	38.0	35.1	72.2	68.6	48.0	99.6
Ayutthaya	1990	42.6	35.7	39.9	35.6	39.8	81.1	30.1	33.1	68.7	483.6	82.5	68.5
(S.26)	1991	42.4	34.8	35.9	40.8	36.7	33.0	32.2	109.5	547.2	356.7	42.1	77.0
	1992	37.7	33.8	35.3									
	Avg.	40.2	33.0	34.8	34.6	38.6	63.0	34.8	63.1	196.4	282.6	78.9	81.3
Lop Buri	1988				6.9	18.7	21.2	16.1	22.1	46.5	87.0	99.5	71.4
A.Ban	1989	14.8	0.9	0.4	1.0	5.9	10.6	7.3	7.4	40.7	44.7	79.1	84.3
Phreak	1990	15.4	0.8	1.6	2.2	20.0	28.9	10.0	13.3	8.5	94.9	84.8	87.6
Ayutthaya	1991	19.9	0.6	1.1	0.9	1.7	3.1	0.5	2.8	20.5	23.0	47.2	86.7
(L.5)	1992	8.4	1.2	0.4									
	Avg.	14.6	0.9	0.9	2.7	11.6	16.0	8.5	11.4	29.0	62.4	77.6	82.5

TABLE 7.2.3.2 WATER LEVEL IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year		Monthly average water level (m, msl)												
			Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Chao Phraya Upstream Release of Chao Phraya Dam	1987	Mean				15.67	15.60	15.67	14.81	15.57	16.27	16.52	16.38	16.43	
		Max.				16.16	16.29	16.32	15.13	16.42	16.57	16.56	16.55	16.56	
		Min.				15.28	14.65	15.13	14.32	14.88	15.16	16.46	16.07	16.15	
	1988	Mean	14.79	14.37	15.43	15.66	16.23	16.37	16.40	16.48	16.42	16.52	16.52	16.43	
		Max.	16.07	15.08	16.25	15.87	16.52	16.52	16.55	16.54	16.55	16.56	16.56	16.53	
		Min.	14.04	13.94	15.51	15.14	15.78	15.74	16.00	16.14	15.91	16.47	16.49	16.09	
	1989	Mean	15.59	15.62	15.72	15.92	15.64	16.45	15.71	15.54	16.26	16.35	16.26	16.09	
		Max.	16.45	15.89	15.94	16.26	16.09	16.54	16.48	16.29	16.52	16.54	16.52	16.54	
		Min.	15.07	15.29	15.43	15.53	15.31	16.09	14.74	14.37	15.91	15.89	16.13	15.06	
	1990	Mean	15.16	15.13	15.84	15.91	15.72	16.47	15.77	15.73	16.21	16.51	16.39	16.19	
		Max.	15.84	15.68	16.27	16.22	16.51	16.56	16.43	16.41	16.53	16.56	16.55	16.54	
		Min.	14.53	14.35	15.29	15.53	15.06	16.18	15.10	14.76	14.70	16.31	15.90	14.95	
	1991	Mean	14.40	15.08	15.65	15.69	14.88	14.58	13.69	15.58	16.50	16.49	15.99	15.85	
		Max.	15.02	15.88	15.84	16.02	15.36	15.51	14.47	16.53	16.53	16.52	16.50	16.51	
		Min.	13.91	13.96	15.37	15.21	14.31	13.50	13.10	14.56	16.47	16.47	15.52	15.29	
	1992	Mean	14.39	14.63	14.97	14.84	14.50	13.76	13.33	15.95	15.56	16.51	16.27	16.36	
		Max.	15.46	15.62	15.40	15.43	15.08	13.97	13.84	16.55	16.53	16.55	16.56	16.55	
		Min.	13.80	13.84	14.65	14.26	13.69	13.58	12.98	13.46	14.64	16.48	15.92	15.91	
	Chao Phraya Downstream Release of Chao Phraya Dam	1987	Mean				6.61	6.58	6.48	6.36	6.45	9.62	10.50	7.22	7.53
			Max.				6.68	6.83	7.18	6.83	7.38	12.64	12.05	8.66	8.21
			Min.				6.58	6.41	6.30	6.20	6.20	6.10	7.43	6.62	6.66
		1988	Mean	6.30	6.38	6.65	6.33	7.43	8.31	8.04	7.89	9.72	11.95	9.79	7.53
			Max.	6.58	6.63	6.84	6.59	9.48	10.16	10.24	8.79	13.95	14.92	13.22	8.34
			Min.	6.20	6.22	6.45	6.17	6.32	6.27	6.55	6.86	6.44	9.30	7.96	6.67
1989		Mean	6.56	6.32	6.44	6.47	6.41	8.40	6.43	6.36	7.22	8.11	6.81	6.90	
		Max.	7.90	6.43	6.69	6.80	7.17	9.63	7.64	6.83	9.50	11.50	7.47	8.40	
		Min.	6.26	6.27	6.29	6.15	6.14	6.76	5.79	5.79	6.43	6.41	6.67	6.02	
1990		Mean	6.05	6.05	6.50	6.45	6.79	9.28	6.54	6.41	7.13	10.11	7.39	6.99	
		Max.	6.67	6.19	6.79	6.75	9.23	10.51	6.95	6.95	8.06	11.48	8.85	8.35	
		Min.	5.93	5.92	6.10	6.09	6.10	6.88	6.17	6.10	6.10	6.88	6.42	6.28	
1991		Mean	6.10	6.18	6.27	6.35	6.03	5.95	5.94	7.00	9.47	8.65	6.58	6.40	
		Max.	6.27	6.44	6.36	6.55	6.10	6.05	5.94	9.84	10.28	9.20	8.87	7.19	
		Min.	6.00	5.91	6.10	6.25	5.94	5.94	5.94	5.94	8.59	7.92	6.10	5.94	
1992		Mean	5.97	6.16	6.27	6.27	6.22	5.93	5.79	7.41	6.27	9.78	7.10	6.90	
		Max.	6.71	6.35	6.30	6.30	6.25	6.07	5.93	9.35	8.84	12.68	9.90	8.08	
		Min.	5.94	6.10	6.10	6.25	6.15	5.93	5.68	5.68	5.82	7.07	6.00	6.00	

TABLE 7.2.3.3 WATER LEVEL IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year		Monthly average water level (m, msl)											
			Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Chao Phraya A. Muang Ang Thong (C.7)	1966	Mean												
		Max.				1.94	4.57	4.95	3.01	6.06	6.69	6.59	5.70	3.72
		Min.				1.64	1.60	2.41	1.53	2.19	6.10	5.19	2.50	2.53
	1967	Mean												
		Max.	2.59	2.08	1.90	1.86	2.13	2.07	1.91	2.10	6.06	6.59	4.59	2.95
		Min.	1.00	1.68	1.71	1.63	1.01	1.48	1.50	1.48	1.62	4.68	2.02	2.31
	1968	Mean												
		Max.	2.30	1.77	1.85	1.98	3.90	3.63	2.33	3.39	3.42			2.52
		Min.	1.74	1.36	1.38	1.32	1.61	1.71	1.52	1.68	1.57			1.72
	1969	Mean												
		Max.	2.10	1.56	1.39	1.23	1.20	1.77	3.72	4.19	6.72	6.73	4.22	
		Min.	1.50	1.28	1.13	1.14	0.92	0.93	1.33	1.40	1.78	3.64	2.90	
	1970	Mean												
		Max.		1.70	1.64	1.73	4.40	5.36		6.64	6.93	6.93		
		Min.		1.42	1.43	1.38	1.55	2.72		6.20	6.44	6.54		
Chao Phraya A. Bang Ban Sena Ayutthaya (C.15)	1978	Mean												
		Max.				0.52	0.80	0.85	4.62	4.40	5.05	5.37	4.88	2.18
	1979	Max.				0.01	0.00	-0.12	0.02	2.36	1.98	4.88	0.80	0.60
		Min.												
	1979	Mean												
		Max.	2.60	0.74	0.69	0.73	1.38	2.78	1.67	1.22	3.51	3.81	0.85	1.96
		Min.	0.18	0.02	-0.45	0.03	0.07	0.35	0.18	0.03	0.40	0.19	0.20	0.39
	1980	Mean												
		Max.	1.35	0.73	0.62	0.64	2.27	3.18	3.26	3.55	5.10	5.62	5.35	2.52
		Min.	0.10	0.00	0.00	0.00	0.00	0.35	0.20	1.00	2.58	5.10	2.12	0.83
	1981	Mean												
		Max.	0.86	0.77	0.78	0.75	2.25	2.27	3.23	3.86	3.79	3.06	4.48	4.25
		Min.	0.13	0.16	0.18	0.16	0.12	1.03	0.42	3.09	3.06	0.76	0.54	1.54
	1982	Mean												
		Max.	1.65	0.77	0.78	1.07	1.16	1.03	0.94	0.82	3.26	3.42		
Min.		0.37	0.20	0.20	0.19	0.13	0.01	0.04	0.01	0.26	1.90			

TABLE 7.2.3.4 WATER LEVEL IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year		Monthly average water level (m, msl)														
			Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.			
Chao Phraya A. Pak Kret Bang Bua Thong Nonthaburi (C.22)	1986	Mean															
		Max.				0.98	1.36	1.06	1.03	1.06	1.18	1.10	1.20	1.40			
		Min.				-0.59	-0.51	-0.63	-0.92	-0.76	-0.48	-0.44	-0.38	-0.42			
	1987	Mean															
		Max.	1.27	1.04	0.95	1.06	0.95	1.00	0.80	1.04	1.44	1.56	1.18	1.42			
		Min.	-0.52	-0.79	-0.73	-0.56	-0.82	-1.04	-1.11	-0.84	-1.08	-0.04	-0.32	-0.04			
	1988	Mean															
		Max.	1.12	1.12	1.11	1.10	1.08	1.12	1.10	1.16	1.61	1.88	1.85	1.44			
		Min.	-0.41	-0.52	-0.57	-0.60	-0.80	-0.82	-0.76	-0.36	-0.34	-0.02	0.04	-0.15			
	1989	Mean															
		Max.	1.14	1.19	1.12												
		Min.	-0.36	-0.64	-0.56												
	1990	Mean															
		Max.				1.11	1.18	1.12	0.99	0.90	1.18	1.70	1.34	1.29			
		Min.				-0.70	-0.76	-0.74	-1.00	-0.84	-0.92	-0.80	-0.32	-0.12			
	1991	Mean															
		Max.	1.20	1.11	1.03	1.00	0.99	0.93	0.97	1.26	1.37	1.35	1.16	1.26			
		Min.	-0.42	-0.74	-0.53	-0.72	-0.90	-1.05	-1.13	-0.84	0.06	-0.06	-0.53	-0.20			
	1992	Mean															
		Max.	1.06	1.17	0.99												
		Min.	-0.56	-0.77	-0.84												
Chao Phraya A. Bang Sai Rang Sit Ayutthaya (C.29)	1983	Mean															
		Max.				1.09	1.11	1.33	1.05	1.57	1.47	3.06	3.05	2.84			
		Min.				-0.37	-0.48	-0.84	-0.70	-0.21	-0.23	0.72	2.87	0.64			
	1984	Mean															
		Max.	1.48	1.17	1.17												
		Min.	-0.17	-0.22	-0.46												
	1985	Mean															
		Max.					1.09	1.10	1.14	1.19	2.01	2.18	2.18	2.10			
		Min.					-0.38	-0.73	-0.64	-0.51	-0.22	0.37	1.36	0.61			
	1986	Mean															
		Max.	1.41	1.09	1.08	0.94	1.35	1.76	1.12	1.24	1.41	1.14	1.17	1.47			
		Min.	-0.37	-0.53	-0.42	-0.42	-0.41	-0.30	-0.71	-0.52	-0.24	-0.28	-0.30	-0.24			
	1987	Mean															
		Max.	1.27	0.62	0.58	0.63	0.51	0.58	0.41	0.57	1.89	1.89	1.32	1.53			
		Min.	-0.73	-0.94	-0.95	-0.85	-1.00	-1.20	-1.14		-0.87	0.20	-0.04	0.20			
	1988	Mean															
		Max.	1.13	1.10	1.10	1.08	1.20	1.30	1.24	1.34	1.83	2.59	2.55	1.60			
		Min.	-0.33	-0.40	-0.40	-0.34	-0.50	-0.56	-0.50	-0.17	-0.28	0.30	0.57	0.30			
	1989	Mean															
		Max.	1.22	1.08	1.10												
		Min.	-0.14	-0.46	-0.42												

TABLE 7.2.3.5 WATER LEVEL IN CHAO PHRAYA RIVER AND ITS TRIBUTARIES OBSERVED BY RID

Station	Year		Monthly average water level (m, msl)															
			Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.				
Lop Buri A. Muang Lop Buri (L.2A)	1982	Mean																
		Max.				2.65	2.67	2.63	2.30	3.62	5.86	6.39	6.26	6.82				
		Min.				1.70	2.24	2.04	1.91	2.03	3.60	4.57	5.37	3.40				
	1983	Mean																
		Max.	3.42	2.57	2.58	2.64	2.57	2.89	2.75	4.73	5.95	8.39	8.32	7.63				
		Min.	2.31	2.34	2.30	2.35	2.25	2.11	2.22	2.04	2.10	6.00	7.66	5.21				
	1984	Mean																
		Max.	5.18	2.27	3.19	3.78	3.48	3.63	4.47	2.60	5.12	6.42	6.07					
		Min.	2.02	2.00	2.20	2.15	2.90	2.48	2.33	1.88	2.24	3.51	5.42					
	1985	Mean																
		Max.	3.89	2.29	2.43	3.29	2.77	2.46	2.85	3.86	6.03	6.89	7.10					
		Min.	2.13	1.81	2.01	2.12	1.93	2.08	2.07	2.46	3.64	4.98	4.73					
	1986	Mean																
		Max.	4.66		2.55	2.60	4.84	3.49	3.44	4.56	5.09	5.60	5.39	6.34				
		Min.	1.95		2.16	2.17	2.61	2.35	2.11	2.24	2.16	2.31	5.01	5.04				
	1987	Mean																
		Max.	5.04		2.15													
		Min.	1.97		2.06													
Pasak Downstream Release of Rama VI Dam	1987	Mean				0.82	0.73	0.72	0.63	0.64	5.78	5.02	1.19	1.93				
		Max.				1.09	0.91	0.99	0.95	0.85	9.73	8.75	1.56	2.42				
		Min.				0.44	0.50	0.55	0.45	0.42	0.56	1.31	0.68	1.14				
	1988	Mean	1.09	0.96	0.90	0.79	1.38	1.45	1.11	1.96	2.34	3.77	2.83	1.99				
		Max.	1.51	1.18	1.20	1.07	2.47	2.55	1.47	2.98	4.85	7.17	5.80	2.77				
		Min.	0.47	0.77	0.65	0.30	0.54	0.76	0.70	1.19	1.05	0.96	1.42	1.34				
	1989	Mean	1.14	0.98	0.83	0.72	0.67	1.67	0.92	0.91	1.56	1.40	1.05	1.84				
		Max.	1.47	1.27	1.08	1.08	0.90	2.52	1.17	1.96	2.56	2.26	1.61	2.49				
		Min.	0.53	0.75	0.30	0.50	0.46	0.78	0.67	0.47	0.72	0.85	0.62	1.12				
	1990	Mean	1.06	0.93	0.94	0.79	0.88	1.80	0.70	0.90	1.69	6.36	1.82	1.49				
		Max.	1.47	1.16	1.17	1.05	1.78	2.29	1.27	1.89	2.90	10.53	3.87	1.90				
		Min.	0.56	0.73	0.75	0.47	0.54	1.35	0.49	0.52	0.65	2.95	0.99	0.80				
	1991	Mean	1.01	0.79	0.86	0.80	0.67	0.66	0.62	1.58	6.22	4.39	0.74	1.46				
		Max.	1.40	1.05	1.08	1.25	0.98	0.81	1.00	7.19	7.71	7.13	1.25	2.09				
		Min.	0.69	0.41	0.64	0.55	0.47	0.51	0.40	0.47	4.58	0.80	0.30	0.80				
	1992	Mean	0.94	0.81	0.79	0.73	0.65	0.58	0.58	1.58	0.92	2.46	1.08	1.63				
		Max.	1.27	1.14	1.05	0.96	0.96	0.81	0.89	2.45	2.19	4.60	1.85	2.12				
		Min.	0.55	0.53	0.44	0.55	0.46	0.35	0.39	0.85	0.25	1.47	0.76	1.05				

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Royal Irrigation Department
Thailand
Hydrology Division
Rating Curve MCS 0001Y/1991

Nakhon Sawan, Wueso, Nakhon Sawan, (G.2)
Chao Phraya
Chao Phraya
Chao Phraya River
River System - Chao Phraya River

Water Year - 1991

Discharge in Cubic Meter per Second, Water Year April 1, 1991 to March 31, 1992

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	420.	437.	417.	199.	230.	1260.	1001.	708.	510.	170.	230.	291.	
2	410.	250.	250.	170.	215.	1293.	997.	673.	329.	144.	237.	307.	
3	399.	259.	253.	160.	235.	1319.	990.	652.	514.	143.	269.	293.	
4	350.	274.	245.	151.	303.	1324.	958.	644.	484.	170.	253.	264.	
5	365.	242.	231.	124.	323.	1337.	944.	651.	460.	187.	215.	215.	
6	397.	232.	217.	123.	327.	1391.	944.	661.	531.	192.	170.	225.	
7	430.	264.	210.	156.	335.	1419.	947.	644.	579.	195.	131.	258.	
8	440.	257.	193.	193.	305.	1409.	951.	641.	579.	179.	179.	276.	
9	433.	209.	233.	213.	287.	1377.	954.	635.	521.	160.	203.	274.	
10	443.	273.	274.	203.	282.	1337.	961.	675.	542.	149.	230.	252.	
11	395.	244.	291.	172.	243.	1243.	947.	714.	539.	183.	235.	225.	
12	337.	233.	234.	141.	271.	1153.	926.	737.	311.	193.	243.	192.	
13	424.	330.	230.	144.	271.	1119.	922.	717.	472.	203.	203.	250.	
14	433.	330.	274.	164.	333.	1132.	913.	636.	419.	170.	236.	207.	
15	413.	282.	203.	170.	284.	1193.	990.	579.	403.	173.	265.	289.	
16	350.	239.	239.	160.	239.	1197.	1040.	534.	395.	153.	294.	296.	
17	344.	213.	210.	156.	291.	1152.	1032.	511.	363.	150.	311.	294.	
18	373.	224.	403.	143.	331.	1114.	962.	499.	340.	203.	309.	264.	
19	384.	230.	317.	112.	443.	1037.	874.	434.	229.	225.	294.	234.	
20	353.	251.	224.	94.	339.	1033.	843.	502.	255.	237.	213.	257.	
21	393.	250.	190.	109.	675.	1053.	867.	502.	282.	231.	231.	272.	
22	377.	220.	170.	117.	630.	1030.	850.	439.	237.	188.	203.	290.	
23	334.	193.	174.	120.	444.	1020.	840.	462.	242.	149.	240.	305.	
24	330.	175.	170.	120.	1047.	1012.	894.	550.	271.	153.	272.	290.	
25	281.	190.	170.	215.	1111.	1009.	874.	563.	246.	213.	270.	257.	
26	244.	234.	191.	170.	1143.	932.	856.	511.	215.	251.	230.	210.	
27	250.	254.	137.	130.	1144.	972.	822.	562.	203.	274.	198.	207.	
28	337.	274.	134.	217.	1150.	973.	851.	502.	222.	243.	222.	314.	
29	303.	271.	150.	227.	1143.	1003.	857.	453.	231.	276.	264.	354.	
30	354.	341.	151.	224.	1140.	1001.	830.	399.	234.	224.	300.	300.	
31	250.	250.	212.	1214.	1214.	767.	767.	201.	201.	229.	313.	313.	
Total	11177.	7000.	6550.	5172.	17073.	35030.	28492.	17069.	11906.	6104.	6958.	8500.	163715. CMSOAY
Mean	353.	227.	214.	167.	530.	1153.	919.	539.	324.	197.	240.	274.	443. CMS
Max	433.	330.	274.	229.	444.	1419.	1040.	739.	579.	235.	311.	360.	1413. CMS
Min	274.	175.	170.	94.	260.	972.	767.	453.	201.	143.	170.	190.	71. CMS
Runoff	753.7	502.3	503.4	440.9	1527.3	3027.1	2401.7	1524.6	1022.7	527.4	600.3	734.9	14075.9 MCM
Minimum Peak	147.20 CMS, at 22.24 H (MSL), at 15.00 Hours, on Sep 7, 1991												
Runoff Yield													13.03 Liters/Second/Square KM

Royal Irrigation Department
Thailand
Hydrology Division 60062
Rating Curve HC 5UC011/1990

Station - Huahon Siam, Huahon Siam, (C.2)
River - Chao Phraya
River - Chao Phraya
River - Chao Phraya River

Discharge in Cubic Meter per Second Water Year April 1, 1990 to March 31, 1991

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	493.3	605.3	971.0	507.2	643.5	393.0	833.5	571.3	564.4	260.4	211.2	236.0	
2	522.5	427.0	1063.2	346.7	532.4	647.3	843.4	701.2	575.3	225.0	218.3	319.7	
3	493.8	373.0	1063.2	538.5	519.3	549.0	811.0	713.5	595.0	230.3	214.0	337.5	
4	531.0	350.0	1065.8	549.0	514.4	713.5	814.0	742.2	707.7	218.3	222.0	347.1	
5	431.0	345.2	1050.7	503.5	503.7	745.0	353.2	701.0	691.6	130.4	211.2	331.9	
6	437.4	417.0	1227.9	507.3	512.0	805.0	379.7	533.9	340.7	190.4	222.0	315.5	
7	495.0	474.2	971.0	516.3	523.3	805.0	340.1	542.7	542.2	217.2	195.0	232.8	
8	512.0	460.5	1044.0	554.2	525.8	811.0	505.0	558.2	572.4	236.4	200.0	328.1	
9	531.2	431.0	1098.0	592.0	471.0	814.0	308.0	508.9	524.0	241.2	249.2	361.0	
10	553.4	403.0	1125.2	531.6	472.1	859.3	303.0	633.9	501.5	217.2	209.1	331.0	
11	512.0	417.0	1141.2	497.2	512.0	856.0	320.3	541.6	464.7	263.5	357.6	375.0	
12	473.4	453.0	1125.2	455.0	526.4	822.0	327.2	713.5	491.5	333.5	347.1	369.0	
13	473.4	453.0	1055.8	393.0	511.2	744.5	322.5	713.5	437.0	335.7	353.0	367.0	
14	430.8	427.0	1025.0	417.0	523.3	845.7	1034.0	633.7	403.0	234.4	297.4	350.0	
15	497.0	457.0	1040.0	472.4	521.6	899.5	1014.3	534.6	431.0	247.5	289.2	371.0	
16	441.0	427.0	1032.6	475.5	439.4	872.7	955.0	328.0	480.5	233.2	324.5	411.0	
17	403.0	371.0	1013.4	439.0	444.2	839.0	386.4	549.0	322.5	195.3	347.1	399.0	
18	397.0	367.0	1007.6	411.0	435.3	817.0	372.4	524.0	324.0	179.0	324.1	372.0	
19	431.0	393.0	983.5	397.0	437.6	833.4	676.1	364.5	364.5	195.3	294.0	329.5	
20	435.8	455.0	347.1	347.1	443.0	359.3	333.7	339.0	321.0	194.4	255.2	371.0	
21	435.2	407.2	789.0	359.0	625.0	893.2	639.3	501.5	339.0	137.4	223.4	312.9	
22	303.0	303.7	723.8	343.0	415.0	834.0	675.3	473.4	417.0	217.2	247.5	341.4	
23	434.7	351.2	730.5	393.0	529.0	934.0	376.4	507.3	413.0	257.2	265.0	399.0	
24	434.7	351.2	704.5	377.0	525.2	876.5	1007.4	508.3	395.0	213.3	307.5	421.0	
25	435.0	350.3	675.3	407.0	571.0	850.2	940.6	512.3	369.0	205.6	314.3	397.0	
26	411.0	319.3	635.0	403.0	373.0	760.0	352.9	359.0	337.6	244.6	307.2	391.0	
27	433.2	377.0	617.7	431.0	343.0	778.7	355.2	343.3	239.2	257.2	293.7	372.0	
28	434.3	361.0	531.6	503.5	341.0	829.0	320.2	311.6	262.0	234.0	265.2	347.1	
29	472.1	360.0	577.6	556.3	351.0	745.4	314.0	312.3	237.2	246.0	317.0	415.0	
30	437.7	350.3	604.2	515.0	339.5	776.0	709.0	515.6	232.7	255.3	415.0	437.0	
31	346.7	346.7	633.9	633.9	341.0	743.3	743.3	234.0	234.0	217.2	437.0	437.0	

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	1-132.5	15715.7	27395.1	14742.7	14753.5	23743.0	28052.7	18535.6	14433.2	7312.7	7675.6	11321.2	195433.9 CMS DAY
2	471.1	507.0	913.2	475.6	433.0	792.1	340.4	517.8	455.6	235.9	274.2	365.2	535.4 CMS
3	379.4	346.7	1141.2	633.0	623.5	934.0	1014.6	722.2	707.7	335.0	353.0	437.0	1141.2 CMS
4	239.0	363.2	531.6	347.1	333.5	333.0	633.3	473.4	232.4	179.0	193.0	232.3	179.0 CMS
5	1221.05	1377.92	2366.94	1273.77	1250.14	2055.12	2250.75	1691.50	1247.03	531.32	663.24	973.15	16835.49 MCM
6	1157.60	1157.60	21.70	21.70	21.70	21.70	21.70	21.70	21.70	21.70	21.70	21.70	21.70
7	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84
8	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47	10.47

MS Computer Center, Processing : 14-JAN-1993 10:13:40.33

LIS/LC5328/74

Station - Nakhon Sawan, Muang Nakhon Sawan, (C.2)
 Stream - Chao Phraya
 River - Chao Phraya
 Meter System - Chao Phraya River

Royal Irrigation Department
 Thailand
 Hydrology Division
 Rating Curve TC5.0001Y/1957

Water Year - 1989

Discharges in Cubic Meter per Second, Water Year April 1, 1989 to March 31, 1990

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	425.9	557.6	561.6	375.9	271.7	645.2	704.0	337.8	650.3	203.8	153.0	593.0	593.0
2	314.3	509.6	533.7	344.8	277.4	640.4	660.5	302.5	633.7	207.4	161.5	351.4	351.4
3	269.3	545.3	743.0	315.0	269.2	669.5	609.6	773.0	677.9	200.2	243.4	403.5	403.5
4	343.2	524.1	790.0	311.0	265.1	704.0	576.3	737.2	649.2	173.4	225.0	442.3	442.3
5	421.0	505.2	341.0	340.4	333.8	693.3	370.4	751.1	593.4	153.0	309.0	430.0	430.0
6	312.4	443.6	537.0	327.2	365.4	761.1	561.9	639.3	648.0	145.5	303.0	417.9	417.9
7	335.4	319.0	344.2	299.0	595.1	606.3	573.2	639.5	629.2	142.2	275.5	635.3	635.3
8	504.0	507.6	525.0	323.0	410.4	539.6	576.0	630.3	436.5	212.8	216.4	527.4	527.4
9	532.2	508.2	377.4	357.4	529.9	326.8	626.4	701.1	537.6	273.5	220.0	417.3	417.3
10	525.6	488.0	509.5	457.4	415.0	507.5	718.5	727.2	651.9	277.4	250.8	457.2	457.2
11	534.4	465.0	913.5	519.0	433.2	605.3	731.0	727.2	594.0	234.4	227.0	493.0	493.0
12	519.5	305.2	953.5	300.5	589.2	651.3	796.2	754.0	542.4	238.0	285.0	329.8	329.8
13	342.4	517.0	743.0	464.4	562.0	669.3	757.0	766.5	592.3	233.1	243.2	339.5	339.5
14	501.9	514.6	895.0	457.3	612.4	701.1	721.4	769.0	471.6	235.0	227.2	505.2	505.2
15	570.6	493.2	351.3	445.2	612.4	693.2	718.5	793.0	423.2	309.0	203.6	493.0	493.0
16	474.0	484.4	790.0	440.4	579.3	633.7	706.9	772.0	338.9	329.4	243.2	539.6	539.6
17	505.3	456.0	763.0	423.8	564.3	669.2	706.9	773.0	373.6	297.0	237.0	559.2	559.2
18	502.8	477.9	450.0	450.0	564.3	669.2	759.0	731.0	353.6	230.3	303.0	567.9	567.9
19	571.3	451.0	751.0	457.3	535.2	554.7	315.4	767.0	321.0	173.5	312.0	562.0	562.0
20	507.5	437.2	741.0	410.4	507.6	643.2	960.0	755.0	435.0	207.4	313.0	576.0	576.0
21	526.3	471.9	713.6	373.6	486.0	634.3	1134.4	734.0	279.3	227.2	290.0	519.6	519.6
22	530.6	431.2	973.0	331.6	483.5	632.0	1342.3	739.0	252.2	250.3	253.2	431.2	431.2
23	342.4	423.3	654.3	309.0	471.6	620.8	1646.3	715.6	290.3	212.8	281.2	512.4	512.4
24	511.9	447.6	603.6	307.0	472.9	626.4	1335.6	724.3	234.3	193.0	307.0	559.4	559.4
25	514.9	431.1	567.9	297.0	426.8	634.3	1274.4	745.0	235.0	167.0	344.3	553.5	553.5
26	532.4	435.7	533.1	293.1	502.0	630.3	1102.3	743.0	243.4	150.0	362.8	543.0	543.0
27	533.0	442.3	523.2	253.4	376.0	727.2	1354.0	727.2	241.6	173.4	332.0	543.0	543.0
28	544.5	423.3	490.3	239.3	615.2	742.0	973.0	705.9	216.4	191.2	343.2	502.5	502.5
29	451.2	427.2	424.5	245.2	663.4	760.0	392.5	693.2	193.0	194.5	400.0	474.0	474.0
30	510.0	517.2	353.7	254.6	626.4	733.0	321.3	573.0	173.3	211.0	400.0	423.4	423.4
31	543.0	543.0	512.4	262.2	612.4	615.4	615.4	615.4	191.2	185.3	423.4	423.4	423.4

Total	15375.8	15213.0	21333.6	11216.0	15033.6	19764.5	23234.8	22237.2	13476.3	5743.0	7759.3	15000.4	190357.3 CMS DAY
Mean	522.5	490.9	729.5	361.3	493.6	659.3	846.3	741.2	434.7	217.6	277.4	459.3	521.3 CMS
Max	504.0	505.6	935.5	519.6	663.4	760.0	1446.3	837.3	636.6	329.4	352.0	576.0	1443.3 CMS
Min	338.0	431.1	365.7	239.3	282.2	524.3	370.4	375.0	173.0	143.5	153.0	503.0	143.5 CMS
Weight	1334.43	131.34	1370.32	769.06	1300.63	1707.63	2456.69	1921.29	1154.40	532.77	671.13	1302.95	16445.87 MCM
Momentary Peak	1433.20 CMS	at	22.44 M (MSL)	at	2.00 hours	on Oct 23, 1989							
Weight Yield	5.72	Liters/Second/Square Km	Momentary Peak Yield	13.19	Liters/Second/Square Km								

Station - Nakhon Sawan, Nakhon Phanom, Nakhon Phanom (C.I.)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

Royal Irrigation Department
 Thailand
 Hydrology Division 270459
 Rating Curve

Discharges in Cubic Meter per Second, Water Year April 1, 1982 to March 31, 1983

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	429.4	372.0	412.9	392.0	439.4	754.9	574.2	1400.0	634.7	271.2	285.0	466.5	466.5
2	429.4	405.3	394.0	336.0	475.5	313.5	599.0	132.0	601.2	342.0	233.4	429.4	429.4
3	429.4	392.0	398.0	330.0	409.9	343.9	592.8	126.8	651.0	345.0	253.0	464.2	464.2
4	430.8	376.0	390.0	364.0	437.4	373.4	637.4	123.0	539.5	392.0	273.2	439.9	439.9
5	435.2	332.0	334.0	342.0	442.5	374.2	548.5	119.0	523.3	259.9	312.0	459.9	459.9
6	410.5	396.0	394.0	414.7	443.9	344.5	621.4	116.0	509.4	212.4	126.0	444.2	444.2
7	425.1	402.1	523.0	419.0	444.4	741.9	604.5	1141.4	597.4	193.0	324.0	433.5	433.5
8	439.0	403.4	525.4	450.2	433.7	724.9	615.9	1113.5	597.4	330.0	304.0	406.3	406.3
9	408.4	427.3	483.5	446.4	433.4	722.5	646.0	1048.7	602.2	217.4	276.4	402.1	402.1
10	410.5	394.0	777.0	477.3	433.9	709.0	709.0	1063.9	604.5	247.6	234.5	423.2	423.2
11	446.4	547.0	819.0	511.0	453.3	690.1	768.6	1239.1	504.5	260.2	260.0	439.9	439.9
12	446.4	515.8	819.0	497.0	434.7	661.2	550.0	1011.2	592.5	233.9	318.0	446.4	446.4
13	403.4	460.1	735.6	444.2	421.4	621.4	795.5	977.1	563.9	265.5	360.0	455.2	455.2
14	435.7	499.0	771.4	326.0	535.4	392.5	939.9	955.4	533.0	290.0	376.0	473.2	473.2
15	435.2	439.9	739.0	376.0	569.6	565.6	1023.6	339.9	434.7	310.0	333.0	455.7	455.7
16	362.0	444.2	623.5	406.3	515.8	571.0	1174.0	918.2	450.5	310.0	366.0	444.2	444.2
17	390.0	468.3	623.2	457.4	509.2	597.6	1223.0	996.5	425.2	338.0	364.0	466.5	466.5
18	379.0	531.3	633.6	449.0	513.3	609.4	1295.4	362.4	403.4	330.0	400.0	459.6	459.6
19	273.2	622.6	666.5	359.0	547.6	636.0	1428.0	543.1	390.0	262.0	410.5	475.5	475.5
20	272.3	592.8	502.2	651.0	512.6	754.9	1530.0	740.7	749.0	222.0	409.4	466.3	466.3
21	340.0	719.3	503.2	795.2	619.0	969.4	1715.3	331.4	354.0	260.0	394.0	453.0	453.0
22	333.0	725.2	547.0	639.5	639.5	1290.2	1776.5	310.6	420.0	275.2	343.0	423.1	423.1
23	372.0	711.7	532.6	304.1	696.4	1325.3	1833.6	783.2	316.0	282.0	360.0	439.9	439.9
24	437.3	637.4	503.6	439.3	595.5	1254.5	1855.2	708.9	292.0	240.2	400.0	444.2	444.2
25	437.4	633.5	482.4	316.2	705.3	1156.9	1906.5	757.6	266.0	245.3	413.9	450.5	450.5
26	421.0	587.8	435.2	757.6	695.5	1070.1	1874.4	757.6	390.0	212.0	427.4	464.0	464.0
27	604.2	549.4	437.3	709.0	543.5	951.6	1333.0	763.0	295.0	232.1	442.0	466.3	466.3
28	394.0	320.5	447.4	643.3	749.3	440.7	1774.0	741.4	290.0	239.2	444.2	459.6	459.6
29	504.2	426.5	410.5	590.2	714.4	703.0	1693.0	714.4	264.0	292.0	444.2	444.2	444.2
30	333.0	466.3	364.0	542.4	711.7	709.0	1596.3	493.2	247.6	304.0	453.0	453.0	453.0
31	437.3	437.3	513.4	513.4	717.1	1495.0	1495.0		272.5	304.0	453.0	453.0	453.0

Total 12101.2 12766.0 16776.0 16776.0 17274.0 24675.4 37156.2 23991.9 14351.7 6451.7 2739.2 13773.4 215731.3 CM3 DAY
 Mean 403.4 509.2 539.2 540.5 537.2 622.5 1195.9 983.1 463.0 272.3 347.8 444.3 591.0 CM3
 Max 437.4 725.2 819.0 364.1 717.1 1325.3 1906.6 1400.0 654.7 366.0 446.2 475.5 1705.0 CM3
 Min 272.3 376.0 364.0 300.3 329.4 506.5 504.6 593.2 247.6 183.0 230.6 402.1 183.0 CM3
 Minimum 1065.35 1365.91 1467.52 1447.67 1492.47 2131.93 3211.16 2426.23 1239.79 739.36 341.33 1190.02 12539.23 CMH
 Momentary Peak 1915.30 CM3 at 23:33 M (MSL) at 12:00 Hours on Oct 25, 1983
 Momentary Yield 5.35 Liters/Square KM, Momentary Peak Yield 17.33 Liters/Square KM

RIS Computer Center, Processing: 14-JAN-1993 10:14:56.35

Station - Ban Bang Kaeo, A. Muang, Ang Thong, (C.7A)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

LCS/LQ92D/04

Royal Irrigation Department
 Thailand
 Hydrology Division
 Rating Curve MCS 0003Y/1991

Water Year - 1991

Discharge in Cubic Meter per Second, Water Year April 1, 1991 to March 31, 1992

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	114.3	107.0	125.3	72.8	55.0	733.0	462.3	300.2	124.5	153.3	96.3	105.0	
2	114.3	107.7	119.7	73.5	56.3	747.6	444.6	214.7	143.0	149.0	102.3	93.0	
3	131.0	99.7	117.0	78.5	79.3	233.5	449.7	160.1	192.6	146.0	102.3	77.3	
4	140.0	113.0	105.0	82.4	82.4	840.5	444.6	152.0	132.2	145.0	87.7	75.5	
5	172.0	113.3	101.0	81.1	77.2	355.7	434.5	161.3	203.7	133.3	74.5	77.2	
6	155.0	107.7	93.3	70.9	59.0	844.4	426.9	152.0	209.2	114.3	97.0	74.6	
7	140.0	105.0	74.5	53.7	93.0	822.8	462.3	135.5	225.7	107.7	97.0	83.0	
8	129.5	103.7	94.3	79.3	105.0	357.2	457.3	132.5	233.0	125.0	98.3	103.0	
9	124.0	93.3	91.7	73.5	103.7	374.9	469.9	135.3	233.3	123.7	99.7	113.7	
10	115.7	90.3	69.0	91.7	105.0	230.0	467.4	150.5	300.2	113.0	103.7	123.0	
11	111.7	102.3	67.7	93.3	77.0	797.6	432.9	175.4	315.3	102.3	109.0	121.0	
12	105.0	105.0	97.0	63.7	57.7	753.0	430.3	172.0	343.5	110.3	109.0	144.5	
13	102.3	102.3	102.3	79.3	50.3	691.3	438.2	173.7	374.0	95.7	121.0	147.5	
14	107.7	101.0	113.0	118.3	74.5	638.5	437.0	163.2	385.5	93.0	121.0	141.3	
15	111.7	105.0	110.3	137.0	91.7	655.4	394.0	143.0	364.4	126.5	121.0	128.0	
16	122.3	117.7	106.3	114.3	77.2	633.7	444.6	134.0	323.3	128.0	110.3	115.7	
17	125.3	123.7	91.7	57.7	75.9	647.6	504.0	114.3	319.7	116.3	101.0	102.3	
18	129.5	132.3	26.3	35.0	75.9	617.1	511.7	111.7	334.3	115.7	67.7	103.3	
19	141.5	140.0	23.3	72.3	97.7	562.0	439.3	131.0	325.2	112.3	66.2	107.7	
20	147.5	125.0	92.4	72.3	113.0	547.3	331.3	134.0	313.2	105.0	87.7	114.3	
21	141.5	113.3	61.1	75.9	114.3	514.5	272.7	131.0	303.3	101.0	93.0	114.3	
22	134.0	94.3	56.3	91.1	115.7	517.1	293.3	133.5	293.7	103.7	107.7	123.7	
23	129.5	39.0	74.6	73.3	125.0	475.0	315.3	146.0	275.3	113.3	110.3	131.0	
24	113.7	97.0	66.3	63.3	313.3	467.4	347.3	147.5	253.3	121.0	117.0	135.5	
25	105.0	97.0	93.3	33.7	317.5	473.0	379.0	193.5	260.4	122.5	150.3	137.0	
26	114.3	99.7	74.5	75.7	47.1	462.3	424.3	173.7	236.7	103.7	152.0	132.5	
27	113.0	97.0	97.0	105.0	34.7	442.1	462.3	156.7	223.3	110.3	123.0	135.0	
28	111.7	99.7	103.7	102.3	373.6	411.7	476.1	140.0	201.3	114.0	117.0	139.0	
29	119.7	103.7	94.3	97.0	647.0	426.9	426.1	141.3	135.9	123.7	121.0	117.0	
30	109.0	134.0	55.0	91.7	616.6	437.0	449.7	133.5	163.1	115.3	107.7	137.7	
31	132.3	132.3	67.3	67.3	672.0	361.5		166.1	166.1	109.0		109.0	
Total	3733.2	3371.4	2831.2	2741.7	6172.6	14691.5	13419.0	4637.1	2054.3	3584.1	3114.1	3545.3	74854.2 CMSDAY
Max	144.6	103.3	96.0	83.6	122.1	620.7	432.9	134.6	259.9	118.3	107.4	114.4	204.3 CMS
Min	172.0	140.0	126.5	137.0	572.0	306.6	306.6	300.2	336.3	153.3	152.0	147.5	374.9 CMS
Min	102.3	69.0	66.5	70.9	75.9	411.7	272.7	111.7	122.5	93.0	74.6	74.0	66.3 CMS
Kinoff	323.04	271.22	248.94	230.83	533.31	1034.07	1153.40	400.65	693.11	316.31	259.06	306.35	6457.40 MCM
Minimum Peak	346.20 CMS, at	342 M (MSL), at	23.00 hours, on Sep	2, 1991									
Kinoff Yield	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Units	Liters/Second/Square KM												

Station - Ban Bang Keap, Muang, and Thong, (C.74)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

Royal Irrigation Department
 Thailand
 Hydrology Division 190502
 Rating Curve HC 50C3Y7199

Water Year - 1990

Discharges in Cubic Meter per Second, Water Year April 1, 1990 to March 31, 1991

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	159.2	153.3	497.5	157.3	162.0	127.2	145.4	621.6	262.5	247.6	144.1	140.2	
2	159.2	174.5	600.9	157.3	166.2	122.0	141.5	508.0	236.3	247.6	146.7	144.1	
3	162.0	155.4	569.9	157.3	159.2	107.3	145.4	426.1	309.3	250.8	141.5	135.0	
4	155.0	141.5	657.6	145.7	144.1	102.6	203.1	326.0	310.3	247.6	145.4	141.5	
5	149.4	124.5	706.4	144.1	136.3	105.4	404.0	363.0	350.0	233.2	142.3	142.3	
6	140.2	116.3	592.9	142.3	122.5	114.2	393.7	370.0	354.0	211.3	135.3	141.5	
7	133.7	142.3	653.0	137.5	123.3	142.3	981.4	315.5	352.5	200.5	135.3	150.3	
8	131.1	137.5	630.3	135.3	135.3	155.6	1008.2	254.0	282.9	191.3	133.9	149.4	
9	133.9	137.5	630.3	135.3	142.3	159.2	1008.2	222.0	254.0	135.2	145.4	140.2	
10	136.2	132.4	632.9	141.5	140.2	176.0	1122.6	203.6	242.3	133.7	132.6	145.4	
11	137.3	132.4	733.0	149.7	137.5	135.2	1122.6	197.5	233.2	166.7	115.8	145.4	
12	135.4	132.4	722.9	145.4	144.1	205.2	1120.0	231.9	228.4	176.0	112.9	135.0	
13	136.4	131.1	777.5	136.3	152.2	203.6	1138.4	252.4	231.6	169.0	112.9	125.3	
14	149.4	135.3	731.5	139.2	130.5	149.2	1139.2	307.9	226.3	167.6	111.5	125.3	
15	133.3	133.9	635.5	143.3	137.6	170.4	1154.6	300.5	249.2	162.0	111.5	129.8	
16	137.3	141.5	642.9	135.0	162.0	150.5	1130.4	239.5	255.7	159.2	110.3	120.7	
17	145.4	131.1	631.4	119.4	137.3	142.3	1075.8	206.7	260.8	137.3	115.3	127.2	
18	131.7	128.5	693.0	133.7	135.0	205.1	1013.3	262.9	262.9	149.4	127.2	146.7	
19	124.0	123.9	640.0	144.1	162.0	212.3	911.0	209.7	298.2	144.1	135.3	170.4	
20	113.1	123.3	573.6	124.5	153.6	234.0	515.5	203.6	321.2	141.5	141.5	162.0	
21	110.3	123.9	539.5	144.1	142.3	264.2	739.5	200.5	321.2	135.0	150.3	164.3	
22	105.4	144.1	436.6	132.4	132.4	231.2	737.1	203.6	319.3	123.3	153.6	169.0	
23	113.9	154.3	313.5	135.0	123.5	212.3	806.4	206.7	306.0	127.2	164.8	164.3	
24	132.4	176.0	295.2	125.9	125.9	232.4	916.0	191.3	302.4	142.3	159.2	167.0	
25	123.9	203.1	236.3	123.3	115.1	242.3	1029.0	191.3	293.4	141.5	162.0	164.3	
26	132.4	231.5	249.2	123.7	100.6	202.1	1056.2	189.3	279.5	146.7	142.3	131.1	
27	144.1	233.4	222.5	117.4	92.4	175.0	971.8	184.4	264.2	127.2	144.1	115.5	
28	137.3	372.0	203.5	113.1	107.0	157.2	923.5	212.3	260.3	146.7	145.4	131.1	
29	170.4	426.1	177.5	109.0	93.7	150.3	878.5	276.1	264.2	141.5	135.0	135.0	
30	173.2	436.1	153.4	114.2	103.0	142.3	734.7	263.9	265.9	136.3	152.2	135.0	
31	169.7	469.7	133.7	133.7	133.7	711.4		257.4	257.4	138.9	142.3	142.3	

Total	4312.9	5501.3	16341.2	4202.7	4206.0	5335.4	26346.5	3103.1	3727.1	5319.2	3829.3	4461.2	97603.4 CMSDAY
Mean	145.3	169.1	544.7	135.5	137.6	177.3	846.7	272.8	251.5	171.6	136.8	143.9	255.0 CMS
Max	173.2	400.7	777.5	137.3	166.2	264.2	1134.6	621.6	364.0	250.8	164.8	170.4	1154.6 CMS
Min	103.4	116.3	103.4	109.0	93.7	103.5	141.5	181.5	225.3	123.3	101.0	115.5	93.7 CMS
Runoff	57.03	309.6	1411.03	363.3	363.3	463.93	2267.70	707.19	754.02	459.53	330.35	385.45	3322.44 MCM
Momentary Peak	1134.50 CMS	at 5:26 M (MSL)	at 5:00 Hours, on Oct 15, 1990										
Runoff Yield	*****	Liters/Second/Square KM	*****	Liters/Second/Square KM	*****	Liters/Second/Square KM	*****	Liters/Second/Square KM	*****	Liters/Second/Square KM	*****	Liters/Second/Square KM	

LJS/LQSD2E/04

WJ Computer Center, Processing : 14-JAN-1993 10:19:31.93

Royal Irrigation Department
Thailand
Hydrology Division
Rattis Curve MCSJG03Y/1989

Station - Ban Bang Kaeo, A. Muang, Ang Thong, (G.7A)
Stream - Chao Phraya
River - Chao Phraya
River System - Chao Phraya River

Water Year - 1989

Discharge, in Cubic Meter per Second, Water Year April 1, 1989 to March 31, 1990

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	144.0	73.9	136.0	150.4	77.2	124.0	337.9	252.0	225.4	209.2	100.2	115.3	
2	113.4	57.2	148.8	140.3	77.2	134.5	342.2	209.3	225.4	203.0	117.1	122.5	
3	109.3	93.7	163.9	124.0	73.6	139.2	290.0	189.4	236.2	199.6	114.5	130.0	
4	105.4	124.0	238.0	127.0	72.4	130.0	281.3	194.5	230.0	176.2	103.0	137.6	
5	104.1	134.5	354.3	125.3	74.3	124.0	170.7	159.4	214.9	171.1	127.0	137.6	
6	113.2	144.0	408.8	119.7	72.4	127.0	165.6	179.2	227.2	179.2	134.5	147.2	
7	113.4	137.2	510.2	110.6	79.6	123.5	143.8	153.2	272.0	177.3	122.5	140.8	
8	113.2	117.1	429.3	110.6	76.0	122.5	134.5	155.4	340.1	132.5	103.5	139.2	
9	117.1	117.1	664.2	100.2	66.0	123.5	144.0	142.4	477.6	185.0	92.4	119.7	
10	117.0	117.7	361.2	93.4	73.6	123.5	139.2	139.2	474.1	165.6	101.5	113.4	
11	144.0	147.0	363.4	63.3	67.2	144.0	130.0	144.0	635.2	172.4	117.1	117.1	
12	132.0	109.3	437.6	109.3	98.9	115.8	140.3	137.1	435.2	172.4	121.0	106.7	
13	144.0	144.0	520.6	144.0	113.6	121.0	162.2	170.7	420.3	162.2	115.4	115.4	
14	143.3	115.6	507.2	148.3	113.2	136.0	177.5	179.2	409.3	157.1	125.0	130.0	
15	134.1	92.3	337.7	137.1	117.1	145.6	184.3	192.3	423.2	142.4	115.8	134.5	
16	101.5	57.2	501.0	123.0	123.5	179.2	140.9	204.7	411.2	123.5	103.4	130.0	
17	105.4	63.3	444.8	134.5	131.5	149.2	130.9	192.3	394.3	136.0	101.5	134.5	
18	97.6	83.9	430.4	133.0	121.0	203.0	177.3	177.9	376.5	136.0	103.0	139.2	
19	91.1	42.4	403.8	137.6	113.2	206.4	184.3	201.3	354.3	124.0	103.0	145.6	
20	93.7	72.4	399.4	145.6	117.1	215.6	177.9	199.4	323.0	101.5	103.0	163.6	
21	99.3	77.2	397.1	169.0	118.4	221.8	372.2	134.3	296.0	113.2	104.1	157.1	
22	93.3	93.9	363.4	194.3	106.7	246.0	640.7	172.4	270.0	124.0	101.5	134.0	
23	94.6	93.7	333.0	125.3	104.1	229.0	915.8	132.0	244.0	111.9	93.9	137.6	
24	95.0	104.1	290.0	104.1	93.9	216.6	1073.6	157.1	238.0	114.5	97.2	125.6	
25	104.1	101.5	266.0	110.6	117.1	266.0	1061.2	174.1	236.2	127.0	91.1	111.9	
26	107.3	91.1	229.0	93.3	119.7	302.0	984.0	167.0	229.0	125.3	113.2	139.3	
27	103.0	93.0	191.1	100.2	127.0	411.2	831.7	170.7	239.0	123.5	113.4	117.1	
28	103.3	92.4	163.5	110.6	144.0	464.2	643.5	164.3	230.3	136.0	113.2	131.5	
29	103.4	97.6	157.1	121.0	130.0	394.3	527.9	201.3	227.2	115.9	113.2	130.0	
30	103.4	102.3	143.3	91.1	133.0	416.0	420.8	213.2	225.4	93.7	127.0	127.0	
31	109.3	109.3	95.9	95.9	134.5	330.0	330.0	220.0	220.0	59.3	127.0	127.0	

Total	5320.0	5191.9	10449.8	5863.0	3214.5	6098.5	11615.4	5413.4	9335.1	4600.0	3023.9	4937.7	68450.2 CMSDAY
Mean	110.7	103.0	343.3	144.6	103.7	203.3	374.7	120.5	307.6	148.4	110.2	130.9	137.5 CMS
Max	132.0	144.0	567.2	194.5	144.0	464.2	1073.6	252.0	474.1	209.6	134.5	165.6	1673.6 CMS
Min	83.3	72.4	136.0	85.9	66.0	115.8	133.0	131.2	214.9	89.3	87.2	100.7	66.0 CMS
Runoff	238.55	273.78	902.66	333.73	277.73	526.91	1003.57	468.15	822.53	397.44	266.62	350.59	5914.10 MCY
Runoff Peak	1095.60 CMS	at	4.63 M (MSL)	at	13.00 Hours	on Oct 24, 1989							
Runoff Yield	***** Liters/Second/Square KM, Momentary Peak Yield ***** Liters/Second/Square KM												

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KLD Computer Center, Processing: 14-JAN-1993 10:11:20.34

Royal Irrigation Department
Thailand
Hydrology Division
Rating Curve

Station - Ban Bang Kheor A. Huang, Ang Thong (U.74)
Stream - Chaop Phraya
River - Chaop Phraya
River system - Chaop Phraya River

Water Year - 1y12

Discharge in Cubic Meter per Second, Water Year April 1, 1982 to March 31, 1983

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	143.9	115.0	221.0	148.2	201.9	390.2	824.3	1925.3	310.1	241.6	131.4	120.4	
2	135.5	119.5	177.9	142.5	248.0	452.0	203.2	1497.8	310.1	230.4	127.2	130.0	
3	113.7	117.3	183.9	144.0	204.5	530.0	754.9	1335.5	505.0	132.5	135.0	130.0	
4	115.3	116.5	199.3	139.3	212.0	608.4	727.3	1293.2	291.4	236.3	134.2	121.7	
5	137.0	141.7	155.6	131.4	233.4	643.5	687.9	1170.0	275.2	260.3	137.0	113.9	
6	147.2	134.2	142.8	124.4	193.5	643.3	643.6	1127.6	272.4	235.0	124.4	117.3	
7	144.4	133.4	137.0	127.2	199.4	599.6	566.4	1039.6	299.9	235.2	132.3	127.2	
8	124.4	131.4	167.3	133.4	172.0	533.0	528.0	1007.6	342.4	194.0	130.0	123.0	
9	143.0	131.4	256.4	153.3	169.5	420.0	440.0	340.4	372.2	174.3	124.4	127.2	
10	143.0	123.6	327.1	174.3	165.0	305.0	464.0	371.2	404.4	146.4	120.4	137.0	
11	146.3	130.0	312.0	165.0	155.0	236.8	478.0	317.0	430.0	159.0	130.0	145.4	
12	141.2	134.2	617.2	209.0	200.0	174.0	512.0	720.2	428.0	145.4	128.4	138.3	
13	127.2	139.4	665.5	203.0	227.2	178.2	584.2	735.5	424.0	131.4	135.6	138.3	
14	129.4	135.3	632.4	193.3	270.4	133.3	634.2	692.0	413.0	142.0	139.3	138.3	
15	137.0	136.4	530.4	186.5	231.4	144.4	631.2	637.0	440.0	144.0	134.2	135.6	
16	133.4	132.2	364.2	179.0	289.7	130.0	715.4	597.4	422.0	144.0	131.4	128.5	
17	142.6	172.0	500.3	132.4	142.6	142.6	331.5	542.6	401.0	139.3	115.5	123.0	
18	145.4	135.0	535.0	139.3	245.4	156.5	1073.5	514.0	372.2	146.0	106.1	110.0	
19	142.6	211.5	304.0	167.3	221.0	191.0	1259.5	445.0	340.7	152.2	105.1	130.0	
20	133.4	233.4	482.0	238.4	222.5	304.7	1432.0	423.0	330.5	156.5	107.4	97.4	
21	131.4	333.0	430.0	339.0	241.6	601.3	1572.6	402.8	323.7	151.0	102.7	103.5	
22	129.4	370.0	413.0	450.0	257.2	1038.4	1823.8	401.0	313.5	153.3	111.3	116.5	
23	115.2	426.0	331.2	604.0	273.6	1432.0	1933.9	623.0	322.0	159.4	120.4	121.7	
24	106.1	320.0	344.1	654.6	293.0	1532.4	1922.0	414.0	322.0	155.2	123.0	127.2	
25	103.7	422.0	289.4	632.4	316.9	1930.2	1975.9	394.3	325.4	146.3	130.0	117.2	
26	111.3	338.4	236.4	530.4	273.5	1574.0	1932.0	349.2	349.2	137.0	123.0	114.1	
27	111.3	322.6	213.0	370.3	273.5	1650.2	1924.0	342.4	303.4	116.5	130.0	141.7	
28	104.3	323.7	169.0	530.0	323.5	1298.0	1937.2	344.1	239.7	146.6	127.2	127.2	
29	103.5	283.2	170.5	604.0	345.8	1124.7	1916.3	340.7	281.6	141.2	137.0	137.0	
30	103.5	268.6	153.0	397.4	332.5	939.2	1844.5	313.3	251.2	130.0	145.4	145.4	
31	103.5	253.4	253.4	344.1	301.4	1757.4	1757.4	251.2	251.2	132.3	131.4	131.4	

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	143.9	115.0	221.0	148.2	201.9	390.2	824.3	1925.3	310.1	241.6	131.4	120.4	
2	135.5	119.5	177.9	142.5	248.0	452.0	203.2	1497.8	310.1	230.4	127.2	130.0	
3	113.7	117.3	183.9	144.0	204.5	530.0	754.9	1335.5	505.0	132.5	135.0	130.0	
4	115.3	116.5	199.3	139.3	212.0	608.4	727.3	1293.2	291.4	236.3	134.2	121.7	
5	137.0	141.7	155.6	131.4	233.4	643.5	687.9	1170.0	275.2	260.3	137.0	113.9	
6	147.2	134.2	142.8	124.4	193.5	643.3	643.6	1127.6	272.4	235.0	124.4	117.3	
7	144.4	133.4	137.0	127.2	199.4	599.6	566.4	1039.6	299.9	235.2	132.3	127.2	
8	124.4	131.4	167.3	133.4	172.0	533.0	528.0	1007.6	342.4	194.0	130.0	123.0	
9	143.0	131.4	256.4	153.3	169.5	420.0	440.0	340.4	372.2	174.3	124.4	127.2	
10	143.0	123.6	327.1	174.3	165.0	305.0	464.0	371.2	404.4	146.4	120.4	137.0	
11	146.3	130.0	312.0	165.0	155.0	236.8	478.0	317.0	430.0	159.0	130.0	145.4	
12	141.2	134.2	617.2	209.0	200.0	174.0	512.0	720.2	428.0	145.4	128.4	138.3	
13	127.2	139.4	665.5	203.0	227.2	178.2	584.2	735.5	424.0	131.4	135.6	138.3	
14	129.4	135.3	632.4	193.3	270.4	133.3	634.2	692.0	413.0	142.0	139.3	138.3	
15	137.0	136.4	530.4	186.5	231.4	144.4	631.2	637.0	440.0	144.0	134.2	135.6	
16	133.4	132.2	364.2	179.0	289.7	130.0	715.4	597.4	422.0	144.0	131.4	128.5	
17	142.6	172.0	500.3	132.4	142.6	142.6	331.5	542.6	401.0	139.3	115.5	123.0	
18	145.4	135.0	535.0	139.3	245.4	156.5	1073.5	514.0	372.2	146.0	106.1	110.0	
19	142.6	211.5	304.0	167.3	221.0	191.0	1259.5	445.0	340.7	152.2	105.1	130.0	
20	133.4	233.4	482.0	238.4	222.5	304.7	1432.0	423.0	330.5	156.5	107.4	97.4	
21	131.4	333.0	430.0	339.0	241.6	601.3	1572.6	402.8	323.7	151.0	102.7	103.5	
22	129.4	370.0	413.0	450.0	257.2	1038.4	1823.8	401.0	313.5	153.3	111.3	116.5	
23	115.2	426.0	331.2	604.0	273.6	1432.0	1933.9	623.0	322.0	159.4	120.4	121.7	
24	106.1	320.0	344.1	654.6	293.0	1532.4	1922.0	414.0	322.0	155.2	123.0	127.2	
25	103.7	422.0	289.4	632.4	316.9	1930.2	1975.9	394.3	325.4	146.3	130.0	117.2	
26	111.3	338.4	236.4	530.4	273.5	1574.0	1932.0	349.2	349.2	137.0	123.0	114.1	
27	111.3	322.6	213.0	370.3	273.5	1650.2	1924.0	342.4	303.4	116.5	130.0	141.7	
28	104.3	323.7	169.0	530.0	323.5	1298.0	1937.2	344.1	239.7	146.6	127.2	127.2	
29	103.5	283.2	170.5	604.0	345.8	1124.7	1916.3	340.7	281.6	141.2	137.0	137.0	
30	103.5	268.6	153.0	397.4	332.5	939.2	1844.5	313.3	251.2	130.0	145.4	145.4	
31	103.5	253.4	253.4	344.1	301.4	1757.4	1757.4	251.2	251.2	132.3	131.4	131.4	

Total: 3627.2 7259.3 10497.3 6956.7 7356.8 19715.6 35622.5 21412.0 10535.2 5301.1 3503.9 3333.2 136552.1 CMS DAY
 Mean 122.9 227.1 349.5 288.9 253.4 657.2 1149.1 730.4 340.5 171.0 125.1 125.3 372.6 CMS
 Max 145.8 490.0 605.0 654.5 301.4 1630.2 1932.0 1525.8 440.0 288.0 130.8 145.4 1932.0 CMS
 Min 100.0 112.5 137.0 124.4 166.4 130.0 464.0 313.6 231.2 116.5 106.1 97.0 CMS
 Runoff 313.7 609.92 907.01 773.86 676.33 1703.43 3077.77 1493.40 913.06 458.02 302.74 335.51 11970.90 HCM
 Momentary Peak 193320 CMS, at 7:30 M (MSL), at 1:00 Hours, on Oct 27, 1982
 Runoff Yield ***** Liters/Second/Square Km, Momentary Peak Yield ***** Liters/Second/Square Km

NJO Computer Center, Processing : 14-JAN-1993 10:20:45.13

LCS/L15020/J4

Royal Irrigation Department
Thailand
Hydrology Division
Rating Curve MCS 0002/1991

Station - Ban De Rai, Sanphay, Chai Wat, (6.13)
Stream - Chao Phraya
River - Chao Phraya
River system - Chao Phraya River

Water Year - 1991

Discharge in Cubic Meter per Second, Water Year April 1, 1991 to March 31, 1992

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	72.9	54.7	42.9	42.9	42.9	597.5	373.4	191.6	56.9	45.1	54.7	66.5	
2	76.7	54.7	42.9	42.9	42.9	725.2	359.0	145.2	59.8	42.9	54.7	52.0	
3	75.7	54.7	42.9	42.9	42.9	70.7	359.0	133.6	53.3	42.9	54.7	56.9	
4	71.0	54.7	42.9	42.9	42.9	751.3	552.3	123.3	64.7	42.9	54.7	54.7	
5	65.5	54.7	42.9	42.9	42.9	342.7	342.7	117.9	62.9	42.9	54.7	54.7	
6	65.5	54.7	42.9	42.9	42.9	725.3	342.7	113.6	62.9	42.9	54.7	63.8	
7	69.5	54.7	42.9	42.9	42.9	755.2	373.9	114.8	80.5	42.9	54.7	71.0	
8	73.8	54.7	42.9	42.9	42.9	342.7	342.7	109.6	111.7	42.9	54.7	71.0	
9	64.3	54.7	42.9	42.9	42.9	732.0	397.9	105.5	123.9	42.9	54.7	71.0	
10	73.1	54.7	42.9	42.9	42.9	705.9	431.3	111.7	123.9	42.9	54.7	71.0	
11	93.1	54.7	42.9	42.9	42.9	659.0	399.9	122.1	137.1	42.9	54.7	71.0	
12	22.4	54.7	42.9	42.9	42.9	530.5	411.5	129.0	167.2	43.7	54.7	71.0	
13	72.9	54.7	42.9	42.9	42.9	534.4	373.9	120.0	162.3	42.9	54.7	71.0	
14	74.6	54.7	42.9	42.9	42.9	562.0	339.3	100.3	135.2	42.9	62.0	71.0	
15	77.6	54.7	42.9	42.9	42.9	582.0	411.5	91.4	125.7	42.9	71.0	71.0	
16	73.7	54.7	42.9	42.9	42.9	595.0	431.3	65.6	117.9	42.9	71.0	71.0	
17	31.4	54.7	42.9	42.9	42.9	574.2	436.0	56.9	103.6	42.9	66.5	71.0	
18	31.4	43.8	42.9	42.9	42.9	559.2	443.2	53.9	99.3	42.9	62.0	71.0	
19	75.7	42.9	42.9	42.9	42.9	497.0	394.4	56.1	87.1	42.9	53.3	71.0	
20	73.7	42.9	42.9	42.9	42.9	493.7	472.5	61.3	63.3	42.9	57.6	71.0	
21	75.7	42.9	42.9	42.9	42.9	400.3	315.1	65.6	58.3	42.9	54.7	71.0	
22	75.7	42.9	42.9	42.9	42.9	452.1	318.4	63.3	56.1	42.9	53.9	71.0	
23	75.7	42.9	42.9	42.9	42.9	432.7	342.7	63.3	54.7	42.9	54.7	71.0	
24	75.7	42.9	42.9	42.9	42.9	454.0	339.3	76.7	54.7	42.9	54.7	71.0	
25	73.7	42.9	42.9	42.9	42.9	433.4	413.4	64.3	51.0	42.9	54.7	71.0	
26	71.9	42.9	42.9	42.9	42.9	407.5	444.3	79.5	43.9	42.9	64.7	71.0	
27	67.6	42.9	42.9	42.9	42.9	373.4	457.7	71.9	43.7	42.9	75.7	71.0	
28	65.5	42.9	42.9	42.9	42.9	364.6	464.3	60.3	42.9	49.5	72.9	71.0	
29	69.5	42.9	42.9	42.9	42.9	590.3	432.7	54.7	43.9	96.3	67.4	71.0	
30	61.5	42.9	42.9	42.9	42.9	405.7	371.6	56.1	47.5	59.3	71.0	71.0	
31	42.9	42.9	42.9	42.9	42.9	559.0	303.7	48.6	48.6	42.9	42.9	71.0	

Total	2250.9	1536.4	1329.9	5911.1	17175.9	12304.7	2797.0	2585.3	1417.7	1712.9	2133.6	52157.4	CMSDAY
Mean	75.0	49.6	43.4	42.9	190.7	572.5	567.2	73.2	63.4	45.7	59.1	63.8	142.5
Max	75.7	54.7	51.0	42.9	69.0	732.7	435.0	191.6	167.2	98.3	75.7	71.0	752.7
Min	61.3	42.9	42.9	42.9	42.9	373.4	372.5	53.9	42.9	42.9	53.9	54.7	42.9
Runoff	194.8	134.74	112.41	114.90	510.72	1464.45	1037.21	241.66	223.57	122.49	147.99	184.54	4565.57
Runoff Peak	795.40	CMS, at 10:31 M (MSL)	at 15:00 Hours, on Sep 8, 1991										
Runoff Yield	1.18	Liters/Square KM	Momentary Peak Yield	6.59	Liters/Square KM								

Station - Ban Ae Hai, Sanphayay Chai Wat, (C.13)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

Royal Irrigation Department
 Thailand
 Hydrology Division 221191
 Rating Curve HC 50024/199C

Water Year - 1970

Discharge in Cubic Meter per Second, Water Year April 1, 1990 to March 31, 1991

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	92.9	93.2	92.2	143.9	143.6	67.0	134.2	430.4	247.4	73.2	70.5	67.0	
2	96.3	88.1	82.0	135.4	131.9	67.7	133.6	332.8	280.1	72.4	70.5	67.0	
3	95.4	85.2	68.0	123.0	109.7	69.1	207.4	304.5	292.0	62.3	69.3	68.4	
4	94.6	34.4	73.0	118.0	92.0	74.0	213.0	293.8	333.4	60.0	69.3	77.5	
5	96.1	35.2	77.0	115.1	65.2	107.0	493.2	322.6	331.5	60.1	67.1	65.2	
6	91.3	65.2	718.0	103.4	62.7	135.1	732.0	272.0	266.0	60.0	67.7	65.2	
7	93.5	73.9	629.0	106.1	61.8	146.0	354.5	204.7	193.0	60.0	63.5	75.2	
8	91.2	66.4	628.4	113.3	63.2	154.2	908.6	161.2	161.2	60.0	66.6	74.0	
9	93.0	71.2	784.0	126.0	68.6	183.5	1075.2	151.8	189.5	60.0	58.4	74.0	
10	110.5	66.3	823.5	134.2	82.7	178.9	1060.9	163.5	154.2	60.0	53.7	77.6	
11	120.0	63.4	366.6	136.6	92.0	231.7	1063.0	235.6	141.3	60.0	56.5	85.2	
12	116.0	67.7	373.2	136.5	107.0	209.4	1406.4	244.7	133.1	60.0	68.4	85.2	
13	108.6	67.7	326.6	141.3	115.1	153.0	1212.8	323.0	122.0	60.0	71.2	85.2	
14	106.4	68.4	745.0	140.1	123.4	150.7	1239.2	269.0	110.6	62.3	50.3	62.7	
15	105.2	93.4	736.0	128.4	130.7	132.4	1197.8	182.4	97.1	67.0	81.3	78.9	
16	93.9	70.5	729.0	100.7	126.0	232.6	1142.0	143.5	98.0	69.3	78.9	78.6	
17	92.0	69.1	718.0	83.5	116.0	233.2	1003.0	136.6	115.1	70.3	62.7	84.4	
18	87.2	67.7	712.0	73.3	101.6	251.6	854.5	135.4	134.2	70.5	53.5	86.1	
19	81.3	67.0	672.0	73.3	66.1	261.6	712.0	136.6	144.2	70.5	52.7	63.5	
20	66.1	67.0	607.5	73.3	60.3	222.6	574.0	131.6	131.6	70.5	73.6	73.9	
21	95.4	67.7	486.3	72.6	66.9	194.2	620.6	120.0	112.0	62.3	73.3	77.5	
22	100.7	111.3	295.6	72.6	77.5	213.0	676.0	106.1	113.3	69.1	69.1	77.5	
23	105.2	133.9	301.0	72.6	72.6	275.0	799.0	92.0	119.0	69.1	70.5	77.5	
24	98.9	141.3	237.9	72.6	67.0	238.2	1094.7	92.9	120.0	69.3	74.0	77.5	
25	92.9	130.1	247.9	72.6	67.0	196.5	1050.4	106.1	115.1	69.3	76.3	78.9	
26	72.6	264.4	224.5	72.6	67.0	133.9	960.8	123.0	108.3	69.3	78.9	78.9	
27	66.3	371.2	203.4	71.3	67.0	116.0	903.6	136.6	94.4	70.5	78.9	77.5	
28	71.9	403.3	181.8	72.6	67.0	99.6	882.8	272.0	81.0	71.2	71.2	77.5	
29	82.7	333.7	135.4	90.3	67.0	105.2	737.0	247.4	30.3	71.2	77.5	77.5	
30	33.2	300.1	141.3	114.2	67.0	113.0	653.3	202.6	30.3	71.2	77.5	77.5	
31		516.2		134.2	67.0		564.0		79.6	71.2		78.2	

Total	2311.9	4524.0	17234.8	3224.0	2369.6	5019.4	25009.5	8125.7	4772.3	2783.5	2027.8	2441.3	78207.4 CMSDAY
Mean	73.9	149.2	574.5	104.0	91.9	167.3	806.8	204.2	133.9	69.7	72.6	72.6	214.3 CMS
Max	120.0	316.2	873.2	143.6	143.6	281.8	1239.2	430.4	333.4	78.9	70.5	86.1	1239.2 CMS
Min	66.3	67.0	155.4	71.9	67.0	67.0	134.2	92.0	79.5	60.0	53.7	67.0	53.7 CMS
Kinoff	242.35	399.51	1489.09	273.55	248.21	433.63	2150.32	529.26	412.35	173.75	175.20	210.97	6757.29 MCM
Momentary Peak	1219.20 CMS	at 11:48 M (MSL)	at 9:00 Hours	on Oct 15, 1990									
Runoff Yield	1.78	Liters/Square KM,	Momentary Peak Yield	10.27	Liters/Square KM								

WFO Computer Center, Processing : 14-JAN-1993 10:20:22.83

LCS/LJ3020704

Station - Ban Pa Rai, Sarabwary, Chai Nat, (C.13)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

Royal Irrigation Department
 Thailand
 Hydrology Division
 Rating Curve MCS-002Y/1939

Water Year - 1989

Discharges in Cubic Meter per Second, Water Year April 1, 1989 to March 31, 1990

Date	Apr	May	Jun	Jul	AUG	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	46.0	78.0	127.0	97.0	50.0	109.2	545.3	213.0	127.0	47.6	40.4	55.6	
2	79.0	36.0	156.9	53.0	52.4	101.0	306.5	182.9	130.9	46.0	39.6	54.8	
3	109.2	103.4	330.0	67.0	58.4	99.0	210.2	154.3	133.5	42.8	39.6	76.0	
4	106.3	173.8	411.9	53.9	53.6	105.6	137.4	145.2	133.5	42.8	39.6	77.0	
5	103.2	173.1	440.7	54.3	53.6	111.6	114.0	122.3	141.9	42.8	40.4	77.0	
6	74.0	155.9	530.0	59.4	50.4	111.6	102.0	115.3	171.2	42.0	42.0	77.0	
7	75.2	70.0	511.9	57.2	52.4	103.0	90.0	111.6	239.5	41.2	44.4	77.0	
8	107.5	52.0	491.0	58.0	46.0	36.0	23.0	110.4	308.2	40.4	47.5	77.0	
9	120.5	52.0	409.2	53.0	48.0	35.0	92.0	110.4	365.7	46.3	52.4	75.0	
10	127.0	53.0	377.2	53.0	48.0	36.0	112.3	116.6	314.7	103.2	51.6	77.0	
11	141.3	53.0	473.0	123.3	50.8	95.0	134.8	123.1	319.3	54.8	51.6	77.0	
12	112.2	103.0	542.5	133.0	53.0	106.8	196.2	124.4	297.0	44.4	52.4	77.0	
13	95.0	141.3	505.0	160.3	59.6	124.4	203.2	123.3	214.4	46.8	53.2	60.0	
14	74.0	96.0	500.5	154.3	75.0	150.4	166.6	133.5	204.6	62.0	53.2	62.0	
15	95.0	72.0	525.0	146.3	108.3	179.0	188.6	134.8	171.2	74.0	52.4	97.0	
16	74.0	53.0	432.1	137.4	106.6	172.5	180.3	132.2	152.5	51.0	51.6	95.0	
17	75.0	53.0	444.5	138.1	106.6	146.5	116.6	123.1	143.9	30.0	51.6	106.8	
18	59.6	57.0	426.0	134.3	98.0	145.2	120.5	119.2	132.2	70.0	51.6	117.9	
19	53.3	57.4	422.4	133.7	101.0	147.5	135.6	120.5	108.0	48.2	52.4	121.3	
20	53.0	53.0	431.1	133.0	94.0	176.4	393.2	120.5	106.0	42.3	52.4	123.1	
21	60.4	57.2	395.4	236.3	60.0	104.2	632.3	115.3	98.0	42.3	51.6	124.4	
22	72.0	57.2	370.3	79.0	75.0	193.4	922.6	116.6	82.0	43.2	52.4	104.0	
23	54.0	57.2	319.3	79.0	79.0	163.6	1180.6	116.6	74.0	47.9	51.6	97.0	
24	73.0	53.0	309.6	95.0	90.0	261.0	1135.3	111.6	65.0	46.8	51.6	92.0	
25	91.0	53.0	279.4	94.3	63.0	313.4	1032.0	116.6	63.0	42.3	51.6	115.3	
26	85.0	53.0	242.5	53.2	99.0	393.5	939.2	124.4	62.0	42.0	54.0	119.2	
27	73.0	53.0	204.5	51.5	113.3	536.6	600.2	127.0	63.0	41.2	59.6	120.5	
28	97.0	52.0	175.4	30.2	119.2	529.3	520.6	127.0	57.2	41.2	61.2	120.5	
29	66.0	42.0	149.1	50.0	123.7	429.3	415.2	127.0	48.4	41.2	61.2	103.2	
30	99.0	121.0	124.1	28.3	129.5	599.0	343.6	123.3	49.2	40.4	65.0	85.0	
31	111.6	111.6		28.6	119.2	244.0			49.2	40.4		85.0	
Total	4572.3	5506.1	11263.0	2235.5	2451.6	5711.1	11402.2	3559.0	4616.3	1570.6	1394.4	2693.5	53354.9 CMSDAY
Avgn	99.1	95.7	373.4	71.5	79.4	190.4	367.3	123.6	148.9	50.7	69.3	93.3	146.1 CMS
Max	127.0	175.1	605.0	253.5	129.6	536.6	1135.3	213.0	365.7	103.2	61.2	125.7	1155.9 CMS
Min	53.0	57.2	124.1	33.0	50.0	63.0	33.0	110.4	42.4	40.4	39.6	54.3	26.6 CMS
Runoff	430.80	227.90	773.12	244.90	212.92	495.64	935.15	333.33	398.89	135.70	120.45	249.93	4663.14 MCM
Momentary Peak	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),	1207.00 CMS, at 11:50 M (M3L),
Runoff Yield	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	10.51 Liters/Second/Square KM

Station - Ban Ng Ruir, Sarabanyar Canal Natr. (C.13)
 Stream - Chao Phraya
 River - Chao Phraya
 River System - Chao Phraya River

Royal Irrigation Department
 Irrailanc
 Hydrology Division 200559
 Rating Curve

Water Year - 1983

Discharge in Cubic Meter per Second, Water Year April 1, 1983 to March 31, 1989

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	48.3	53.4	128.2	99.3	205.2	454.4	735.0	1845.0	254.0	25.7	49.5	51.2	
2	47.5	53.4	103.2	87.9	205.0	602.5	893.0	1856.4	230.5	26.2	50.3	51.2	
3	49.6	55.3	96.2	79.1	214.0	657.5	845.1	1517.0	203.5	109.4	49.5	53.2	
4	52.6	56.5	74.0	75.0	270.0	715.2	759.8	1369.2	193.0	150.7	43.9	53.2	
5	57.4	54.2	53.2	86.3	170.6	729.2	751.8	1260.6	173.2	241.2	49.4	59.0	
6	55.8	55.0	51.3	102.2	109.4	557.5	877.5	1163.6	172.0	92.4	45.6	59.0	
7	49.6	59.0	104.6	123.4	123.5	522.6	517.5	1108.2	204.0	53.2	50.3	62.9	
8	43.2	62.6	275.3	135.1	166.4	464.6	591.0	1000.0	203.0	53.4	51.0	64.4	
9	30.3	70.0	297.0	179.0	154.6	301.4	537.0	914.4	242.3	51.0	51.0	65.3	
10	49.6	66.3	390.0	195.0	139.0	235.5	355.2	832.3	275.1	51.0	50.3	59.0	
11	57.5	118.2	721.4	200.4	109.2	193.0	577.5	784.3	273.1	51.0	50.3	59.0	
12	59.2	153.2	747.8	227.5	224.5	157.2	690.0	731.3	273.3	59.9	50.3	54.0	
13	76.0	122.1	737.0	196.0	267.0	107.0	712.8	672.5	280.2	102.2	50.3	59.0	
14	78.0	109.4	729.2	154.6	303.2	73.0	750.5	617.5	325.0	76.0	50.3	59.9	
15	83.0	95.2	655.0	163.7	296.2	61.7	784.3	370.6	312.5	60.3	51.0	64.4	
16	69.0	64.6	640.0	101.0	266.3	61.7	599.8	541.6	343.0	54.2	51.0	61.7	
17	92.6	79.1	600.0	114.3	249.0	71.0	1147.5	500.2	254.0	65.3	51.0	60.5	
18	55.4	42.6	503.4	194.5	223.0	37.4	1372.9	452.2	221.0	60.2	51.0	60.3	
19	43.9	157.4	345.5	292.4	233.5	233.5	1540.3	376.0	213.5	60.2	52.6	60.3	
20	44.0	458.2	502.5	390.0	253.3	600.0	1995.1	374.0	147.5	65.7	59.0	65.3	
21	43.4	500.2	463.0	541.3	303.2	1125.3	2314.1	372.0	165.4	105.3	60.8	60.3	
22	42.2	549.0	436.0	721.4	324.0	1691.5	2611.4	406.1	143.1	167.4	53.2	67.9	
23	43.4	497.9	322.1	755.9	343.0	1929.2	2331.8	394.0	133.4	64.4	56.6	64.6	
24	35.0	440.4	263.3	734.4	276.2	2051.4	2540.5	299.5	133.0	59.0	56.6	75.0	
25	62.5	322.0	252.4	602.5	363.0	1769.0	2311.3	292.4	233.5	55.8	50.6	67.1	
26	57.4	352.0	314.0	622.5	370.0	1672.3	2327.3	295.0	71.0	50.3	56.6	67.1	
27	55.0	294.2	164.3	525.5	363.0	1444.3	2325.2	292.4	91.5	48.2	37.6	62.9	
28	56.6	237.0	149.3	508.0	392.0	1194.0	2352.3	270.0	97.4	48.2	50.3	50.3	
29	57.4	266.8	114.3	384.0	334.0	1040.3	2367.2	262.0	43.2	43.2	50.3	50.3	
30		209.5		328.0	422.9		2357.2		83.7	43.9			
Total	1422.2	6493.9	11044.5	9560.3	3097.0	25444.3	44317.6	21570.1	6290.6	2451.1	1471.7	1948.2	133392.0 CMSDAY
Mean	54.1	209.5	367.5	311.5	261.2	761.5	1429.6	719.0	202.9	77.1	52.6	62.3	379.2 CMS
Max	76.0	500.2	747.8	775.5	422.9	2120.2	2345.0	1645.0	346.0	241.2	60.2	87.9	2545.0 CMS
Min	42.2	53.4	51.3	75.0	109.4	61.7	537.0	262.0	71.0	43.2	48.2	50.3	42.2 CMS
Knoff	140.16	561.67	952.52	634.65	674.52	2025.63	3329.04	1963.66	543.51	211.73	127.15	168.32	11957.07 HCM
Knoff Peak	2553.30 CMSr at 14.92 M (MSL), at 23:00 hours on Oct 21, 1983												
Knoff Yield	3.16 Liters/Second/Square KM, Momentary Peak Yield												21.16 Liters/Second/Square KM

LUS/LUS02D/04

Water Year - 1991

Royal Irrigation Department
 Irrigation
 Hydrology Division
 Rating Curve H.S. 00134/1971

Station - The Raj, The Raj, Para Mahon S. A. Vuttthayak (S. 002)
 - 26 334
 - 26 334
 River - Paeak River

Discharge in Cubic Meter per Second, Water Year April 1, 1991 to March 31, 1992

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	32.1	37.5	34.0	28.6	42.3	771.7	602.6	51.2	32.7	50.0	32.1	30.5	
2	35.4	39.5	47.0	27.3	28.7	702.5	619.3	52.4	45.5	57.2	32.2	16.7	
3	42.3	40.1	41.2	23.7	27.8	729.2	529.9	33.7	56.7	53.5	26.1	17.0	
4	47.1	36.5	32.1	27.3	27.3	598.0	635.3	43.3	58.2	46.5	20.9	16.3	
5	32.7	35.9	32.7	27.4	28.6	692.6	645.6	42.8	72.7	42.3	20.0	20.9	
6	32.7	39.9	33.7	23.5	21.8	670.2	534.3	39.6	87.7	34.3	30.0	20.0	
7	47.6	33.2	31.6	23.9	28.6	675.2	609.2	47.1	77.0	44.4	32.7	27.8	
8	30.2	31.1	34.3	24.3	26.5	567.5	612.1	32.7	72.0	39.6	30.0	34.3	
9	42.1	35.3	32.7	20.9	25.7	646.7	637.4	45.5	76.2	35.3	30.5	34.3	
10	32.6	34.3	27.0	27.0	34.3	640.5	620.7	43.3	103.3	31.1	35.3	33.7	
11	32.1	30.0	27.9	23.7	31.6	535.3	563.6	60.4	94.6	30.5	32.7	43.9	
12	27.0	29.1	31.1	23.5	30.5	635.3	545.6	51.3	106.2	35.9	39.1	49.7	
13	30.5	33.9	32.7	30.0	32.7	622.1	524.3	42.8	123.1	24.4	44.9	52.4	
14	30.5	31.1	40.7	47.1	31.1	607.3	460.0	42.3	109.7	23.7	44.9	50.2	
15	32.3	34.5	35.9	49.2	29.1	537.7	407.5	34.4	113.3	33.2	31.6	43.3	
16	30.9	40.1	39.1	36.0	27.6	470.0	553.3	32.7	66.9	47.1	28.3	32.1	
17	42.3	39.1	33.2	32.7	23.1	437.5	284.9	30.0	32.7	35.9	25.2	31.6	
18	42.0	45.5	31.6	22.7	24.8	464.9	274.7	23.7	93.4	29.6	30.0	24.6	
19	30.3	42.7	30.5	33.7	34.4	436.9	265.6	44.4	24.2	32.7	23.9	33.7	
20	32.3	45.5	39.9	33.2	34.3	425.5	200.3	41.7	57.1	29.1	24.4	33.7	
21	32.3	41.7	22.2	35.9	52.9	333.1	132.4	42.3	79.1	35.3	30.5	35.3	
22	47.1	21.1	27.4	36.4	25.6	360.4	110.5	35.0	75.5	28.5	32.2	40.1	
23	42.3	27.4	23.1	35.3	37.7	340.9	96.2	40.1	68.4	33.0	27.5	43.3	
24	32.7	32.7	33.1	35.3	33.4	349.5	81.2	44.4	73.4	36.9	42.6	44.9	
25	32.7	32.7	34.9	38.5	40.2	358.7	69.3	47.5	73.4	35.5	42.3	43.9	
26	31.1	29.1	32.7	33.7	143.9	357.9	77.0	43.2	67.7	32.7	39.9	43.9	
27	31.1	33.2	30.5	34.3	242.2	432.1	74.2	44.4	92.0	36.9	43.7	45.5	
28	32.7	35.2	35.3	34.3	336.4	472.1	76.2	36.9	59.3	44.9	38.0	44.9	
29	30.9	36.4	26.7	31.6	494.1	494.1	62.0	47.6	51.3	44.9	36.4	42.3	
30	33.3	47.6	28.3	35.9	550.7	533.4	37.0	42.3	50.3	34.8	31.1	31.1	
31	42.7	42.7	33.7	33.7	692.5	61.5	61.5	54.5	54.5	50.3	50.3	50.3	

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	122.3	1156.2	969.9	977.3	5375.5	15416.0	11036.3	1264.0	2365.5	1169.1	930.4	1094.2	42103.5 CFS/DAY
2	42.3	35.7	32.0	32.2	109.5	547.2	356.7	42.1	77.0	37.7	33.5	35.3	115.1 CFS
3	42.3	42.7	42.0	49.2	692.6	740.9	645.6	60.4	123.1	57.2	59.9	52.4	771.7 CFS
4	47.0	47.0	42.2	41.8	340.9	31.5	20.7	20.7	32.7	24.4	20.0	16.5	16.5 CFS
5	103.09	96.23	85.53	39.17	293.37	1418.39	955.31	109.21	205.11	100.92	94.71	94.54	3658.17 MCM
6	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
7	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
8	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
9	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
10	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
11	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
12	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
13	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
14	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
15	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
16	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
17	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
18	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
19	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
20	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
21	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
22	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
23	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
24	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
25	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
26	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
27	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
28	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
29	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
30	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												
31	777.50 CFS, at 9.60 M (A.D.), at 12.00 Hours, on Sep 1, 1991												

LCS/L.SUZE/64

R/U Computer Center, Processing : 14-JAN-1973 10:21:14.19

Royal Irrigation Department
Thailand
Hydrology Division
Rating Curve MCS.0C12Y/1959

Station : Tha Ruea, Tha Kuar, Para Wakhon Si Ayutthaya (S.25)
Stream : Pa Sak
River : Pa Sak
River System : Pasak River

Water Year - 1979

Discharge, in Cubic Meter per Second, Water Year April 1, 1979 to March 31, 1980

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	45.35	34.00	34.00	44.25	27.03	42.05	50.79	54.50	73.74	57.20	32.50	35.00	35.00
2	36.75	24.74	30.04	43.70	25.73	43.15	77.34	31.60	90.35	56.00	42.05	40.75	40.75
3	25.73	24.10	34.00	39.55	25.73	45.35	73.74	45.90	74.07	53.40	45.35	47.50	47.50
4	32.50	27.56	37.60	37.65	20.85	54.20	90.35	47.60	73.07	54.90	45.90	51.60	51.60
5	27.04	31.00	59.05	42.05	22.42	41.50	73.74	52.60	75.61	55.40	47.60	53.60	53.60
6	29.08	33.50	34.80	43.15	21.84	44.25	53.35	52.70	103.40	47.00	44.80	56.00	56.00
7	33.00	38.00	62.90	37.10	22.42	29.08	51.20	55.40	123.10	42.50	44.80	41.50	41.50
8	29.54	33.20	37.55	37.05	16.95	26.08	45.90	41.50	129.05	43.70	36.35	39.65	39.65
9	29.54	41.50	37.25	33.50	19.72	65.30	47.00	33.00	141.37	57.80	34.50	32.50	32.50
10	36.55	43.55	70.42	29.55	17.46	40.40	40.40	37.10	133.64	42.60	37.65	33.50	33.50
11	40.75	47.00	104.90	26.20	20.43	32.50	27.64	39.30	120.55	41.50	38.75	30.04	30.04
12	36.50	35.00	120.35	50.52	22.00	22.42	27.08	42.30	143.07	50.00	39.30	30.52	30.52
13	46.20	30.04	130.75	37.05	22.42	43.15	23.60	43.20	141.37	45.20	38.75	33.00	33.00
14	44.25	39.20	114.30	34.00	25.36	41.50	43.15	56.90	123.93	56.20	36.35	36.00	36.00
15	36.00	27.15	123.10	37.65	27.94	70.94	54.90	59.00	141.37	34.50	34.00	39.50	39.50
16	35.00	24.94	143.17	53.00	45.35	72.30	60.95	62.90	140.46	53.75	31.50	37.65	37.65
17	34.00	20.43	152.83	51.60	65.00	142.23	51.60	55.40	135.00	40.40	32.50	38.75	38.75
18	24.74	20.43	153.80	44.90	34.00	103.80	47.00	50.00	102.00	41.50	37.10	45.90	45.90
19	25.73	20.86	130.75	40.40	33.50	92.60	57.80	53.00	93.84	59.30	37.65	48.80	48.80
20	26.20	12.40	100.46	42.60	53.30	106.00	77.34	43.20	111.93	50.52	36.00	56.00	56.00
21	28.12	14.67	99.59	43.70	56.30	101.23	129.90	46.45	101.23	33.75	33.00	54.20	54.20
22	23.36	21.24	114.80	46.60	26.12	102.80	113.35	36.20	73.73	47.60	30.04	46.45	46.45
23	26.20	28.12	104.80	37.10	30.04	129.50	35.07	29.34	59.65	36.55	23.26	43.15	43.15
24	30.92	34.00	77.34	37.65	24.10	137.73	99.59	34.00	61.60	32.50	19.72	32.50	32.50
25	33.50	34.50	37.53	37.10	23.12	114.40	77.34	50.60	64.25	24.10	24.10	24.94	24.94
26	37.05	26.20	77.34	34.50	37.60	92.15	76.61	43.70	61.60	34.00	26.62	27.15	27.15
27	39.35	31.50	60.30	39.00	73.84	80.60	33.34	45.90	64.18	31.50	32.50	28.60	28.60
28	34.00	24.55	39.30	30.04	72.30	84.05	73.74	51.20	61.60	35.50	32.50	30.55	30.55
29	37.05	26.60	42.60	33.50	56.90	73.13	73.06	54.20	62.90	37.65	30.52	30.52	30.52
30	37.10	27.94	41.50	23.36	73.74	73.74	71.62	60.70	59.65	37.65	39.65	39.65	39.65
31		31.50		24.12	49.40		60.36		55.40	37.10		43.70	43.70

Total	1003.02	921.32	2604.66	1177.95	1056.79	2159.43	2125.65	1440.81	3052.73	1321.32	902.40	1235.83	14172.57 CMS DAY
Mean	33.45	29.72	86.00	36.00	33.36	72.21	63.00	43.02	91.64	42.52	35.66	39.37	52.53 CMS
Max	46.20	47.00	153.80	53.00	75.90	142.50	129.90	62.90	145.07	57.80	47.60	56.00	153.80 CMS
Min	24.74	12.40	30.04	23.36	17.46	22.42	27.54	29.36	55.40	30.52	19.72	24.94	12.40 CMS
Runoff	35.713	79.602	245.060	101.775	93.916	167.162	133.743	124.467	260.366	114.162	66.262	106.760	1655.310 MCM
Momentary Peak	135.80 CMS	at	4.62 M (A.D.)	at	9.00 Hours	on Jun 17, 1979							
Runoff Yield	*****	Liters/Second/Square Km	*****	Liters/Second/Square Km	*****	Liters/Second/Square Km	*****	Liters/Second/Square Km	*****	Liters/Second/Square Km	*****	Liters/Second/Square Km	

Royal Irrigation Department
Thailand
Hydrology Division 250459
Rating Curve

Station - Tha Ruay Tha Ruay Pong Nakhon Si Ayutthaya (S.26)
River - Pa Sak
River System - Pasak River

Water Year - 1938

Discharge in Cubic Meter per Second, Water Year April 1, 1938 to March 31, 1939

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	19.00	24.50	51.50	45.00	49.20	50.00	112.00	373.20	69.00	45.40	37.00	53.00	53.00
2	33.70	19.90	44.50	45.20	39.40	57.90	103.60	346.30	79.50	45.40	30.66	31.95	31.95
3	24.90	19.40	52.20	34.04	32.97	64.50	87.00	305.60	80.50	44.60	33.30	31.65	31.65
4	25.60	22.20	43.40	32.97	45.40	75.50	96.00	273.00	92.20	43.80	28.50	27.60	27.60
5	27.90	29.10	42.20	32.50	46.20	56.00	67.50	245.60	85.50	45.80	27.00	21.90	21.90
6	27.90	32.51	43.00	24.60	43.20	74.00	53.50	227.60	91.60	47.00	27.00	23.70	23.70
7	28.30	30.94	43.00	34.30	45.50	53.00	53.50	217.50	101.20	46.60	27.30	23.50	23.50
8	23.50	32.31	52.20	34.04	43.40	58.50	48.20	203.20	106.60	43.80	27.30	24.30	24.30
9	32.34	30.00	54.50	40.90	56.00	47.00	190.40	121.00	49.00	49.00	27.00	25.50	25.50
10	34.78	30.66	50.40	35.15	55.50	42.60	42.20	183.20	135.30	45.00	25.50	28.60	28.60
11	37.40	29.40	51.00	41.00	102.40	60.60	44.60	175.20	113.20	45.00	29.40	32.97	32.97
12	32.97	34.73	53.50	43.40	127.40	41.00	42.20	170.40	112.60	33.50	30.99	32.97	32.97
13	29.70	34.73	53.50	41.50	123.40	31.93	54.00	159.10	99.40	31.32	32.97	36.63	36.63
14	21.00	32.60	67.50	43.00	121.00	61.50	61.00	175.20	103.60	32.31	36.25	36.25	36.25
15	23.60	52.60	31.00	36.26	97.40	36.26	63.00	121.60	103.60	35.15	32.64	35.89	35.89
16	27.90	49.50	74.00	32.51	94.00	34.41	78.00	81.50	82.00	35.89	30.33	33.30	33.30
17	29.70	59.50	73.00	27.70	83.00	37.20	124.00	75.50	75.50	34.41	19.70	21.90	21.90
18	35.50	59.50	72.00	29.10	92.50	43.00	180.60	94.60	65.00	34.73	19.20	21.60	21.60
19	32.64	72.50	57.50	26.50	79.50	52.20	267.00	46.60	60.50	35.89	18.30	18.50	18.50
20	34.02	72.00	57.00	29.70	71.50	171.20	409.40	52.00	59.50	35.15	20.19	16.00	16.00
21	32.64	64.00	49.40	34.73	67.00	261.00	402.20	63.00	60.50	33.30	19.50	18.00	18.00
22	34.31	34.00	45.00	39.80	70.50	262.00	423.60	63.00	62.50	33.57	22.50	24.00	24.00
23	30.33	51.60	39.00	42.90	79.00	434.60	417.80	63.50	65.00	33.57	24.60	26.10	26.10
24	27.90	50.50	33.30	46.60	93.00	190.40	405.60	66.00	67.50	35.15	26.40	27.90	27.90
25	29.50	52.50	30.00	46.60	77.50	172.20	592.60	51.40	66.00	34.73	27.90	27.00	27.00
26	27.30	53.50	29.20	46.60	91.00	159.60	402.20	50.60	63.50	31.92	26.70	27.30	27.30
27	24.30	30.50	27.00	45.40	89.20	147.20	427.40	53.00	63.50	27.30	29.40	24.60	24.60
28	17.46	31.50	24.60	50.20	80.50	133.25	535.40	52.20	61.50	34.73	30.99	30.33	30.33
29	23.70	34.00	25.50	51.00	72.00	115.60	527.60	59.00	52.20	35.89	34.41	34.41	34.41
30	43.50	63.00	24.50	46.60	69.50	120.40	469.40	53.00	51.40	35.15	40.20	40.20	40.20
31	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50	69.50

Total	555.51	1470.62	1335.50	1206.65	2311.57	2926.45	6664.30	4287.60	2484.60	1130.79	772.44	874.75	26771.78
Mean	29.52	49.03	51.12	35.92	74.57	97.61	221.43	142.90	80.13	33.09	27.59	28.22	73.40
Max	33.00	34.00	30.00	51.00	127.50	262.00	535.40	378.20	123.90	47.00	37.00	40.20	535.40
Min	17.46	12.90	24.60	24.50	32.97	31.93	42.20	46.60	44.20	27.30	18.30	16.00	17.46
Runoff	71.916	123.790	132.650	104.287	199.720	253.013	593.076	370.397	214.669	102.020	68.739	75.378	2314.810
Runoff Yield	547.10	CM/S	at	9.17	M (A-D),	at	15.00	Hours	on	Oct	28	1938	
Runoff Yield	*****	Liters/Second/Square KM,	Momentary Peak Yield	*****	Liters/Second/Square KM								

LCS/L13020/04

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Royal Irrigation Department
Thailand
Hydrology Division
Rating Curve HCS-0C13Y/1991

Station - Ban Praek, Ban Praek, Prachin Sakon Si Ayutthaya, (L.S)
Stream - Lop Buri
River - Lop Buri
River System - Lop Buri River

Water Year - 1991

Discharges in Cubic Meter Per Second, Water Year April 1, 1991 to March 31, 1992

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	0.2	2.6	4.4	0.3	1.0	20.3	17.3	22.6	60.6	26.3	3.2	0.1	
2	0.5	2.2	4.5	0.5	1.3	22.6	22.0	22.3	60.0	22.9	2.3	0.2	
3	1.5	1.3	4.3	0.3	1.3	25.3	24.4	23.0	65.3	19.3	2.2	0.4	
4	1.3	0.7	3.9	0.4	1.3	27.6	26.0	24.3	173.4	16.3	1.3	0.4	
5	1.5	0.5	4.0	0.3	1.3	25.9	23.8	24.3	173.4	16.0	1.5	0.3	
6	1.2	1.0	3.5	0.2	1.3	25.2	30.0	23.3	163.5	14.6	1.5	0.2	
7	0.9	1.1	3.2	0.1	1.1	26.0	30.6	26.2	163.2	11.7	1.4	0.2	
8	0.3	1.7	3.4	0.1	0.9	25.2	23.0	29.3	153.3	10.5	1.3	0.3	
9	0.7	1.3	3.5	0.0	0.7	25.8	23.1	33.5	133.4	9.3	1.3	0.4	
10	1.4	1.1	3.3	0.0	0.5	27.4	21.7	35.3	124.0	3.1	1.3	0.5	
11	1.4	1.0	3.9	0.0	0.5	26.3	20.7	37.9	121.2	10.5	1.3	0.3	
12	0.7	0.9	3.7	0.9	0.4	26.6	19.2	42.4	110.3	10.2	1.2	0.6	
13	0.6	1.3	3.7	0.7	0.4	26.3	17.7	44.1	103.3	9.4	1.1	0.7	
14	0.6	2.4	3.3	0.3	0.3	25.2	14.7	45.4	110.3	6.3	1.1	0.7	
15	0.6	2.4	3.9	1.1	0.5	24.4	12.4	47.3	98.7	5.3	1.1	0.6	
16	0.6	2.1	4.2	1.1	0.5	23.9	10.9	52.4	87.1	4.9	1.0	0.5	
17	0.6	1.5	4.6	1.1	0.5	23.8	12.2	34.2	68.0	4.5	0.9	0.4	
18	0.5	1.3	4.2	1.0	0.7	22.6	10.2	37.6	73.0	4.3	0.9	0.4	
19	0.5	1.0	3.4	0.9	0.9	20.4	10.3	39.3	66.8	4.1	0.8	0.4	
20	0.5	2.3	3.7	0.9	1.3	13.5	10.7	34.3	62.3	3.9	0.3	0.4	
21	0.5	2.4	2.0	0.7	3.3	15.0	11.3	63.5	53.8	3.8	0.8	0.3	
22	0.5	1.4	1.9	0.9	2.9	12.8	16.1	64.3	55.3	3.7	0.8	0.3	
23	0.9	1.3	1.9	0.7	2.0	11.5	23.5	63.2	32.7	3.6	0.7	0.3	
24	1.0	1.3	1.9	0.4	1.7	10.3	23.6	64.3	43.4	3.3	0.7	0.3	
25	1.7	1.2	1.8	0.2	2.0	10.7	37.3	64.3	43.2	4.7	0.8	0.3	
26	1.2	1.1	1.7	0.1	3.2	11.1	40.4	64.3	48.9	4.2	0.9	0.5	
27	0.3	1.4	1.5	0.1	3.4	11.3	41.5	62.9	33.3	3.7	0.6	0.7	
28	0.5	2.1	1.5	0.1	2.1	11.9	33.7	62.3	33.2	3.2	0.4	0.7	
29	0.3	2.6	1.3	0.1	10.7	12.9	33.7	61.1	34.1	3.0	0.4	0.7	
30	2.0	3.1	1.1	0.1	14.1	13.2	26.9	60.0	33.0	3.1	0.7	0.7	
31		4.2		0.3	17.4	13.2	23.3		23.3	3.3			

Total	47.2	52.9	93.3	15.4	99.6	914.3	712.7	1410.6	2633.5	259.1	34.6	13.7	6015.1 CMSDAY
Mean	0.9	1.7	3.1	0.3	2.6	20.5	23.0	47.2	86.7	3.4	1.2	0.4	16.4 CMS
Max	2.0	4.2	4.6	1.1	17.4	27.6	41.5	69.3	173.4	26.3	3.2	0.7	173.4 CMS
Min	0.2	0.5	1.1	0.0	0.4	10.7	10.2	22.6	27.3	3.0	0.7	0.1	0.0 CMS
Range	2.35	4.57	6.06	1.33	17.48	53.09	51.58	122.39	232.29	22.39	2.99	1.13	519.70 MCM
Instantaneous Peak	191.60 CMS at			4.32 M (A.D.) at	12.00 hours, on Dec 4, 1991								
Annual Yield	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

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Station - Ban Phraek, Ban Phraek, Pong Makhon Si Ayutthaya, (L.S)
 Stream - Lop Buri
 River - Lop Buri
 River System - Lop Buri River

Royal Irrigation Department
 Thailand
 Hydrology Division
 Rating Curves MCS-DC13Y/1983

Water Year - 1983

Discharge in Cubic Meter per Second Water Year April 1, 1983 to March 31, 1984

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	0.50	3.12	26.15	3.86	2.22	23.39	77.28	70.08	55.55	51.34	0.50	0.50	0.50
2	0.50	2.34	23.41	3.52	1.70	20.00	75.18	70.08	24.12	47.84	0.50	0.50	0.50
3	0.50	2.34	19.75	3.71	1.53	19.55	71.22	70.08	53.10	44.88	0.50	0.50	0.50
4	0.50	2.04	17.24	3.44	2.23	19.70	53.23	70.49	53.66	41.39	0.50	0.50	0.50
5	0.50	1.50	19.12	3.17	1.13	23.32	54.32	70.24	28.52	37.24	0.71	0.53	0.50
6	0.50	1.50	13.42	3.33	0.71	23.93	42.24	73.92	20.12	33.41	0.74	0.41	0.50
7	0.50	1.53	15.00	3.20	0.85	23.73	25.83	72.13	20.00	23.22	1.10	0.35	0.50
8	0.50	1.53	14.15	3.30	1.30	24.23	29.20	77.70	100.40	23.02	1.60	0.16	0.50
9	0.50	1.10	13.22	3.30	1.33	24.64	30.30	80.33	100.40	23.47	1.75	0.19	0.50
10	0.50	0.93	11.73	7.37	2.22	23.02	17.50	99.03	98.00	23.46	1.90	0.13	0.50
11	0.50	0.80	7.72	8.07	3.22	23.39	9.33	82.04	96.84	23.40	1.75	0.23	0.50
12	0.50	0.71	5.69	8.40	3.20	23.04	6.40	82.20	96.24	13.22	1.23	0.20	0.50
13	0.50	0.56	2.90	8.54	4.27	23.41	6.10	83.16	91.16	13.04	1.00	0.50	0.50
14	0.71	0.93	11.04	5.44	5.03	15.14	3.30	32.68	96.84	10.35	0.71	0.50	0.50
15	0.82	1.50	13.32	8.70	6.10	16.40	3.36	33.15	99.20	11.11	0.55	0.50	0.50
16	0.53	2.23	13.32	9.12	6.90	23.40	13.74	34.12	96.64	7.90	0.53	0.30	0.50
17	0.53	2.90	12.04	8.73	7.46	41.36	17.94	33.15	94.32	5.60	0.50	3.76	0.50
18	0.93	3.17	10.73	8.23	7.72	49.20	23.30	34.12	91.68	4.34	0.50	3.30	0.50
19	1.10	7.02	9.12	9.94	13.11	45.93	29.53	33.64	82.72	3.52	0.50	4.54	0.50
20	1.05	7.37	7.45	10.59	10.59	47.03	37.19	37.33	90.64	2.72	0.50	4.34	0.50
21	1.10	7.33	6.40	9.79	10.75	52.92	43.34	70.66	56.52	3.84	0.50	3.24	0.50
22	1.30	6.80	5.71	9.12	7.00	59.72	50.10	70.66	32.68	4.27	0.50	3.24	0.50
23	1.45	6.40	3.17	9.94	3.01	60.39	50.98	76.44	73.92	3.28	0.50	2.10	0.50
24	1.40	6.10	3.54	10.59	2.50	62.23	74.34	70.02	71.60	2.19	0.50	1.70	0.50
25	1.25	5.23	3.22	9.95	10.39	67.43	77.70	75.02	66.74	1.45	0.50	1.55	0.50
26	1.35	13.74	3.04	3.67	12.43	72.39	76.02	76.02	66.37	0.93	0.50	1.70	0.50
27	1.30	13.02	3.76	9.12	14.44	71.50	73.30	77.70	55.32	0.74	0.50	2.22	0.50
28	2.48	13.04	2.72	7.79	13.83	73.30	71.22	84.50	63.32	0.52	0.50	2.43	0.50
29	2.72	13.04	3.52	7.24	17.20	77.23	67.23	83.64	62.60	0.56	0.50	2.22	0.50
30	3.42	13.35	4.30	8.40	14.30	77.70	67.33	86.04	59.11	0.56	0.50	1.93	0.50
31	29.43	29.43	29.43	3.72	13.93	97.70	97.70	97.70	55.10	0.50	0.50	1.30	0.50
Total	30.63	131.93	519.23	223.36	230.10	1220.73	1564.23	2373.00	2612.54	477.29	21.69	49.20	9126.43 CMSDAY
Mean	1.02	5.27	16.04	7.23	7.42	40.93	44.33	79.10	34.23	13.40	0.72	1.59	23.00 CMS
Max	3.92	29.40	26.15	10.59	13.93	72.70	77.70	99.03	100.40	51.36	1.90	3.80	100.40 CMS
Min	0.50	0.56	2.72	3.32	0.63	13.14	6.10	70.02	55.10	0.50	0.50	0.16	0.16 CMS
Runoff	2.631	15.723	27.593	12.483	13.281	105.471	119.577	205.027	225.734	41.232	1.691	4.231	750.525 CMH
Momentary Peak	101.00 CMS	at	4.65 M (A.D.),	at	6.00 Hours	on Dec 31, 1983							
Runoff field	*****	Liters/Second/Square Km,	Momentary Peak Yield	*****	Liters/Second/Square Km								

Station - Ban Praek, Ban Praek, Phra Lakhon Si Ayuthayay (L.5)
 Stream - Lop Buri
 River System - Lop Buri River
 Royal Irrigation Department
 Thailand
 Hydrology Division
 Rating Curve

Water Year - 1983

Discharges in Cubic Meter per Second, Water Year April 1, 1983 to March 31, 1984

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual
1	1.40	9.30	20.20	10.40	10.40	24.54	37.95	150.00	70.52	47.04	2.72	0.00	
2	1.20	11.00	15.30	12.95	8.51	20.16	83.70	156.40	27.74	44.23	2.16	0.00	
3	1.50	13.59	15.99	13.04	13.04	26.53	30.20	143.70	59.74	41.16	1.74	0.27	
4	1.30	15.91	15.26	13.83	8.83	31.50	71.74	153.60	59.35	37.20	1.40	0.57	
5	1.00	17.00	14.09	15.52	8.32	33.71	44.52	136.60	70.13	35.39	1.20	0.60	
6	0.55	16.53	13.26	17.82	9.24	33.92	37.53	133.00	59.35	32.70	1.03	0.25	
7	5.50	19.75	21.01	17.71	9.51	53.50	35.25	127.40	69.35	29.31	0.95	0.95	
8	3.91	19.50	26.34	15.30	10.20	25.55	34.55	121.00	63.13	35.93	0.90	0.95	
9	3.35	19.00	29.12	17.15	11.10	25.00	33.50	114.60	67.79	22.32	0.90	0.90	
10	2.37	18.53	30.70	13.44	13.37	25.03	31.70	108.60	67.79	19.45	0.70	0.80	
11	1.61	14.30	31.90	15.65	14.74	19.82	31.50	101.70	63.96	15.69	0.65	0.80	
12	1.88	15.16	33.10	12.93	13.30	15.25	32.10	97.15	63.13	14.22	0.54	0.65	
13	2.09	15.39	33.50	11.20	24.34	14.22	33.30	95.92	72.19	12.10	0.48	0.54	
14	2.09	14.43	34.13	10.00	26.93	13.70	34.76	94.16	74.22	10.40	0.42	0.60	
15	3.21	14.22	34.13	10.30	30.50	13.70	35.70	93.02	74.15	3.83	0.39	0.90	
16	9.82	15.39	34.90	12.60	30.90	13.70	33.10	91.23	84.20	7.30	0.31	1.00	
17	12.40	16.16	31.70	13.37	30.30	13.55	47.64	88.30	89.60	6.54	0.75	0.75	
18	13.37	30.20	29.31	12.60	31.50	19.00	103.10	87.40	87.25	5.82	0.80	0.31	
19	13.39	23.32	29.70	12.40	33.50	31.90	113.50	86.30	85.20	3.82	0.80	0.39	
20	17.21	25.93	23.23	12.40	34.55	42.35	117.50	79.30	82.70	3.03	0.93	0.33	
21	15.99	24.36	20.05	13.04	34.55	69.55	123.40	79.30	73.40	4.26	0.85	0.24	
22	15.32	23.23	17.47	15.73	33.30	79.75	123.60	79.30	75.60	2.93	0.85	0.13	
23	13.37	21.52	15.26	20.50	31.50	87.40	134.60	79.30	74.82	2.44	0.85	0.15	
24	11.70	19.75	13.15	21.85	28.93	93.02	137.00	76.15	73.06	2.54	0.85	0.15	
25	10.30	16.44	11.10	24.72	25.52	96.50	143.60	72.62	70.13	1.21	0.75	0.09	
26	9.15	18.44	9.51	26.34	23.60	100.40	143.30	72.62	67.40	1.35	0.48	0.03	
27	3.25	19.45	6.70	24.63	22.62	97.75	143.20	72.62	64.74	1.10	0.13	0.03	
28	7.92	21.18	5.16	23.10	23.60	96.50	151.90	72.13	61.60	4.72	0.00	0.03	
29	6.97	22.40	6.67	19.15	23.62	93.02	153.60	72.13	58.35	3.92	0.00	0.12	
30	3.70	21.86	6.70	13.75	24.54	91.22	153.60	70.91	55.25	3.77	0.12	0.12	
31	21.16	21.16		12.71	23.45	152.55			51.84	3.21		0.09	

Total	476.43	580.77	633.79	493.55	534.26	1393.37	2697.63	2934.13	2214.27	454.54	24.62	13.79	12393.93 CMSDAY
Mean	5.06	16.73	21.19	16.03	22.07	40.46	27.03	99.47	71.43	14.52	0.88	0.44	33.96 CMS
Max	17.21	25.93	34.13	26.34	34.55	100.40	153.60	150.00	59.60	47.64	2.72	1.00	153.60 CMS
Min	0.65	9.60	6.07	10.00	8.66	13.70	31.50	70.91	51.84	1.10	0.00	0.00	0.00 CMS
Staff	17.840	50.179	54.932	43.075	50.120	120.440	233.094	257.927	191.513	37.704	2.127	1.191	1070.836 CMX
Momentary Peak	153.60 CMS, at			5.54 M (4-D), at 13.00 Hours, on Oct 30, 1983									
Staff field	***** Liters/Second/Square KM, Momentary Peak Yield ***** Liters/Second/Square KM												

8.2.1 Water Supply Data from PWA

Table 8.2.1.1 Water Production and Selling Amount, and Number of Consumer in Chai Nat

Month	B.E. 2533			B.E. 2534			B.E. 2535		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	93,000	52,034	2,371	105,726	57,242	2,471	129,774	65,164	3,476
Feb	89,500	61,390	2,373	107,875	54,658	2,493	127,250	64,739	3,451
Mar	94,000	53,673	2,381	123,091	59,715	2,500	152,187	69,634	3,493
Apr	95,300	64,136	2,356	120,991	61,693	2,514	150,523	73,399	3,527
May	93,000	64,695	2,395	120,533	69,159	2,552	141,850	84,900	3,522
Jun	92,000	57,822	2,423	117,393	63,151	2,689	144,857	73,857	3,546
Jul	92,000	54,239	2,425	133,767	55,601	2,702	164,371	74,104	3,556
Aug	93,500	58,577	2,443	125,140	66,732	2,713	171,639	70,705	3,572
Sep	93,200	58,984	2,450	120,393	61,319	2,739	163,912	72,244	3,593
Oct	92,500	53,777	2,461	121,753	63,655	3,455			
Nov	91,000	56,634	2,472	122,155	66,229	3,462			
Dec	92,000	54,375	2,479	123,149	64,741	3,479			
Total	1,111,000	690,136		1,450,927	744,105		1,345,863	646,446	

Table 8.2.1.2 Water Production and Selling Amount, and Number of Consumer in Sing Buri

Month	B.E. 2533			B.E. 2534			B.E. 2535		
	Distribution (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Distribution (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Distribution (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	121,578	66,031	3,491	126,334	64,718	3,626	127,516	73,754	3,627
Feb	111,364	68,296	3,592	113,846	73,397	3,638	120,147	70,329	3,651
Mar	122,534	67,399	3,593	134,081	77,158	3,678	152,039	74,425	3,652
Apr	124,783	85,216	3,527	134,939	91,708	3,699	159,709	91,950	4,013
May	133,810	79,173	3,531	129,571	85,753	3,726	163,650	88,683	4,071
Jun	123,465	73,271	3,568	135,527	86,555	3,743	147,326	100,776	4,132
Jul	124,513	73,477	3,575	134,277	80,664	3,754	150,418	102,777	4,183
Aug	124,290	74,726	3,622	139,665	84,938	3,768	141,701	93,836	4,225
Sep	129,731	80,155	3,592	125,505	78,693	3,735	139,323	86,654	4,269
Oct	128,266	72,151	3,600	118,323	80,479	3,781			
Nov	116,141	66,349	3,616	124,294	75,771	3,805			
Dec	113,479	62,292	3,613	126,665	68,231	3,621			
Total	1,473,954	874,038		1,551,917	947,997		1,201,839	782,294	

Source: PWA

Table 8.2.1.1.3 Water Production and Selling Amount, and Number of Consumer in Pa Mok

Month	1990			1991			1992		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	22,780	12,979	825	21,420	15,362	851	20,910	13,952	878
Feb	22,440	14,579	825	21,080	15,215	855	21,080	12,992	878
Mar	22,270	11,922	823	20,910	14,379	859	26,860	14,490	879
Apr	22,100	15,379	830	21,090	14,833	859	27,710	18,210	881
May	22,270	17,052	833	21,590	18,063	862	27,710	18,265	882
Jun	22,100	14,370	825	20,910	16,132	864	27,540	15,739	885
Jul	21,930	13,758	839	20,400	14,252	869	23,800	16,647	889
Aug	22,100	14,047	840	20,910	15,354	870	23,970	16,925	894
Sep	21,930	15,678	843	21,182	15,545	872	23,845	15,405	895
Oct	22,100	15,230	844	21,182	14,472	872			
Nov	21,760	13,594	844	21,030	15,882	875			
Dec	21,590	13,722	847	20,740	13,758	876			
Total	265,370	172,310		252,484	161,248		223,425	142,818	

Table 8.2.1.1.4 Water Production and Selling Amount, and Number of Consumer

Month	1990			1991			1992		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	44,013	33,315	1,409	49,507	37,654	1,516	57,344	49,106	1,768
Feb	40,633	34,274	1,417	44,195	38,715	1,541	53,512	42,123	1,775
Mar	47,007	32,859	1,424	52,835	36,599	1,557	63,348	39,274	1,794
Apr	46,536	37,218	1,433	53,692	40,056	1,573	66,900	51,974	1,809
May	49,304	38,659	1,447	58,115	48,062	1,594	71,002	59,148	1,824
Jun	48,839	41,735	1,459	52,989	45,233	1,618	69,865	52,529	1,832
Jul	49,249	40,067	1,435	53,634	38,911	1,641	72,269	51,055	1,849
Aug	50,470	39,730	1,483	54,308	43,646	1,648	70,620	57,715	1,862
Sep	50,125	41,307	1,486	53,232	41,799	1,671	70,220	53,663	1,890
Oct	51,005	35,790	1,495	56,110	40,761	1,700			
Nov	48,667	38,598	1,501	53,457	43,353	1,738			
Dec	49,580	37,057	1,503	55,419	39,841	1,756			
Total	575,418	480,619		637,493	498,630		595,081	456,587	

Source : PWA.

Table 8.2.1.5 Water Production and Selling Amount, and Number of Consumer in Rangsit

Month	1990			1991			1992		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan.	446,697	238,468	5,937	509,402	354,114	8,911	616,357	614,407	10,954
Feb.	395,864	257,628	6,363	490,683	285,885	9,088	695,393	693,443	11,032
Mar.	446,065	225,103	6,381	509,402	345,730	9,207	629,228	520,669	11,032
Apr.	448,672	263,739	6,415	613,464	320,210	9,332			
May	426,858	266,057	6,506	567,572	357,211	9,443			
Jun.	405,060	215,789	6,687	580,925	367,211	9,615			
Jul.	444,307	267,339	6,819	559,132	325,280	9,806			
Aug.	435,929	295,120	6,911	584,844	380,110	9,985			
Sep.	430,196	290,539	7,193	544,464	395,141	10,096			
Oct.	440,542	299,233	7,259	619,704	512,866	10,212			
Nov.	412,639	283,865	8,285	590,783	372,886	10,513			
Dec.	509,402	373,011	8,591	624,893	409,739	10,685			
Total	5,243,231	3,277,890		6,784,253	4,426,392		1,940,978	1,828,518	

Table 8.2.1.6 Water Production and Selling Amount, and Number of Consumer in Lop Buri

Month	1990			1991			1992		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	1,093,080	1,010,695	7,051	1,034,140	810,893	8,112	559,730	872,485	9,088
Feb	1,079,880	1,005,388	7,112	939,220	869,546	8,209	900,300	860,093	9,150
Mar	1,158,750	944,756	7,192	1,057,060	722,964	8,264	1,003,490	825,214	9,220
Apr	1,133,620	1,030,128	7,217	1,010,960	905,642	8,322	1,023,300	950,567	9,265
May	1,155,610	1,051,927	7,277	1,086,220	934,449	8,425	1,037,420	839,330	9,297
Jun	1,124,010	821,206	7,394	1,027,860	930,478	8,545	989,810	874,551	9,402
Jul	1,132,090	974,749	7,516	1,184,450	788,813	8,665	987,650	856,811	9,504
Aug	1,086,200	964,351	7,626	1,047,500	913,361	8,750	1,031,910	863,774	9,598
Sep	997,110	906,086	7,734	987,770	871,735	8,810	920,870	795,727	9,750
Oct	1,030,350	868,600	7,836	968,780	870,352	8,903			
Nov	975,130	747,714	7,920	937,610	858,972	8,956			
Dec	1,012,070	855,532	8,008	972,660	876,329	9,025			
Total	12,997,900	11,201,132		12,254,250	10,353,533		8,853,890	7,738,563	

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Table 8.2.1.7 Water Production and Selling Amount, and Number of Consumer in Aug Thong

Month	1990			1991			1992		
	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer	Production (m ³ /month)	Selling (m ³ /month)	No. of Consumer
Jan	75,760	49,594	2,396	83,600	65,695	2,564	89,998	60,087	2,740
Feb	70,160	58,653	2,393	75,260	58,046	2,603	94,753	57,863	2,760
Mar	81,490	52,416	2,405	95,140	57,765	2,622	96,688	74,306	2,780
Apr	80,550	72,214	2,418	96,850	71,458	2,626	112,792	92,035	2,782
May	81,690	64,750	2,424	102,550	77,164	2,639	104,896	78,909	2,804
Jun	78,560	59,405	2,434	91,790	67,972	2,653	106,790	72,407	2,820
Jul	80,680	56,548	2,440	92,230	67,293	2,662	108,060	82,350	2,829
Aug	79,920	65,703	2,449	88,842	77,999	2,670	112,341	78,768	2,831
Sep	79,190	61,129	2,434	83,866	64,496	2,698	121,588	76,355	2,848
Oct	80,420	61,189	2,543	89,957	77,704	2,708			
Nov	78,190	53,189	2,553	93,410	72,174	2,715			
Dec	82,510	56,719	2,563	91,065	65,162	2,736			
Total	949,120	711,509		1,084,550	822,949		947,906	673,060	

Source PWA.

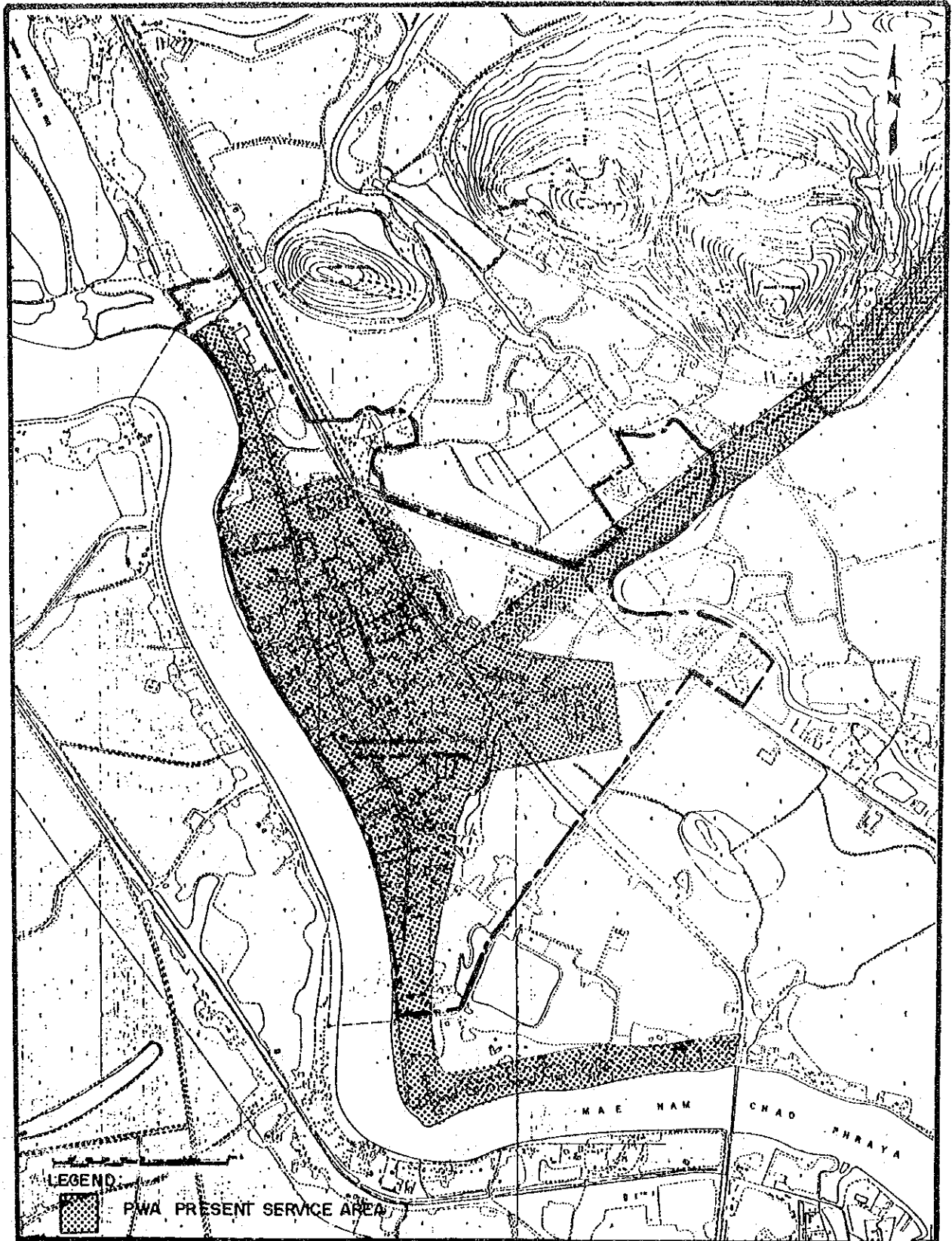
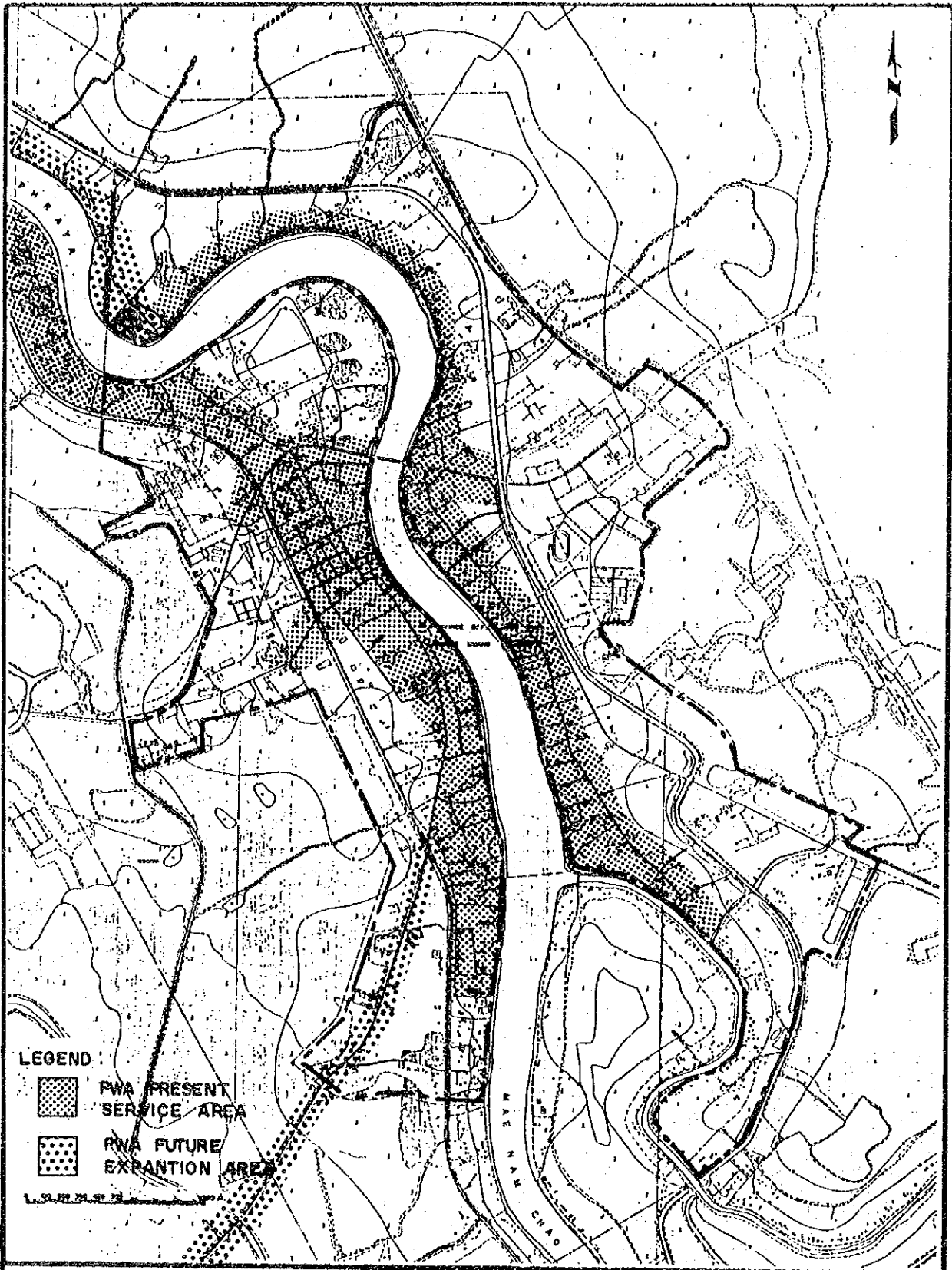


FIG. 8.2.1.1 PRESENT WATER SUPPLY SERVICE AREA
(CHAI NAT MUNICIPALITY)

MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN
JAPAN INTERNATIONAL COOPERATION AGENCY



LEGEND:

 PWA PRESENT SERVICE AREA

 PWA FUTURE EXPANTION AREA

FIG. 8.2.1.2 PRESENT WATER SUPPLY SERVICE AREA (SING BURI MUNICIPALITY)

MASTER PLANNING FOR THE SEWERAGE DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

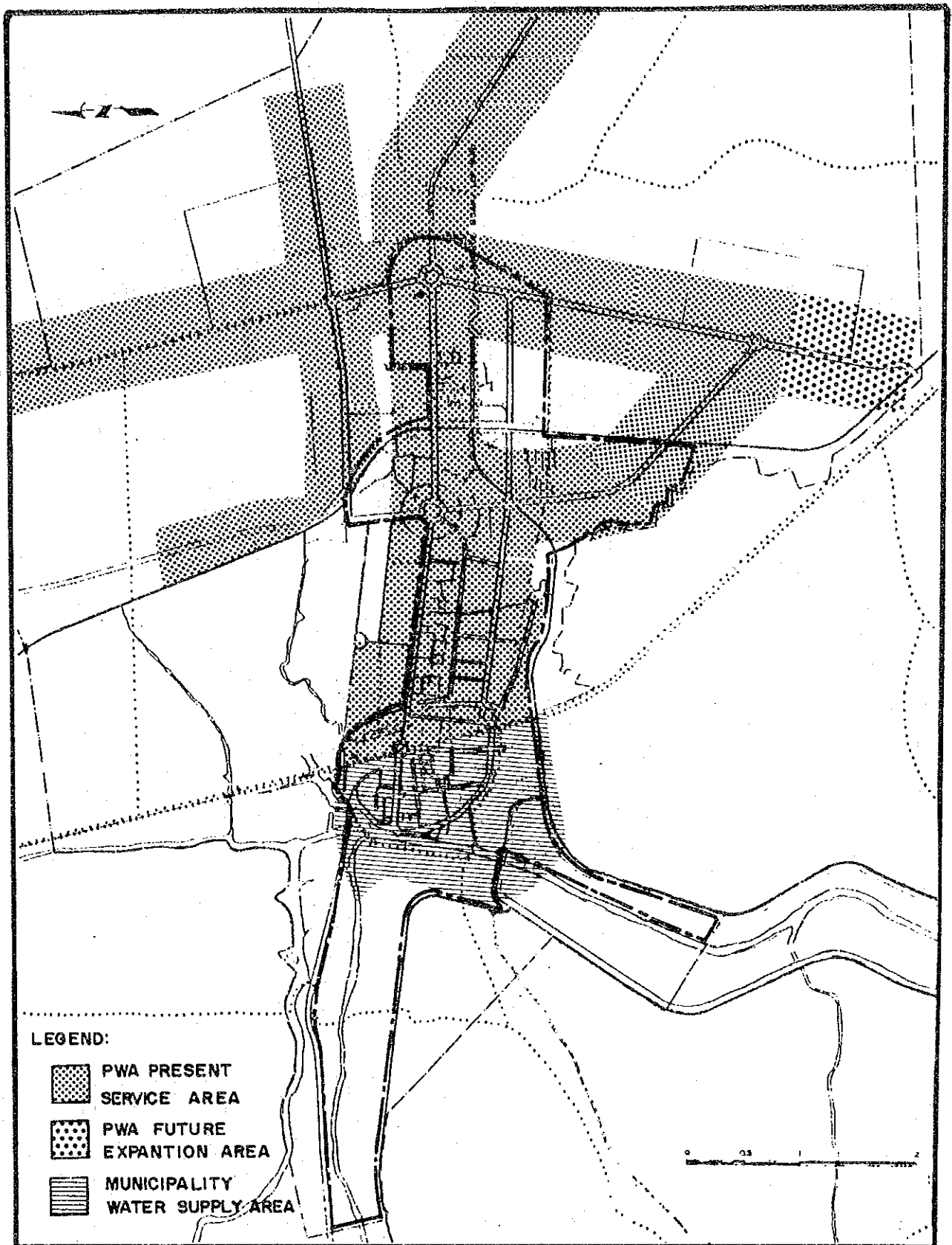


FIG. 8.2.1.3 PRESENT WATER SUPPLY SERVICE AREA
(LOP BURI MUNICIPALITY)

MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

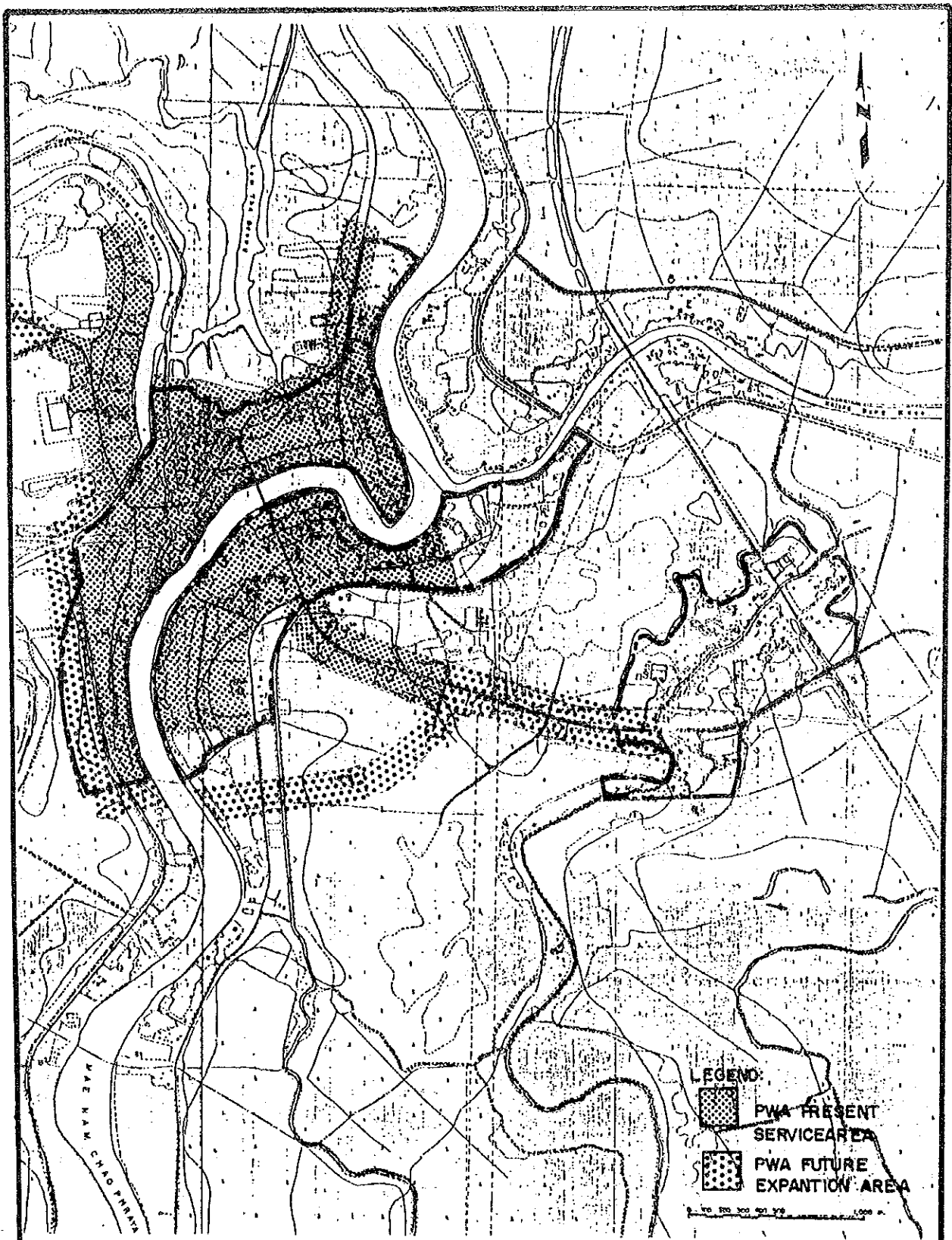
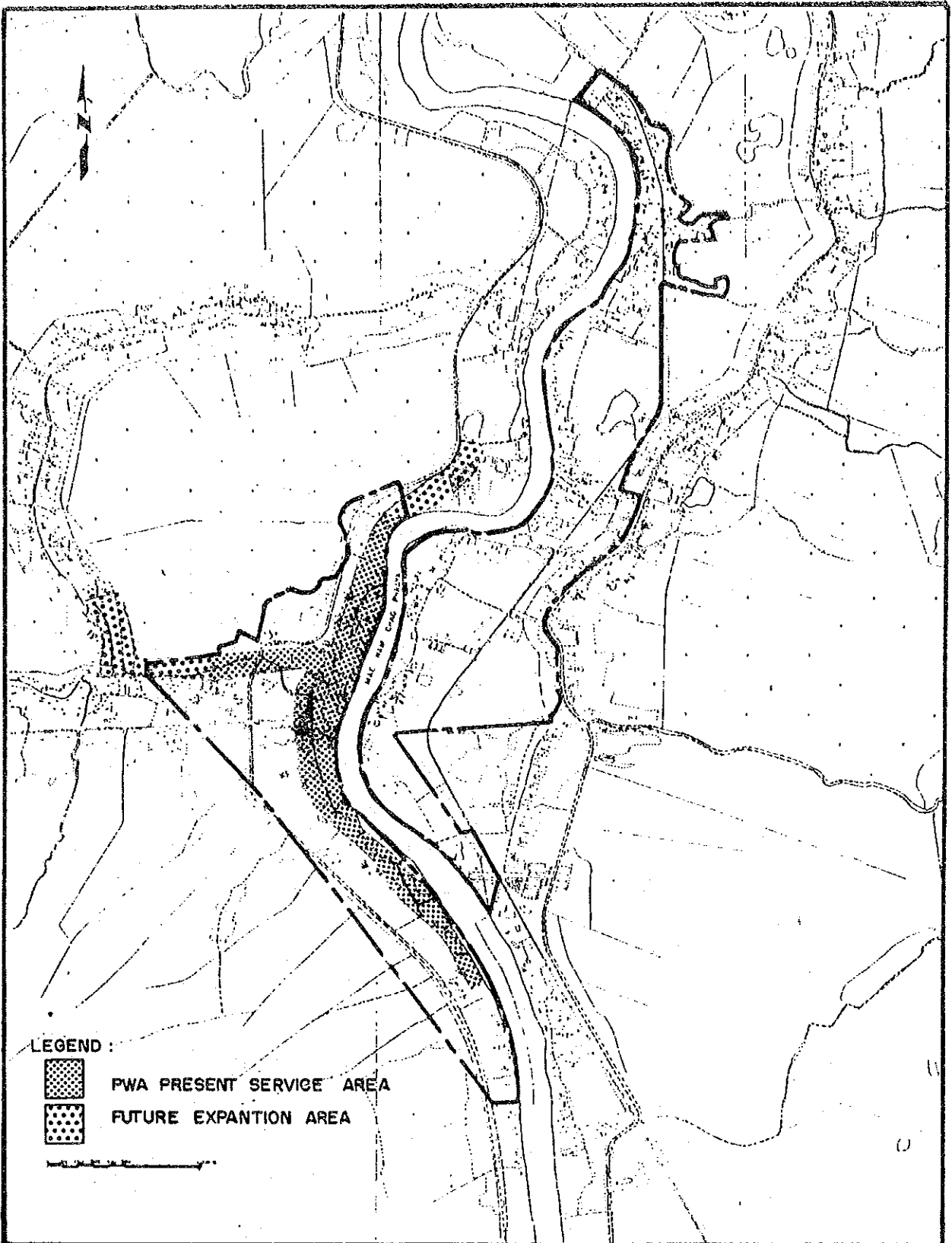


FIG. 8.2.1.4 PRESENT WATER SUPPLY SERVICE AREA
(ANG THONG MUNICIPALITY)

MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY



LEGEND :



PWA PRESENT SERVICE AREA

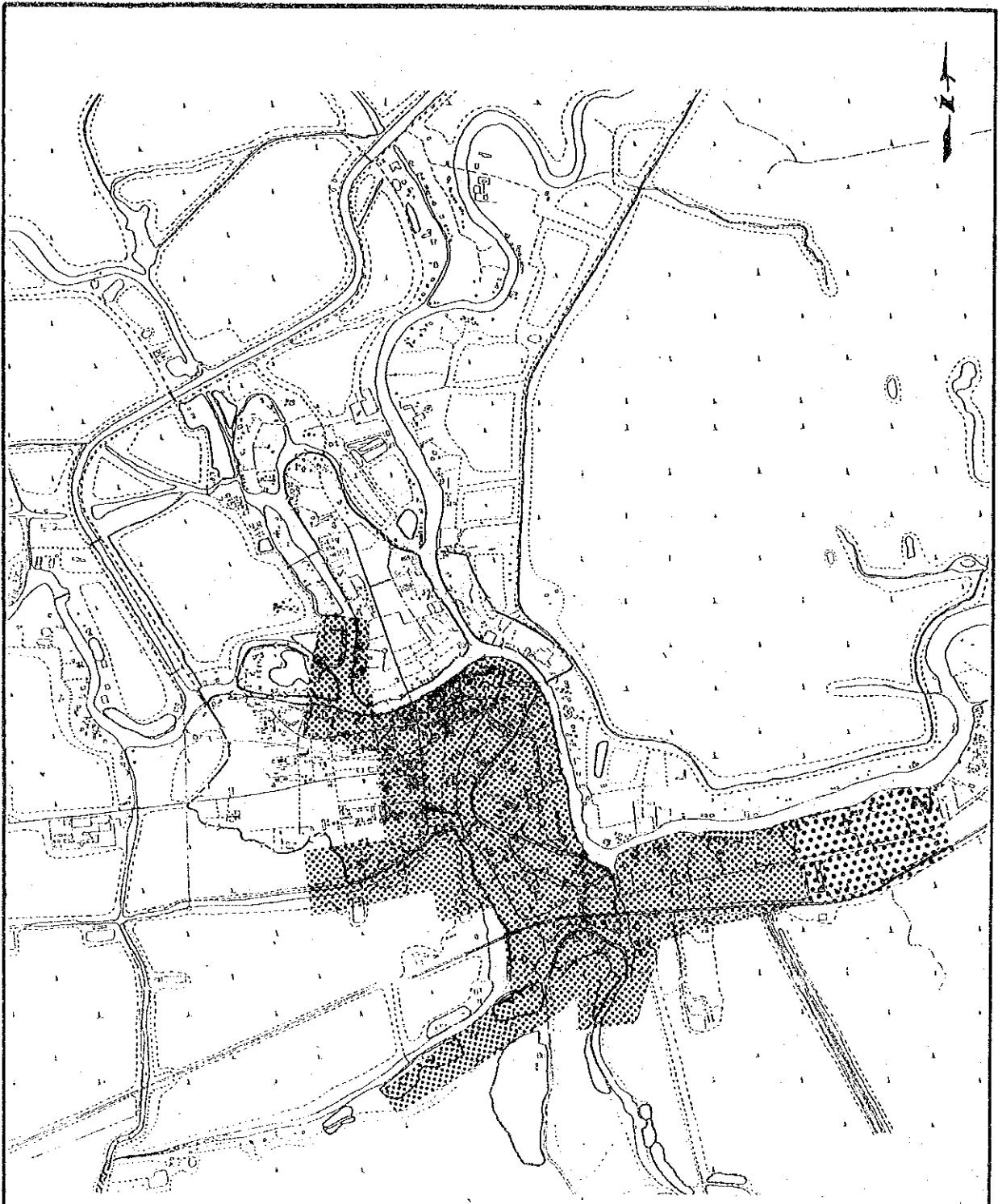
FUTURE EXPANTION AREA



FIG. 8.2.1.5 PRESENT WATER SUPPLY SERVICE AREA
(PA MOK MUNICIPALITY)

MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY



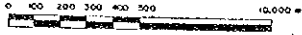
LEGEND:



PWA PRESENT SERVICE AREA



PWA FUTURE EXPANTION AREA



**FIG. 8.2.1.6 PRESENT WATER SUPPLY SERVICE AREA
(SENA BURI MUNICIPALITY)**

**STUDY ON MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN**

JAPAN INTERNATIONAL COOPERATION AGENCY

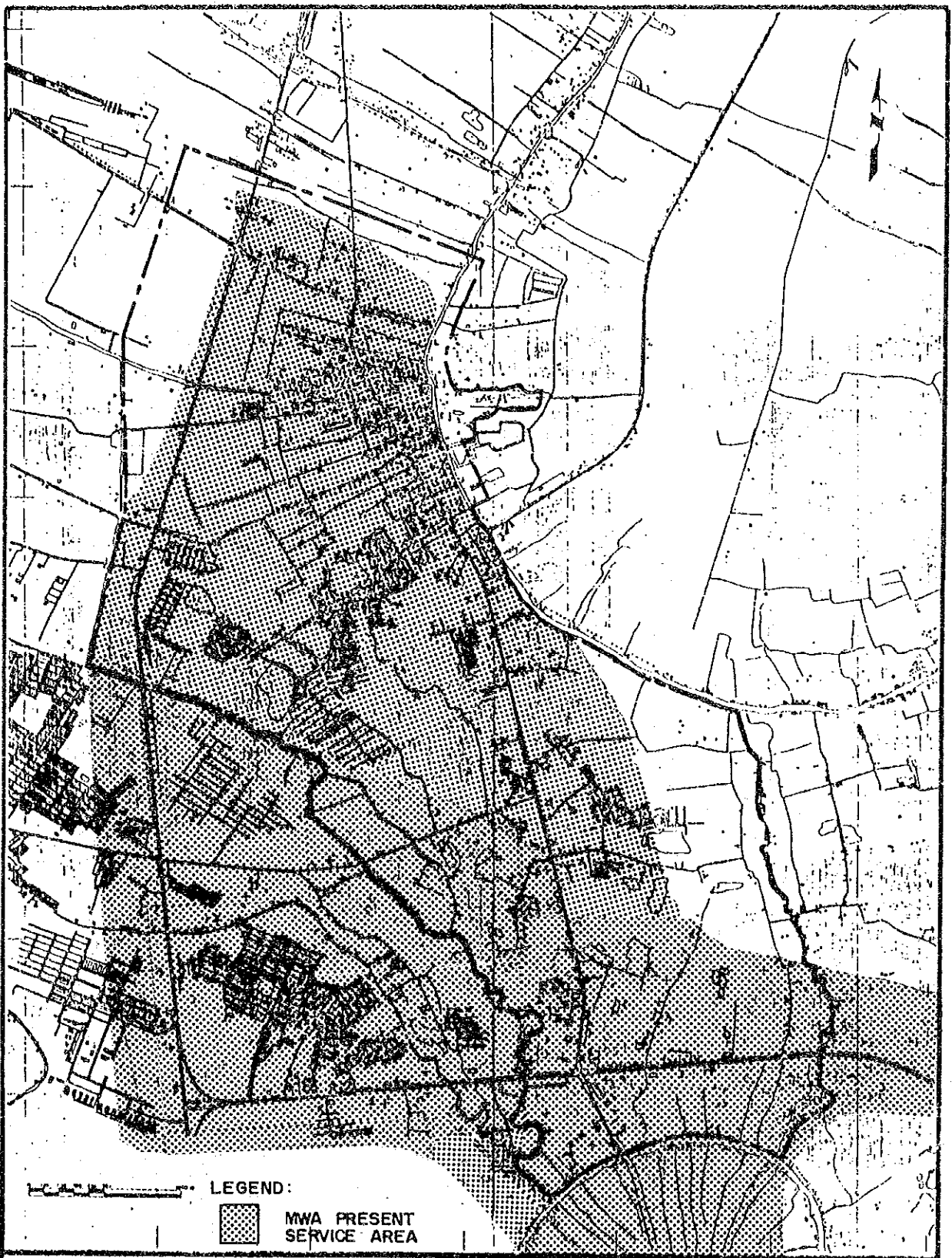


FIG. 8.2.1.7 PRESENT WATER SUPPLY SERVICE AREA
(BANG BUA THONG MUNICIPLITY)

MASTER PLANNING FOR THE SEWERAGE
DEVELOPMENT PROJECT FOR LOWER CHAO PHRAYA RIVER BASIN
JAPAN INTERNATIONAL COOPERATION AGENCY

8.3 Investigation on Industrial Wastewater

Table 8.3.1 (1) Wastewater Quality and Quantity: Discharged

No.	Item	Flow Rate (m ³ /hr.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	SS (mg/l)	Alkal. (mg/l)	cl- (mg/l)	NH4-N (mg/l)	NO3-N (mg/l)	SO4 2-- (mg/l)	Coliform Group (MPN/100ml)
P-1 (Chicken)	9:00-10:30	62.3	29.6	7.7	4.6	24.0	58.7	145	355	230	0.84	5.24	70.3	3,500
	12:00-13:30	62.7	29.5	7.8	4.0	24.7	67.1	148	330	223	0.84	3.04	68.8	1,700
	15:00-16:30	61.8	29.8	7.8	4.3	24.7	65.4	156	330	219	0.84	7.34	66.3	1,800
	Weighted Avg. Pollution Load	498.4	29.6	7.8	4.3	24.5	63.7	150	338	224	0.84	5.20	68.5	2,333
P-2 (Brewing)	9:00-10:30	72.8	34.0	7.6	0.1	27.5	539.0	18	380	141	<0.01	0.11	97.9	7,900
	12:00-13:30	66.2	30.9	7.6	2.7	35.0	587.0	21	390	134	<0.01	0.08	94.1	220
	15:00-16:30	66.2	29.5	7.6	2.6	30.0	531.0	21	380	138	<0.01	0.08	99.6	200
	Weighted Avg. Pollution Load	1,641.6	31.5	7.6	1.7	30.7	551.9	20	383	138	0.00	0.09	97.2	2,938
P-3 (Paper)	9:00-10:30	80.1	33.0	7.5	0.2	32.5	212.0	50	700	69	1.40	0.03	14.9	54,000
	12:00-13:30	79.0	33.3	7.3	0.2	37.0	214.0	46	720	67	1.70	0.01	15.2	35,000
	15:00-16:30	75.0	32.1	7.4	0.2	43.5	222.0	64	705	67	1.40	0.02	14.7	35,000
	Weighted Avg. Pollution Load	1,872.8	32.8	7.4	0.2	37.5	215.9	53	708	68	1.50	0.02	14.9	41,501
P-4 (Ceramic)	9:00-10:30	116.3	29.3	6.0	1.1	2.0	43.9	9	65	287	<0.01	<0.01	443.0	40
	12:00-13:30	50.2	29.5	6.0	0.4	1.3	37.1	7	70	281	<0.01	<0.01	387.0	0
	15:00-16:30	100.5	29.4	6.1	0.4	2.5	30.5	6	70	282	<0.01	<0.01	353.0	0
	Weighted Avg. Pollution Load	712.0	29.4	6.0	0.7	2.1	37.6	7	68	284	0.00	0.00	398.6	17
P-5 (Steel Rolling)	9:00-10:30	10.8	30.8	7.4	7.5	1.2	26.9	3	40	1,077	0.28	0.94	42.8	170
	12:00-13:30	9.2	31.2	7.5	7.1	1.7	47.0	40	40	940	0.28	1.80	42.5	0
	15:00-16:30	9.7	31.3	7.3	6.8	2.0	51.8	35	35	879	0.28	0.63	42.0	0
	Weighted Avg. Pollution Load	237.6	31.1	7.4	7.1	1.6	41.3	1	38	970	0.28	1.11	42.4	62

* unit for Pollution Load is kg/day

Table 8.3.1 (2) Wastewater Quality and Quantity: Discharged (cont'd)

No.	Item	Flow Rate (m ³ /hr.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	SS (mg/l)	Alkal. (mg/l)	cl- (mg/l)	NH4-N (mg/l)	NO3-N (mg/l)	SO4 2- (mg/l)	Coliform Group (MPN/100ml)
N-1 (Soft Drink)	9:00-10:30	45.0	29.1	7.8	3.2	4.0	25.7	14	395	45	<0.01	0.84	14.9	1,600,000
	12:00-13:30	43.8	29.0	7.8	3.2	4.3	40.2	26	415	45	<0.01	0.47	15.4	920,000
	15:00-16:30	44.0	29.1	7.7	3.0	3.3	21.4	22	415	41	2.24	<0.01	15.6	2,400,000
	Weighted Avg. Pollution Load	-	29.1	7.8	3.1	3.9	29.1	21	408	44	0.74	0.44	15.3	1,640,783
		354.1	-	-	-	1.4	10.3	7.3	144.6	15.4	0.3	0.2	5.4	-
N-2 (Ice Cream)	9:00-10:30	8.0	27.4	7.8	4.7	95.0	135.0	42	150	667	81.80	2.42	55.6	9,200,000
	12:00-13:30	6.0	27.4	7.9	7.1	232.0	269.0	62	140	780	60.20	6.40	53.9	2,400,000
	15:00-16:30	7.0	27.5	8.0	7.1	255.0	316.0	69	140	704	57.40	4.62	51.1	5,400,000
	Weighted Avg. Pollution Load	-	27.4	7.9	6.2	187.5	233.6	57	144	712	67.50	4.29	53.6	5,990,476
		112.0	-	-	-	21.0	26.2	6.4	16.1	79.7	7.6	0.5	6.0	-
N-3 (Paper)	9:00-10:30	268.0	31.2	6.9	0.3	89.0	186.0	26	205	372	<0.01	0.25	137.0	28,000
	12:00-13:30	222.8	31.5	7.0	0.1	148.0	221.0	33	200	397	<0.01	0.22	148.0	160,000
	15:00-16:30	267.0	35.8	7.6	0.1	105.0	219.0	30	180	458	<0.01	0.20	141.0	540,000
	Weighted Avg. Pollution Load	-	33.0	7.2	0.2	111.8	208.2	29	194	411	0.00	0.22	141.6	254,734
		6,223.2	-	-	-	695.8	1,295.7	183.5	1,209.4	2,557.1	0.0	1.4	881.4	-
N-4 (Dyeing)	9:00-10:30	53.9	33.0	7.4	5.2	25.5	109.0	14	235	79	<0.01	0.03	126.0	24,000
	12:00-13:30	53.9	32.7	7.1	5.1	15.0	75.5	50	160	92	<0.01	0.02	116.0	35,000
	15:00-16:30	56.2	33.5	7.1	6.4	44.5	100.0	42	90	83	<0.01	0.02	140.0	16,000
	Weighted Avg. Pollution Load	-	33.1	7.2	5.6	28.6	94.9	35	161	85	0.00	0.02	127.5	24,874
		1,312.8	-	-	-	37.5	124.6	46.5	210.9	111.2	0.0	0.0	167.4	-
N-5 (Washing)	9:00-10:30	12.0	23.7	5.2	1.7	17.4	59.9	26	25	493	<0.01	0.01	242.0	35,000
	12:00-13:30	12.0	23.6	6.0	1.7	24.8	91.8	15	55	488	<0.01	0.08	176.0	1,700,000
	15:00-16:30	12.0	23.5	5.3	1.7	24.3	86.0	17	20	465	<0.01	0.09	259.0	1,300
	Weighted Avg. Pollution Load	-	23.6	5.5	1.7	22.2	79.2	19	33	482	0.00	0.06	225.7	578,767
		96.0	-	-	-	2.1	7.6	1.9	3.2	46.3	0.0	0.0	21.7	-

* unit for Pollution Load is kg/day

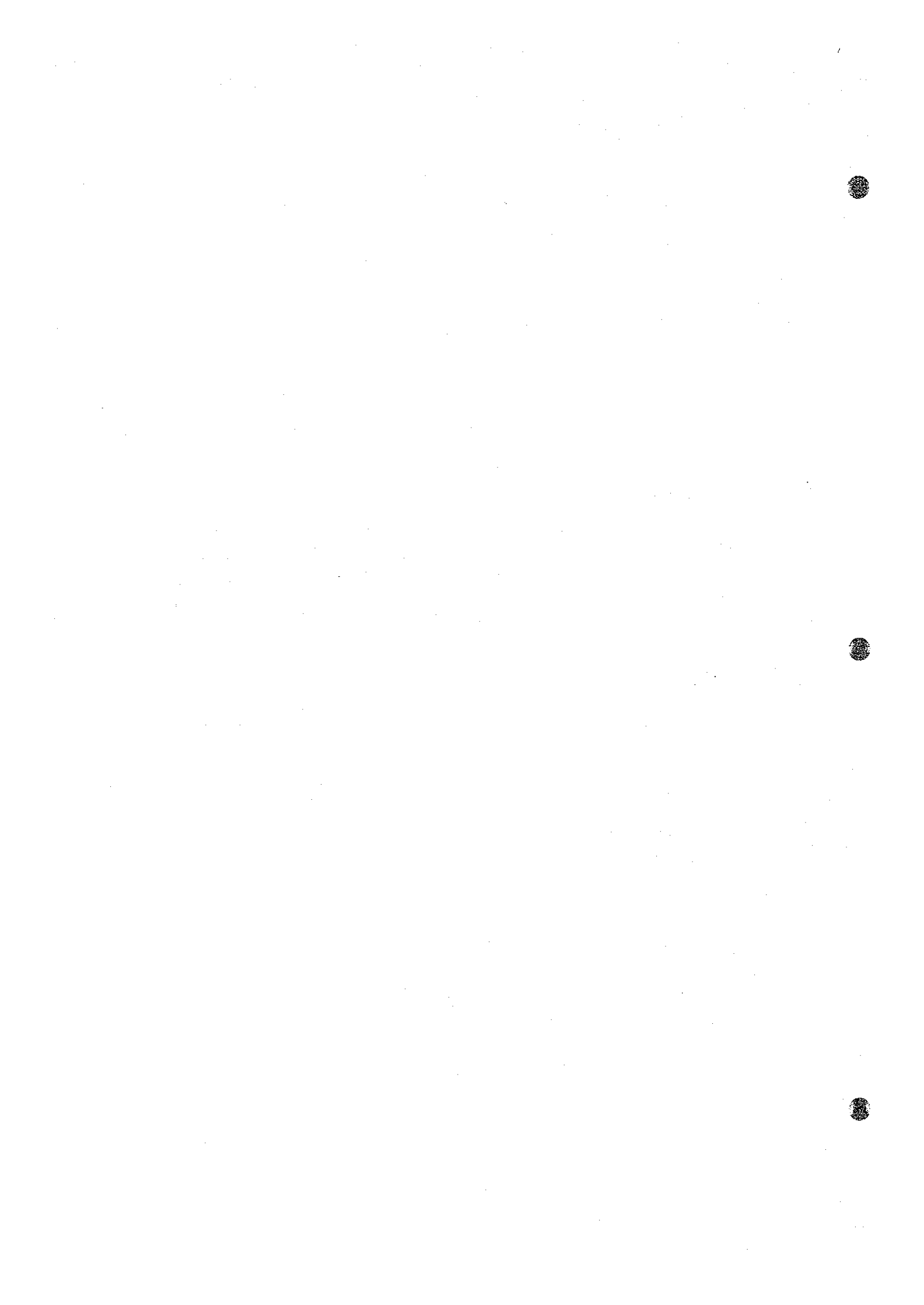
Table 8.3.2 Information on Slaughter houses based on Questionnaire Survey

Municipality	Location	Area (rai)	Kind/Number (N/Day)	Water Consumption			Discharge Point
				Water Supply	Ground-water	Treatment Facility	
Chai Nat	Phomprasert Road	1.05	Pig - 19 Cow - 0 Buffalo - 1	m3/Day 8	m3/Day 8	-	Behind Private Low land
Sing Buri	Tambol Ton Pho Moo 6	1.905	Pig - 30-35 Cow - 3-4	0.2	Used		
Lop Buri	Ramdeacho Road	6 rai 10 yards	Pig - 20-30	Used	-	-	Ramdeacho Drainage
Pamok	From Muni. Office 1.5 km.	5.5	Pig - 16	3	Used	-	Drain Pond
Sena	Tamsasit Road	4.0	Pig - 28 Buffalo - 2	-	-	Septic Tank	-
Bang Bua Thong	Moo 4	4.0	Pig - 18 Cow - 1 Buffalo - 1	-	10	Septic Tank	-
Prachatipat	Moo 4	0.375	-	-	Deep Well	-	Pond
	Moo 6	1.0	-	-	Canal	-	Pond

Table 8.3.3 Wastewater Quantity and Quality of Factories in Rangsit Area

Category	Type of Industry	DIW Reg. No.	Fac. No.	Area (m ²)	No. of Worker	Wastewater Generation (m ³ /d)	Wastewater Generation (l/m ² /d)	BOD Generation (kg/d)	BOD Generation (g/m ² /d)	SS Generation (kg/d)	SS Generation (g/m ² /d)	(kg/c/d)	(kg/c/d)
A	High Organic Cont. Ind.	4, 5, 9, 10, 12, 15, 16, 29, 47	17	270,130	1,351	3,751.0	13.9	2,776	4,218	15.6	3,122	1,370	5.1
B	Medium Organic Cont. Ind.	22, 28, 39, 41, 46	17	1,837,288	10,231	21,262.0	11.6	2,078	8,057	4.4	0,788	1,480	0.8
C	Low Organic Cont. Ind.	37, 42, 51, 52, 53, 91	21	700,308	6,104	4,002.0	5.7	0,656	713	1.0	0,117	721	1.0
D	Inorganic Cont. Ind. (no HM.)	55, 58, 59, 60, 62, 64, 65, 77, 78, 84, 95	29	726,558	9,299	5,971.4	8.2	0,642	1,388	1.9	0,149	28,758	39.6
E	Inorganic Cont. Ind. (w/HM.)	69, 71, 72, 74	21	583,888	16,588	3,256.0	5.6	0,196	798	1.4	0,048	592	1.0
F	No WW from production	2, 14, 20, 21, 23, 24, 27, 33, 34, 40, 46, 48, 61, 66, 67, 70, 73, 81, 82, 83, 85, 86, 87, 88	104	2,403,858	70,715	8,761.2	3.6	0,124	2,206	0.9	0,031	2,497	1.0
Total			209	6,522,030	114,288	47,003.6	7.2	0,411	17,380	2.7	0,152	35,418	5.4

Source: F/S on Central Wastewater Treatment Plant Project, 1992, DIW



9.2.1 Water Intake for Irrigation Use

Table 9.2.1.1 Water Intake at Some Major Irrigation Gates in March and April

River	Name of Gate and Pump St.	Location	River Mouth (km)	Yearly average flow rate (m ³ /s)				Average in March & April
				1989	1990	1991	1992	
Chao Phraya	Bang Bua Thong	Pathum Thani	72.0	March	6.53	20.44	26.56	19.1
				April	16.85	20.88	23.00	19.9
	Phra Udom	Pathum Thani	74.0	March	8.75	14.62	13.46	12.0
				April	16.71	14.78	12.64	13.6
(In charge by RID)	Chula-longkorn	South Rangsit, Pathum Thani	84.0	March	0.00	0.00	0.00	0.0
				April	0.00	0.00	0.00	0.0
	Phra Intraracha	North Rangsit, Pathum Thani	100.0	March	0.00	0.00	0.00	0.0
				April	0.00	0.00	0.00	0.0
	Singhanat	Pathum Thani	108.0	March	0.00	5.85	2.80	2.2
				April	0.00	0.00	1.40	0.3
Weighted distance from river mouth =				74.1	Total average in March =			33.2
(using weighted-average of flow rate and distance)					Total average in April =			33.8
					Total average in March and April =			33.5
Chao Phraya	MWA Raw Water Intake	Sam Lae, Pathum Thani	98.0	March	30.00	30.00	30.00	30.00
				April	30.00	30.00	30.00	30.00
Chao Phraya	Bang Ban Pumping St.	Ayutthaya	126.0	March	0.00	0.00	0.00	0.0
				April	0.00	0.00	0.00	0.0
Noi	Jao Jed	Ayutthaya	136.0	March	0.00	0.00	0.00	0.0
				April	0.00	0.00	0.00	0.0

Note : * Distance is measured from river mouth

** Distance from river mouth of Noi river is measured from PCD's set up point at Pompetch, A.Muang, Ayutthaya (142.0 km from river mouth) along that river

9.5.1 Investigation Results for Analysis of Concentration Ratio and Run-off Ratio

9.5.1.1 Water Quality Examination Results

Table 9.5.1.1 (1) Water Quality of Drainage Channel for Concentrated Ratio Analysis
--High Population Density--

Station No. C-1L (Ayuthaya)																	
Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)
9:00	387.1	20.0	7.6	4.9	6.7	19.4	24.0	9	9:00	2,231.7	19.0	7.9	4.0	6.9	33.7	40.8	13
11:00	266.3	23.0	7.6	4.1	7.8	31.2	30.0	12	11:00	1,707.6	22.0	8.0	6.0	9.5	36.5	44.0	19
13:00	331.5	25.0	8.1	4.7	7.2	19.4	50.0	9	13:00	1,679.7	25.5	8.1	3.6	13.3	43.9	48.3	57
15:00	377.3	27.0	8.4	3.3	8.6	31.2	74.0	11	15:00	1,569.1	27.0	7.1	2.7	18.0	48.5	52.7	41
17:00	236.1	26.0	8.0	1.2	13.0	66.2	68.0	39	17:00	1,602.2	25.0	8.0	1.3	19.8	54.2	58.5	21
19:00	0.0	25.0	7.9	1.5	7.9	39.0	72.0	6	19:00	1,506.9	22.0	7.3	0.6	22.2	55.7	47.9	15
21:00	0.0	24.0	7.6	1.4	18.0	58.4	46.0	11	21:00	1,419.5	20.5	7.9	0.3	26.5	63.2	49.1	15
23:00	0.0	22.0	7.7	0.0	22.0	62.3	44.0	11	23:00	1,423.5	20.0	7.6	0.0	40.0	69.4	44.8	64
1:00	39.9	21.0	7.8	0.0	31.0	74.0	44.0	19	1:00	1,471.4	19.0	7.8	0.7	41.2	79.2	54.5	28
3:00	159.6	21.0	7.8	0.0	20.0	50.6	42.0	13	3:00	1,465.1	19.0	7.4	0.2	20.0	49.3	47.0	67
5:00	155.5	22.0	7.8	0.9	19.0	54.5	40.0	14	5:00	1,417.4	19.0	7.6	0.6	16.7	44.8	45.8	8
7:00	215.3	21.0	7.8	3.5	5.4	23.4	24.0	9	7:00	1,693.1	18.5	7.6	0.6	11.7	48.4	42.8	49
Daily Flow (m ³ /day)	Maximum	27.0	8.4	4.9	31.0	74.0	74.0	39	Daily Flow (m ³ /day)	Maximum	27.0	8.1	6.0	41.2	79.2	58.5	67
	Minimum	20.0	7.6	0.0	5.4	19.4	24.0	6		Minimum	18.5	7.1	0.0	6.9	33.7	40.8	8
	Arith. Mean	23.1	7.8	2.1	13.9	44.1	46.5	13.6		Arith. Mean	21.4	7.7	1.7	20.5	52.3	48.0	33.1
2,169	Geom. Mean	23.3	7.9	3.2	10.1	34.2	45.0	13.8	19,187	Geom. Mean	21.4	7.7	1.9	19.6	51.1	47.7	32.5
	Pollution L.	-	-	-	21.92	74.21	97.69	29.97		Pollution L.	-	-	-	375.34	981.18	915.81	623.83

Table 9.5.1.1 (2) Water Quality of Drainage Channel for Concentrated Ratio Analysis
 --High Population Density--

Station No. C-2U (Nonthaburi)										Station No. C-2L (Nonthaburi)									
Time	Flow Rate (m ³ /2hrs)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)		Time	Flow Rate (m ³ /2hrs)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	
9:00	132.8	26.5	7.3	0.7	12.0	38.0	28.0	1		9:00	-1,048.4	28.5	7.0	1.5	5.0	19.0	21.0	10	
11:00	14.4	26.5	7.4	0.6	12.0	31.0	30.0	3		11:00	3,210.5	28.5	7.0	1.1	3.5	16.0	21.0	15	
13:00	72.6	27.5	7.3	1.0	25.0	47.0	36.0	7		13:00	2,138.7	28.5	6.9	0.3	34.0	73.0	40.0	28	
15:00	106.3	28.5	7.3	0.8	29.0	47.0	30.0	9		15:00	362.2	29.0	7.3	0.0	30.0	80.0	44.0	9	
17:00	75.3	28.0	7.3	0.5	25.0	51.0	32.0	3		17:00	1,497.5	29.0	7.2	0.0	19.0	54.0	32.0	23	
19:00	74.3	27.0	7.2	0.0	21.0	39.0	32.0	5		19:00	2,051.9	28.5	6.9	0.9	10.0	31.0	30.0	13	
21:00	42.4	27.5	7.3	0.0	22.0	39.0	30.0	2		21:00	2,700.1	28.0	6.7	0.0	7.0	115.0	70.0	15	
23:00	0.0	26.5	7.2	0.0	29.0	39.0	32.0	4		23:00	823.7	28.0	6.8	0.0	58.0	111.0	74.0	30	
1:00	0.0	26.5	7.3	0.0	28.0	35.0	34.0	2		1:00	362.8	27.0	6.8	0.0	67.0	210.0	70.0	270	
3:00	17.4	26.0	7.3	0.0	31.0	47.0	30.0	3		3:00	518.7	27.0	7.0	0.0	53.0	122.0	70.0	56	
5:00	71.5	26.0	7.3	0.0	18.0	27.0	30.0	3		5:00	306.9	27.0	6.9	0.0	52.0	99.0	68.0	26	
7:00	108.6	26.0	7.3	0.0	17.0	25.0	30.0	2		7:00	-2,027.0	28.0	7.0	1.8	4.5	19.0	18.0	24	
Daily Flow (m ³ /day)	Maximum	28.5	7.4	1.0	31.0	51.0	36.0	9		Daily Flow (m ³ /day)	Maximum	29.0	7.3	1.8	70.0	210.0	74.0	270	
	Minimum	26.0	7.2	0.0	12.0	25.0	28.0	1			Minimum	27.0	6.7	0.0	3.5	16.0	18.0	9	
	Arith. Mean	26.9	7.3	0.3	22.4	38.8	31.2	3.7			Arith. Mean	28.1	7.0	0.5	33.8	79.1	46.5	43.3	
736	Geom. Mean	27.0	7.3	0.4	20.3	38.8	30.6	3.8			Geom. Mean	28.4	6.9	0.1	39.8	82.1	50.7	28.8	
	Pollution L.	-	-	-	14.96	28.53	22.51	2.83			Pollution L.	-	-	-	433.98	894.34	552.44	313.49	

Table 9.5.1.1 (4) Water Quality of Drainage Channel for Concentrated Ratio Analysis
 - Medium Population Density -

Station No. C-4U (Pathum Thani)												Station No. C-4L (Pathum Thani)											
Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	(unit: Pollution Load kg/day)					
																		Maximum	Minimum	Arith. Mean			
9:00	-404.4	29.0	7.4	3.2	1.8	13.0	15.0	72	9:00	-13,323.1	27.0	7.1	3.2	1.5	18.5	14.1	59						
11:00	-23.9	28.0	7.5	3.2	1.9	13.9	14.8	51	11:00	12,957.1	28.0	7.1	4.1	1.8	16.7	14.2	66						
13:00	5,279.6	28.0	7.4	3.5	1.8	14.3	13.6	41	13:00	7,917.5	28.5	7.6	4.1	1.4	19.7	13.9	45						
15:00	6,846.6	28.0	7.3	2.1	1.9	13.4	14.0	28	15:00	8,667.0	29.0	7.2	3.9	2.0	20.4	13.5	42						
17:00	4,790.9	28.0	7.4	1.3	1.9	14.8	14.0	36	17:00	-1,856.6	29.0	7.2	3.6	1.7	20.5	14.4	39						
19:00	1,724.9	28.0	7.5	2.6	1.9	17.0	14.4	35	19:00	-2,464.8	27.0	7.0	3.7	1.8	15.7	14.2	52						
21:00	10,734.2	28.0	7.4	2.4	0.8	21.9	14.0	35	21:00	15,183.6	27.5	7.1	3.4	1.5	17.1	15.3	36						
23:00	9,208.1	27.0	7.2	0.7	1.0	19.4	15.8	39	23:00	21,794.8	27.0	7.2	2.4	1.9	15.4	14.6	33						
1:00	6,223.5	27.0	7.2	1.0	1.1	21.4	16.3	32	1:00	14,875.2	27.0	7.0	2.4	1.9	15.5	14.4	23						
3:00	2,115.5	26.0	7.2	0.7	1.4	16.7	15.8	9	3:00	7,420.8	26.5	6.9	2.1	2.0	16.5	15.5	24						
5:00	-372.1	26.0	7.2	0.9	1.5	18.6	16.8	55	5:00	-4,091.1	26.0	6.9	1.8	2.2	18.4	16.8	29						
7:00	666.3	26.0	7.3	1.9	1.6	19.8	18.7	58	7:00	-19,613.9	27.0	7.1	4.1	2.3	14.6	14.1	61						
Daily Flow (m ³ /day)	Maximum	29.0	7.5	3.5	1.9	21.9	18.7	72	Daily Flow (m ³ /day)	Maximum	29.0	7.6	4.1	2.3	20.5	16.8	66						
	Minimum	26.0	7.2	0.7	0.8	13.0	13.6	9		Minimum	26.0	6.9	1.8	1.4	14.6	13.5	23						
	Arith. Mean	27.4	7.3	2.0	1.6	17.0	15.3	40.9		Arith. Mean	27.5	7.1	3.2	1.8	17.4	14.6	42.4						
46,789	Geom. Mean	27.6	7.3	1.8	1.3	18.2	14.7	33.8	47,467	Geom. Mean	28.0	7.2	2.7	1.6	17.1	14.7	22.3						
	Pollution L.	-	-	-	62.23	850.38	689.99	1,581.85	Pollution L.		-	-	-	77.34	812.59	695.92	1,059.82						

Table 9.5.1.1 (5) Water Quality of Drainage Channel for Concentrated Ratio Analysis
- Rural Area -

Station No. C-5U (Pathum Thani)										Station No. C-5L (Pathum Thani)																		
Time	Flow Rate (m ³ /2hrs).	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs).	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs).	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)		
																											Time	Flow Rate (m ³ /2hrs).
9:00	27,901.9	27.5	7.1	2.9	2.4	19.5	21.0	33	9:00	45,712.5	28.0	7.0	3.5	1.3	14.5	14.0	67											
11:00	28,436.3	28.5	7.1	2.8	2.0	18.0	15.3	45	11:00	50,560.5	28.0	7.1	3.9	2.5	16.5	15.8	67											
13:00	15,428.2	29.0	7.1	4.8	2.2	13.1	14.6	46	13:00	9,609.8	28.5	7.5	4.1	2.8	16.3	15.2	42											
15:00	2,417.4	29.0	7.2	4.0	2.0	13.3	14.4	33	15:00	-5,175.7	28.5	7.3	3.8	2.5	14.5	14.6	35											
17:00	5,505.8	29.0	7.2	3.7	2.2	15.9	14.1	37	17:00	3,103.7	28.0	7.4	3.6	2.8	18.2	14.0	31											
19:00	12,122.5	29.0	7.2	3.3	1.9	14.6	14.4	34	19:00	19,454.9	28.0	7.6	4.0	2.2	16.2	15.0	46											
21:00	10,768.7	28.5	7.2	2.5	2.3	16.8	15.1	42	21:00	13,030.5	28.0	7.6	3.3	4.2	19.9	15.2	43											
23:00	31,894.8	28.0	7.1	2.7	2.4	18.7	16.5	38	23:00	28,180.7	28.0	7.1	3.1	2.2	20.3	14.9	27											
1:00	30,619.9	28.0	7.2	2.6	1.2	16.9	16.7	41	1:00	22,533.3	27.5	7.5	2.9	2.1	16.6	15.7	32											
3:00	22,429.2	28.0	7.0	3.3	1.7	19.7	16.9	32	3:00	16,268.9	27.0	7.6	2.9	2.1	22.2	19.7	37											
5:00	15,054.5	27.5	7.0	2.8	1.8	19.9	17.3	37	5:00	14,934.1	27.0	7.6	3.4	2.0	24.3	19.2	59											
7:00	10,991.6	27.0	7.0	2.3	1.7	20.4	17.6	26	7:00	31,507.7	27.5	7.6	4.0	1.9	15.7	14.5	65											
Daily Flow (m ³ /day)	Maximum	29.0	7.2	4.8	2.4	20.4	21.0	46	Daily Flow (m ³ /day)	Maximum	28.5	7.6	4.1	4.2	24.3	19.7	67											
	Minimum	27.0	7.0	2.3	1.2	13.1	14.1	26		Minimum	27.0	7.0	2.9	1.3	14.5	14.0	27											
	Arith. Mean	28.3	7.1	3.1	2.0	17.2	16.2	37		Arith. Mean	27.8	7.4	3.5	2.4	17.9	15.7	45.9											
213,601	Geom. Mean	28.1	7.1	3.0	2.0	17.9	16.7	37.9	249,721	Geom. Mean	27.8	7.3	3.5	2.2	17.5	15.5	53.0											
	Pollution L.	-	-	-	0.42	3.82	3.57	8.09		Pollution L.	-	-	-	0.54	4.37	3.88	13.24											

Table 9.5.1.1 (7) Water Quality of River for Run-off Ratio Analysis
- Chao Phraya River-

Station No. P-1U (Ang Thong)												Station No. P-1L (Ang Thong)											
Time	Flow Rate (m ³ /2hrs)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl (mg/l)	SS (mg/l)						
9:00	1,202,191.2	22.0	7.4	8.1	2.2	5.9	9.4	28	9:00	1,020,142.8	23.0	7.6	8.0	1.2	4.2	10.8	31						
11:00	1,064,425.9	23.5	7.6	8.4	1.7	5.4	10.2	34	11:00	1,356,708.6	23.0	7.5	7.9	1.5	5.5	10.9	41						
13:00	457,005.4	24.0	7.5	8.4	2.0	4.5	9.9	35	13:00	752,454.8	25.0	7.7	8.4	2.7	8.3	11.2	35						
15:00	305,730.9	24.0	7.8	8.3	3.0	9.3	10.7	35	15:00	696,013.0	25.0	8.0	8.5	2.4	8.3	11.7	29						
17:00	478,564.7	23.5	7.8	8.3	2.1	7.8	10.2	31	17:00	526,657.7	24.0	8.0	8.1	2.2	4.9	10.6	33						
19:00	1,110,967.2	22.5	7.9	7.9	2.0	6.8	10.6	37	19:00	605,197.3	23.0	8.0	8.1	2.1	7.0	10.6	29						
21:00	1,260,115.0	22.5	7.9	8.2	2.8	8.1	11.6	32	21:00	908,969.4	23.0	8.0	8.0	2.4	9.9	10.8	28						
23:00	1,323,095.4	22.0	7.9	8.1	2.5	7.7	11.7	38	23:00	1,207,366.2	21.5	8.0	8.1	2.0	8.7	10.4	27						
1:00	1,197,995.4	22.0	7.9	7.9	2.4	7.0	10.1	38	1:00	1,327,086.0	22.0	8.0	7.9	2.2	9.3	9.9	26						
3:00	1,046,118.6	21.5	7.9	7.9	2.4	8.1	10.3	31	3:00	810,103.7	23.0	7.9	7.9	2.3	9.1	10.6	23						
5:00	978,058.8	21.5	7.9	7.9	1.8	7.0	11.3	28	5:00	670,139.5	21.5	7.9	7.9	1.3	7.6	10.6	23						
7:00	1,099,474.2	21.5	8.0	7.6	2.4	7.5	10.6	28	7:00	605,197.3	22.0	7.9	8.1	1.9	8.2	10.1	25						
Daily Flow (m ³ /day)	Maximum	24.0	8.0	8.4	3.0	9.3	11.7	38	Daily Flow (m ³ /day)	Maximum	25.0	8.0	8.5	2.7	9.9	11.7	41						
	Minimum	21.5	7.4	7.6	1.7	4.5	9.4	28		Minimum	21.5	7.5	7.9	1.2	4.2	9.9	23						
	Arith. Mean	22.5	7.8	8.1	2.3	7.1	10.6	32.9		Arith. Mean	23.0	7.9	8.1	2.0	7.6	10.7	28.2						
	Geom. Mean	22.3	7.8	8.0	2.3	7.1	10.6	32.9		Geom. Mean	22.9	7.9	8.1	2.0	7.6	10.7	29.6						
11,543,743	Pollution L.	-	-	-	26.19	81.54	122.52	379.85	10,486,046	Pollution L.	-	-	-	20.79	79.86	111.69	310.43						

Table 9.5.1.1 (8) Water Quality of River for Run-off Ratio Analysis
- Chao Phraya River -

Station No. P-2U (Pathum Thani)										Station No. P-2L (Pathum Thani)									
Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl	SS (mg/l)	Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl	SS (mg/l)	Daily Flow (m ³ /day)	Pollution L.
9:00	-5,669,247.6	28.5	7.0	2.4	1.6	12.0	17.0	45	9:00	-5,793,352.2	27.5	7.1	2.5	2.4	13.0	17.0	49		
11:00	-6,982,346.2	29.0	7.0	2.0	1.7	13.0	17.0	45	11:00	-1,983,445.2	27.5	7.1	2.0	2.8	15.0	20.0	41		
13:00	-4,144,735.8	29.0	7.0	2.4	2.0	18.0	18.0	22	13:00	6,715,895.4	28.0	7.2	2.8	2.2	18.0	18.0	18		
15:00	4,687,131.6	29.0	7.0	2.1	2.2	18.0	17.0	28	15:00	5,515,417.8	28.0	7.2	2.8	2.4	18.0	18.0	26		
17:00	5,231,725.2	28.5	7.0	2.5	1.7	18.0	17.0	26	17:00	3,469,977.0	28.5	7.4	2.7	2.1	20.0	18.0	17		
19:00	5,501,502.0	28.0	7.0	2.6	1.6	27.0	20.0	19	19:00	2,530,922.4	27.5	7.2	2.9	1.8	19.0	22.0	19		
21:00	5,122,780.2	28.0	7.1	2.5	1.4	19.0	16.0	21	21:00	2,828,224.8	27.5	7.1	3.1	2.1	34.0	18.0	15		
23:00	5,873,961.6	28.0	7.1	2.8	1.8	11.0	20.0	30	23:00	3,059,830.8	27.5	6.5	3.2	1.6	42.0	20.0	22		
1:00	5,429,926.8	28.0	7.2	2.8	1.6	27.0	20.0	45	1:00	1,353,243.6	27.5	7.1	2.4	1.2	38.0	16.0	39		
3:00	5,972,430.6	28.0	7.2	4.0	1.8	15.0	16.0	69	3:00	1,818,387.0	27.0	7.1	3.0	1.7	38.0	16.0	54		
5:00	2,697,102.0	28.0	7.3	4.0	1.6	42.0	16.0	64	5:00	828,459.0	27.0	7.2	2.9	1.3	23.0	18.0	46		
7:00	-4,659,940.8	28.0	7.2	4.0	1.7	34.0	16.0	58	7:00	-709,218.0	27.0	7.2	2.6	2.0	16.0	16.0	56		
Daily Flow (m ³ /day)	Maximum	29.0	7.3	4.0	2.2	42.0	20.0	69	Daily Flow (m ³ /day)	Maximum	28.5	7.4	3.2	2.8	42.0	22.0	56		
19,460,290	Minimum	28.0	7.0	2.0	1.4	11.0	16.0	19	Minimum	Minimum	27.0	6.5	2.0	1.2	13.0	16.0	15		
	Arith. Mean	28.3	7.1	2.8	1.7	21.2	17.5	39.3	Arith. Mean	Arith. Mean	27.5	7.1	2.7	2.0	24.5	18.1	33.5		
	Geom. Mean	27.7	7.2	3.1	1.7	23.2	18.9	29.4	Geom. Mean	Geom. Mean	27.9	7.1	3.1	1.8	29.8	18.7	13.5		
	Pollution L.	-	-	-	33.03	451.85	367.96	571.87	Pollution L.	Pollution L.	-	-	-	35.61	585.49	366.56	265.27		

Table 9.5.1.1 (9) Water Quality of River for Run-off Ratio Analysis
- Lop Buri River-

Station No. P-3U (Ayutthaya)										Station No. P-3L (Ayutthaya)																
Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl ⁻ (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl ⁻ (mg/l)	SS (mg/l)	Time	Flow Rate (m ³ /2hrs.)	Water Temp. (deg.C)	pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	Cl ⁻ (mg/l)	SS (mg/l)
9:00	68,451.1	21.5	7.2	6.5	2.4	7.4	17.8	34	9:00	106.0	25.0	7.3	6.4	3.0	20.1	24.3	24		106.0	25.0	7.3	6.4	3.0	20.1	24.3	24
11:00	79,806.1	22.0	7.3	6.8	2.0	6.7	20.3	25	11:00	-431,030.2	26.0	7.4	6.8	3.5	16.2	22.5	36		-431,030.2	26.0	7.4	6.8	3.5	16.2	22.5	36
13:00	-72,800.8	23.0	7.3	6.2	2.9	7.4	22.0	29	13:00	-203,683.7	25.5	7.4	6.9	2.9	15.9	22.1	23		-203,683.7	25.5	7.4	6.9	2.9	15.9	22.1	23
15:00	156,451.0	24.0	7.5	6.5	3.7	10.7	23.0	34	15:00	266,587.2	25.5	7.4	7.1	3.0	12.1	21.4	28		266,587.2	25.5	7.4	7.1	3.0	12.1	21.4	28
17:00	140,716.2	23.0	7.7	6.1	4.5	14.8	21.4	40	17:00	422,065.3	25.5	7.5	7.0	2.9	15.6	22.1	32		422,065.3	25.5	7.5	7.0	2.9	15.6	22.1	32
19:00	128,077.2	22.0	7.6	6.4	4.1	9.7	19.9	35	19:00	290,540.3	25.0	7.4	6.3	2.4	15.8	22.9	36		290,540.3	25.0	7.4	6.3	2.4	15.8	22.9	36
21:00	106,937.8	22.0	7.7	6.3	3.8	17.4	18.2	46	21:00	149,213.4	24.5	7.4	6.3	2.6	16.2	23.6	34		149,213.4	24.5	7.4	6.3	2.6	16.2	23.6	34
23:00	69,533.6	21.0	7.7	7.2	3.9	16.1	16.2	24	23:00	41,979.1	24.0	7.4	6.3	2.8	14.3	24.5	21		41,979.1	24.0	7.4	6.3	2.8	14.3	24.5	21
1:00	41,956.4	21.0	7.6	6.4	4.5	19.0	16.9	25	1:00	123,103.3	25.0	7.5	6.6	2.7	15.6	22.5	34		123,103.3	25.0	7.5	6.6	2.7	15.6	22.5	34
3:00	30,382.1	20.0	7.7	6.6	3.8	18.3	16.7	23	3:00	54,746.8	25.0	7.3	6.4	2.9	10.1	22.8	32		54,746.8	25.0	7.3	6.4	2.9	10.1	22.8	32
5:00	62,248.6	20.0	7.7	6.4	4.6	17.7	16.2	28	5:00	207,849.2	24.0	7.4	6.8	2.7	12.1	22.4	30		207,849.2	24.0	7.4	6.8	2.7	12.1	22.4	30
7:00	108,623.1	19.0	7.6	6.5	4.9	13.7	14.4	21	7:00	169,300.6	24.0	7.5	6.5	2.4	8.5	24.3	22		169,300.6	24.0	7.5	6.5	2.4	8.5	24.3	22
Daily Flow (m ³ /day)	Maximum	24.0	7.7	7.2	4.9	19.0	23.0	46	Daily Flow (m ³ /day)	Maximum	26.0	7.5	7.1	3.5	20.1	24.5	36		Maximum	26.0	7.5	7.1	3.5	20.1	24.5	36
	Minimum	19.0	7.2	6.1	2.0	6.7	14.4	21		Minimum	24.0	7.3	6.3	2.4	8.5	21.4	21		Minimum	24.0	7.3	6.3	2.4	8.5	21.4	21
	Arith. Mean	21.5	7.6	6.5	3.8	13.2	18.6	30.3		Arith. Mean	24.9	7.4	6.6	2.8	14.4	23.0	29.3		Arith. Mean	24.9	7.4	6.6	2.8	14.4	23.0	29.3
920,384	Geom. Mean	21.7	7.6	6.5	4.0	13.5	18.7	32.6	1,092,777	Geom. Mean	24.4	7.5	6.6	2.4	12.5	22.8	30.3		Geom. Mean	24.4	7.5	6.6	2.4	12.5	22.8	30.3
	Pollution L.	-	-	-	3.65	12.42	17.26	30.00		Pollution L.	-	-	-	2.59	13.65	24.87	33.14			-	-	-	2.59	13.65	24.87	33.14

9.5.1.2 Cross Sectional Survey of Rivers

With reference to the study of concentrated and residual purification ratios of comprehensive basin-side planning, the data on flow rates of the rivers/channels in the study areas are requisites. In order to obtain the basic information for calculation of flow rate, cross sectional survey of the rivers/channels is required at the designated points.

(1) Study area and survey points

The study area is in the section between Chainat and Nonthabure, and the survey points are eighteen in a total as indicated in Table 9.5.1.2.1.

Table 9.5.1.2 Location of Investigation Points

Study Purpose	Study Area		No. of Points
	Land use type/River	Municipality	
Concentrated ratio	Urban-area	Ayutthaya	2
		Pathum Thani	2
	Sub-urban area	Ayutthaya	2
		Pathum Thani	2
	Rural Area	Pathum Thani	2
	Natural Area	Pathum Thani	2
Sub-Total		12	
Residual purification ratio	Chao Phraya River	Ang-Thong	2
	-do-	Pathum Thani	2
	Lop Buri River	Lop Buri	2
	Sub-Total		6
	Total		18

(2) Survey results

The survey was conducted in the middle of December, 1992 and the results are incorporated herewith.

FIGURE 9.5.1.2 (1) C-1U KHLONG MAKAM AYUTTHAYA

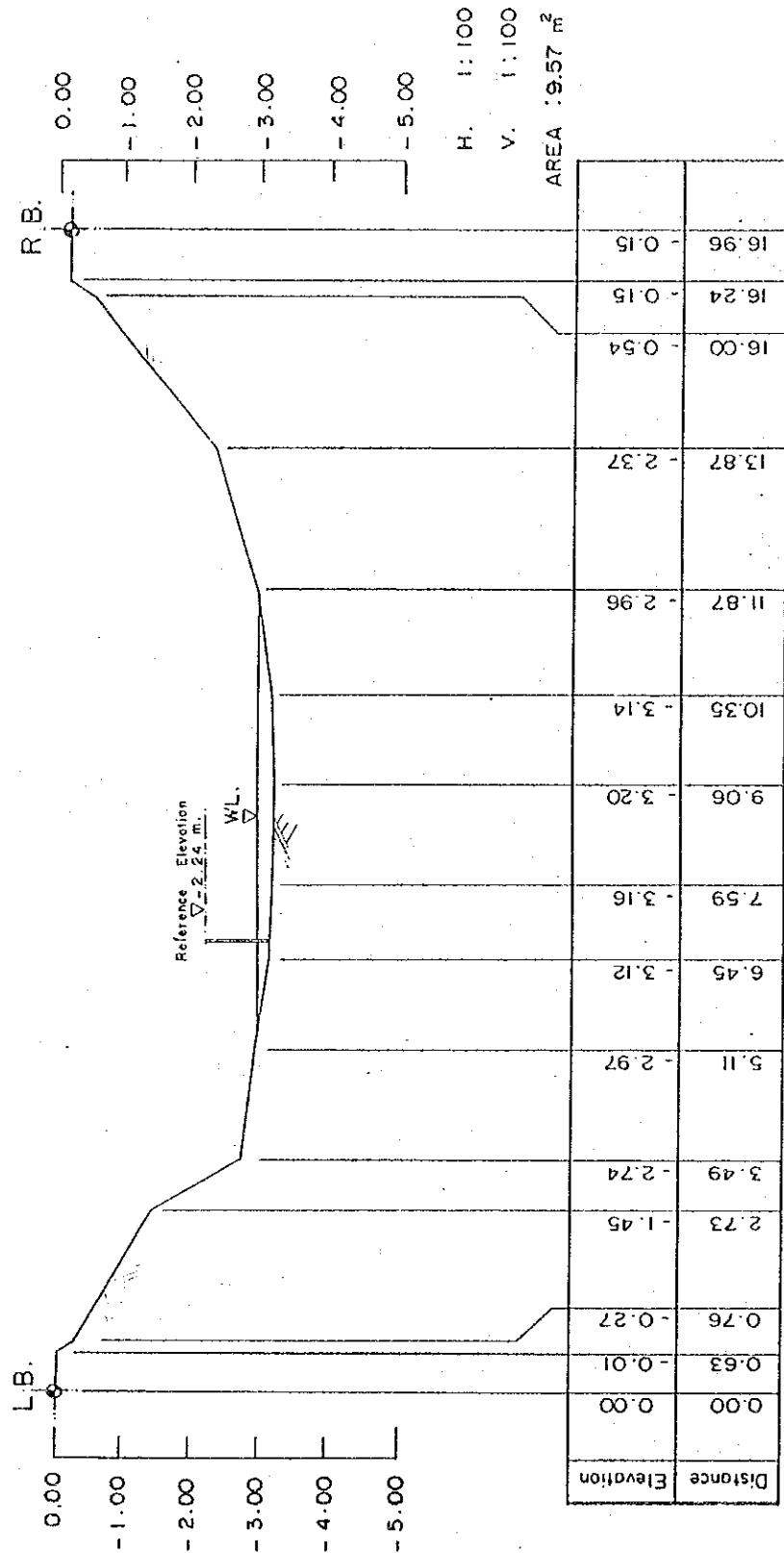


FIGURE 9.5.1.2 (2) C-1L KHLONG MAKAN AYUTTHAYA

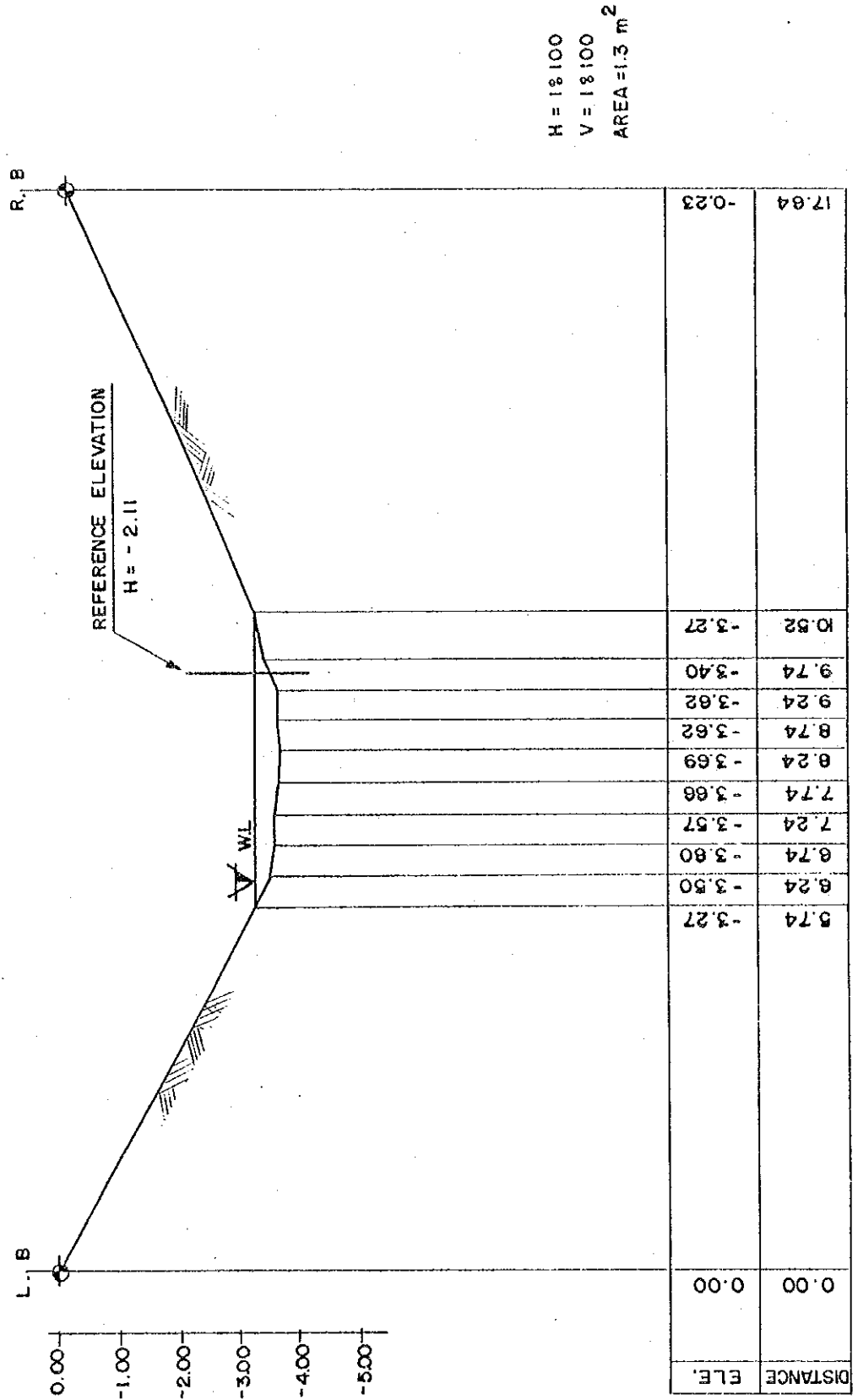


FIGURE 9.5.1.2 (3) C-2U BANG KHWANG DRAINAGE CHANEL MONTHABURI

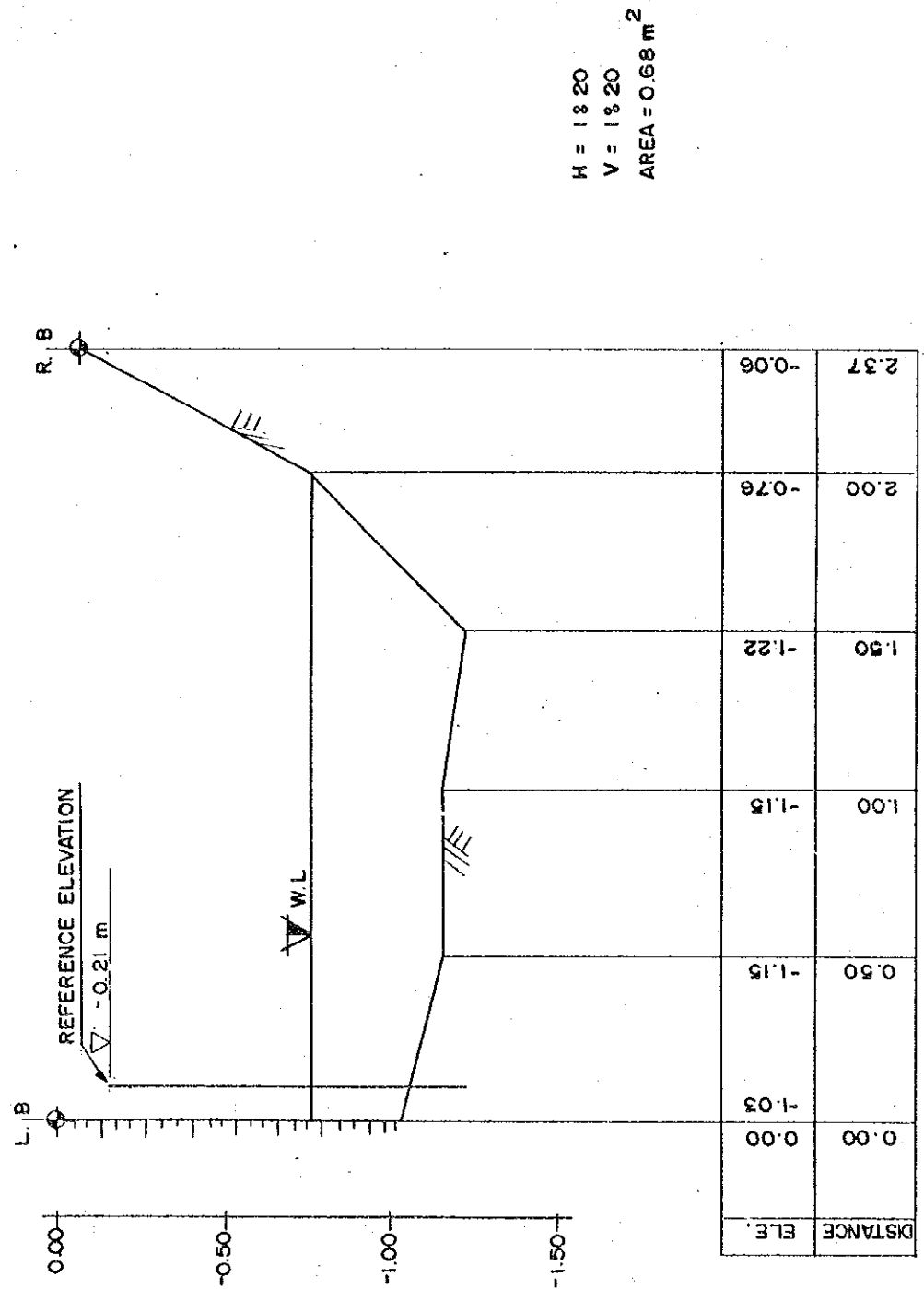


FIGURE 9.5.1.2 (4) C-2L BANG KHWANG DRAINAGE CHANEL MONTHABURI

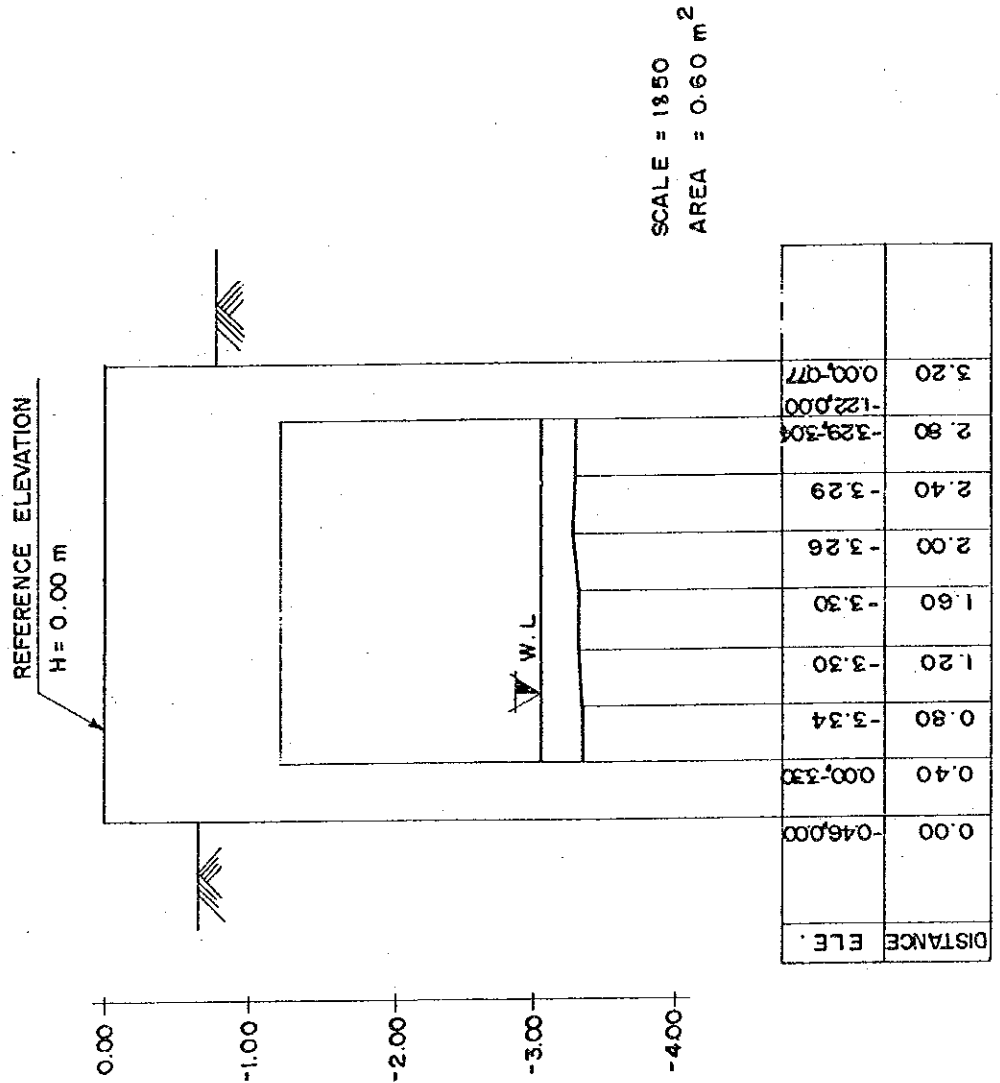


FIGURE 9.5.1.2 (5) C-3U KHLONG TAKIEN AYUTTHAYA

