DATA BOOK

3: TOPOGRAPHY/GEOLOGY

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Figure 3.1 Scheatic Geological Map of San Estiban Damsite ---------- 3.T.1

Figure 3.2 Geological Profile of Axis, San Estiban Dam ---------- 3.T.2

Data Book 3: Topography and Geology

Geology of San Esteban Dam Site

The results of site investigation are shown in "Figure 3.1 Schematic Geological Map" and "Figure 3.2 Geological Profile".

The foundation rock is composed of various volcanic rocks such as vitric tuff, tuff (fine to sandy), basaltic lava, and volcanic breccia that are covered by unconsolidated talus deposit, river deposit, and terrace deposit.

Rock Soundness

The foundation rock is not considered to be sound and the shear strength is estimated approximately 60 ton/m^2 in average. The shear strength of each rocks are estimated below.

Vitric tuff	:	about 60 ton/m^2, partly 40 ton/m^2, and 100 ton/m^2
Tuff	:	50 - 60 ton/m^2
Basaltic lava	:	100 - 120 ton/m^2
Volcanic breccia	:	80 - 100 ton/m^2

Hard and fine lava is fit for dam foundation and construction materials, however, porous rock and/or aglomelatic rock are troublesome for dam foundation due to its heterogeneous soundness and high permeability.

The maximum dam height is estimated as 65 m with the crest elevation of 155 meters above mean sea level from the topographical point of view. The width of right ridge is not so large and leakage through it should be studied further.

Permeability

Groundwater table in the left bank is low in spite of increasing elevation of the ground surface. Judging from its hydrogeological condition, permeability of foundation rock may be high in general. Generally, it is well known that permeability of lava is high with the following reasons.

Lava has various lithological phases as follows:

- hard and fine rock for the center part of lava flow,
- chilled marginal rock, and
- porous rock and/or agromelatic rock of marginal part of lava flow.

Porous and/or agromelatic rock is permeable due to the formation of many cracks and micro-cavities.

Consequently, length of curtain grouting line and depth of grouting will become large.

Construction Materials

Core and filter materials can be taken near the dam site in the reservoir. But, rock materials especially rip-rap material shall be taken from the far site besides the Pan-American Highway.

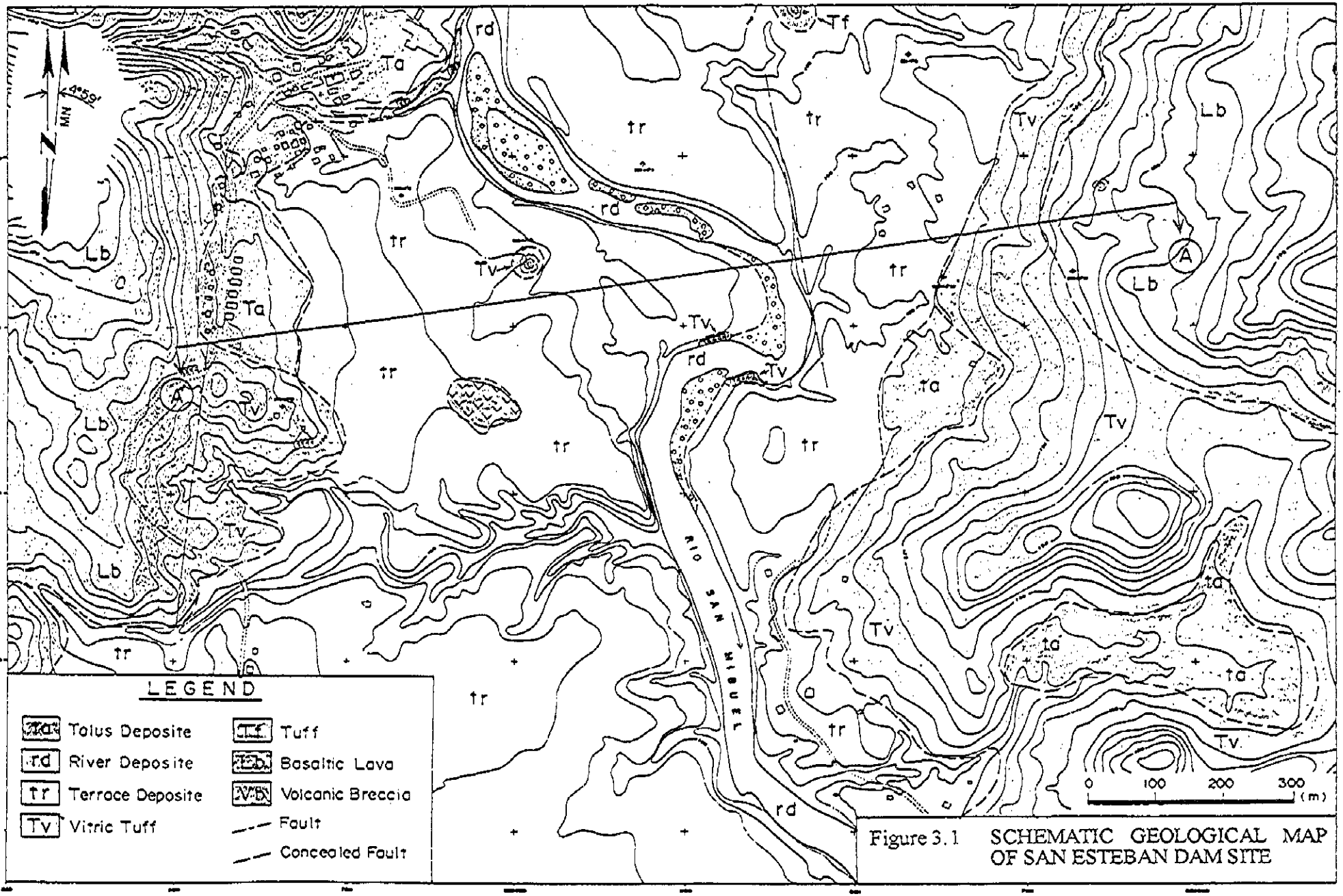

Figure 3.1 SCHEMATIC GEOLOGICAL MAP OF SAN ESTEBAN DAM SITE

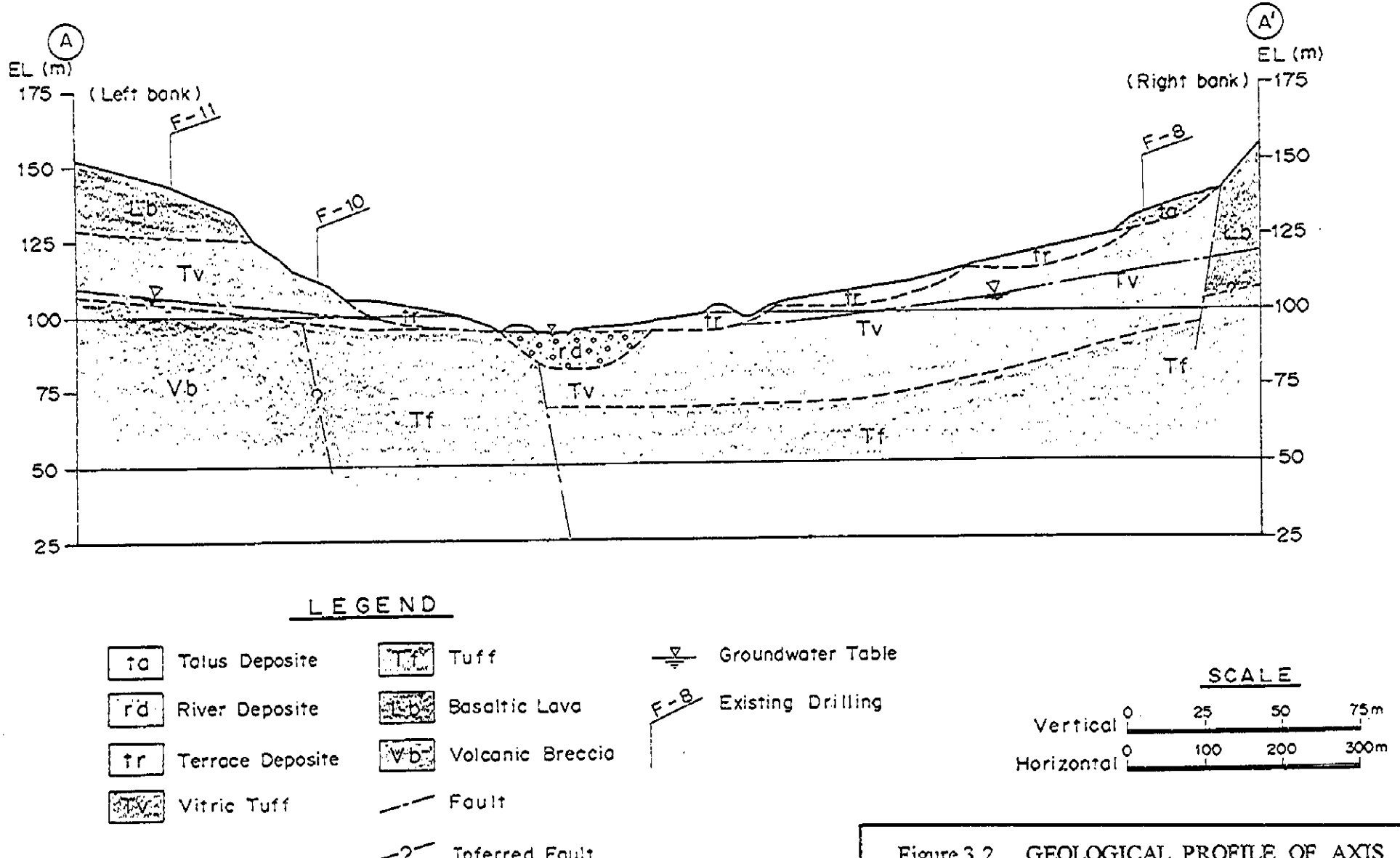

Figure 3.2 GEOLOGICAL PROFILE OF AXIS SAN ESTEBAN DAM

3.F.2

DATA BOOK

4: PROPOSED LAND USE

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Figure 4.1 Existing Land Use in the Basin (1995-1996)---------- 4.F.1

Figure 4.2 Conservation Areas in and Around Type Study Area---------- 4.F.2

1 Land Use For Simulation

The existing land use by sub-basin was obtained based on Land Use Map in El Salvador in 1995-1996 published by MAG. The existing land use in the basin is shown in Figure 4. 1. This land use was applied for 1995 flood simulation(refer to Table 4. 1).

The land use for 1980 flood simulation was projected by linear interpolation between 1995 land use and 1975 land use. The land use in 1975 was also prepared by MAG.

The land use data in 1980 and 1975 are shown in Table 4. 2 and Table 4. 3.

2 Land Use For Design

The land use for design flood (refer to Table 4. 4) was decided supposing that urban area in 1995 would be expanded for the year 2020 based on the proposed economic framework.

Table 4. 1 LAND USE BY SUBBASIN FOR 1995 FLOOD SIMULATION

Basin	Area	Urban area	Basic grain	Pasture	Coffee	Sugar Cane	Heneque	Fruits	Veg.	Forest	Water	Lava	Total Area	N
	Equivalent roughness	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	2	1		
	1	0.7	0.0	100.5	6.7	0.0	1.5	0.0	0.0	2.4	0.8	0.0	112.6	0.32
	2	1.6	2.5	148.7	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	153.6	0.31
	3	0.3	0.6	119.3	7.6	0.0	0.0	0.0	0.0	0.0	0.8	0.0	128.5	0.31
Upper	4	0.0	0.6	56.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	57.8	0.32
Basin	5	0.0	8.3	101.2	5.1	0.0	0.0	0.0	3.5	2.3	0.8	0.0	121.2	0.32
	6	0.0	16.0	117.7	20.9	0.0	24.0	0.0	6.5	41.5	0.6	0.0	227.1	0.38
	7	0.0	1.6	19.9	0.0	0.0	2.5	0.0	0.0	0.0	0.1	0.0	24.2	0.31
	8	1.3	5.9	49.6	18.1	0.6	5.1	0.0	0.0	1.9	0.3	2.1	85.0	0.33
	9	10.1	0.7	29.4	10.9	0.0	1.6	0.0	0.0	0.0	0.4	0.9	54.0	0.29
	10	0.4	0.9	90.3	0.0	0.0	0.3	0.0	0.0	5.0	0.3	0.0	97.2	0.32
Middle	11	4.5	0.0	6.8	0.0	0.0	0.8	0.0	0.0	0.4	0.3	0.0	12.8	0.28
Basin	12	4.1	0.9	98.8	5.6	6.2	1.8	0.0	0.0	18.5	0.6	0.3	136.8	0.36
	13	0.0	1.4	99.9	0.0	4.3	3.7	8.0	0.0	71.2	18.5	0.0	207.0	0.59
	14	0.0	7.7	141.0	0.0	8.9	7.1	0.0	0.0	50.3	3.0	1.1	219.2	0.42
	15	1.5	26.2	92.9	0.0	14.8	2.2	0.0	0.0	101.3	6.0	18.1	263.0	0.54
Lower	16	2.2	13.9	63.7	32.7	3.0	0.0	0.0	0.0	16.9	1.1	4.2	137.7	0.38
Basin	17	2.2	22.9	126.2	32.5	1.1	0.8	0.0	0.0	12.0	0.9	1.3	199.9	0.33
	18	0.0	0.0	1.1	0.0	0.0	0.6	0.0	0.0	7.3	0.2	0.0	9.2	0.65
	Total	29.0	110.0	1463.9	140.0	39.0	52.0	8.0	10.0	331.0	36.0	28.0	2246.8	
	Percent	1.3%	4.9%	65.2%	6.2%	1.7%	2.3%	0.4%	0.4%	14.7%	1.6%	1.2%	100.0%	

Table 4. 2 LAND USE BY SUBBASIN FOR 1980 FLOOD SIMULATION

	Area	Urban area	Basic grain	Pasture	Coffee	Sugar Cane	Henequen	Fruits	Veg.	Forest	Water	Lava	Total Area	N
	Equivalent roughness	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	2	1		
	1	0.5	0.0	100.1	5.6	0.0	1.1	0.0	0.0	4.8	0.5	0.0	112.6	0.32
	2	1.1	7.1	144.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	153.6	0.30
	3	0.2	1.6	119.8	6.4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	128.5	0.31
Upper	4	0.0	1.6	55.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	57.8	0.31
Basin	5	0.0	24.1	81.3	4.3	0.0	0.0	0.0	6.5	4.6	0.5	0.0	121.2	0.32
	6	0.0	46.2	51.5	17.6	0.0	17.1	0.0	12.1	82.2	0.4	0.0	227.1	0.45
	7	0.0	4.7	17.6	0.0	0.0	1.8	0.0	0.0	0.0	0.1	0.0	24.2	0.31
	8	0.9	17.0	36.1	15.2	4.4	3.7	0.0	0.0	3.8	0.2	3.7	85.0	0.35
	9	7.0	1.9	32.9	9.1	0.0	1.2	0.0	0.0	0.0	0.2	1.6	54.0	0.30
	10	0.2	2.7	83.9	0.0	0.0	0.2	0.0	0.0	9.9	0.2	0.0	97.2	0.34
Middle	11	3.2	0.0	8.1	0.0	0.0	0.5	0.0	0.0	0.9	0.2	0.0	12.8	0.30
Basin	12	2.9	2.6	42.7	4.7	45.1	1.3	0.0	0.0	36.7	0.4	0.5	136.8	0.41
	13	0.0	4.2	1.2	0.0	31.4	2.6	14.9	0.0	141.1	11.6	0.0	207.0	0.67
	14	0.0	22.4	22.8	0.0	65.4	5.1	0.0	0.0	99.7	1.9	2.0	219.2	0.50
	15	1.1	75.8	44.8	0.0	6.0	1.5	0.0	0.0	98.4	3.8	31.7	263.0	0.56
Lower	16	1.5	40.3	4.7	27.5	22.2	0.0	0.0	0.0	33.5	0.7	7.3	137.7	0.44
Basin	17	1.5	66.2	69.3	27.3	8.3	0.5	0.0	0.0	23.8	0.6	2.2	199.9	0.36
	18	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	8.1	0.1	0.0	9.2	0.67
	Total	20.3	318.3	918.0	117.8	182.8	37.0	14.9	18.7	547.4	22.5	49.1	2246.8	
	Percent	0.9%	14.2%	40.9%	5.2%	8.1%	1.6%	0.7%	0.8%	24.4%	1.0%	2.2%	100.0%	

Table 4. 3 LAND USE BY SUBBASIN FOR 1975 FLOOD SIMULATION

	Area	Urban area	Basic grain	Pasture	Coffee	Sugar Cane	Henequen	Fruits	Veg.	Forest	Water	Lava	Total Area	N
	Equivalent roughness	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	2	1		
	1	0.6	0.0	100.2	5.9	0.0	1.2	0.0	0.0	4.2	0.6	0.0	112.6	0.32
	2	1.3	6.0	145.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	153.6	0.30
	3	0.2	1.3	119.7	6.7	0.0	0.0	0.0	0.0	0.0	0.5	0.0	128.5	0.31
Upper	4	0.0	1.4	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	57.8	0.31
Basin	5	0.0	20.1	86.3	4.5	0.0	0.0	0.0	5.8	4.0	0.6	0.0	121.2	0.32
	6	0.0	38.6	68.1	18.4	0.0	18.8	0.0	10.7	72.0	0.4	0.0	227.1	0.43
	7	0.0	3.9	18.2	0.0	0.0	2.0	0.0	0.0	0.0	0.1	0.0	24.2	0.31
	8	1.0	14.2	39.4	15.9	3.4	4.0	0.0	0.0	3.4	0.2	3.3	85.0	0.35
	9	7.8	1.6	32.0	9.6	0.0	1.3	0.0	0.0	0.0	0.3	1.5	54.0	0.30
	10	0.3	2.3	85.5	0.0	0.0	0.2	0.0	0.0	8.7	0.2	0.0	97.2	0.34
Middle	11	3.5	0.0	7.7	0.0	0.0	0.6	0.0	0.0	0.8	0.2	0.0	12.8	0.30
Basin	12	3.2	2.1	56.7	4.9	35.4	1.4	0.0	0.0	32.1	0.4	0.5	136.8	0.40
	13	0.0	3.5	25.9	0.0	24.6	2.9	13.2	0.0	123.6	13.3	0.0	207.0	0.65
	14	0.0	18.7	52.3	0.0	51.3	5.6	0.0	0.0	87.3	2.2	1.8	219.2	0.48
	15	1.2	63.4	56.9	0.0	8.2	1.7	0.0	0.0	99.1	4.3	28.3	263.0	0.55
Lower	16	1.7	33.7	19.4	28.8	17.4	0.0	0.0	0.0	29.4	0.8	6.5	137.7	0.43
Basin	17	1.7	55.4	83.6	28.6	6.5	0.6	0.0	0.0	20.9	0.7	2.0	199.9	0.35
	18	0.0	0.0	0.7	0.0	0.0	0.5	0.0	0.0	7.9	0.1	0.0	9.2	0.67
	Total	22.4	266.2	1054.5	123.4	146.9	40.8	13.2	16.5	493.3	25.9	43.8	2246.8	
	Percent	1.0%	11.8%	46.9%	5.5%	6.5%	1.8%	0.6%	0.7%	22.0%	1.2%	1.9%	100.0%	

note: This table is projected using 1995 landuse and 1975 landuse.

Table 4. 4 LAND USE BY SUBBASIN FOR DESIGN FLOOD

	Area	Urban area	Basic grain	Pasture	Coffee	Sugar Cane	eneque	Fruits	Veg.	Forest	Water	Lava	Total Area	N
	Equivalent roughness	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	2	1		
	1	1.4	0.0	99.8	6.7	0.0	1.5	0.0	0.0	2.4	0.8	0.0	112.6	0.32
	2	1.7	2.5	148.7	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	153.6	0.31
	3	0.2	0.6	119.3	7.6	0.0	0.0	0.0	0.0	0.0	0.8	0.0	128.5	0.31
Upper	4	0.0	0.6	56.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	57.8	0.32
Basin	5	0.5	8.3	100.7	5.1	0.0	0.0	0.0	3.5	2.3	0.8	0.0	121.2	0.32
	6	1.7	16.0	116.0	20.9	0.0	24.0	0.0	6.5	41.5	0.6	0.0	227.1	0.38
	7	0.0	1.6	19.9	0.0	0.0	2.5	0.0	0.0	0.0	0.1	0.0	24.2	0.31
	8	0.4	5.9	50.5	18.1	0.6	5.1	0.0	0.0	1.9	0.3	2.1	85.0	0.33
	9	6.3	0.7	33.2	10.9	0.0	1.6	0.0	0.0	0.0	0.4	0.9	54.0	0.30
	10	0.0	0.9	90.7	0.0	0.0	0.3	0.0	0.0	5.0	0.3	0.0	97.2	0.33
Middle	11	7.3	0.0	4.1	0.0	0.0	0.8	0.0	0.0	0.4	0.3	0.0	12.8	0.24
Basin	12	10.5	0.9	92.5	5.6	6.2	1.8	0.0	0.0	18.5	0.6	0.3	136.8	0.35
	13	0.0	1.4	99.9	0.0	4.3	3.7	8.0	0.0	71.2	18.5	0.0	207.0	0.59
	14	0.6	7.7	140.4	0.0	8.9	7.1	0.0	0.0	50.3	3.0	1.1	219.2	0.42
	15	0.4	26.2	94.1	0.0	14.8	2.2	0.0	0.0	101.3	6.0	18.1	263.0	0.54
Lower	16	3.7	13.9	62.2	32.7	3.0	0.0	0.0	0.0	16.9	1.1	4.2	137.7	0.38
Basin	17	4.2	22.9	124.2	32.5	1.1	0.8	0.0	0.0	12.0	0.9	1.3	199.9	0.33
	18	0.0	0.0	1.1	0.0	0.0	0.6	0.0	0.0	7.3	0.2	0.0	9.2	0.65
	Total	38.8	110.0	1454.1	140.0	39.0	52.0	8.0	10.0	331.0	36.0	28.0	2246.8	
	Percent	1.7%	4.9%	64.7%	6.2%	1.7%	2.3%	0.4%	0.4%	14.7%	1.6%	1.2%	100.0%	

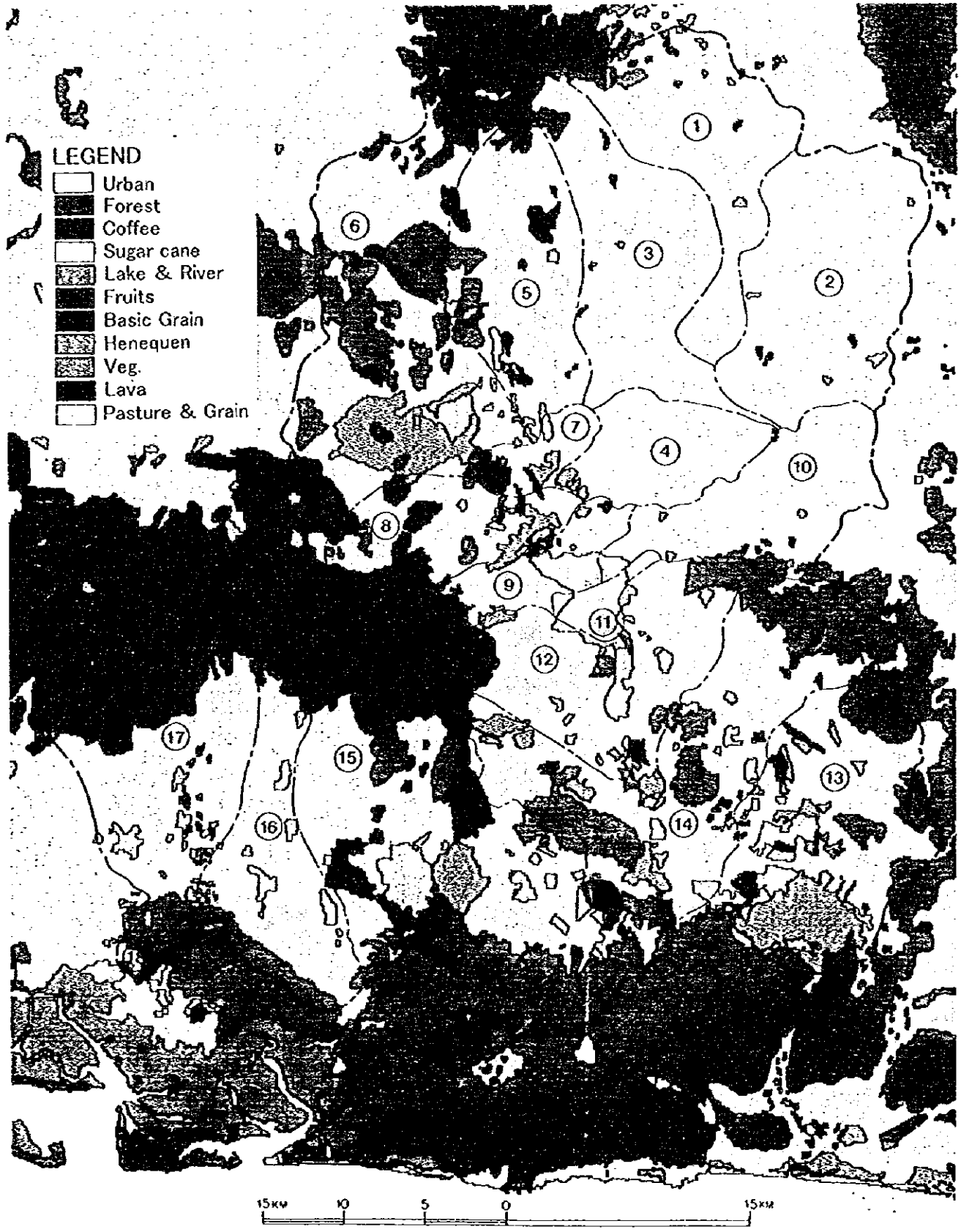

Figure 4. 1 EXISTING LAND USE IN THE BASIN (1995-1996)

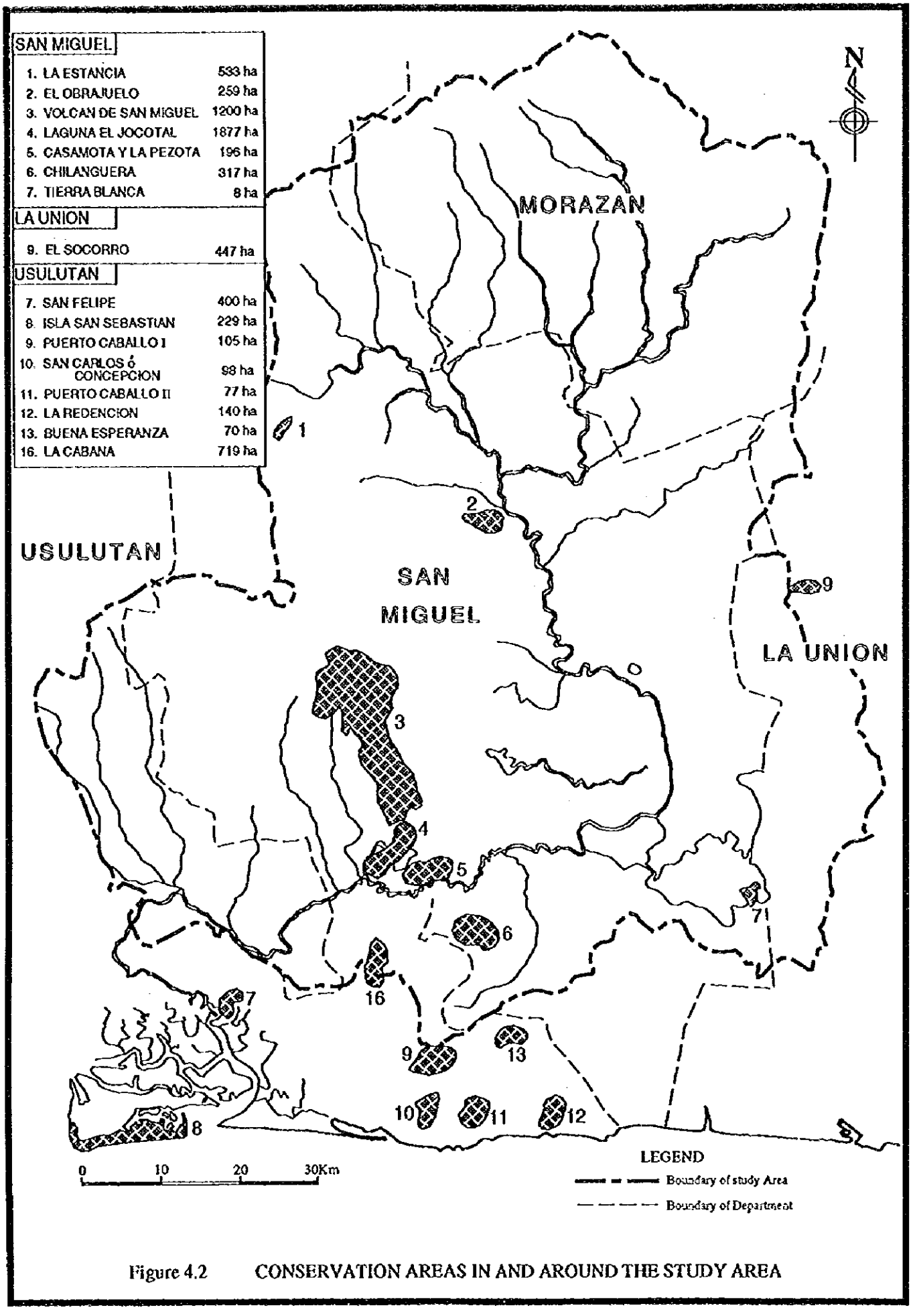

Figure 4.2 CONSERVATION AREAS IN AND AROUND THE STUDY AREA

DATA BOOK

5: RIVER IMPROVEMENT PLAN

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Table 5.9 Design Alignment of San Miguel River (9/11)---------- 5.F.9

Table 5.10 Design Alignment of San Miguel River (10/11)---------- 5.F.10

Table 5.11 Design Alignment of San Miguel River (11/11)---------- 5.F.11

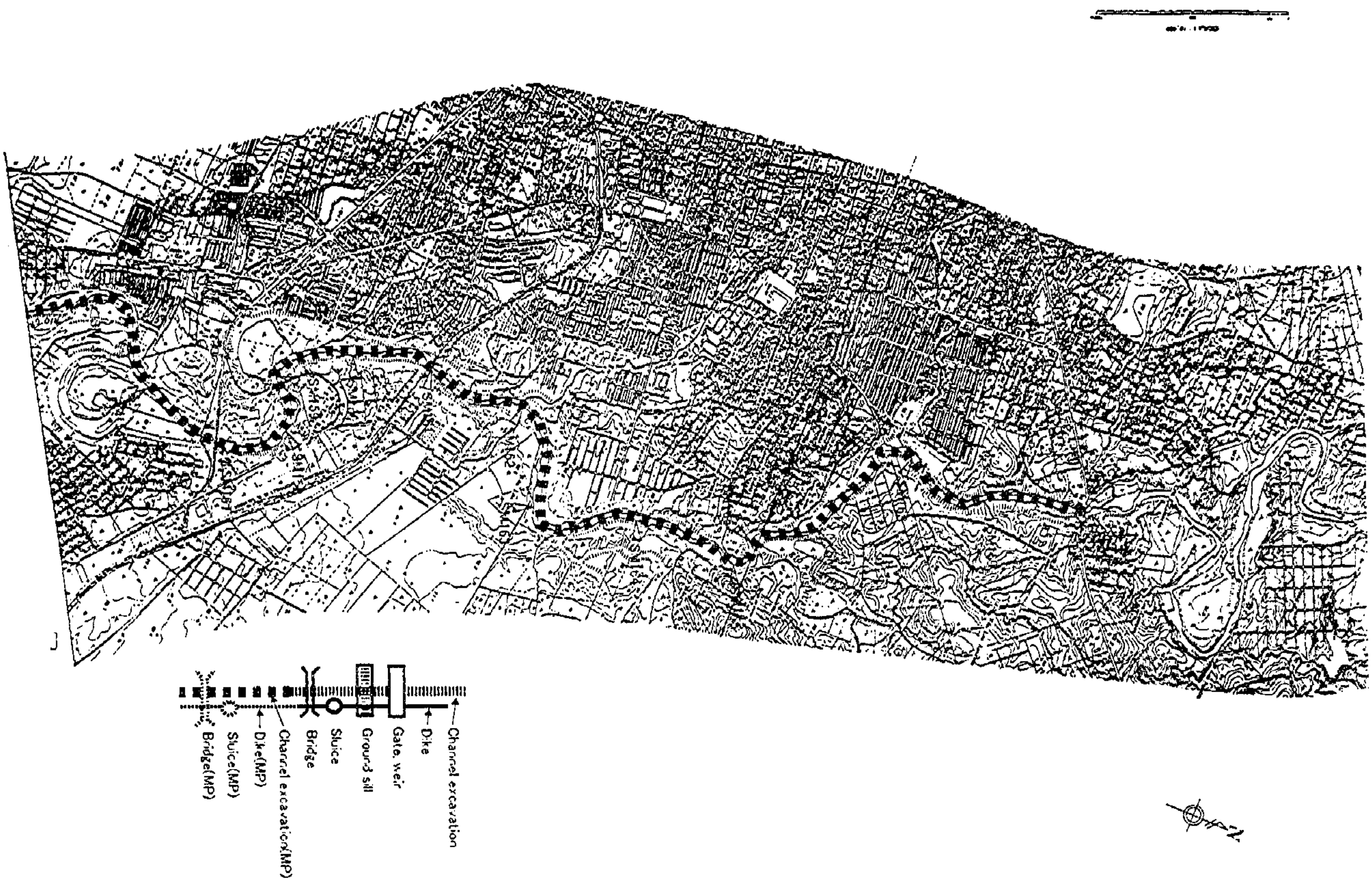
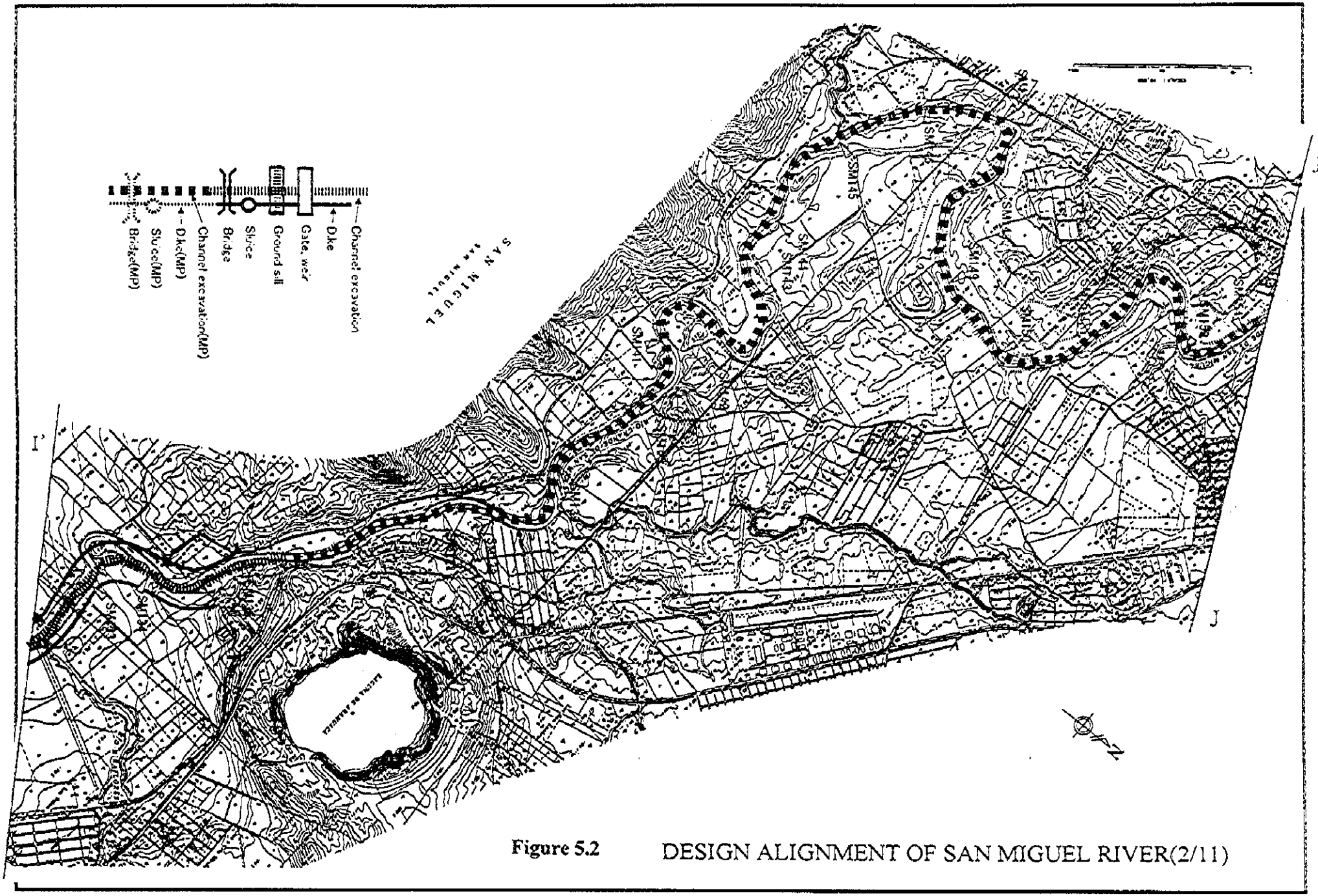


Figure 5.1 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(1/11)



5.F.2

Figure 5.2 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(2/11)

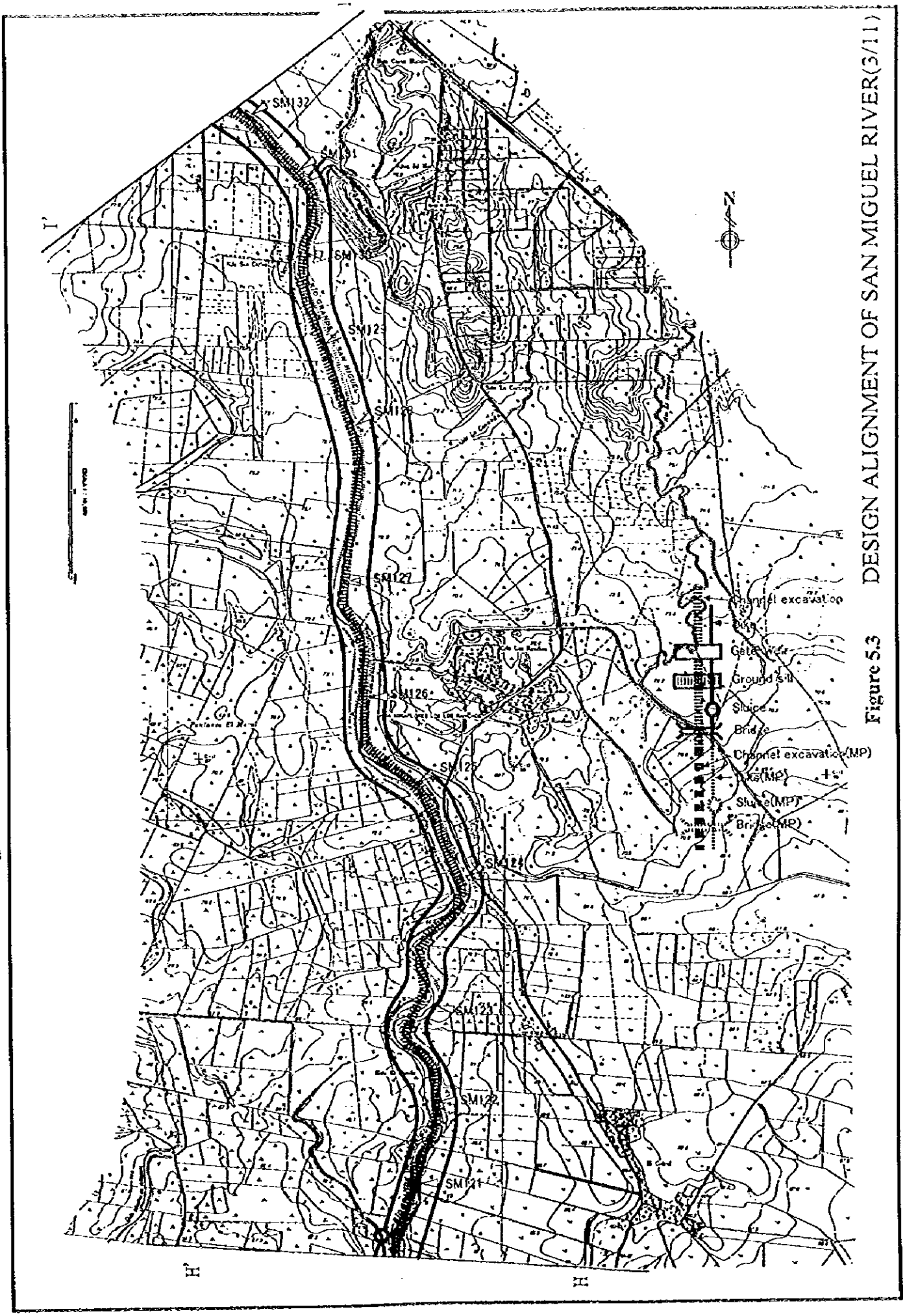


Figure 5.3 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(3/11)

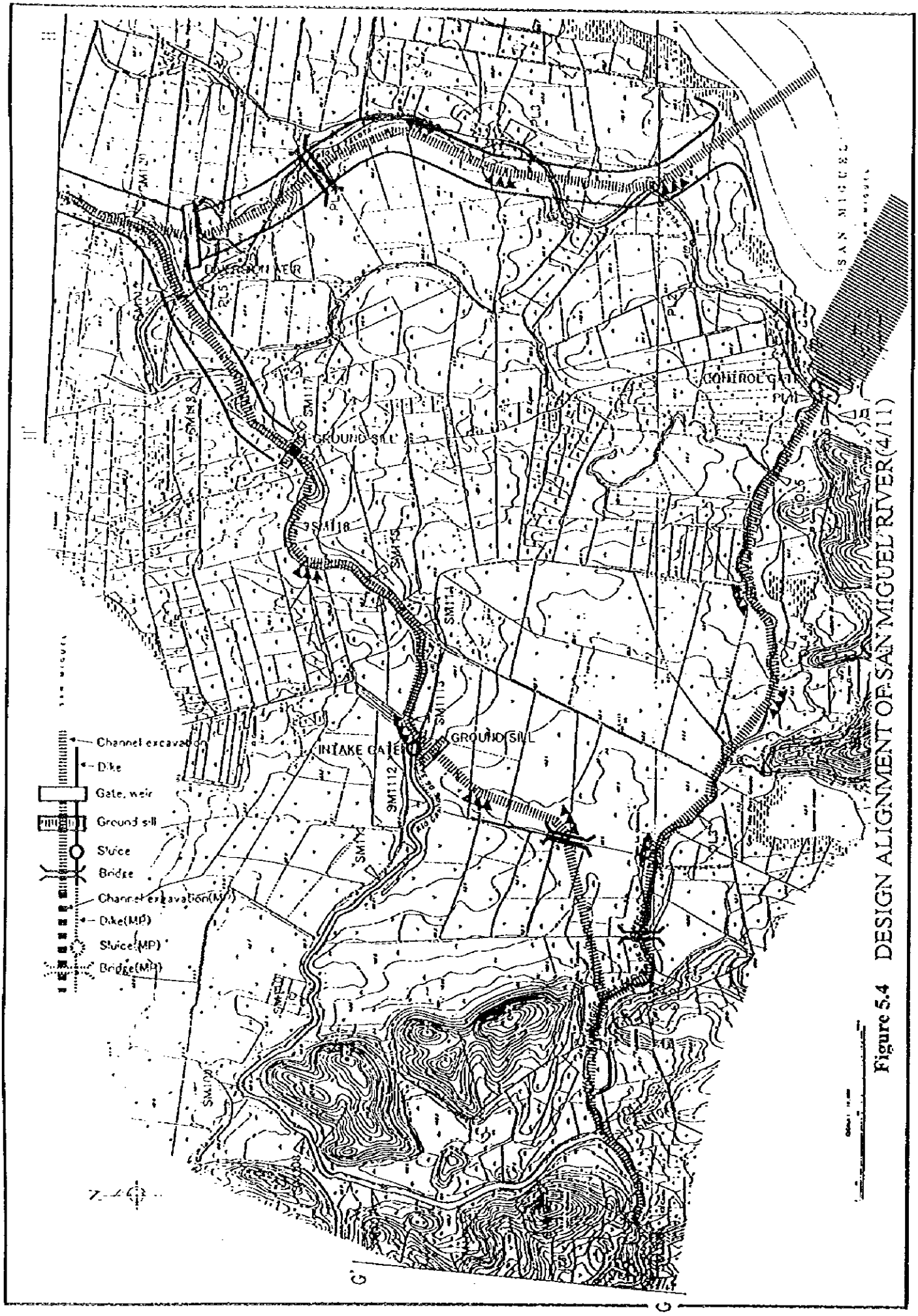


Figure 5.4 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(4/11)

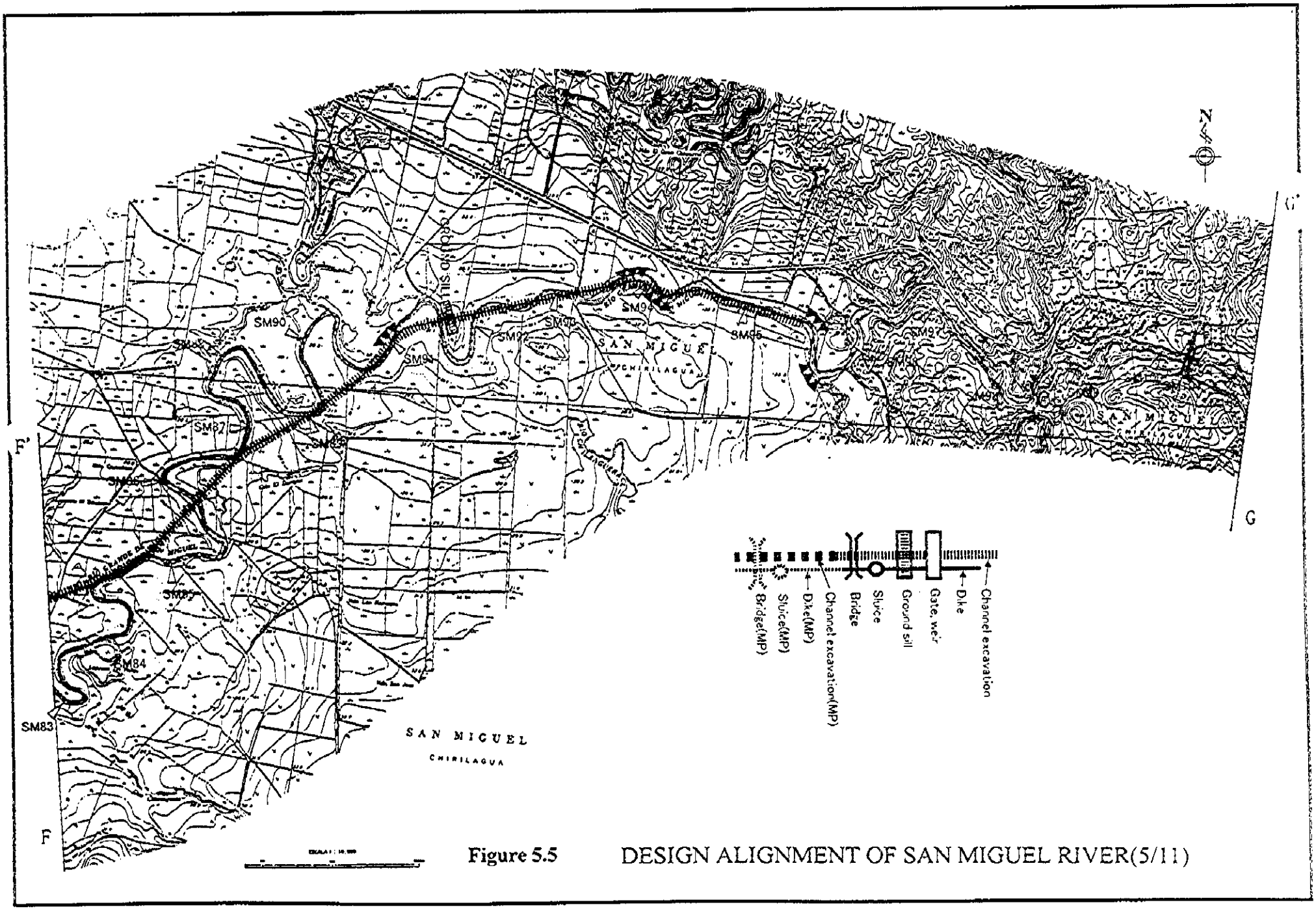


Figure 5.5 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(5/11)

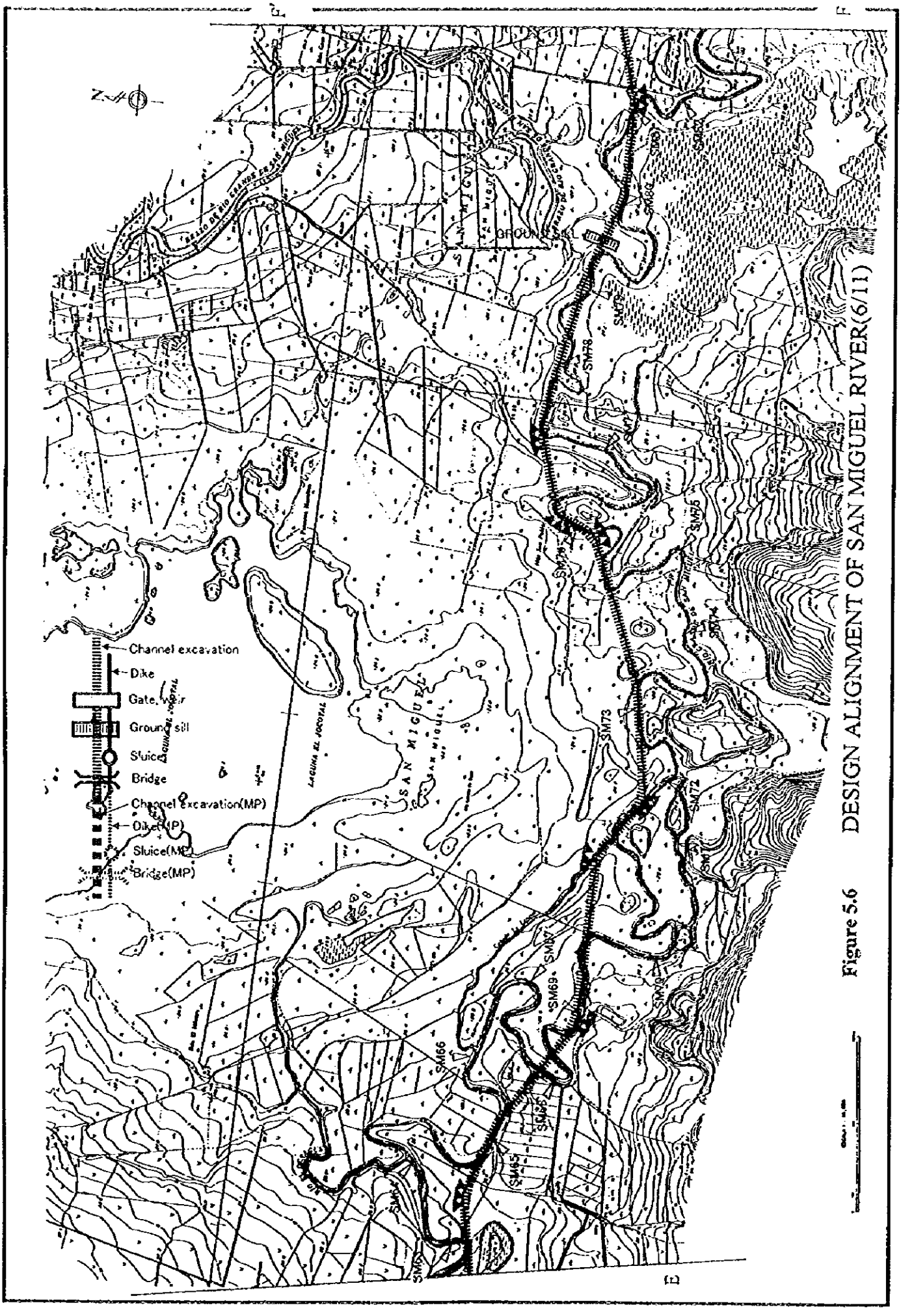
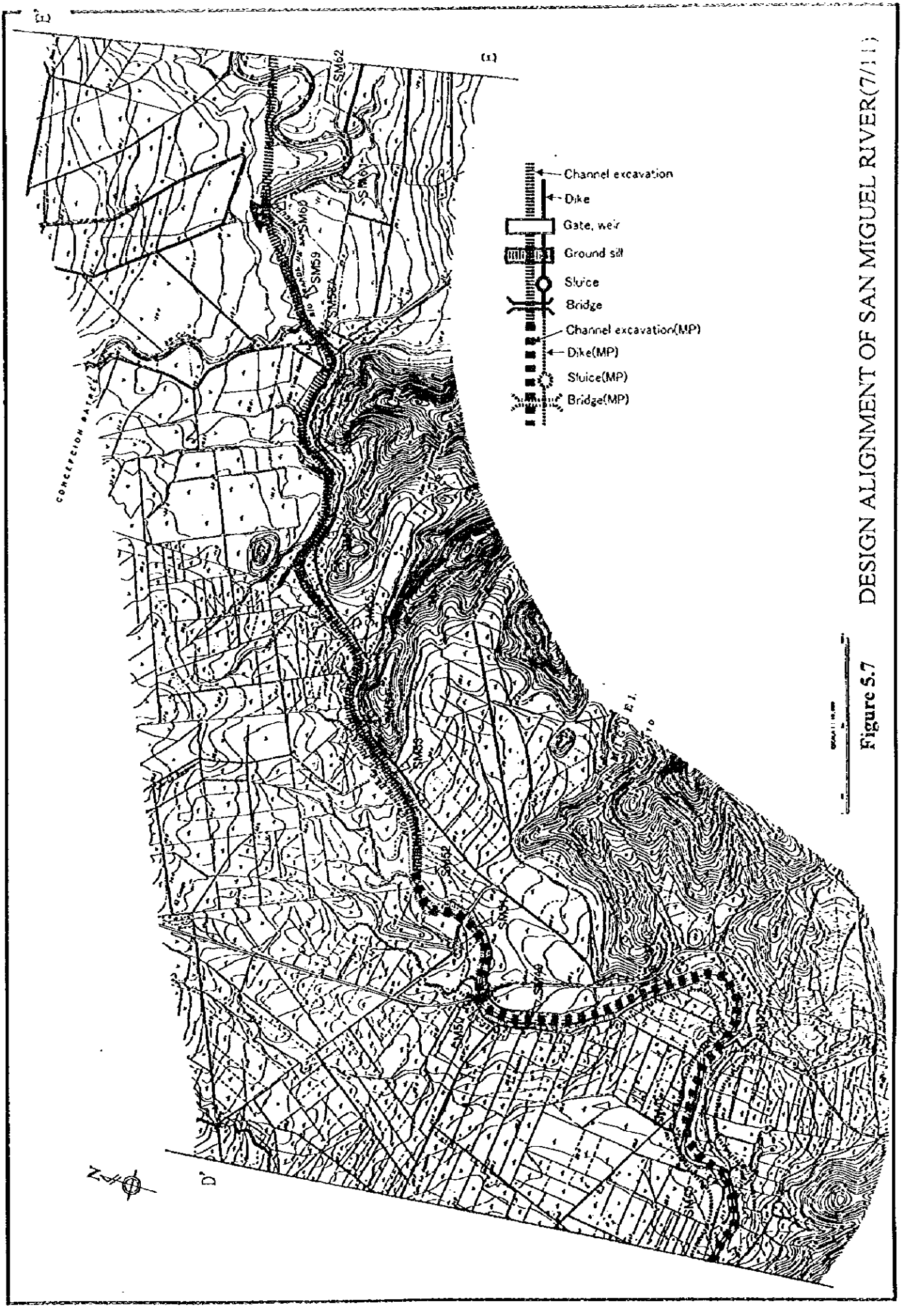


Figure 5.6 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(6/11)



DESIGN ALIGNMENT OF SAN MIGUEL RIVER(7/11)

Figure 5.7

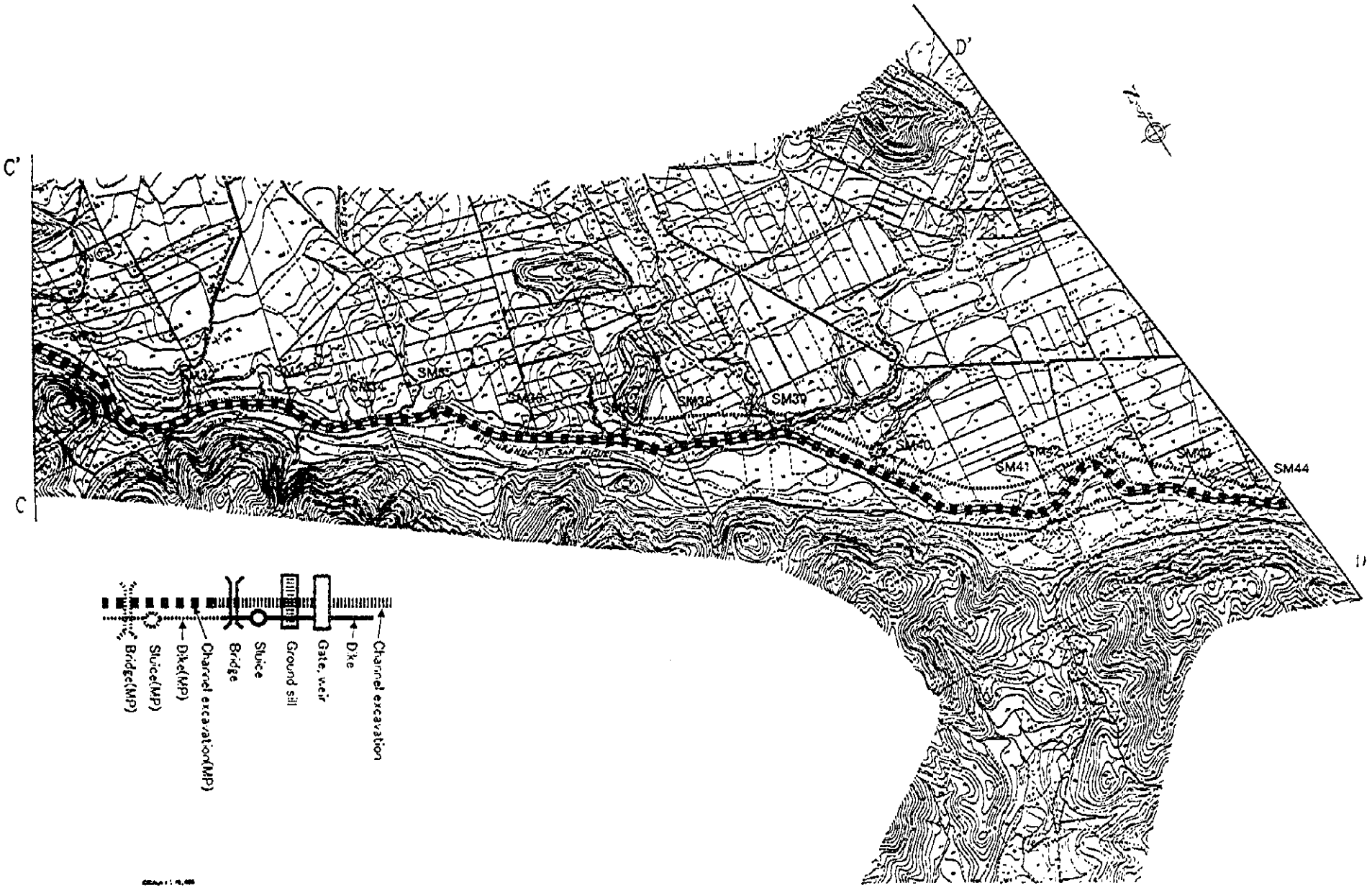
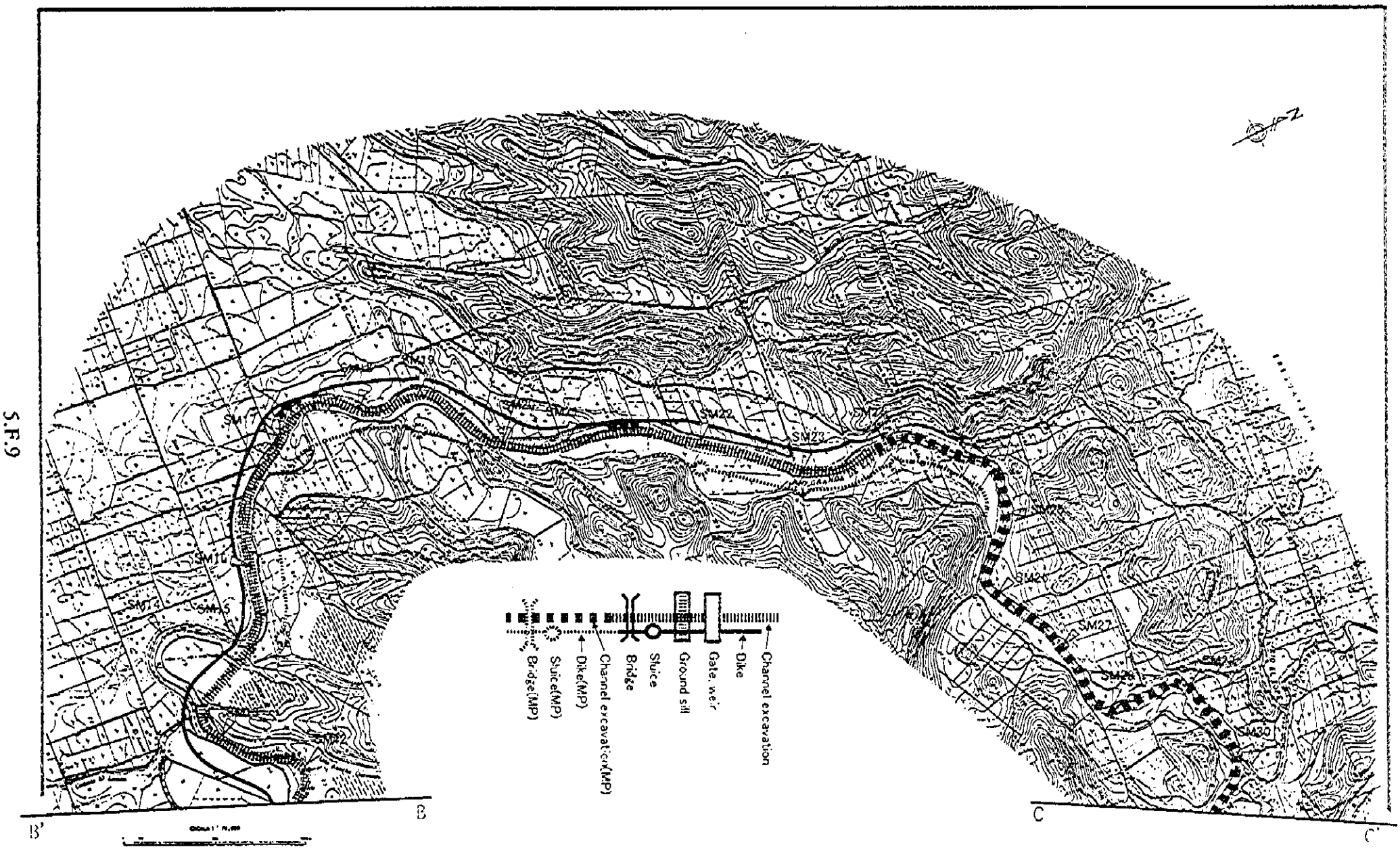


Figure 5.8 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(8/11)



5.F.9

Figure 5.9 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(9/11)

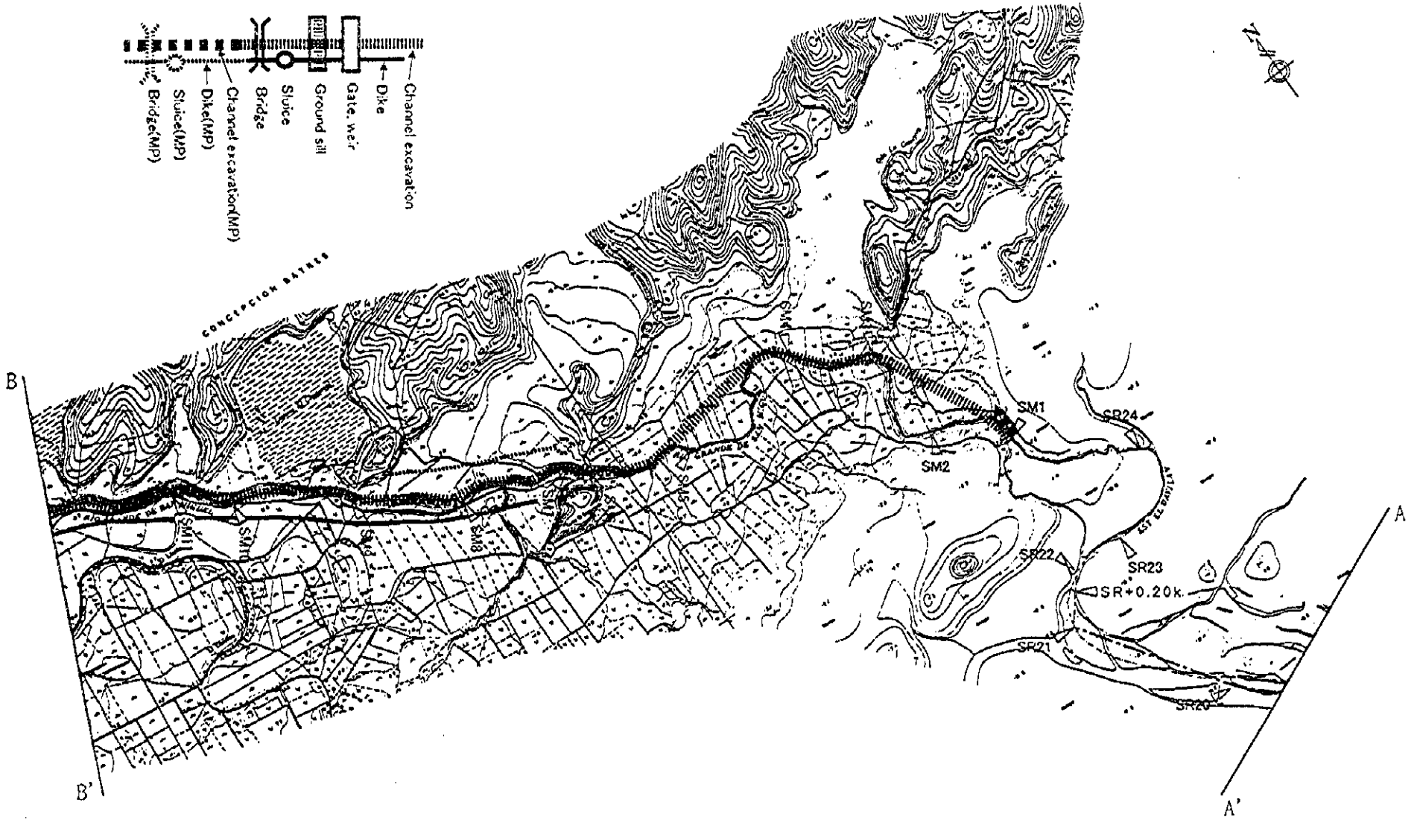


Figure 5.10 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(10/11)

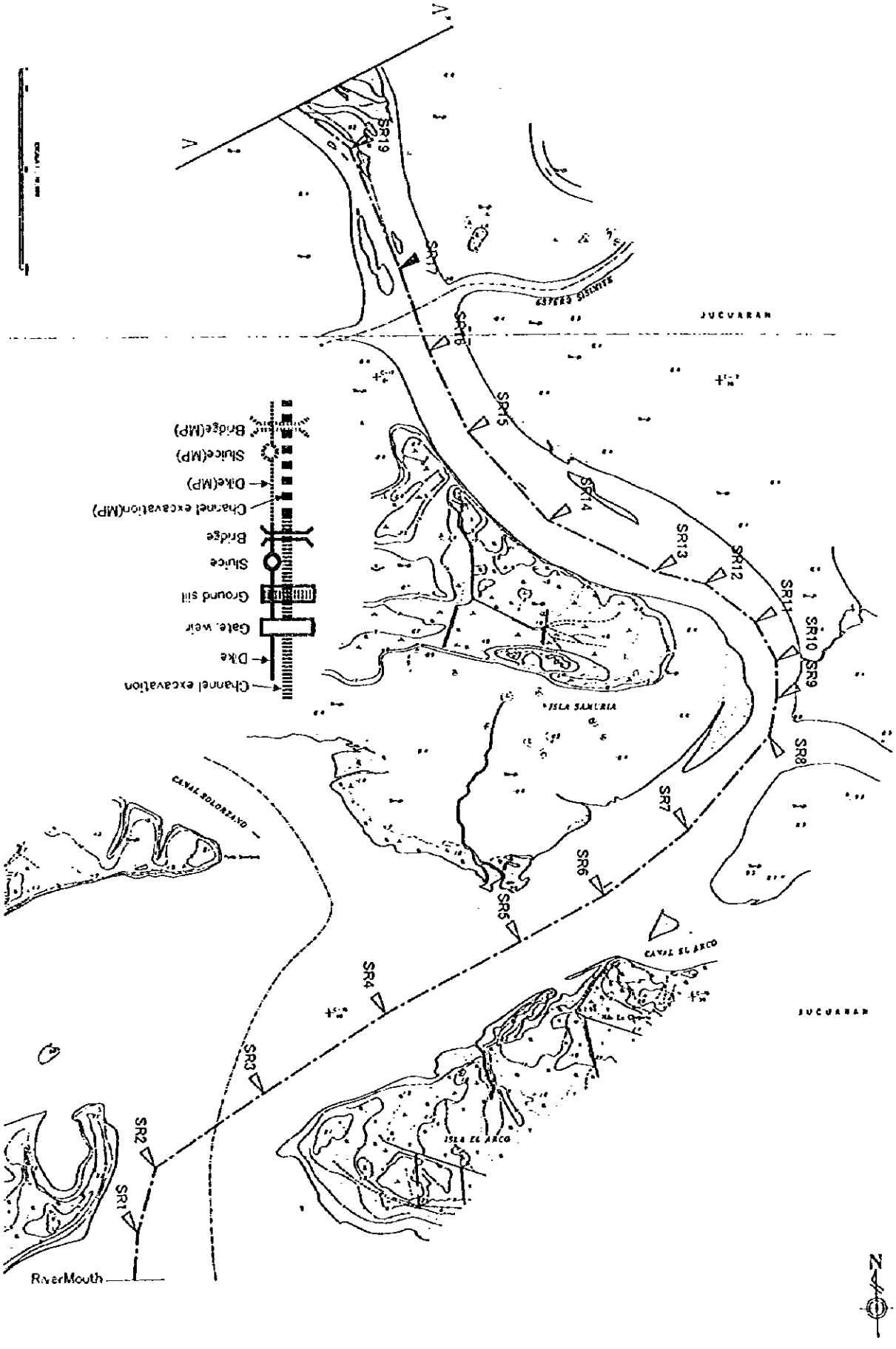


Figure 5.11 DESIGN ALIGNMENT OF SAN MIGUEL RIVER(11/11)

DATA BOOK

6: OLOMEGA RETARDING PLAN

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1 Drought Simulation

The simulation result is shown in Table 6. 1.

2 Excess Probability of Daily Rainfall by Month

In order to study the rainy season's variation of flood event in upstream area of Lake Olomega , excess probability of daily rainfall by month was studied.

Maximum daily rainfall was picked up by month for the following period.

Station	Period
San Francisco Gotera	1964- 1995
El Papalon	1964-1995

Probability daily rainfall by month at San Francisco Gotera and El Papalon is shown in Figure 6. 1.

The probability daily rainfalls of rainy season of in October are less than of in September and are approximately same as of in July.

3 Analysis of Olomega Diversion Facility

a. Simulation of Overflow

The analysis of Olomega Diversion Facility was based on the combination of overflow formula over side weir and longitudinal waterlevel profile considering lateral outflow model.

For this analysis, sub-basin 13 and 14 are divided as follows(refer to Figure 6. 2),

Subbasin	Divided sub-basin	Catchment Area (km^2)	Description
Subbasin 13	Subbasin 13-1	127.4	North area of the lake
	Subbasin 13-2	79.6	Hilly area south of the lake

Total		207.0	
Subbasin 14	Subbasin 14-1	131.4	Lake San Juan and residual area of Olomega drainage
	Subbasin 14-2	27.6	Miraflores river
	Subbasin 14-3	60.2	Caranga creek
Total		219.2	

The inflow hydrograph Q1 was calculated as the following equation

$$Q1 = Q(41) - Q(13) - Q(14) \times \frac{\text{area of subbasin}(14-1)}{\text{area of subbasin}(14)}$$

Q(41),Q(13),Q(14) : Discharge at Point(41),(13) and (14)

The runoff discharge from Subbasin (14-1) ,Q3 was calculated as the following equation

$$Q3 = Q(14) \times \frac{\text{area of subbasin}(14-1)}{\text{area of subbasin}(14)}$$

Q(14) : Discharge at Point(14)

The runoff from Subbasin (13) is that from Olomega self catchment.

The overflow discharge Q2 was calculated by a Japanese formula called Honma formula, which is a formula to calculate overflow frontward. This is a function of a longitudinal length of weir, a flow depth over weir and a discharge factor.

For perfect overflow the following formula was used.

$Q_2 = C \times B \times h_1^{1.5}$

C: Discharge factor for perfect overflow

B: Longitudinal length of weir in m

h_1: *Flow depth over weir in m*

For submerged overflow, the following formula was used.

$Q_2 = C' \times B \times h_2 \sqrt{h_1 - h_2}$

C': Discharge factor for submerged overflow

B: Longitudinal length of weir in m

h_1: *Upstream flow depth over weir in m*

h_2: *Downstream flow depth over weir in m*

To consider the reduction of lateral overflow amount, an coefficient 0.9 was multiplied by the calculated discharge by the above Honma formula. This coefficient has been examined by some general hydraulic experiments in Japan.

Based on the above assumptions, the diversion of flood water from San Miguel river was simulated as shown in Figure 6. 3. The upstream flow depth ,h1,was calculated from waterlevel and discharge relation of San Miguel river. The downstream depth,h2, was calculated from waterlevel and storage volume in Lake Olomega.

Figure 6. 4 and Figure 6. 5 show the hydrographs at Olomega Diversion for 10 year flood under M/P and 2 year flood under P/P, respectively.

b. Study of longitudinal waterlevel profile at weir reach

In the above calculation of overflow discharge, the overflow depth over the weir is assumed to be longitudinally constant. To check the availability of the assumption, longitudinal water profile at weir was studied.

To consider the momentum decrease due to the overflow from the river to the lake, a water profile equation was used instead of the conventional non-uniform equation. The longitudinal water profile at weir reach is as follows,

$$\frac{dH}{dx} = \frac{i - \dfrac{Q^2 n^2}{R^{3/4} A^2} + \dfrac{\alpha n Q q}{g A^2}}{1 - \dfrac{\alpha Q^2}{g A^3} \dfrac{\partial A}{\partial H}}$$

H: waterlevel(MSL), i: bed slope, Q: discharge(m^3 / s), n: Manning roughness
R: hydraulic radius(m), A: flow area(m^2)
q: lateral discharge(m^2 / s, overflow to the lake is positive) is equal to Q2
n: discharge coefficient

Based on this equation, the waterlevel profile can be calculated from downstream to upstream for a certain waterlevel and a discharge at downstream boundary.

If it is subcritical flow at the weir, the waterlevel at downstream section of the weir is

elevated compared with uniform flow profile because dH / dx >0.

For Master Plan and Priority Project cases, the waterlevel profiles at the weir reach were calculated as shown in Figure 6. 6 and Figure 6. 7, respectively. The detailed results are shown in Table 6. 2 and Table 6. 3 .

Within the weir reach ,the downstream waterlevel is elevated by 0.1m to 0.2m even though the discharge is decreasing due to overflow. This means that the assumption that overflow depth is constant within the weir reach assures the diverted discharge to be expected.

4 Discharge With Dam

The retardation effect of flood control dam is simulated based on the relation between reservoir waterlevel , storage volume and outflow from the spillway and outlet facility using the following equation;

$$\frac{dS}{dt} = I - O$$

where, S: Storage volume (m^3)

I: Inflow into reservoir (m^3 / s)

O: Outflow from reservoir (m^3 / s)

A Dam, as a floodwater storage facility, was set at discharge point No.29 ,which is located at Villerias under the following conditions;

Location: Discharge point No.29

Overflow spillway: Crest Height EL.127.0 m Crest Width B=50 m

Waterlevel and Storage volume relation is as follows,

$$H = -\frac{5}{10^5}\left(\frac{V}{10^6}\right) + 0.0705\frac{V}{10^6} + 110.24$$

H: Waterlevel in MSL

V: Water volume in the reservoir in m^3

(Waterlevel and Storage volume relation)

Storage volume in $10^6 m^3$	Elevation in MSL
0.00	92
0.79	95
4.41	100
15.49	105
40.33	110
85.38	115
156.48	120
258.62	125
395.48	130
568.74	135
778.13	140

The initial condition is as follows,

$Vi=306*10^6 m^3$

Hi = EL. MSL+127.1 m

The following discharge formula was used.

$Q = 2 * B * h^{1.5}$

B: Crest width in m

h: Overflow depth in m

Table 6.1 DROUGHT SIMULATION OF LAKE OLOMEGA OPERATION (1/2)

	MONTH	L.W.L.	RESERVOIR V.	RESERVOIR A.	DELTA V.	INFLOW	EVAPORATION		INFLOW - EVAPORATION	OUTFLOW	L.W.L.(WITHOUT)
		m	m.c.m.	km2	m.c.m.	m3/s	mm	m.c.m.	m3/s	m3/s	m
1975	JAN	65.0	47.4	30.94		0.39	150	4.63	-1.34	0.00	64.79
	FEB	64.9	43.8	28.86		0.33	161	4.98	-1.73	0.00	64.62
	MAR	64.7	39.7	26.44		0.3	188	5.41	-1.72	0.00	64.47
	APR	64.5	35.1	23.77		0.32	174	4.59	-1.45	0.00	64.32
	MAY	64.5	33.9	23.11		1.84	139	3.31	0.60	0.62	64.19
	JUN	64.5	33.9	23.11	0.00	1.66	135	3.12	0.46	0.46	64.32
	JUL	64.5	33.9	23.11	0.00	2.88	139	3.22	1.68	1.68	64.41
	AUG	64.5	33.9	23.11	0.00	6.79	140	3.24	5.58	5.58	64.52
	SEP	64.5	33.9	23.11	0.00	15.87	100	2.31	14.98	14.98	65.15
	OCT	64.5	33.9	23.11	0.00	9.82	95	2.20	9.00	9.00	65.71
	NOV	64.5	33.9	23.11	12.12	5.47	89	2.05	4.68	0.00	65.45
	DEC	64.9	46.0	30.13		0.9	125	2.90	-0.18	0.00	65.11
1976	JAN	64.9	45.6	29.85	6.23	4.01	150	4.51	2.32	0.00	64.84
	FEB	65.0	45.6	30.94	0.07	2.38	161	4.81	0.39	0.00	64.65
	MAR	64.9	45.7	29.93		1.71	188	5.80	-0.46	0.00	64.47
	APR	64.9	44.5	29.22		4.36	174	5.20	2.36	2.37	64.31
	MAY	64.5	33.9	23.11		4.63	139	4.07	3.11	7.05	64.29
	JUN	64.5	33.9	23.11	0.00	50.77	135	3.12	49.57	49.57	65.30
	JUL	64.5	33.9	23.11	0.00	12.03	139	3.22	10.83	10.83	65.54
	AUG	64.5	33.9	23.11	0.00	5.81	140	3.24	4.60	4.60	65.18
	SEP	64.5	33.9	23.11	0.00	14.1	100	2.31	13.21	13.21	65.08
	OCT	64.5	33.9	23.11	0.00	15.91	95	2.20	15.09	15.09	65.12
	NOV	64.7	40.6	26.99	6.71	3.38	89	2.05	2.59	0.00	64.94
	DEC	64.8	42.2	27.89	1.55	1.86	125	3.38	0.60	0.00	64.74
1977	JAN	64.8	41.7	27.64		1.39	150	4.18	-0.17	0.00	64.58
	FEB	64.7	40.3	26.80		1.24	161	4.45	-0.60	0.00	64.41
	MAR	64.7	38.2	25.61		1.11	188	5.03	-0.77	0.00	64.22
	APR	64.6	36.4	24.52		0.99	174	4.45	-0.73	0.00	64.08
	MAY	64.5	33.9	23.11		4.99	139	3.42	3.71	4.62	64.00
	JUN	64.5	33.9	23.11	0.00	20.06	135	3.12	18.86	18.86	64.23
	JUL	64.5	33.9	23.11	0.00	2.33	139	3.22	1.13	1.13	64.20
	AUG	64.5	33.9	23.11	0.00	8.74	140	3.24	7.53	7.53	64.18
	SEP	64.5	33.9	23.11	0.00	11.79	100	2.31	10.90	10.90	64.20
	OCT	64.5	33.9	23.11	0.00	6.5	95	2.20	5.68	5.68	64.31
	NOV	64.5	33.9	23.11	10.00	4.65	89	2.05	3.86	0.00	64.24
	DEC	64.9	43.9	28.90	3.21	2.28	125	2.90	1.20	0.00	64.19

Table 6.1 DROUGHT SIMULATION OF LAKE OLOMEGA OPERATION (2/2)

	MONTH	L.W.L.	RESERVOIR V.	RESERVOIR A.	DELTA V.	INFLOW	EVAPORATION		INFLOW - EVAPORATION	OUTFLOW	L.W.L.(WITHOUT)
		m	m.c.m.	km2	m.c.m.	m3/s	mm	m.c.m.	m3/s	m3/s	m
1978	JAN	65.0	47.1	30.76		1.22	150	4.33	-0.40	0.00	64.05
	FEB	64.9	46.1	30.15		1.01	161	4.95	-1.04	0.00	63.90
	MAR	64.9	43.6	28.69		1.03	188	5.66	-1.08	0.00	63.73
	APR	64.7	40.7	27.01		1.41	174	4.98	-0.51	0.00	63.50
	MAY	64.5	33.9	23.11		4.78	139	3.76	3.38	5.93	63.39
	JUN	64.5	33.9	23.11	0.00	6.08	135	3.12	4.88	4.88	63.62
	JUL	64.5	33.9	23.11	0.00	19.21	139	3.22	18.01	17.97	63.72
	AUG	64.5	33.9	23.11	0.00	19.94	140	3.24	18.73	18.69	63.93
	SEP	64.5	33.9	23.11	0.00	61.12	100	2.31	60.23	60.23	64.90
	OCT	64.5	33.9	23.11	0.00	37.07	95	2.20	36.25	36.22	65.34
	NOV	64.9	44.5	29.23	10.57	4.87	89	2.05	4.08	0.00	65.13
	DEC	65.0	47.4	30.94	2.95	2.49	125	3.66	1.12	-0.06	64.87
1979	JAN	65.0	46.7	30.53		1.46	150	4.63	-0.27	0.00	64.65
	FEB	64.9	46.0	30.13		1.3	161	4.92	-0.73	0.00	64.49
	MAR	64.9	44.3	29.10		1.11	188	5.65	-1.00	0.00	64.29
	APR	64.8	41.6	27.55	3.86	3.44	174	5.05	1.49	0.00	64.13
	MAY	64.5	33.9	23.11		3.85	139	3.84	2.42	5.33	64.11
	JUN	64.5	33.9	23.11	0.00	19.55	135	3.12	18.35	18.35	64.55
	JUL	64.5	33.9	23.11	0.00	24	139	3.22	22.80	22.76	65.01
	AUG	64.5	33.9	23.11	0.00	21.98	140	3.24	20.77	20.73	65.46
	SEP	64.5	33.9	23.11	0.00	42.35	100	2.31	41.46	41.46	65.92
	OCT	64.5	33.9	23.11	0.00	38.44	95	2.20	37.62	37.59	65.73
	NOV	64.5	33.9	23.11	26.74	11.11	89	2.05	10.32	0.00	65.49
	DEC	65.0	60.7	30.94	7.20	3.77	125	2.90	2.69	0.00	65.20

Table 6.2 RESULTS OF WATERLEVEL CALCULATION FOR 10 YEAR FLOOD UNDER M/P (1/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qover (m3/s)	Qtotal (m3/s)	Radius (m)
1	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
2	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
3	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
4	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
5	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
6	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
7	62.93	71.13	7.20	70.13	0.19	0.0	660.0	5.62
8	62.94	71.14	7.20	70.13	0.19	0.0	660.0	5.62
9	62.94	71.14	7.20	70.13	0.19	0.0	660.0	5.62
10	62.94	71.14	7.20	70.13	0.19	0.0	660.0	5.62
11	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
12	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
13	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
14	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
15	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
16	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
17	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
18	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
19	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
20	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
21	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.62
22	62.94	71.14	7.19	70.13	0.19	0.0	660.0	5.61
23	62.95	71.15	7.19	70.13	0.19	0.0	660.0	5.61
24	62.95	71.15	7.19	70.13	0.19	0.0	660.0	5.61
25	62.95	71.15	7.19	70.13	0.19	0.0	660.0	5.61
26	62.95	71.15	7.19	70.13	0.19	0.0	660.0	5.61
27	62.95	71.15	7.19	70.13	0.19	0.0	660.0	5.61
28	62.95	71.15	7.19	70.14	0.19	0.0	660.0	5.61
29	62.95	71.15	7.19	70.14	0.19	0.0	660.0	5.61
30	62.95	71.15	7.19	70.14	0.19	0.0	660.0	5.61
31	62.95	71.15	7.19	70.14	0.19	0.0	660.0	5.61
32	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
33	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
34	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
35	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
36	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
37	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
38	62.95	71.15	7.18	70.14	0.19	0.0	660.0	5.61
39	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
40	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
41	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
42	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
43	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
44	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
45	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
46	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
47	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
48	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
49	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
50	62.96	71.16	7.18	70.14	0.19	0.0	660.0	5.61
51	62.96	67.26	7.17	70.14	0.19	9.0	669.0	5.60
52	62.96	67.26	7.17	70.13	0.20	9.0	678.0	5.60
53	62.96	67.26	7.17	70.13	0.20	8.9	686.9	5.60

Table 6.2 RESULTS OF WATERLEVEL CALCULATION FOR 10 YEAR FLOOD UNDER M/P (2/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qover (m3/s)	Qtotal (m3/s)	Radius (m)
54	62.97	67.27	7.16	70.13	0.20	8.9	695.8	5.60
55	62.97	67.27	7.16	70.12	0.21	8.9	704.7	5.59
56	62.97	67.27	7.15	70.12	0.21	8.9	713.6	5.59
57	62.97	67.27	7.15	70.12	0.21	8.9	722.5	5.59
58	62.97	67.27	7.15	70.12	0.21	8.8	731.3	5.59
59	62.97	67.27	7.14	70.11	0.22	8.8	740.2	5.58
60	62.97	67.27	7.14	70.11	0.22	8.8	749.0	5.58
61	62.97	67.27	7.14	70.11	0.22	8.8	757.7	5.58
62	62.97	67.27	7.13	70.10	0.22	8.8	766.5	5.58
63	62.97	67.27	7.13	70.10	0.23	8.7	775.2	5.57
64	62.97	67.27	7.12	70.10	0.23	8.7	783.9	5.57
65	62.97	67.27	7.12	70.09	0.23	8.7	792.6	5.57
66	62.97	67.27	7.12	70.09	0.24	8.7	801.3	5.57
67	62.97	67.27	7.11	70.09	0.24	8.6	809.9	5.56
68	62.97	67.27	7.11	70.08	0.24	8.6	818.6	5.56
69	62.98	67.28	7.10	70.08	0.24	8.6	827.2	5.56
70	62.98	67.28	7.10	70.08	0.25	8.6	835.7	5.56
71	62.98	67.28	7.10	70.07	0.25	8.5	844.3	5.55
72	62.98	67.28	7.09	70.07	0.25	8.5	852.8	5.55
73	62.98	67.28	7.09	70.06	0.26	8.5	861.3	5.55
74	62.98	67.28	7.08	70.06	0.26	8.5	869.8	5.55
75	62.98	67.28	7.08	70.06	0.26	8.5	878.2	5.54
76	62.98	67.28	7.07	70.05	0.26	8.4	886.7	5.54
77	62.98	67.28	7.07	70.05	0.27	8.4	895.1	5.54
78	62.98	67.28	7.06	70.05	0.27	8.4	903.5	5.53
79	62.98	67.28	7.06	70.04	0.27	8.4	911.8	5.53
80	62.98	67.28	7.06	70.04	0.27	8.3	920.1	5.53
81	62.98	67.28	7.05	70.03	0.28	8.3	928.5	5.52
82	62.98	67.28	7.05	70.03	0.28	8.3	936.7	5.52
83	62.98	67.28	7.04	70.03	0.28	8.3	945.0	5.52
84	62.99	67.29	7.04	70.02	0.29	8.2	953.2	5.52
85	62.99	67.29	7.03	70.02	0.29	8.2	961.4	5.51
86	62.99	67.29	7.03	70.01	0.29	8.2	969.6	5.51
87	62.99	67.29	7.02	70.01	0.29	8.2	977.8	5.51
88	62.99	67.29	7.02	70.01	0.30	8.1	985.9	5.50
89	62.99	67.29	7.01	70.00	0.30	8.1	994.0	5.50
90	62.99	67.29	7.01	70.00	0.30	8.1	1002.1	5.50
91	62.99	67.29	7.00	69.99	0.31	8.0	1010.1	5.49
92	62.99	67.29	7.00	69.99	0.31	8.0	1018.1	5.49
93	62.99	67.29	6.99	69.99	0.31	8.0	1026.1	5.49
94	62.99	67.29	6.99	69.98	0.31	8.0	1034.1	5.48
95	62.99	67.29	6.98	69.98	0.32	7.9	1042.0	5.48
96	62.99	67.29	6.98	69.97	0.32	7.9	1050.0	5.48
97	62.99	67.29	6.97	69.97	0.32	7.9	1057.9	5.47
98	62.99	67.29	6.97	69.96	0.32	7.9	1065.7	5.47
99	62.99	67.29	6.96	69.96	0.33	7.8	1073.6	5.47
100	63.00	67.30	6.96	69.95	0.33	7.8	1081.4	5.46
101	63.00	67.30	6.95	69.95	0.33	7.8	1089.1	5.46
102	63.00	67.30	6.95	69.95	0.34	7.8	1096.9	5.46
103	63.00	67.30	6.94	69.94	0.34	7.7	1104.6	5.45
104	63.00	67.30	6.94	69.94	0.34	7.7	1112.3	5.45
105	63.00	67.30	6.93	69.93	0.34	7.7	1120.0	5.45
106	63.00	67.30	6.93	69.93	0.35	7.6	1127.6	5.44

Table 6.2 RESULTS OF WATERLEVEL CALCULATION FOR 10 YEAR FLOOD UNDER M/P (3/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qover (m3/s)	Qtotal (m3/s)	Radius (m)
107	63.00	67.30	6.92	69.92	0.35	7.6	1135.3	5.44
108	63.00	67.30	6.92	69.92	0.35	7.6	1142.8	5.44
109	63.00	67.30	6.91	69.91	0.36	7.6	1150.4	5.43
110	63.00	67.30	6.91	69.91	0.36	7.5	1157.9	5.43
111	63.00	67.30	6.90	69.90	0.36	7.5	1165.4	5.43
112	63.00	67.30	6.90	69.90	0.36	7.5	1172.9	5.42
113	63.00	71.20	6.90	69.90	0.36	0.0	1172.9	5.42
114	63.00	71.20	6.90	69.90	0.36	0.0	1172.9	5.42
115	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
116	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
117	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
118	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
119	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
120	63.01	71.21	6.90	69.90	0.36	0.0	1172.9	5.42
121	63.01	71.21	6.90	69.91	0.36	0.0	1172.9	5.42
122	63.01	71.21	6.90	69.91	0.36	0.0	1172.9	5.42
123	63.01	71.21	6.90	69.91	0.36	0.0	1172.9	5.42

Table 6.3 RESULTS OF WATERLEVEL CALCULATION FOR 2 YEAR FLOOD UNDER P/P (1/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qetu (m3/s)	Qtotal (m3/s)	Radius (m)
1	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
2	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
3	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
4	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
5	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
6	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
7	62.93	71.13	5.20	68.13	0.18	0.0	360.0	4.27
8	62.94	71.14	5.20	68.13	0.18	0.0	360.0	4.27
9	62.94	71.14	5.20	68.13	0.18	0.0	360.0	4.27
10	62.94	71.14	5.20	68.13	0.18	0.0	360.0	4.27
11	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
12	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
13	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
14	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
15	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
16	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
17	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
18	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
19	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
20	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
21	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
22	62.94	71.14	5.19	68.13	0.18	0.0	360.0	4.27
23	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
24	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
25	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
26	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
27	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
28	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.27
29	62.95	71.15	5.19	68.13	0.18	0.0	360.0	4.26
30	62.95	71.15	5.19	68.14	0.18	0.0	360.0	4.26
31	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
32	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
33	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
34	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
35	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
36	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
37	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
38	62.95	71.15	5.18	68.14	0.18	0.0	360.0	4.26
39	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
40	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
41	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
42	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
43	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
44	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
45	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
46	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
47	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
48	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
49	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
50	62.96	71.16	5.18	68.14	0.18	0.0	360.0	4.26
51	62.96	66.06	5.17	68.14	0.18	5.5	365.5	4.26

Table 6.3 RESULTS OF WATERLEVEL CALCULATION FOR 2 YEAR FLOOD UNDER P/P (2/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qetu (m3/s)	Qtotal (m3/s)	Radius (m)
52	62.96	66.06	5.17	68.13	0.18	5.5	371.0	4.25
53	62.96	66.06	5.17	68.13	0.19	5.5	376.5	4.25
54	62.97	66.07	5.16	68.13	0.19	5.5	382.0	4.25
55	62.97	66.07	5.16	68.13	0.19	5.5	387.4	4.25
56	62.97	66.07	5.16	68.13	0.20	5.4	392.9	4.25
57	62.97	66.07	5.16	68.12	0.20	5.4	398.3	4.24
58	62.97	66.07	5.15	68.12	0.20	5.4	403.7	4.24
59	62.97	66.07	5.15	68.12	0.20	5.4	409.1	4.24
60	62.97	66.07	5.15	68.12	0.21	5.4	414.5	4.24
61	62.97	66.07	5.14	68.11	0.21	5.4	419.9	4.24
62	62.97	66.07	5.14	68.11	0.21	5.4	425.3	4.23
63	62.97	66.07	5.14	68.11	0.22	5.3	430.6	4.23
64	62.97	66.07	5.14	68.11	0.22	5.3	435.9	4.23
65	62.97	66.07	5.13	68.11	0.22	5.3	441.2	4.23
66	62.97	66.07	5.13	68.10	0.22	5.3	446.5	4.23
67	62.97	66.07	5.13	68.10	0.23	5.3	451.8	4.22
68	62.97	66.07	5.12	68.10	0.23	5.3	457.1	4.22
69	62.98	66.08	5.12	68.10	0.23	5.3	462.4	4.22
70	62.98	66.08	5.12	68.09	0.24	5.2	467.6	4.22
71	62.98	66.08	5.11	68.09	0.24	5.2	472.8	4.21
72	62.98	66.08	5.11	68.09	0.24	5.2	478.0	4.21
73	62.98	66.08	5.11	68.08	0.24	5.2	483.2	4.21
74	62.98	66.08	5.10	68.08	0.25	5.2	488.4	4.21
75	62.98	66.08	5.10	68.08	0.25	5.2	493.6	4.20
76	62.98	66.08	5.10	68.08	0.25	5.1	498.7	4.20
77	62.98	66.08	5.09	68.07	0.26	5.1	503.9	4.20
78	62.98	66.08	5.09	68.07	0.26	5.1	509.0	4.20
79	62.98	66.08	5.09	68.07	0.26	5.1	514.1	4.20
80	62.98	66.08	5.08	68.07	0.26	5.1	519.2	4.19
81	62.98	66.08	5.08	68.06	0.27	5.1	524.2	4.19
82	62.98	66.08	5.08	68.06	0.27	5.1	529.3	4.19
83	62.98	66.08	5.07	68.06	0.27	5.0	534.3	4.19
84	62.99	66.09	5.07	68.05	0.28	5.0	539.3	4.18
85	62.99	66.09	5.07	68.05	0.28	5.0	544.3	4.18
86	62.99	66.09	5.06	68.05	0.28	5.0	549.3	4.18
87	62.99	66.09	5.06	68.05	0.28	5.0	554.3	4.18
88	62.99	66.09	5.06	68.04	0.29	5.0	559.3	4.17
89	62.99	66.09	5.05	68.04	0.29	4.9	564.2	4.17
90	62.99	66.09	5.05	68.04	0.29	4.9	569.1	4.17
91	62.99	66.09	5.04	68.03	0.30	4.9	574.0	4.17
92	62.99	66.09	5.04	68.03	0.30	4.9	578.9	4.16
93	62.99	66.09	5.04	68.03	0.30	4.9	583.8	4.16
94	62.99	66.09	5.03	68.02	0.31	4.9	588.6	4.16
95	62.99	66.09	5.03	68.02	0.31	4.8	593.5	4.15
96	62.99	66.09	5.03	68.02	0.31	4.8	598.3	4.15
97	62.99	66.09	5.02	68.02	0.31	4.8	603.1	4.15
98	62.99	66.09	5.02	68.01	0.32	4.8	607.9	4.15
99	62.99	66.09	5.01	68.01	0.32	4.8	612.6	4.14
100	63.00	66.10	5.01	68.01	0.32	4.7	617.4	4.14
101	63.00	66.10	5.01	68.00	0.33	4.7	622.1	4.14
102	63.00	66.10	5.00	68.00	0.33	4.7	626.8	4.14

Table 6.3 RESULTS OF WATERLEVEL CALCULATION FOR 2 YEAR FLOOD UNDER P/P (3/3)

X (m)	Zb MSL	Dh MSL	Depth (m)	Waterlevel MSL	Fr -	Qetu (m3/s)	Qtotal (m3/s)	Radius (m)
103	63.00	66.10	5.00	68.00	0.33	4.7	631.5	4.13
104	63.00	66.10	4.99	67.99	0.33	4.7	636.2	4.13
105	63.00	66.10	4.99	67.99	0.34	4.7	640.8	4.13
106	63.00	66.10	4.99	67.99	0.34	4.6	645.5	4.12
107	63.00	66.10	4.98	67.98	0.34	4.6	650.1	4.12
108	63.00	66.10	4.98	67.98	0.35	4.6	654.7	4.12
109	63.00	66.10	4.97	67.98	0.35	4.6	659.3	4.12
110	63.00	66.10	4.97	67.97	0.35	4.6	663.9	4.11
111	63.00	66.10	4.97	67.97	0.35	4.6	668.4	4.11
112	63.00	66.10	4.96	67.97	0.36	4.5	673.0	4.11
113	63.00	71.20	4.96	67.97	0.36	0.0	673.0	4.11
114	63.00	71.20	4.96	67.97	0.36	0.0	673.0	4.11
115	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
116	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
117	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
118	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
119	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
120	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
121	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
122	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11
123	63.01	71.21	4.96	67.97	0.36	0.0	673.0	4.11

Table 6.4(1/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
1	7.23	8.68	0.50	0.00	0.00	0.00	7.23	7.23	63.29	64.50	5.20	4.55	12.43
2	7.23	8.68	1.56	0.00	0.00	0.00	7.23	7.23	63.29	64.50	5.20	4.55	12.44
3	7.24	8.68	2.92	0.00	0.00	0.00	7.24	7.24	63.29	64.50	5.20	4.55	12.44
4	7.24	8.68	4.43	0.00	0.00	0.00	7.24	7.24	63.29	64.50	5.20	4.55	12.44
5	7.24	8.68	6.04	0.00	0.00	0.00	7.24	7.24	63.29	64.50	5.20	4.55	12.44
6	7.24	8.68	7.71	0.00	0.00	0.00	7.24	7.24	63.29	64.50	5.21	4.55	12.45
7	7.24	8.69	9.44	0.00	0.00	0.00	7.24	7.24	63.29	64.50	5.21	4.55	12.45
8	7.25	8.69	11.29	0.00	0.00	0.00	7.25	7.25	63.29	64.50	5.21	4.55	12.45
9	7.25	8.69	13.33	0.87	0.00	0.87	7.25	8.12	63.29	64.50	5.21	4.56	13.33
10	7.25	8.70	15.65	3.19	0.00	3.19	7.25	10.44	63.29	64.50	5.21	4.56	15.65
11	7.25	8.70	18.34	5.87	0.00	5.87	7.25	13.12	63.29	64.50	5.22	4.56	18.34
12	7.26	8.70	21.44	8.97	0.00	8.97	7.26	16.23	63.29	64.50	5.22	4.56	21.44
13	7.26	8.71	24.99	12.51	0.00	12.51	7.26	19.77	63.29	64.50	5.22	4.56	24.99
14	7.26	8.71	28.94	16.46	0.00	16.46	7.26	23.72	63.61	64.50	5.22	4.57	28.94
15	7.26	8.72	33.25	20.77	0.00	20.77	7.26	28.03	63.69	64.50	5.22	4.57	33.25
16	7.27	8.72	37.83	25.34	0.00	25.34	7.27	32.61	63.78	64.50	5.23	4.57	37.83
17	7.27	8.73	42.58	30.08	0.00	30.08	7.27	37.35	63.86	64.50	5.23	4.57	42.58
18	7.27	8.73	47.39	34.88	0.00	34.88	7.27	42.16	63.93	64.50	5.23	4.57	47.39
19	7.28	8.73	52.17	39.65	0.00	39.65	7.28	46.93	64.00	64.50	5.24	4.58	52.17
20	7.28	8.74	56.83	44.31	0.00	44.31	7.28	51.59	64.07	64.50	5.24	4.58	56.83
21	7.28	8.74	61.32	48.80	0.00	48.80	7.28	56.08	64.13	64.50	5.24	4.58	61.32
22	7.29	8.75	65.59	53.05	0.00	53.05	7.29	60.34	64.19	64.50	5.25	4.59	65.59
23	7.29	8.76	69.60	57.06	0.00	57.06	7.29	64.35	64.24	64.50	5.25	4.59	69.60
24	7.30	8.76	73.33	60.79	0.00	60.79	7.30	68.08	64.29	64.50	5.25	4.59	73.33
25	7.30	8.77	76.79	64.24	0.00	64.24	7.30	71.54	64.33	64.50	5.25	4.59	76.79
26	7.32	8.77	79.97	67.39	0.00	67.39	7.32	74.71	64.37	64.50	5.26	4.62	79.97
27	7.35	8.81	82.90	70.27	0.00	70.27	7.35	77.62	64.40	64.50	5.28	4.69	82.90
28	7.37	8.84	85.59	72.91	0.00	72.91	7.37	80.28	64.43	64.50	5.30	4.77	85.59
29	7.40	8.88	88.07	75.34	0.00	75.34	7.40	82.74	64.46	64.50	5.33	4.87	88.07
30	7.43	8.93	90.37	77.58	0.00	77.58	7.43	85.01	64.48	64.50	5.35	4.99	90.37
31	7.47	8.97	92.51	79.67	0.00	79.67	7.47	87.13	64.50	64.50	5.38	5.11	92.51
32	7.50	9.02	94.53	81.62	0.00	81.62	7.50	89.12	64.53	64.50	5.41	5.25	94.53
33	7.54	9.07	96.43	83.46	0.00	83.46	7.54	90.99	64.55	64.50	5.44	5.39	96.43

Table 6.4(2/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
34	7.57	9.12	98.23	85.19	0.00	85.19	7.57	92.76	64.56	64.50	5.47	5.54	98.23
35	7.61	9.17	99.94	86.83	0.00	86.83	7.61	94.44	64.58	64.50	5.50	5.70	99.94
36	7.65	9.23	101.56	88.37	0.00	88.37	7.65	96.03	64.60	64.50	5.53	5.86	101.56
37	7.69	9.28	103.08	89.83	0.00	89.83	7.69	97.52	64.61	64.50	5.56	6.03	103.08
38	7.73	9.34	104.52	91.19	0.00	91.19	7.73	98.93	64.63	64.50	5.60	6.20	104.52
39	7.78	9.39	105.88	92.47	0.00	92.47	7.78	100.24	64.64	64.50	5.63	6.38	105.88
40	7.82	9.45	107.14	93.66	0.00	93.66	7.82	101.48	64.65	64.50	5.67	6.55	107.14
41	7.86	9.51	108.33	94.76	0.00	94.76	7.86	102.63	64.66	64.50	5.70	6.73	108.33
42	7.91	9.57	109.43	95.79	0.00	95.79	7.91	103.70	64.67	64.50	5.74	6.91	109.43
43	7.95	9.63	110.46	96.74	0.00	96.74	7.95	104.69	64.68	64.50	5.77	7.08	110.46
44	8.00	9.69	111.41	97.61	0.00	97.61	8.00	105.61	64.69	64.50	5.81	7.26	111.41
45	8.04	9.75	112.30	98.41	0.00	98.41	8.04	106.45	64.70	64.50	5.84	7.44	112.30
46	8.09	9.81	113.12	99.15	0.00	99.15	8.09	107.24	64.71	64.50	5.88	7.61	113.12
47	8.13	9.86	113.87	99.83	0.00	99.83	8.13	107.96	64.72	64.50	5.91	7.79	113.87
48	8.18	9.92	114.58	100.45	0.00	100.45	8.18	108.63	64.72	64.50	5.95	7.96	114.58
49	8.22	9.98	115.22	101.02	0.00	101.02	8.22	109.24	64.73	64.50	5.98	8.12	115.22
50	8.37	10.06	115.85	101.45	0.00	101.45	8.37	109.82	64.73	64.50	6.03	8.28	115.85
51	8.54	10.28	116.55	101.84	0.00	101.84	8.54	110.38	64.74	64.50	6.17	8.43	116.55
52	8.72	10.52	117.38	102.36	0.00	102.36	8.72	111.08	64.74	64.50	6.30	8.57	117.38
53	8.89	10.75	118.45	103.11	0.00	103.11	8.89	112.01	64.75	64.50	6.45	8.70	118.45
54	9.08	11.00	119.92	104.25	0.00	104.25	9.08	113.33	64.76	64.50	6.59	8.84	119.92
55	9.26	11.24	121.92	105.92	0.00	105.92	9.26	115.18	64.78	64.50	6.74	8.97	121.92
56	9.45	11.49	124.57	108.24	0.00	108.24	9.45	117.69	64.80	64.50	6.88	9.09	124.57
57	9.64	11.73	128.07	111.40	0.00	111.40	9.64	121.04	64.83	64.50	7.03	9.22	128.07
58	9.83	11.97	132.62	115.61	0.00	115.61	9.83	125.44	64.87	64.50	7.18	9.34	132.62
59	10.02	12.22	138.33	120.99	0.00	120.99	10.02	131.00	64.92	64.50	7.32	9.45	138.33
60	10.21	12.46	145.16	127.48	0.00	127.48	10.21	137.69	64.98	64.50	7.47	9.57	145.16
61	10.39	12.69	152.91	134.91	0.00	134.91	10.39	145.30	65.04	64.50	7.61	9.68	152.91
62	10.58	12.93	161.29	142.96	0.00	142.96	10.58	153.54	65.11	64.50	7.75	9.78	161.29
63	10.77	13.15	169.94	151.29	0.00	151.29	10.77	162.05	65.18	64.50	7.88	9.88	169.94
64	10.95	13.38	178.52	159.55	0.00	159.55	10.95	170.50	65.25	64.50	8.02	9.98	178.52
65	11.13	13.59	186.74	167.46	0.00	167.46	11.13	178.59	65.32	64.50	8.15	10.08	186.74
66	11.31	13.81	194.39	174.80	0.00	174.80	11.31	186.11	65.38	64.50	8.28	10.17	194.39

Table 6.4(3/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
67	11.49	14.01	201.34	181.45	0.00	181.45	11.49	192.94	65.43	64.50	8.40	10.26	201.34
68	11.66	14.21	207.54	187.36	0.00	187.36	11.66	199.02	65.47	64.50	8.52	10.34	207.54
69	11.83	14.41	212.98	192.52	0.00	192.52	11.83	204.34	65.51	64.50	8.64	10.42	212.98
70	11.99	14.59	217.71	196.97	0.00	196.97	11.99	208.96	65.55	64.50	8.75	10.50	217.71
71	12.15	14.77	221.78	200.77	0.00	200.77	12.15	212.92	65.57	64.50	8.86	10.58	221.78
72	12.31	14.95	225.26	203.99	0.00	203.99	12.31	216.30	65.60	64.50	8.96	10.65	225.26
73	12.47	15.12	228.24	206.72	0.00	206.72	12.47	219.18	65.62	64.50	9.06	10.72	228.24
74	12.61	15.28	230.78	209.02	0.00	209.02	12.61	221.62	65.64	64.50	9.16	10.77	230.78
75	12.75	15.42	232.94	210.95	0.00	210.95	12.75	223.69	65.65	64.50	9.24	10.79	232.94
76	12.88	15.56	234.74	212.53	0.00	212.53	12.88	225.41	65.66	64.50	9.33	10.82	234.74
77	13.01	15.69	236.18	213.76	0.00	213.76	13.01	226.77	65.67	64.50	9.41	10.84	236.18
78	13.14	15.82	237.26	214.64	0.00	214.64	13.14	227.78	65.68	64.50	9.48	10.86	237.26
79	13.26	15.94	238.00	215.19	0.00	215.19	13.26	228.45	65.68	64.50	9.55	10.88	238.00
80	13.38	16.06	238.42	215.42	0.00	215.42	13.38	228.80	65.68	64.50	9.62	10.89	238.42
81	13.49	16.17	238.54	215.36	0.00	215.36	13.49	228.85	65.68	64.50	9.69	10.91	238.54
82	13.60	16.27	238.36	215.01	0.00	215.01	13.60	228.61	65.68	64.50	9.75	10.93	238.36
83	13.71	16.37	237.94	214.42	0.00	214.42	13.71	228.13	65.67	64.50	9.81	10.94	237.94
84	13.81	16.47	237.36	213.67	0.00	213.67	13.81	227.49	65.67	64.50	9.87	10.96	237.36
85	13.91	16.56	236.68	212.84	0.00	212.84	13.91	226.76	65.66	64.50	9.93	10.97	236.68
86	14.01	16.65	235.98	211.99	0.00	211.99	14.01	226.00	65.66	64.50	9.98	10.99	235.98
87	14.10	16.73	235.30	211.17	0.00	211.17	14.10	225.27	65.65	64.50	10.03	11.00	235.30
88	14.19	16.81	234.67	210.40	0.00	210.40	14.19	224.59	65.65	64.50	10.08	11.02	234.67
89	14.28	16.89	234.11	209.71	0.00	209.71	14.28	223.99	65.64	64.50	10.12	11.03	234.11
90	14.36	16.96	233.63	209.10	0.00	209.10	14.36	223.46	65.64	64.50	10.17	11.04	233.63
91	14.44	17.03	233.22	208.58	0.00	208.58	14.44	223.02	65.63	64.50	10.21	11.05	233.22
92	14.52	17.09	232.89	208.13	0.00	208.13	14.52	222.65	65.63	64.50	10.24	11.06	232.89
93	14.59	17.15	232.63	207.76	0.00	207.76	14.59	222.35	65.63	64.50	10.28	11.07	232.63
94	14.66	17.21	232.42	207.44	0.00	207.44	14.66	222.11	65.62	64.50	10.32	11.08	232.42
95	14.73	17.27	232.27	207.19	0.00	207.19	14.73	221.92	65.62	64.50	10.35	11.09	232.27
96	14.80	17.32	232.16	206.98	0.00	206.98	14.80	221.77	65.62	64.50	10.38	11.10	232.16
97	14.86	17.37	232.08	206.81	0.00	206.81	14.86	221.67	65.62	64.50	10.41	11.11	232.08
98	14.69	17.37	231.95	206.85	0.00	206.85	14.69	221.54	65.62	64.50	10.41	11.05	231.95
99	14.49	17.07	231.56	206.84	0.00	206.84	14.49	221.33	65.62	64.50	10.23	10.88	231.56

Table 6.4(4/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
100	14.31	16.78	230.79	206.42	0.00	206.42	14.31	220.73	65.62	64.50	10.06	10.72	230.79
101	14.13	16.52	229.51	205.48	0.00	205.48	14.13	219.61	65.61	64.50	9.90	10.57	229.51
102	13.96	16.27	227.63	203.92	0.00	203.92	13.96	217.88	65.60	64.50	9.75	10.42	227.63
103	13.80	16.03	225.17	201.76	0.00	201.76	13.80	215.56	65.58	64.50	9.61	10.29	225.17
104	13.65	15.82	222.12	198.98	0.00	198.98	13.65	212.64	65.56	64.50	9.48	10.16	222.12
105	13.51	15.61	218.37	195.50	0.00	195.50	13.51	209.01	65.54	64.50	9.36	10.04	218.37
106	13.37	15.42	213.87	191.25	0.00	191.25	13.37	204.63	65.50	64.50	9.24	9.92	213.87
107	13.24	15.24	208.74	186.36	0.00	186.36	13.24	199.60	65.47	64.50	9.13	9.81	208.74
108	13.12	15.07	203.20	181.05	0.00	181.05	13.12	194.17	65.42	64.50	9.03	9.71	203.20
109	13.00	14.91	197.51	175.57	0.00	175.57	13.00	188.57	65.38	64.50	8.94	9.61	197.51
110	12.89	14.75	191.88	170.15	0.00	170.15	12.89	183.04	65.34	64.50	8.84	9.51	191.88
111	12.78	14.61	186.48	164.94	0.00	164.94	12.78	177.72	65.30	64.50	8.76	9.42	186.48
112	12.68	14.48	181.42	160.07	0.00	160.07	12.68	172.75	65.26	64.50	8.68	9.33	181.42
113	12.58	14.35	176.76	155.58	0.00	155.58	12.58	168.16	65.22	64.50	8.60	9.25	176.76
114	12.49	14.23	172.51	151.49	0.00	151.49	12.49	163.98	65.19	64.50	8.53	9.17	172.51
115	12.40	14.11	168.68	147.82	0.00	147.82	12.40	160.22	65.15	64.50	8.46	9.10	168.68
116	12.31	14.00	165.24	144.54	0.00	144.54	12.31	156.85	65.13	64.50	8.40	9.03	165.24
117	12.23	13.90	162.18	141.62	0.00	141.62	12.23	153.85	65.10	64.50	8.33	8.96	162.18
118	12.15	13.80	159.46	139.03	0.00	139.03	12.15	151.18	65.08	64.50	8.28	8.89	159.46
119	12.08	13.71	157.04	136.74	0.00	136.74	12.08	148.82	65.06	64.50	8.22	8.83	157.04
120	12.01	13.62	154.90	134.73	0.00	134.73	12.01	146.73	65.04	64.50	8.17	8.77	154.90
121	11.94	13.54	153.00	132.95	0.00	132.95	11.94	144.89	65.03	64.50	8.12	8.71	153.00
122	12.79	13.63	151.56	130.61	0.00	130.61	12.79	143.40	65.01	64.50	8.17	8.97	151.56
123	13.80	14.90	151.23	128.49	0.00	128.49	13.80	142.29	64.99	64.50	8.93	9.76	151.23
124	14.84	16.23	152.17	127.61	0.00	127.61	14.84	142.44	64.98	64.50	9.73	10.56	152.17
125	15.89	17.58	154.43	128.01	0.00	128.01	15.89	143.89	64.98	64.50	10.54	11.38	154.43
126	16.94	18.94	158.06	129.76	0.00	129.76	16.94	146.70	65.00	64.50	11.35	12.19	158.06
127	17.99	20.29	163.03	132.87	0.00	132.87	17.99	150.86	65.03	64.50	12.17	13.01	163.03
128	19.03	21.63	169.23	137.24	0.00	137.24	19.03	156.27	65.06	64.50	12.97	13.81	169.23
129	20.05	22.94	176.53	142.73	0.00	142.73	20.05	162.79	65.11	64.50	13.75	14.60	176.53
130	21.05	24.20	184.73	149.18	0.00	149.18	21.05	170.22	65.17	64.50	14.51	15.37	184.73
131	22.02	25.42	193.58	156.32	0.00	156.32	22.02	178.34	65.23	64.50	15.24	16.12	193.58
132	22.97	26.59	202.77	163.86	0.00	163.86	22.97	186.83	65.29	64.50	15.94	16.85	202.77

Table 6.4(5/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
133	23.88	27.71	212.00	171.51	0.00	171.51	23.88	195.39	65.35	64.50	16.61	17.55	212.00
134	24.75	28.77	220.98	178.99	0.00	178.99	24.75	203.74	65.41	64.50	17.24	18.22	220.98
135	25.59	29.77	229.52	186.08	0.00	186.08	25.59	211.67	65.46	64.50	17.84	18.87	229.52
136	26.40	30.71	237.45	192.64	0.00	192.64	26.40	219.04	65.51	64.50	18.41	19.49	237.45
137	27.17	31.59	244.69	198.58	0.00	198.58	27.17	225.75	65.56	64.50	18.94	20.08	244.69
138	27.90	32.42	251.22	203.88	0.00	203.88	27.90	231.78	65.60	64.50	19.43	20.64	251.22
139	28.59	33.19	257.04	208.55	0.00	208.55	28.59	237.14	65.63	64.50	19.90	21.18	257.04
140	29.25	33.91	262.21	212.63	0.00	212.63	29.25	241.88	65.66	64.50	20.33	21.68	262.21
141	29.87	34.58	266.77	216.17	0.00	216.17	29.87	246.04	65.69	64.50	20.73	22.16	266.77
142	30.46	35.20	270.79	219.22	0.00	219.22	30.46	249.69	65.71	64.50	21.10	22.61	270.79
143	31.02	35.77	274.32	221.86	0.00	221.86	31.02	252.88	65.73	64.50	21.45	23.04	274.32
144	31.54	36.31	277.44	224.13	0.00	224.13	31.54	255.67	65.74	64.50	21.76	23.44	277.44
145	32.03	36.79	280.20	226.11	0.00	226.11	32.03	258.14	65.76	64.50	22.06	23.82	280.20
146	49.78	40.25	288.96	215.05	0.00	215.05	49.78	264.83	65.68	64.50	24.13	31.71	288.96
147	72.37	68.07	323.89	210.71	0.00	210.71	72.37	283.08	65.65	64.50	40.81	55.48	323.89
148	95.92	98.33	398.11	243.25	0.00	243.25	95.92	339.17	65.88	64.50	58.95	81.73	398.11
149	119.23	128.53	525.45	329.16	0.00	329.16	119.23	448.40	66.43	64.50	77.05	108.45	525.45
150	141.50	157.04	714.01	478.37	0.00	478.37	141.50	619.87	67.25	64.50	94.14	134.25	714.01
151	162.18	182.90	946.43	674.61	76.98	597.64	0.00	597.64	68.18	64.51	109.64	158.22	707.28
152	153.96	200.19	1172.55	898.58	247.76	650.83	0.00	650.83	69.09	64.55	120.00	165.04	770.83
153	143.57	179.91	1319.88	1068.47	419.43	649.04	0.00	649.04	69.72	64.61	107.85	148.65	756.88
154	134.78	163.71	1373.45	1140.53	500.14	640.38	0.00	640.38	69.97	64.68	98.14	135.22	738.52
155	127.31	150.57	1353.03	1135.46	493.42	642.04	0.00	642.04	69.95	64.77	90.26	124.11	732.30
156	120.92	139.85	1299.21	1094.45	447.65	646.80	0.00	646.80	69.81	64.85	83.83	114.86	730.64
157	115.43	131.03	1235.47	1041.50	389.17	652.33	0.00	652.33	69.62	64.92	78.55	107.07	730.87
158	110.68	123.71	1154.25	969.41	315.85	653.56	0.00	653.56	69.36	64.99	74.16	100.49	727.71
159	106.57	117.59	1053.65	876.59	229.13	647.45	0.00	647.45	69.01	65.04	70.49	94.88	717.94
160	102.99	112.45	949.13	778.74	148.37	630.37	0.00	630.37	68.62	65.08	67.41	90.07	697.78
161	99.86	108.10	853.42	688.76	85.49	603.27	0.00	603.27	68.24	65.11	64.80	85.93	668.07
162	97.12	104.41	771.40	611.69	42.46	569.23	0.00	569.23	67.90	65.14	62.59	82.36	631.83
163	94.71	101.27	703.26	547.85	15.33	532.52	0.00	532.52	67.60	65.15	60.70	79.25	593.22
164	92.59	98.57	647.33	495.65	1.43	494.22	0.00	494.22	67.34	65.17	59.09	76.54	553.30
165	90.72	96.26	601.52	453.10	0.00	453.10	90.72	543.82	67.12	65.17	57.70	74.17	601.52

Table 6.4(6/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
166	89.07	94.27	563.92	418.35	0.00	418.35	89.07	507.42	66.94	65.17	56.51	72.10	563.92
167	87.61	92.55	532.93	389.84	0.00	389.84	87.61	477.45	66.78	65.17	55.48	70.27	532.93
168	86.31	91.06	507.23	366.34	0.00	366.34	86.31	452.65	66.65	65.17	54.59	68.66	507.23
169	85.15	89.77	485.82	346.85	0.00	346.85	85.15	432.00	66.53	65.17	53.81	67.24	485.82
170	77.90	87.46	465.22	334.90	0.00	334.90	77.90	412.79	66.46	65.17	52.43	63.89	465.22
171	70.83	77.78	439.37	321.92	0.00	321.92	70.83	392.75	66.39	65.17	46.63	57.76	439.37
172	64.71	69.70	409.89	303.41	0.00	303.41	64.71	368.11	66.27	65.17	41.78	52.48	409.89
173	59.38	62.88	379.62	282.54	0.00	282.54	59.38	341.92	66.14	65.17	37.69	47.91	379.62
174	54.72	57.08	350.20	261.26	0.00	261.26	54.72	315.98	66.00	65.17	34.22	43.93	350.20
175	50.63	52.12	322.62	240.75	0.00	240.75	50.63	291.37	65.86	65.17	31.24	40.44	322.62
176	47.01	47.84	297.34	221.65	0.00	221.65	47.01	268.66	65.73	65.17	28.68	37.37	297.34
177	43.80	44.13	274.53	204.27	0.00	204.27	43.80	248.07	65.60	65.17	26.45	34.66	274.53
178	40.95	40.89	254.13	188.67	0.00	188.67	40.95	229.61	65.48	65.17	24.51	32.25	254.13
179	38.39	38.06	235.99	174.78	0.00	174.78	38.39	213.17	65.38	65.17	22.81	30.10	235.99
180	36.10	35.56	219.88	162.47	0.00	162.47	36.10	198.57	65.28	65.17	21.32	28.18	219.88
181	34.04	33.35	205.60	151.57	0.00	151.57	34.04	185.61	65.19	65.17	19.99	26.46	205.60
182	32.18	31.39	192.93	141.93	0.00	141.93	32.18	174.11	65.10	65.17	18.81	24.90	192.93
183	30.49	29.63	181.66	133.40	0.00	133.40	30.49	163.89	65.03	65.17	17.76	23.50	181.66
184	28.96	28.07	171.62	125.83	0.00	125.83	28.96	154.79	64.96	65.17	16.82	22.23	171.62
185	27.57	26.66	162.65	119.09	0.00	119.09	27.57	146.67	64.90	65.17	15.98	21.07	162.65
186	26.30	25.39	154.62	113.09	0.00	113.09	26.30	139.40	64.84	65.17	15.22	20.02	154.62
187	25.14	24.24	147.40	107.73	0.00	107.73	25.14	132.87	64.79	65.17	14.53	19.06	147.40
188	24.08	23.20	140.91	102.93	0.00	102.93	24.08	127.00	64.75	65.17	13.91	18.18	140.91
189	23.10	22.26	135.05	98.61	0.00	98.61	23.10	121.71	64.70	65.17	13.34	17.37	135.05
190	22.20	21.40	129.75	94.72	0.00	94.72	22.20	116.92	64.66	65.17	12.83	16.63	129.75
191	21.37	20.61	124.93	91.21	0.00	91.21	21.37	112.58	64.63	65.17	12.35	15.95	124.93
192	20.60	19.89	120.56	88.03	0.00	88.03	20.60	108.63	64.59	65.17	11.92	15.32	120.56
193	19.89	19.23	116.56	85.15	0.00	85.15	19.89	105.04	64.56	65.17	11.53	14.74	116.56
194	19.23	18.62	112.92	82.53	0.00	82.53	19.23	101.76	64.54	65.17	11.16	14.20	112.92
195	18.62	18.06	109.58	80.14	0.00	80.14	18.62	98.75	64.51	65.17	10.83	13.70	109.58
196	18.05	17.55	106.52	77.95	0.00	77.95	18.05	96.00	64.49	65.17	10.52	13.24	106.52
197	17.52	17.07	103.70	75.95	0.00	75.95	17.52	93.47	64.46	65.17	10.23	12.80	103.70
198	17.03	16.63	101.11	74.12	0.00	74.12	17.03	91.15	64.44	65.17	9.97	12.40	101.11

Table 6.4(7/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
199	16.56	16.22	98.72	72.44	0.00	72.44	16.56	89.00	64.42	65.17	9.72	12.03	98.72
200	16.13	15.84	96.51	70.89	0.00	70.89	16.13	87.02	64.41	65.17	9.49	11.68	96.51
201	15.73	15.48	94.47	69.46	0.00	69.46	15.73	85.19	64.39	65.17	9.28	11.35	94.47
202	15.35	15.15	92.58	68.14	0.00	68.14	15.35	83.49	64.37	65.17	9.08	11.04	92.58
203	14.99	14.84	90.82	66.93	0.00	66.93	14.99	81.92	64.36	65.17	8.90	10.75	90.82
204	14.66	14.55	89.18	65.80	0.00	65.80	14.66	80.46	64.35	65.17	8.72	10.48	89.18
205	14.35	14.28	87.66	64.75	0.00	64.75	14.35	79.10	64.33	65.17	8.56	10.23	87.66
206	14.05	14.03	86.24	63.78	0.00	63.78	14.05	77.83	64.32	65.17	8.41	9.99	86.24
207	13.77	13.79	84.92	62.88	0.00	62.88	13.77	76.65	64.31	65.17	8.27	9.76	84.92
208	13.51	13.57	83.68	62.04	0.00	62.04	13.51	75.55	64.30	65.17	8.14	9.55	83.68
209	13.26	13.36	82.53	61.26	0.00	61.26	13.26	74.52	64.29	65.17	8.01	9.35	82.53
210	13.02	13.16	81.45	60.53	0.00	60.53	13.02	73.55	64.28	65.17	7.89	9.16	81.45
211	12.80	12.98	80.43	59.85	0.00	59.85	12.80	72.65	64.27	65.17	7.78	8.98	80.43
212	12.59	12.80	79.48	59.21	0.00	59.21	12.59	71.80	64.27	65.17	7.68	8.81	79.48
213	12.39	12.64	78.58	58.61	0.00	58.61	12.39	71.00	64.26	65.17	7.58	8.65	78.58
214	12.20	12.48	77.74	58.05	0.00	58.05	12.20	70.26	64.25	65.17	7.48	8.50	77.74
215	12.02	12.34	76.94	57.53	0.00	57.53	12.02	69.55	64.25	65.17	7.39	8.35	76.94
216	11.85	12.20	76.20	57.04	0.00	57.04	11.85	68.89	64.24	65.17	7.31	8.21	76.20
217	11.69	12.06	75.49	56.57	0.00	56.57	11.69	68.26	64.23	65.17	7.23	8.08	75.49
218	11.53	11.94	74.83	56.14	0.00	56.14	11.53	67.67	64.23	65.17	7.16	7.96	74.83
219	11.39	11.82	74.20	55.73	0.00	55.73	11.39	67.11	64.22	65.17	7.08	7.84	74.20
220	11.25	11.71	73.60	55.34	0.00	55.34	11.25	66.59	64.22	65.17	7.02	7.73	73.60
221	11.11	11.60	73.04	54.98	0.00	54.98	11.11	66.09	64.21	65.17	6.95	7.62	73.04
222	10.99	11.50	72.51	54.63	0.00	54.63	10.99	65.62	64.21	65.17	6.89	7.52	72.51
223	10.86	11.40	72.00	54.31	0.00	54.31	10.86	65.17	64.20	65.17	6.83	7.42	72.00
224	10.75	11.31	71.52	54.00	0.00	54.00	10.75	64.74	64.20	65.17	6.78	7.33	71.52
225	10.64	11.22	71.07	53.71	0.00	53.71	10.64	64.34	64.20	65.17	6.72	7.24	71.07
226	10.53	11.13	70.63	53.43	0.00	53.43	10.53	63.96	64.19	65.17	6.67	7.16	70.63
227	10.43	11.05	70.22	53.17	0.00	53.17	10.43	63.60	64.19	65.17	6.63	7.07	70.22
228	10.33	10.98	69.83	52.92	0.00	52.92	10.33	63.25	64.19	65.17	6.58	7.00	69.83
229	10.24	10.90	69.46	52.69	0.00	52.69	10.24	62.92	64.18	65.17	6.54	6.92	69.46
230	10.15	10.83	69.10	52.46	0.00	52.46	10.15	62.61	64.18	65.17	6.49	6.85	69.10
231	10.06	10.77	68.77	52.25	0.00	52.25	10.06	62.31	64.18	65.17	6.45	6.78	68.77

Table 6.4(8/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
232	9.98	10.70	68.44	52.05	0.00	52.05	9.98	62.03	64.18	65.17	6.42	6.72	68.44
233	9.90	10.64	68.13	51.85	0.00	51.85	9.90	61.76	64.17	65.17	6.38	6.65	68.13
234	9.83	10.58	67.84	51.67	0.00	51.67	9.83	61.50	64.17	65.17	6.34	6.59	67.84
235	9.75	10.53	67.56	51.50	0.00	51.50	9.75	61.25	64.17	65.17	6.31	6.54	67.56
236	9.68	10.47	67.29	51.33	0.00	51.33	9.68	61.01	64.17	65.17	6.28	6.48	67.29
237	9.62	10.42	67.03	51.17	0.00	51.17	9.62	60.79	64.16	65.17	6.25	6.43	67.03
238	9.55	10.37	66.79	51.02	0.00	51.02	9.55	60.57	64.16	65.17	6.22	6.37	66.79
239	9.49	10.32	66.55	50.87	0.00	50.87	9.49	60.36	64.16	65.17	6.19	6.33	66.55
240	9.43	10.28	66.32	50.73	0.00	50.73	9.43	60.16	64.16	65.17	6.16	6.28	66.32
241	9.37	10.23	66.11	50.60	0.00	50.60	9.37	59.97	64.16	65.17	6.13	6.23	66.11
242	9.32	10.19	65.90	50.48	0.00	50.48	9.32	59.79	64.15	65.17	6.11	6.19	65.90
243	9.26	10.15	65.70	50.35	0.00	50.35	9.26	59.62	64.15	65.17	6.08	6.14	65.70
244	9.21	10.11	65.51	50.24	0.00	50.24	9.21	59.45	64.15	65.17	6.06	6.10	65.51
245	9.16	10.07	65.32	50.13	0.00	50.13	9.16	59.29	64.15	65.17	6.04	6.06	65.32
246	9.11	10.03	65.15	50.02	0.00	50.02	9.11	59.13	64.15	65.17	6.02	6.03	65.15
247	9.07	10.00	64.98	49.92	0.00	49.92	9.07	58.98	64.15	65.17	5.99	5.99	64.98
248	9.02	9.97	64.81	49.82	0.00	49.82	9.02	58.84	64.15	65.17	5.97	5.95	64.81
249	8.98	9.93	64.66	49.72	0.00	49.72	8.98	58.70	64.14	65.17	5.95	5.92	64.66
250	8.94	9.90	64.50	49.63	0.00	49.63	8.94	58.57	64.14	65.17	5.94	5.89	64.50
251	8.90	9.87	64.36	49.55	0.00	49.55	8.90	58.44	64.14	65.17	5.92	5.85	64.36
252	8.86	9.84	64.22	49.46	0.00	49.46	8.86	58.32	64.14	65.17	5.90	5.82	64.22
253	8.82	9.81	64.08	49.38	0.00	49.38	8.82	58.20	64.14	65.17	5.88	5.79	64.08
254	8.78	9.79	63.95	49.30	0.00	49.30	8.78	58.09	64.14	65.17	5.87	5.76	63.95
255	8.75	9.76	63.83	49.23	0.00	49.23	8.75	57.98	64.14	65.17	5.85	5.74	63.83
256	8.71	9.73	63.70	49.16	0.00	49.16	8.71	57.87	64.14	65.17	5.83	5.71	63.70
257	8.68	9.71	63.59	49.09	0.00	49.09	8.68	57.77	64.14	65.17	5.82	5.68	63.59
258	8.65	9.68	63.47	49.02	0.00	49.02	8.65	57.67	64.14	65.17	5.81	5.66	63.47
259	8.62	9.66	63.36	48.96	0.00	48.96	8.62	57.57	64.13	65.17	5.79	5.63	63.36
260	8.58	9.64	63.26	48.90	0.00	48.90	8.58	57.48	64.13	65.17	5.78	5.61	63.26
261	8.56	9.62	63.16	48.84	0.00	48.84	8.56	57.39	64.13	65.17	5.76	5.58	63.16
262	8.53	9.60	63.06	48.78	0.00	48.78	8.53	57.30	64.13	65.17	5.75	5.56	63.06
263	8.50	9.57	62.96	48.72	0.00	48.72	8.50	57.22	64.13	65.17	5.74	5.54	62.96
264	8.47	9.56	62.87	48.67	0.00	48.67	8.47	57.14	64.13	65.17	5.73	5.52	62.87

Table 6.4(9/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
265	8.45	9.54	62.78	48.62	0.00	48.62	8.45	57.06	64.13	65.17	5.72	5.50	62.78
266	8.42	9.52	62.69	48.57	0.00	48.57	8.42	56.99	64.13	65.17	5.71	5.48	62.69
267	8.40	9.50	62.61	48.52	0.00	48.52	8.40	56.91	64.13	65.17	5.69	5.46	62.61
268	8.37	9.48	62.53	48.47	0.00	48.47	8.37	56.84	64.13	65.17	5.68	5.44	62.53
269	8.35	9.46	62.45	48.42	0.00	48.42	8.35	56.77	64.13	65.17	5.67	5.42	62.45
270	8.33	9.45	62.37	48.38	0.00	48.38	8.33	56.71	64.13	65.17	5.66	5.40	62.37
271	8.31	9.43	62.30	48.34	0.00	48.34	8.31	56.64	64.13	65.17	5.65	5.39	62.30
272	8.28	9.42	62.23	48.30	0.00	48.30	8.28	56.58	64.13	65.17	5.64	5.37	62.23
273	8.26	9.40	62.16	48.26	0.00	48.26	8.26	56.52	64.13	65.17	5.64	5.35	62.16
274	8.24	9.39	62.09	48.22	0.00	48.22	8.24	56.46	64.12	65.17	5.63	5.34	62.09
275	8.22	9.37	62.02	48.18	0.00	48.18	8.22	56.40	64.12	65.17	5.62	5.32	62.02
276	8.20	9.36	61.96	48.14	0.00	48.14	8.20	56.35	64.12	65.17	5.61	5.31	61.96
277	8.19	9.34	61.90	48.11	0.00	48.11	8.19	56.30	64.12	65.17	5.60	5.29	61.90
278	8.17	9.33	61.84	48.07	0.00	48.07	8.17	56.24	64.12	65.17	5.59	5.28	61.84
279	8.15	9.32	61.78	48.04	0.00	48.04	8.15	56.19	64.12	65.17	5.59	5.26	61.78
280	8.13	9.31	61.72	48.01	0.00	48.01	8.13	56.14	64.12	65.17	5.58	5.25	61.72
281	8.12	9.29	61.67	47.98	0.00	47.98	8.12	56.09	64.12	65.17	5.57	5.24	61.67
282	8.10	9.28	61.61	47.95	0.00	47.95	8.10	56.05	64.12	65.17	5.56	5.22	61.61
283	8.08	9.27	61.56	47.92	0.00	47.92	8.08	56.00	64.12	65.17	5.56	5.21	61.56
284	8.07	9.26	61.51	47.89	0.00	47.89	8.07	55.96	64.12	65.17	5.55	5.20	61.51
285	8.05	9.25	61.46	47.86	0.00	47.86	8.05	55.92	64.12	65.17	5.54	5.19	61.46
286	8.04	9.24	61.41	47.84	0.00	47.84	8.04	55.87	64.12	65.17	5.54	5.18	61.41
287	8.03	9.23	61.37	47.81	0.00	47.81	8.03	55.83	64.12	65.17	5.53	5.17	61.37
288	8.01	9.22	61.32	47.78	0.00	47.78	8.01	55.79	64.12	65.17	5.53	5.15	61.32
289	8.00	9.21	61.28	47.76	0.00	47.76	8.00	55.76	64.12	65.17	5.52	5.14	61.28
290	7.98	9.20	61.23	47.73	0.00	47.73	7.98	55.72	64.12	65.17	5.51	5.13	61.23
291	7.97	9.19	61.19	47.71	0.00	47.71	7.97	55.68	64.12	65.17	5.51	5.12	61.19
292	7.96	9.18	61.15	47.69	0.00	47.69	7.96	55.65	64.12	65.17	5.50	5.11	61.15
293	7.95	9.17	61.11	47.67	0.00	47.67	7.95	55.61	64.12	65.17	5.50	5.10	61.11
294	7.93	9.16	61.07	47.64	0.00	47.64	7.93	55.58	64.12	65.17	5.49	5.09	61.07
295	7.92	9.15	61.03	47.62	0.00	47.62	7.92	55.55	64.12	65.17	5.49	5.08	61.03
296	7.91	9.15	61.00	47.60	0.00	47.60	7.91	55.51	64.12	65.17	5.48	5.08	61.00
297	7.90	9.14	60.96	47.58	0.00	47.58	7.90	55.48	64.12	65.17	5.48	5.07	60.96

Table 6.4(10/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
298	7.89	9.13	60.93	47.56	0.00	47.56	7.89	55.45	64.12	65.17	5.47	5.06	60.93
299	7.88	9.12	60.89	47.54	0.00	47.54	7.88	55.42	64.12	65.17	5.47	5.05	60.89
300	7.87	9.12	60.86	47.53	0.00	47.53	7.87	55.39	64.12	65.17	5.46	5.04	60.86
301	7.86	9.11	60.82	47.51	0.00	47.51	7.86	55.37	64.12	65.17	5.46	5.03	60.82
302	7.85	9.10	60.79	47.49	0.00	47.49	7.85	55.34	64.11	65.17	5.46	5.03	60.79
303	7.84	9.09	60.76	47.47	0.00	47.47	7.84	55.31	64.11	65.17	5.45	5.02	60.76
304	7.83	9.09	60.73	47.46	0.00	47.46	7.83	55.28	64.11	65.17	5.45	5.01	60.73
305	7.82	9.08	60.70	47.44	0.00	47.44	7.82	55.26	64.11	65.17	5.44	5.00	60.70
306	7.81	9.07	60.67	47.42	0.00	47.42	7.81	55.23	64.11	65.17	5.44	5.00	60.67
307	7.80	9.07	60.64	47.41	0.00	47.41	7.80	55.21	64.11	65.17	5.44	4.99	60.64
308	7.79	9.06	60.62	47.39	0.00	47.39	7.79	55.19	64.11	65.17	5.43	4.98	60.62
309	7.78	9.06	60.59	47.38	0.00	47.38	7.78	55.16	64.11	65.17	5.43	4.97	60.59
310	7.77	9.05	60.56	47.36	0.00	47.36	7.77	55.14	64.11	65.17	5.42	4.97	60.56
311	7.77	9.04	60.54	47.35	0.00	47.35	7.77	55.12	64.11	65.17	5.42	4.96	60.54
312	7.76	9.04	60.51	47.34	0.00	47.34	7.76	55.09	64.11	65.17	5.42	4.96	60.51
313	7.75	9.03	60.49	47.32	0.00	47.32	7.75	55.07	64.11	65.17	5.41	4.95	60.49
314	7.74	9.03	60.46	47.31	0.00	47.31	7.74	55.05	64.11	65.17	5.41	4.94	60.46
315	7.74	9.02	60.44	47.30	0.00	47.30	7.74	55.03	64.11	65.17	5.41	4.94	60.44
316	7.73	9.02	60.42	47.28	0.00	47.28	7.73	55.01	64.11	65.17	5.40	4.93	60.42
317	7.72	9.01	60.39	47.27	0.00	47.27	7.72	54.99	64.11	65.17	5.40	4.93	60.39
318	7.71	9.01	60.37	47.26	0.00	47.26	7.71	54.97	64.11	65.17	5.40	4.92	60.37
319	7.71	9.00	60.35	47.25	0.00	47.25	7.71	54.96	64.11	65.17	5.40	4.91	60.35
320	7.70	9.00	60.33	47.24	0.00	47.24	7.70	54.94	64.11	65.17	5.39	4.91	60.33
321	7.69	8.99	60.31	47.23	0.00	47.23	7.69	54.92	64.11	65.17	5.39	4.90	60.31
322	7.69	8.99	60.29	47.21	0.00	47.21	7.69	54.90	64.11	65.17	5.39	4.90	60.29
323	7.68	8.98	60.27	47.20	0.00	47.20	7.68	54.88	64.11	65.17	5.38	4.89	60.27
324	7.67	8.98	60.25	47.19	0.00	47.19	7.67	54.87	64.11	65.17	5.38	4.89	60.25
325	7.67	8.97	60.23	47.18	0.00	47.18	7.67	54.85	64.11	65.17	5.38	4.88	60.23
326	7.66	8.97	60.21	47.17	0.00	47.17	7.66	54.83	64.11	65.17	5.38	4.88	60.21
327	7.66	8.97	60.19	47.16	0.00	47.16	7.66	54.82	64.11	65.17	5.37	4.87	60.19
328	7.65	8.96	60.18	47.15	0.00	47.15	7.65	54.80	64.11	65.17	5.37	4.87	60.18
329	7.64	8.96	60.16	47.14	0.00	47.14	7.64	54.79	64.11	65.17	5.37	4.87	60.16
330	7.64	8.95	60.14	47.13	0.00	47.13	7.64	54.77	64.11	65.17	5.37	4.86	60.14

Table 6.4(11/11) RESULTS OF OVERFLOW SIMULATION FOR 10 YEAR FLOOD UNDER M/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
331	7.63	8.95	60.12	47.13	0.00	47.13	7.63	54.76	64.11	65.17	5.36	4.86	60.12
332	7.63	8.95	60.11	47.12	0.00	47.12	7.63	54.75	64.11	65.17	5.36	4.85	60.11
333	7.62	8.94	60.09	47.11	0.00	47.11	7.62	54.73	64.11	65.17	5.36	4.85	60.09
334	7.62	8.94	60.08	47.10	0.00	47.10	7.62	54.72	64.11	65.17	5.36	4.84	60.08
335	7.61	8.93	60.06	47.09	0.00	47.09	7.61	54.70	64.11	65.17	5.36	4.84	60.06
336	7.61	8.93	60.04	47.08	0.00	47.08	7.61	54.69	64.11	65.17	5.35	4.84	60.04
Max	162.18	200.19	1373.45	1140.53	500.14	653.56	141.50	653.56	69.97	65.17	120.00	165.04	770.83

Table 6.5(1/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
1	7.23	8.68	0.50	0.00	0.00	0.00	7.23	7.23	63.31	64.50	5.20	4.55	12.43
2	7.23	8.68	1.56	0.00	0.00	0.00	7.23	7.23	63.31	64.50	5.20	4.55	12.44
3	7.24	8.68	2.92	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.20	4.56	12.44
4	7.24	8.68	4.43	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.20	4.58	12.44
5	7.24	8.68	6.04	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.20	4.61	12.44
6	7.24	8.68	7.70	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.20	4.64	12.44
7	7.24	8.68	9.44	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.21	4.68	12.44
8	7.24	8.69	11.28	0.00	0.00	0.00	7.24	7.24	63.31	64.50	5.21	4.72	12.45
9	7.24	8.69	13.30	0.85	0.00	0.85	7.24	8.10	63.31	64.50	5.21	4.76	13.30
10	7.24	8.69	15.59	3.14	0.00	3.14	7.24	10.38	63.31	64.50	5.21	4.81	15.59
11	7.25	8.69	18.21	5.76	0.00	5.76	7.25	13.00	63.31	64.50	5.21	4.86	18.21
12	7.25	8.69	21.20	8.74	0.00	8.74	7.25	15.99	63.31	64.50	5.21	4.91	21.20
13	7.25	8.70	24.55	12.09	0.00	12.09	7.25	19.34	63.31	64.50	5.21	4.96	24.55
14	7.25	8.70	28.23	15.77	0.00	15.77	7.25	23.02	63.61	64.50	5.21	5.02	28.23
15	7.25	8.70	32.15	19.68	0.00	19.68	7.25	26.93	63.69	64.50	5.22	5.08	32.15
16	7.25	8.70	36.22	23.75	0.00	23.75	7.25	31.00	63.76	64.50	5.22	5.14	36.22
17	7.26	8.71	40.33	27.86	0.00	27.86	7.26	35.11	63.84	64.50	5.22	5.20	40.33
18	7.26	8.71	44.40	31.92	0.00	31.92	7.26	39.18	63.90	64.50	5.22	5.26	44.40
19	7.26	8.71	48.35	35.87	0.00	35.87	7.26	43.13	63.96	64.50	5.22	5.33	48.35
20	7.26	8.71	52.11	39.63	0.00	39.63	7.26	46.89	64.02	64.50	5.22	5.39	52.11
21	7.26	8.72	55.66	43.17	0.00	43.17	7.26	50.43	64.07	64.50	5.23	5.46	55.66
22	7.27	8.72	58.96	46.47	0.00	46.47	7.27	53.74	64.11	64.50	5.23	5.52	58.96
23	7.27	8.72	62.02	49.52	0.00	49.52	7.27	56.79	64.16	64.50	5.23	5.59	62.02
24	7.27	8.73	64.84	52.34	0.00	52.34	7.27	59.61	64.19	64.50	5.23	5.66	64.84
25	7.27	8.73	67.42	54.92	0.00	54.92	7.27	62.19	64.23	64.50	5.23	5.72	67.42
26	7.28	8.73	69.79	57.27	0.00	57.27	7.28	64.55	64.25	64.50	5.24	5.77	69.79
27	7.30	8.75	71.96	59.41	0.00	59.41	7.30	66.71	64.28	64.50	5.25	5.79	71.96
28	7.31	8.77	73.96	61.38	0.00	61.38	7.31	68.70	64.31	64.50	5.26	5.81	73.96
29	7.33	8.80	75.80	63.20	0.00	63.20	7.33	70.53	64.33	64.50	5.27	5.82	75.80
30	7.35	8.82	77.51	64.87	0.00	64.87	7.35	72.22	64.35	64.50	5.29	5.84	77.51
31	7.37	8.85	79.11	66.44	0.00	66.44	7.37	73.80	64.37	64.50	5.30	5.85	79.11
32	7.39	8.88	80.61	67.90	0.00	67.90	7.39	75.29	64.38	64.50	5.32	5.87	80.61
33	7.41	8.90	82.03	69.28	0.00	69.28	7.41	76.69	64.40	64.50	5.34	5.89	82.03

Table 6.5(2/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
34	7.43	8.93	83.37	70.59	0.00	70.59	7.43	78.02	64.41	64.50	5.36	5.90	83.37
35	7.45	8.96	84.65	71.82	0.00	71.82	7.45	79.28	64.43	64.50	5.37	5.92	84.65
36	7.48	9.00	85.87	73.00	0.00	73.00	7.48	80.47	64.44	64.50	5.39	5.93	85.87
37	7.50	9.03	87.02	74.11	0.00	74.11	7.50	81.61	64.45	64.50	5.41	5.94	87.02
38	7.52	9.06	88.12	75.16	0.00	75.16	7.52	82.69	64.47	64.50	5.43	5.96	88.12
39	7.55	9.10	89.16	76.15	0.00	76.15	7.55	83.70	64.48	64.50	5.45	5.97	89.16
40	7.57	9.13	90.14	77.09	0.00	77.09	7.57	84.66	64.49	64.50	5.47	5.98	90.14
41	7.60	9.16	91.06	77.97	0.00	77.97	7.60	85.57	64.50	64.50	5.49	6.00	91.06
42	7.63	9.20	91.93	78.79	0.00	78.79	7.63	86.42	64.51	64.50	5.51	6.01	91.93
43	7.65	9.24	92.75	79.56	0.00	79.56	7.65	87.21	64.51	64.50	5.54	6.02	92.75
44	7.68	9.27	93.51	80.28	0.00	80.28	7.68	87.96	64.52	64.50	5.56	6.03	93.51
45	7.71	9.31	94.23	80.94	0.00	80.94	7.71	88.65	64.53	64.50	5.58	6.05	94.23
46	7.73	9.34	94.90	81.57	0.00	81.57	7.73	89.30	64.54	64.50	5.60	6.06	94.90
47	7.76	9.38	95.53	82.14	0.00	82.14	7.76	89.90	64.54	64.50	5.62	6.07	95.53
48	7.79	9.42	96.11	82.68	0.00	82.68	7.79	90.46	64.55	64.50	5.64	6.08	96.11
49	7.82	9.45	96.65	83.17	0.00	83.17	7.82	90.99	64.55	64.50	5.67	6.09	96.65
50	7.90	9.50	97.17	83.58	0.00	83.58	7.90	91.48	64.56	64.50	5.69	6.13	97.17
51	8.00	9.63	97.72	83.95	0.00	83.95	8.00	91.95	64.56	64.50	5.77	6.22	97.72
52	8.10	9.77	98.33	84.37	0.00	84.37	8.10	92.47	64.57	64.50	5.86	6.31	98.33
53	8.21	9.91	99.05	84.90	0.00	84.90	8.21	93.11	64.57	64.50	5.94	6.39	99.05
54	8.32	10.06	99.96	85.62	0.00	85.62	8.32	93.93	64.58	64.50	6.03	6.48	99.96
55	8.43	10.20	101.14	86.60	0.00	86.60	8.43	95.03	64.59	64.50	6.12	6.57	101.14
56	8.54	10.35	102.68	87.93	0.00	87.93	8.54	96.47	64.60	64.50	6.20	6.65	102.68
57	8.65	10.50	104.66	89.72	0.00	89.72	8.65	98.37	64.62	64.50	6.29	6.73	104.66
58	8.77	10.65	107.22	92.07	0.00	92.07	8.77	100.83	64.65	64.50	6.38	6.82	107.22
59	8.88	10.80	110.42	95.07	0.00	95.07	8.88	103.95	64.68	64.50	6.47	6.90	110.42
60	9.00	10.95	114.30	98.74	0.00	98.74	9.00	107.74	64.71	64.50	6.56	6.98	114.30
61	9.11	11.10	118.79	103.02	0.00	103.02	9.11	112.13	64.76	64.50	6.65	7.05	118.79
62	9.23	11.25	123.76	107.79	0.00	107.79	9.23	117.02	64.80	64.50	6.74	7.13	123.76
63	9.35	11.39	129.06	112.88	0.00	112.88	9.35	122.23	64.85	64.50	6.83	7.21	129.06
64	9.46	11.54	134.51	118.13	0.00	118.13	9.46	127.59	64.90	64.50	6.92	7.28	134.51
65	9.58	11.68	139.93	123.36	0.00	123.36	9.58	132.93	64.95	64.50	7.00	7.35	139.93
66	9.69	11.82	145.20	128.42	0.00	128.42	9.69	138.11	64.99	64.50	7.08	7.42	145.20

Table 6.5(3/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
67	9.80	11.96	150.18	133.21	0.00	133.21	9.80	143.01	65.04	64.50	7.17	7.49	150.18
68	9.91	12.09	154.80	137.64	0.00	137.64	9.91	147.56	65.07	64.50	7.25	7.56	154.80
69	10.02	12.22	159.03	141.68	0.00	141.68	10.02	151.70	65.11	64.50	7.33	7.63	159.03
70	10.13	12.35	162.84	145.30	0.00	145.30	10.13	155.43	65.14	64.50	7.40	7.69	162.84
71	10.24	12.47	166.23	148.51	0.00	148.51	10.24	158.75	65.17	64.50	7.48	7.75	166.23
72	10.35	12.60	169.24	151.34	0.00	151.34	10.35	161.69	65.19	64.50	7.55	7.81	169.24
73	10.45	12.71	171.88	153.81	0.00	153.81	10.45	164.26	65.21	64.50	7.62	7.87	171.88
74	10.55	12.83	174.19	155.96	0.00	155.96	10.55	166.50	65.23	64.50	7.69	7.93	174.19
75	10.64	12.93	176.21	157.82	0.00	157.82	10.64	168.46	65.24	64.50	7.75	7.97	176.21
76	10.74	13.03	177.95	159.40	0.00	159.40	10.74	170.14	65.26	64.50	7.81	8.02	177.95
77	10.83	13.13	179.42	160.72	0.00	160.72	10.83	171.55	65.27	64.50	7.87	8.06	179.42
78	10.92	13.23	180.63	161.78	0.00	161.78	10.92	172.70	65.28	64.50	7.93	8.11	180.63
79	11.00	13.32	181.58	162.59	0.00	162.59	11.00	173.59	65.28	64.50	7.98	8.15	181.58
80	11.09	13.41	182.29	163.16	0.00	163.16	11.09	174.25	65.29	64.50	8.04	8.19	182.29
81	11.17	13.49	182.77	163.51	0.00	163.51	11.17	174.68	65.29	64.50	8.09	8.23	182.77
82	11.25	13.58	183.03	163.64	0.00	163.64	11.25	174.89	65.29	64.50	8.14	8.27	183.03
83	11.33	13.66	183.09	163.57	0.00	163.57	11.33	174.90	65.29	64.50	8.19	8.31	183.09
84	11.41	13.73	182.99	163.36	0.00	163.36	11.41	174.76	65.29	64.50	8.23	8.34	182.99
85	11.48	13.81	182.79	163.03	0.00	163.03	11.48	174.51	65.29	64.50	8.28	8.38	182.79
86	11.55	13.88	182.51	162.64	0.00	162.64	11.55	174.19	65.28	64.50	8.32	8.41	182.51
87	11.62	13.94	182.20	162.22	0.00	162.22	11.62	173.84	65.28	64.50	8.36	8.44	182.20
88	11.69	14.01	181.89	161.80	0.00	161.80	11.69	173.49	65.28	64.50	8.40	8.47	181.89
89	11.76	14.07	181.59	161.39	0.00	161.39	11.76	173.15	65.27	64.50	8.44	8.50	181.59
90	11.82	14.13	181.31	161.01	0.00	161.01	11.82	172.84	65.27	64.50	8.47	8.53	181.31
91	11.89	14.19	181.06	160.67	0.00	160.67	11.89	172.56	65.27	64.50	8.51	8.56	181.06
92	11.95	14.25	180.85	160.37	0.00	160.37	11.95	172.32	65.27	64.50	8.54	8.59	180.85
93	12.01	14.30	180.68	160.10	0.00	160.10	12.01	172.11	65.26	64.50	8.57	8.61	180.68
94	12.06	14.35	180.54	159.88	0.00	159.88	12.06	171.94	65.26	64.50	8.60	8.64	180.54
95	12.12	14.40	180.43	159.68	0.00	159.68	12.12	171.80	65.26	64.50	8.63	8.66	180.43
96	12.17	14.44	180.35	159.52	0.00	159.52	12.17	171.69	65.26	64.50	8.66	8.69	180.35
97	12.22	14.49	180.29	159.38	0.00	159.38	12.22	171.60	65.26	64.50	8.69	8.71	180.29
98	12.13	14.50	180.21	159.38	0.00	159.38	12.13	171.52	65.26	64.50	8.69	8.69	180.21
99	12.03	14.33	179.99	159.37	0.00	159.37	12.03	171.40	65.26	64.50	8.59	8.60	179.99

Table 6.5(4/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
100	11.93	14.17	179.58	159.15	0.00	159.15	11.93	171.08	65.26	64.50	8.50	8.51	179.58
101	11.83	14.02	178.91	158.67	0.00	158.67	11.83	170.50	65.25	64.50	8.41	8.42	178.91
102	11.74	13.88	177.91	157.85	0.00	157.85	11.74	169.59	65.25	64.50	8.32	8.34	177.91
103	11.65	13.74	176.57	156.68	0.00	156.68	11.65	168.34	65.24	64.50	8.24	8.26	176.57
104	11.57	13.62	174.87	155.14	0.00	155.14	11.57	166.71	65.22	64.50	8.16	8.19	174.87
105	11.49	13.50	172.75	153.17	0.00	153.17	11.49	164.66	65.21	64.50	8.09	8.12	172.75
106	11.41	13.38	170.16	150.73	0.00	150.73	11.41	162.14	65.19	64.50	8.02	8.05	170.16
107	11.34	13.27	167.14	147.84	0.00	147.84	11.34	159.18	65.16	64.50	7.96	7.99	167.14
108	11.27	13.17	163.78	144.62	0.00	144.62	11.27	155.88	65.13	64.50	7.89	7.92	163.78
109	11.20	13.07	160.22	141.18	0.00	141.18	11.20	152.38	65.11	64.50	7.83	7.86	160.22
110	11.14	12.98	156.59	137.68	0.00	137.68	11.14	148.82	65.08	64.50	7.78	7.81	156.59
111	11.07	12.89	153.01	134.22	0.00	134.22	11.07	145.29	65.04	64.50	7.73	7.75	153.01
112	11.01	12.80	149.57	130.88	0.00	130.88	11.01	141.89	65.02	64.50	7.67	7.70	149.57
113	10.95	12.72	146.30	127.72	0.00	127.72	10.95	138.68	64.99	64.50	7.63	7.65	146.30
114	10.90	12.65	143.26	124.78	0.00	124.78	10.90	135.68	64.96	64.50	7.58	7.60	143.26
115	10.85	12.57	140.46	122.08	0.00	122.08	10.85	132.92	64.94	64.50	7.54	7.55	140.46
116	10.79	12.50	137.90	119.61	0.00	119.61	10.79	130.40	64.91	64.50	7.49	7.51	137.90
117	10.74	12.44	135.57	117.37	0.00	117.37	10.74	128.11	64.89	64.50	7.45	7.47	135.57
118	10.70	12.37	133.46	115.35	0.00	115.35	10.70	126.04	64.87	64.50	7.42	7.42	133.46
119	10.65	12.31	131.56	113.53	0.00	113.53	10.65	124.18	64.86	64.50	7.38	7.38	131.56
120	10.61	12.25	129.85	111.90	0.00	111.90	10.61	122.51	64.84	64.50	7.35	7.35	129.85
121	10.56	12.20	128.32	110.44	0.00	110.44	10.56	121.00	64.83	64.50	7.31	7.31	128.32
122	11.08	12.25	127.07	108.65	0.00	108.65	11.08	119.73	64.81	64.50	7.34	7.47	127.07
123	11.70	13.03	126.49	106.98	0.00	106.98	11.70	118.68	64.79	64.50	7.81	7.96	126.49
124	12.34	13.84	126.67	106.04	0.00	106.04	12.34	118.38	64.79	64.50	8.30	8.47	126.67
125	12.98	14.67	127.64	105.87	0.00	105.87	12.98	118.84	64.78	64.50	8.79	8.98	127.64
126	13.62	15.50	129.44	106.52	0.00	106.52	13.62	120.14	64.79	64.50	9.29	9.50	129.44
127	14.27	16.33	132.10	108.04	0.00	108.04	14.27	122.30	64.80	64.50	9.79	10.02	132.10
128	14.91	17.16	135.60	110.41	0.00	110.41	14.91	125.31	64.83	64.50	10.29	10.54	135.60
129	15.55	17.98	139.90	113.58	0.00	113.58	15.55	129.12	64.86	64.50	10.78	11.05	139.90
130	16.17	18.77	144.90	117.48	0.00	117.48	16.17	133.65	64.89	64.50	11.25	11.56	144.90
131	16.79	19.55	150.48	121.98	0.00	121.98	16.79	138.76	64.94	64.50	11.72	12.06	150.48
132	17.39	20.30	156.47	126.91	0.00	126.91	17.39	144.30	64.98	64.50	12.17	12.54	156.47

Table 6.5(5/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41+ Sub. 15+ Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
133	17.97	21.03	162.67	132.09	0.00	132.09	17.97	150.07	65.03	64.50	12.60	13.02	162.67
134	18.54	21.72	168.91	137.35	0.00	137.35	18.54	155.89	65.07	64.50	13.02	13.48	168.91
135	19.10	22.39	175.02	142.50	0.00	142.50	19.10	161.60	65.12	64.50	13.42	13.92	175.02
136	19.63	23.03	180.87	147.44	0.00	147.44	19.63	167.07	65.16	64.50	13.80	14.35	180.87
137	20.14	23.63	186.37	152.06	0.00	152.06	20.14	172.21	65.20	64.50	14.17	14.77	186.37
138	20.64	24.21	191.47	156.32	0.00	156.32	20.64	176.96	65.23	64.50	14.51	15.17	191.47
139	21.11	24.75	196.12	160.17	0.00	160.17	21.11	181.29	65.26	64.50	14.84	15.56	196.12
140	21.57	25.26	200.35	163.63	0.00	163.63	21.57	185.20	65.29	64.50	15.14	15.92	200.35
141	22.01	25.75	204.15	166.71	0.00	166.71	22.01	188.71	65.32	64.50	15.43	16.28	204.15
142	22.42	26.20	207.55	169.42	0.00	169.42	22.42	191.85	65.34	64.50	15.71	16.61	207.55
143	22.82	26.63	210.60	171.81	0.00	171.81	22.82	194.63	65.36	64.50	15.96	16.94	210.60
144	23.20	27.03	213.31	173.91	0.00	173.91	23.20	197.11	65.37	64.50	16.20	17.24	213.31
145	23.56	27.40	215.73	175.75	0.00	175.75	23.56	199.31	65.39	64.50	16.43	17.53	215.73
146	30.51	28.97	220.05	172.18	0.00	172.18	30.51	202.69	65.36	64.50	17.37	21.18	220.05
147	38.98	39.60	232.84	170.12	0.00	170.12	38.98	209.10	65.34	64.50	23.74	31.46	232.84
148	47.77	50.89	257.48	179.21	0.00	179.21	47.77	226.98	65.42	64.50	30.50	42.72	257.48
149	56.61	62.29	297.38	203.43	0.00	203.43	56.61	260.04	65.60	64.50	37.34	54.39	297.38
150	65.28	73.41	356.50	247.21	0.00	247.21	65.28	312.49	65.91	64.50	44.00	66.00	356.50
151	73.64	83.95	435.56	311.59	8.31	303.28	0.00	303.28	66.32	64.50	50.32	77.22	353.61
152	74.69	92.37	528.40	398.33	56.19	342.14	0.00	342.14	66.83	64.52	55.37	82.64	397.51
153	74.72	90.85	620.44	491.26	131.85	359.40	0.00	359.40	67.31	64.54	54.46	79.47	413.87
154	74.75	89.54	698.59	570.16	215.24	354.92	0.00	354.92	67.70	64.57	53.67	76.71	408.59
155	74.78	88.40	750.98	623.21	276.64	346.57	0.00	346.57	67.94	64.61	52.99	74.29	399.56
156	74.80	87.40	777.57	650.38	310.30	340.08	0.00	340.08	68.06	64.66	52.39	72.17	392.48
157	74.82	86.54	785.26	658.56	321.96	336.61	0.00	336.61	68.10	64.71	51.87	70.31	388.48
158	74.84	85.78	774.91	648.65	307.42	341.24	0.00	341.24	68.05	64.76	51.42	68.67	392.66
159	74.86	85.12	746.18	620.30	273.93	346.37	0.00	346.37	67.93	64.81	51.03	67.22	397.40
160	74.87	84.55	705.64	580.09	224.93	355.16	0.00	355.16	67.74	64.85	50.68	65.93	405.84
161	74.88	84.05	661.52	536.26	176.43	359.83	0.00	359.83	67.53	64.89	50.38	64.80	410.21
162	74.90	83.61	619.34	494.32	135.65	358.68	0.00	358.68	67.33	64.92	50.12	63.79	408.80
163	74.91	83.22	581.66	456.86	101.70	355.17	0.00	355.17	67.14	64.95	49.89	62.89	405.05
164	74.92	82.89	549.20	424.60	75.23	349.37	0.00	349.37	66.97	64.97	49.69	62.09	399.05
165	74.93	82.59	521.77	397.33	54.93	342.41	0.00	342.41	66.82	64.99	49.51	61.38	391.92

Table 6.5(6/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
166	74.93	82.33	498.80	374.51	39.64	334.87	0.00	334.87	66.69	65.01	49.35	60.74	384.22
167	74.94	82.11	479.63	355.47	28.41	327.07	0.00	327.07	66.58	65.02	49.22	60.17	376.28
168	74.95	81.91	463.65	339.60	20.39	319.21	0.00	319.21	66.49	65.04	49.10	59.66	368.31
169	74.95	81.73	450.29	326.34	14.19	312.14	0.00	312.14	66.41	65.05	48.99	59.21	361.14
170	69.07	80.43	436.61	319.33	11.43	307.89	0.00	307.89	66.37	65.06	48.22	56.82	356.11
171	63.18	71.92	416.96	310.67	8.31	302.36	0.00	302.36	66.32	65.07	43.11	51.67	345.47
172	58.05	64.76	392.78	295.91	3.27	292.64	0.00	292.64	66.22	65.08	38.82	47.21	331.46
173	53.55	58.69	366.82	278.09	0.08	278.01	0.00	278.01	66.11	65.09	35.18	43.32	313.19
174	49.60	53.50	340.83	259.17	0.00	259.17	49.60	308.77	65.99	65.09	32.07	39.90	340.83
175	46.10	49.03	315.94	240.45	0.00	240.45	46.10	286.54	65.86	65.09	29.39	36.90	315.94
176	42.99	45.16	292.75	222.69	0.00	222.69	42.99	265.68	65.74	65.09	27.07	34.24	292.75
177	40.22	41.80	271.55	206.27	0.00	206.27	40.22	246.49	65.62	65.09	25.06	31.87	271.55
178	37.74	38.85	252.35	191.32	0.00	191.32	37.74	229.06	65.51	65.09	23.29	29.77	252.35
179	35.52	36.26	235.07	177.81	0.00	177.81	35.52	213.33	65.40	65.09	21.74	27.88	235.07
180	33.51	33.97	219.57	165.69	0.00	165.69	33.51	199.21	65.31	65.09	20.36	26.18	219.57
181	31.70	31.94	205.69	154.84	0.00	154.84	31.70	186.55	65.22	65.09	19.15	24.66	205.69
182	30.06	30.13	193.27	145.15	0.00	145.15	30.06	175.21	65.14	65.09	18.06	23.28	193.27
183	28.57	28.51	182.16	136.49	0.00	136.49	28.57	165.07	65.06	65.09	17.09	22.03	182.16
184	27.22	27.06	172.19	128.76	0.00	128.76	27.22	155.98	65.00	65.09	16.22	20.89	172.19
185	25.98	25.75	163.26	121.85	0.00	121.85	25.98	147.82	64.93	65.09	15.43	19.85	163.26
186	24.84	24.57	155.23	115.66	0.00	115.66	24.84	140.50	64.88	65.09	14.73	18.91	155.23
187	23.80	23.50	147.99	110.11	0.00	110.11	23.80	133.91	64.82	65.09	14.09	18.04	147.99
188	22.84	22.53	141.47	105.12	0.00	105.12	22.84	127.97	64.78	65.09	13.50	17.25	141.47
189	21.96	21.64	135.57	100.63	0.00	100.63	21.96	122.59	64.73	65.09	12.97	16.51	135.57
190	21.15	20.83	130.22	96.58	0.00	96.58	21.15	117.73	64.69	65.09	12.49	15.84	130.22
191	20.40	20.09	125.36	92.92	0.00	92.92	20.40	113.31	64.66	65.09	12.05	15.22	125.36
192	19.70	19.42	120.94	89.60	0.00	89.60	19.70	109.30	64.62	65.09	11.64	14.65	120.94
193	19.06	18.79	116.91	86.58	0.00	86.58	19.06	105.64	64.59	65.09	11.27	14.11	116.91
194	18.46	18.22	113.22	83.84	0.00	83.84	18.46	102.30	64.56	65.09	10.92	13.62	113.22
195	17.90	17.69	109.85	81.34	0.00	81.34	17.90	99.24	64.53	65.09	10.61	13.16	109.85
196	17.38	17.21	106.76	79.06	0.00	79.06	17.38	96.44	64.51	65.09	10.31	12.73	106.76
197	16.90	16.75	103.91	76.97	0.00	76.97	16.90	93.87	64.49	65.09	10.04	12.34	103.91
198	16.44	16.33	101.29	75.06	0.00	75.06	16.44	91.50	64.46	65.09	9.79	11.97	101.29

Table 6.5(7/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
199	16.02	15.94	98.88	73.30	0.00	73.30	16.02	89.32	64.44	65.09	9.56	11.62	98.88
200	15.62	15.58	96.65	71.68	0.00	71.68	15.62	87.31	64.43	65.09	9.34	11.29	96.65
201	15.25	15.24	94.58	70.19	0.00	70.19	15.25	85.45	64.41	65.09	9.14	10.99	94.58
202	14.90	14.93	92.67	68.82	0.00	68.82	14.90	83.72	64.39	65.09	8.95	10.70	92.67
203	14.57	14.64	90.90	67.55	0.00	67.55	14.57	82.12	64.38	65.09	8.77	10.44	90.90
204	14.26	14.36	89.25	66.38	0.00	66.38	14.26	80.64	64.37	65.09	8.61	10.18	89.25
205	13.97	14.10	87.72	65.29	0.00	65.29	13.97	79.26	64.35	65.09	8.45	9.95	87.72
206	13.70	13.86	86.29	64.28	0.00	64.28	13.70	77.98	64.34	65.09	8.31	9.72	86.29
207	13.44	13.63	84.95	63.34	0.00	63.34	13.44	76.78	64.33	65.09	8.17	9.51	84.95
208	13.19	13.42	83.71	62.47	0.00	62.47	13.19	75.66	64.32	65.09	8.05	9.31	83.71
209	12.96	13.22	82.54	61.66	0.00	61.66	12.96	74.62	64.31	65.09	7.93	9.13	82.54
210	12.74	13.03	81.45	60.90	0.00	60.90	12.74	73.64	64.30	65.09	7.81	8.95	81.45
211	12.54	12.85	80.43	60.19	0.00	60.19	12.54	72.73	64.29	65.09	7.71	8.78	80.43
212	12.34	12.69	79.47	59.53	0.00	59.53	12.34	71.87	64.28	65.09	7.60	8.62	79.47
213	12.15	12.53	78.57	58.91	0.00	58.91	12.15	71.06	64.28	65.09	7.51	8.47	78.57
214	11.97	12.38	77.73	58.33	0.00	58.33	11.97	70.31	64.27	65.09	7.42	8.33	77.73
215	11.81	12.24	76.93	57.79	0.00	57.79	11.81	69.60	64.26	65.09	7.33	8.19	76.93
216	11.65	12.10	76.18	57.28	0.00	57.28	11.65	68.93	64.26	65.09	7.25	8.06	76.18
217	11.49	11.97	75.47	56.80	0.00	56.80	11.49	68.30	64.25	65.09	7.18	7.94	75.47
218	11.35	11.85	74.81	56.35	0.00	56.35	11.35	67.70	64.24	65.09	7.11	7.82	74.81
219	11.21	11.74	74.18	55.93	0.00	55.93	11.21	67.14	64.24	65.09	7.04	7.71	74.18
220	11.08	11.63	73.58	55.53	0.00	55.53	11.08	66.61	64.23	65.09	6.97	7.60	73.58
221	10.95	11.53	73.01	55.15	0.00	55.15	10.95	66.11	64.23	65.09	6.91	7.50	73.01
222	10.83	11.43	72.48	54.80	0.00	54.80	10.83	65.63	64.22	65.09	6.85	7.41	72.48
223	10.72	11.33	71.97	54.46	0.00	54.46	10.72	65.18	64.22	65.09	6.79	7.31	71.97
224	10.61	11.24	71.49	54.15	0.00	54.15	10.61	64.75	64.22	65.09	6.74	7.23	71.49
225	10.50	11.16	71.04	53.85	0.00	53.85	10.50	64.35	64.21	65.09	6.69	7.14	71.04
226	10.40	11.08	70.61	53.56	0.00	53.56	10.40	63.97	64.21	65.09	6.64	7.06	70.61
227	10.31	11.00	70.19	53.29	0.00	53.29	10.31	63.60	64.20	65.09	6.59	6.98	70.19
228	10.21	10.92	69.80	53.04	0.00	53.04	10.21	63.25	64.20	65.09	6.55	6.91	69.80
229	10.13	10.85	69.43	52.80	0.00	52.80	10.13	62.92	64.20	65.09	6.51	6.84	69.43
230	10.04	10.79	69.07	52.57	0.00	52.57	10.04	62.61	64.20	65.09	6.47	6.77	69.07
231	9.96	10.72	68.74	52.35	0.00	52.35	9.96	62.31	64.19	65.09	6.43	6.71	68.74

Table 6.5(8/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
232	9.88	10.66	68.41	52.14	0.00	52.14	9.88	62.02	64.19	65.09	6.39	6.64	68.41
233	9.81	10.60	68.11	51.95	0.00	51.95	9.81	61.75	64.19	65.09	6.35	6.58	68.11
234	9.73	10.54	67.81	51.76	0.00	51.76	9.73	61.49	64.18	65.09	6.32	6.53	67.81
235	9.66	10.49	67.53	51.58	0.00	51.58	9.66	61.24	64.18	65.09	6.29	6.47	67.53
236	9.60	10.43	67.26	51.41	0.00	51.41	9.60	61.01	64.18	65.09	6.25	6.42	67.26
237	9.53	10.38	67.00	51.25	0.00	51.25	9.53	60.78	64.18	65.09	6.22	6.37	67.00
238	9.47	10.34	66.76	51.09	0.00	51.09	9.47	60.56	64.18	65.09	6.20	6.32	66.76
239	9.41	10.29	66.52	50.94	0.00	50.94	9.41	60.36	64.17	65.09	6.17	6.27	66.52
240	9.36	10.24	66.30	50.80	0.00	50.80	9.36	60.16	64.17	65.09	6.14	6.22	66.30
241	9.30	10.20	66.08	50.66	0.00	50.66	9.30	59.97	64.17	65.09	6.12	6.18	66.08
242	9.25	10.16	65.87	50.53	0.00	50.53	9.25	59.78	64.17	65.09	6.09	6.14	65.87
243	9.20	10.12	65.67	50.41	0.00	50.41	9.20	59.61	64.17	65.09	6.07	6.10	65.67
244	9.15	10.08	65.48	50.29	0.00	50.29	9.15	59.44	64.17	65.09	6.04	6.06	65.48
245	9.10	10.04	65.30	50.18	0.00	50.18	9.10	59.28	64.16	65.09	6.02	6.02	65.30
246	9.05	10.01	65.12	50.07	0.00	50.07	9.05	59.12	64.16	65.09	6.00	5.98	65.12
247	9.01	9.97	64.95	49.96	0.00	49.96	9.01	58.97	64.16	65.09	5.98	5.95	64.95
248	8.97	9.94	64.79	49.86	0.00	49.86	8.97	58.83	64.16	65.09	5.96	5.91	64.79
249	8.92	9.91	64.63	49.77	0.00	49.77	8.92	58.69	64.16	65.09	5.94	5.88	64.63
250	8.88	9.88	64.48	49.68	0.00	49.68	8.88	58.56	64.16	65.09	5.92	5.85	64.48
251	8.85	9.85	64.34	49.59	0.00	49.59	8.85	58.43	64.16	65.09	5.90	5.82	64.34
252	8.81	9.82	64.20	49.50	0.00	49.50	8.81	58.31	64.16	65.09	5.89	5.79	64.20
253	8.77	9.79	64.06	49.42	0.00	49.42	8.77	58.19	64.15	65.09	5.87	5.76	64.06
254	8.74	9.77	63.93	49.34	0.00	49.34	8.74	58.08	64.15	65.09	5.85	5.73	63.93
255	8.70	9.74	63.81	49.26	0.00	49.26	8.70	57.97	64.15	65.09	5.84	5.70	63.81
256	8.67	9.72	63.68	49.19	0.00	49.19	8.67	57.86	64.15	65.09	5.82	5.68	63.68
257	8.64	9.69	63.57	49.12	0.00	49.12	8.64	57.76	64.15	65.09	5.81	5.65	63.57
258	8.61	9.67	63.45	49.05	0.00	49.05	8.61	57.66	64.15	65.09	5.80	5.63	63.45
259	8.58	9.64	63.35	48.99	0.00	48.99	8.58	57.56	64.15	65.09	5.78	5.60	63.35
260	8.55	9.62	63.24	48.92	0.00	48.92	8.55	57.47	64.15	65.09	5.77	5.58	63.24
261	8.52	9.60	63.14	48.86	0.00	48.86	8.52	57.38	64.15	65.09	5.76	5.56	63.14
262	8.49	9.58	63.04	48.80	0.00	48.80	8.49	57.30	64.15	65.09	5.74	5.54	63.04
263	8.47	9.56	62.94	48.75	0.00	48.75	8.47	57.21	64.15	65.09	5.73	5.51	62.94
264	8.44	9.54	62.85	48.69	0.00	48.69	8.44	57.13	64.14	65.09	5.72	5.49	62.85

Table 6.5(9/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

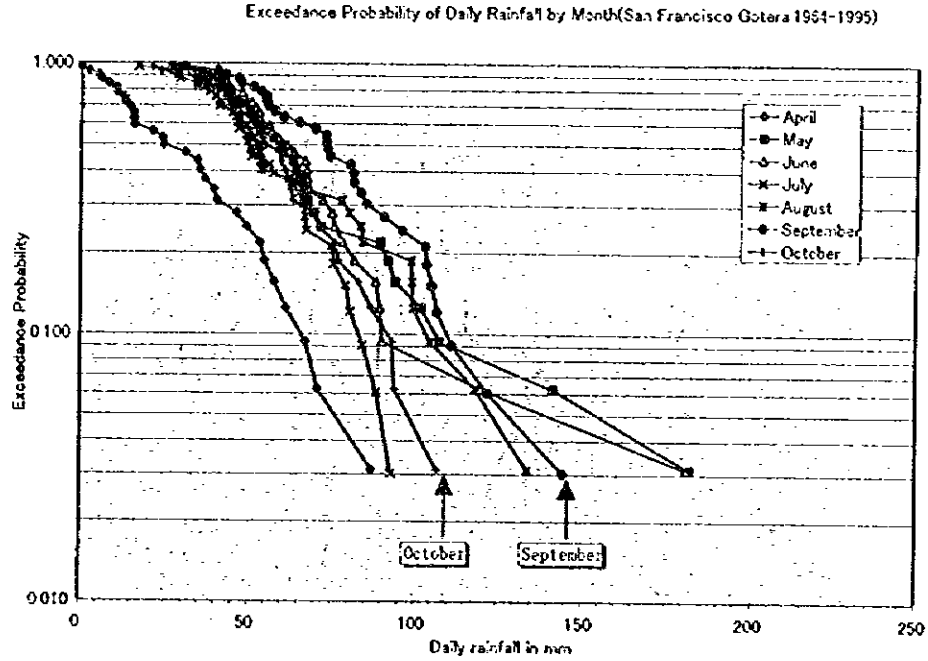
time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131 4/219. 2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(13 1. 4/219. 2)	Runoff from Sub. 15	El Delirio
265	8. 41	9. 52	62. 76	48. 64	0. 00	48. 64	8. 41	57. 05	64. 14	65. 09	5. 71	5. 47	62. 76
266	8. 39	9. 50	62. 68	48. 59	0. 00	48. 59	8. 39	56. 98	64. 14	65. 09	5. 70	5. 46	62. 68
267	8. 37	9. 49	62. 59	48. 54	0. 00	48. 54	8. 37	56. 91	64. 14	65. 09	5. 69	5. 44	62. 59
268	8. 34	9. 47	62. 51	48. 49	0. 00	48. 49	8. 34	56. 84	64. 14	65. 09	5. 68	5. 42	62. 51
269	8. 32	9. 45	62. 43	48. 45	0. 00	48. 45	8. 32	56. 77	64. 14	65. 09	5. 67	5. 40	62. 43
270	8. 30	9. 44	62. 36	48. 40	0. 00	48. 40	8. 30	56. 70	64. 14	65. 09	5. 66	5. 38	62. 36
271	8. 28	9. 42	62. 28	48. 36	0. 00	48. 36	8. 28	56. 64	64. 14	65. 09	5. 65	5. 37	62. 28
272	8. 26	9. 41	62. 21	48. 32	0. 00	48. 32	8. 26	56. 57	64. 14	65. 09	5. 64	5. 35	62. 21
273	8. 24	9. 39	62. 14	48. 27	0. 00	48. 27	8. 24	56. 51	64. 14	65. 09	5. 63	5. 33	62. 14
274	8. 22	9. 38	62. 07	48. 24	0. 00	48. 24	8. 22	56. 45	64. 14	65. 09	5. 62	5. 32	62. 07
275	8. 20	9. 36	62. 01	48. 20	0. 00	48. 20	8. 20	56. 40	64. 14	65. 09	5. 61	5. 30	62. 01
276	8. 18	9. 35	61. 95	48. 16	0. 00	48. 16	8. 18	56. 34	64. 14	65. 09	5. 60	5. 29	61. 95
277	8. 16	9. 34	61. 88	48. 13	0. 00	48. 13	8. 16	56. 29	64. 14	65. 09	5. 60	5. 28	61. 88
278	8. 15	9. 32	61. 82	48. 09	0. 00	48. 09	8. 15	56. 24	64. 14	65. 09	5. 59	5. 26	61. 82
279	8. 13	9. 31	61. 77	48. 06	0. 00	48. 06	8. 13	56. 19	64. 14	65. 09	5. 58	5. 25	61. 77
280	8. 11	9. 30	61. 71	48. 02	0. 00	48. 02	8. 11	56. 14	64. 14	65. 09	5. 57	5. 24	61. 71
281	8. 10	9. 29	61. 66	47. 99	0. 00	47. 99	8. 10	56. 09	64. 14	65. 09	5. 57	5. 22	61. 66
282	8. 08	9. 27	61. 60	47. 96	0. 00	47. 96	8. 08	56. 04	64. 13	65. 09	5. 56	5. 21	61. 60
283	8. 07	9. 26	61. 55	47. 93	0. 00	47. 93	8. 07	56. 00	64. 13	65. 09	5. 55	5. 20	61. 55
284	8. 05	9. 25	61. 50	47. 90	0. 00	47. 90	8. 05	55. 95	64. 13	65. 09	5. 55	5. 19	61. 50
285	8. 04	9. 24	61. 45	47. 87	0. 00	47. 87	8. 04	55. 91	64. 13	65. 09	5. 54	5. 17	61. 45
286	8. 02	9. 23	61. 40	47. 85	0. 00	47. 85	8. 02	55. 87	64. 13	65. 09	5. 53	5. 16	61. 40
287	8. 01	9. 22	61. 36	47. 82	0. 00	47. 82	8. 01	55. 83	64. 13	65. 09	5. 53	5. 15	61. 36
288	7. 99	9. 21	61. 31	47. 79	0. 00	47. 79	7. 99	55. 79	64. 13	65. 09	5. 52	5. 14	61. 31
289	7. 98	9. 20	61. 27	47. 77	0. 00	47. 77	7. 98	55. 75	64. 13	65. 09	5. 52	5. 13	61. 27
290	7. 97	9. 19	61. 22	47. 75	0. 00	47. 75	7. 97	55. 71	64. 13	65. 09	5. 51	5. 12	61. 22
291	7. 96	9. 18	61. 18	47. 72	0. 00	47. 72	7. 96	55. 68	64. 13	65. 09	5. 50	5. 11	61. 18
292	7. 94	9. 17	61. 14	47. 70	0. 00	47. 70	7. 94	55. 64	64. 13	65. 09	5. 50	5. 10	61. 14
293	7. 93	9. 17	61. 10	47. 68	0. 00	47. 68	7. 93	55. 61	64. 13	65. 09	5. 49	5. 09	61. 10
294	7. 92	9. 16	61. 06	47. 65	0. 00	47. 65	7. 92	55. 57	64. 13	65. 09	5. 49	5. 08	61. 06
295	7. 91	9. 15	61. 02	47. 63	0. 00	47. 63	7. 91	55. 54	64. 13	65. 09	5. 48	5. 07	61. 02
296	7. 90	9. 14	60. 99	47. 61	0. 00	47. 61	7. 90	55. 51	64. 13	65. 09	5. 48	5. 07	60. 99
297	7. 89	9. 13	60. 95	47. 59	0. 00	47. 59	7. 89	55. 48	64. 13	65. 09	5. 47	5. 06	60. 95

Table 6.5(10/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
298	7.88	9.12	60.92	47.57	0.00	47.57	7.88	55.45	64.13	65.09	5.47	5.05	60.92
299	7.86	9.12	60.88	47.55	0.00	47.55	7.86	55.42	64.13	65.09	5.47	5.04	60.88
300	7.85	9.11	60.85	47.53	0.00	47.53	7.85	55.39	64.13	65.09	5.46	5.03	60.85
301	7.84	9.10	60.82	47.52	0.00	47.52	7.84	55.36	64.13	65.09	5.46	5.02	60.82
302	7.84	9.10	60.79	47.50	0.00	47.50	7.84	55.33	64.13	65.09	5.45	5.02	60.79
303	7.83	9.09	60.75	47.48	0.00	47.48	7.83	55.31	64.13	65.09	5.45	5.01	60.75
304	7.82	9.08	60.72	47.46	0.00	47.46	7.82	55.28	64.13	65.09	5.44	5.00	60.72
305	7.81	9.08	60.69	47.45	0.00	47.45	7.81	55.25	64.13	65.09	5.44	4.99	60.69
306	7.80	9.07	60.67	47.43	0.00	47.43	7.80	55.23	64.13	65.09	5.44	4.99	60.67
307	7.79	9.06	60.64	47.42	0.00	47.42	7.79	55.20	64.13	65.09	5.43	4.98	60.64
308	7.78	9.06	60.61	47.40	0.00	47.40	7.78	55.18	64.13	65.09	5.43	4.97	60.61
309	7.77	9.05	60.58	47.39	0.00	47.39	7.77	55.16	64.13	65.09	5.43	4.97	60.58
310	7.76	9.05	60.56	47.37	0.00	47.37	7.76	55.13	64.13	65.09	5.42	4.96	60.56
311	7.76	9.04	60.53	47.36	0.00	47.36	7.76	55.11	64.13	65.09	5.42	4.95	60.53
312	7.75	9.03	60.51	47.34	0.00	47.34	7.75	55.09	64.13	65.09	5.42	4.95	60.51
313	7.74	9.03	60.48	47.33	0.00	47.33	7.74	55.07	64.13	65.09	5.41	4.94	60.48
314	7.73	9.02	60.46	47.32	0.00	47.32	7.73	55.05	64.13	65.09	5.41	4.94	60.46
315	7.73	9.02	60.43	47.30	0.00	47.30	7.73	55.03	64.13	65.09	5.41	4.93	60.43
316	7.72	9.01	60.41	47.29	0.00	47.29	7.72	55.01	64.13	65.09	5.40	4.92	60.41
317	7.71	9.01	60.39	47.28	0.00	47.28	7.71	54.99	64.13	65.09	5.40	4.92	60.39
318	7.70	9.00	60.37	47.27	0.00	47.27	7.70	54.97	64.13	65.09	5.40	4.91	60.37
319	7.70	9.00	60.35	47.25	0.00	47.25	7.70	54.95	64.13	65.09	5.39	4.91	60.35
320	7.69	8.99	60.32	47.24	0.00	47.24	7.69	54.93	64.12	65.09	5.39	4.90	60.32
321	7.68	8.99	60.30	47.23	0.00	47.23	7.68	54.92	64.12	65.09	5.39	4.90	60.30
322	7.68	8.98	60.28	47.22	0.00	47.22	7.68	54.90	64.12	65.09	5.39	4.89	60.28
323	7.67	8.98	60.26	47.21	0.00	47.21	7.67	54.88	64.12	65.09	5.38	4.89	60.26
324	7.67	8.97	60.24	47.20	0.00	47.20	7.67	54.86	64.12	65.09	5.38	4.88	60.24
325	7.66	8.97	60.23	47.19	0.00	47.19	7.66	54.85	64.12	65.09	5.38	4.88	60.23
326	7.65	8.97	60.21	47.18	0.00	47.18	7.65	54.83	64.12	65.09	5.37	4.87	60.21
327	7.65	8.96	60.19	47.17	0.00	47.17	7.65	54.82	64.12	65.09	5.37	4.87	60.19
328	7.64	8.96	60.17	47.16	0.00	47.16	7.64	54.80	64.12	65.09	5.37	4.87	60.17
329	7.64	8.95	60.15	47.15	0.00	47.15	7.64	54.79	64.12	65.09	5.37	4.86	60.15
330	7.63	8.95	60.14	47.14	0.00	47.14	7.63	54.77	64.12	65.09	5.37	4.86	60.14

Table 6.5(11/11) RESULTS OF OVERFLOW SIMULATION FOR 2 YEAR FLOOD UNDER P/P

time(hour)	Runoff from Sub. 13	Runoff from Sub. 14	Runoff at Pt. 41	Pt. 41-Sub. 13-Sub. 14*(131.4/219.2)	Overflow at weir	Outflow at weir	Outflow at drainage	Total Outflow	Channel Waterlevel in MSL	Lake Waterlevel in MSL	Sub. 14*(131.4/219.2)	Runoff from Sub. 15	El Delirio
331	7.63	8.95	60.12	47.13	0.00	47.13	7.63	54.76	64.12	65.09	5.36	4.85	60.12
332	7.62	8.94	60.10	47.12	0.00	47.12	7.62	54.74	64.12	65.09	5.36	4.85	60.10
333	7.62	8.94	60.09	47.11	0.00	47.11	7.62	54.73	64.12	65.09	5.36	4.84	60.09
334	7.61	8.94	60.07	47.10	0.00	47.10	7.61	54.71	64.12	65.09	5.36	4.84	60.07
335	7.61	8.93	60.06	47.10	0.00	47.10	7.61	54.70	64.12	65.09	5.35	4.84	60.06
336	7.60	8.93	60.04	47.09	0.00	47.09	7.60	54.69	64.12	65.09	5.35	4.83	60.04
Max	74.95	92.37	785.26	658.56	321.96	359.83	65.28	359.83	68.10	65.09	55.37	82.64	413.87
Volume	5.8E+06				9.4E+06	34387.57	3755.46						



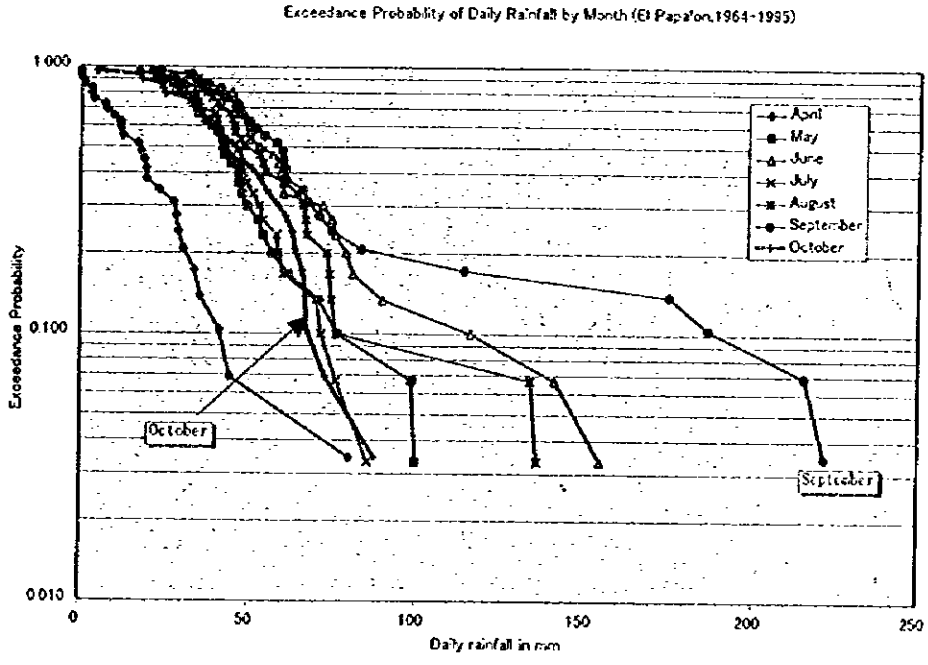


Figure 6. 1 **EXCEEDANCE PROBABILITY OF DAILY RAINFALL BY MONTH**

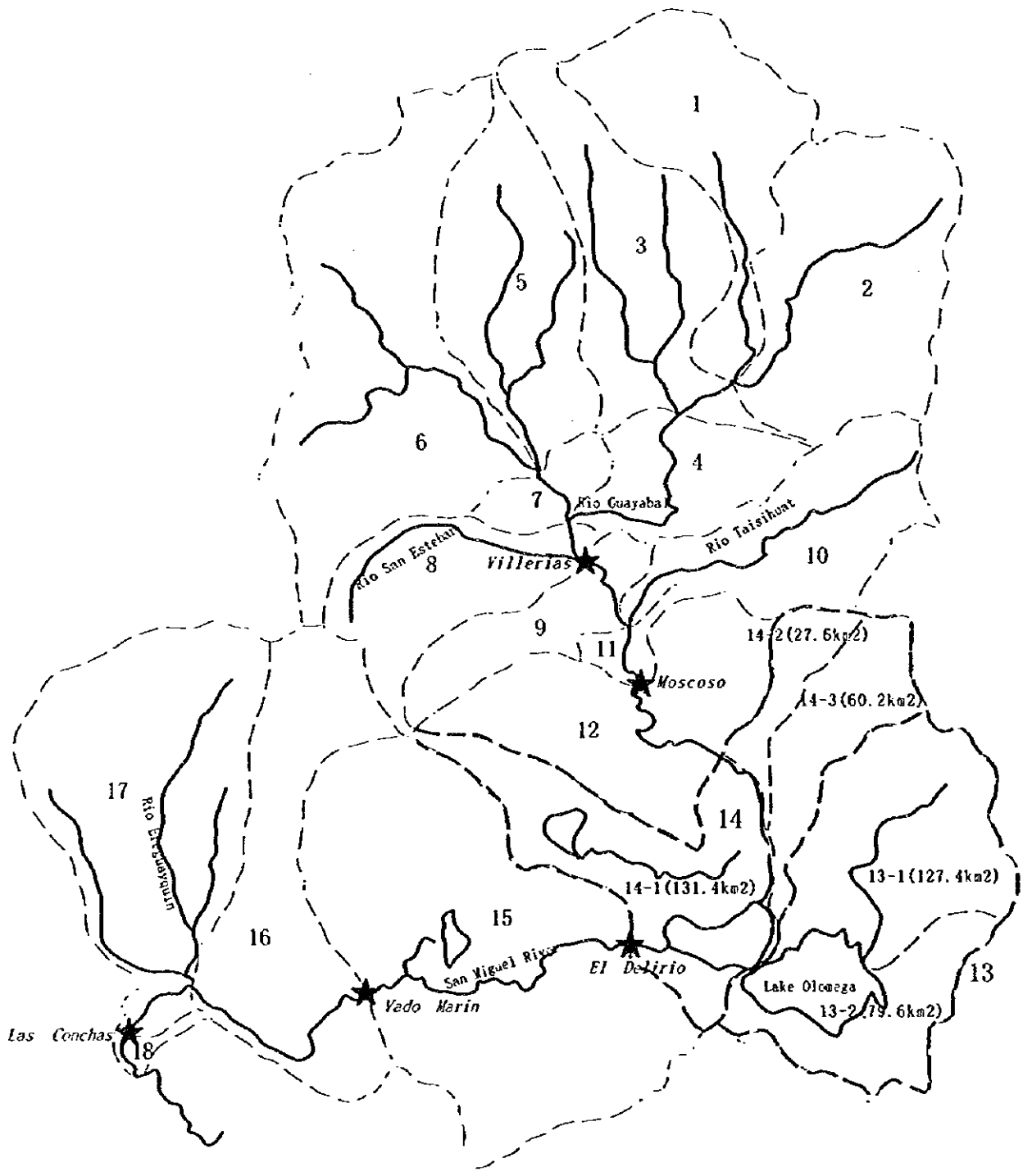
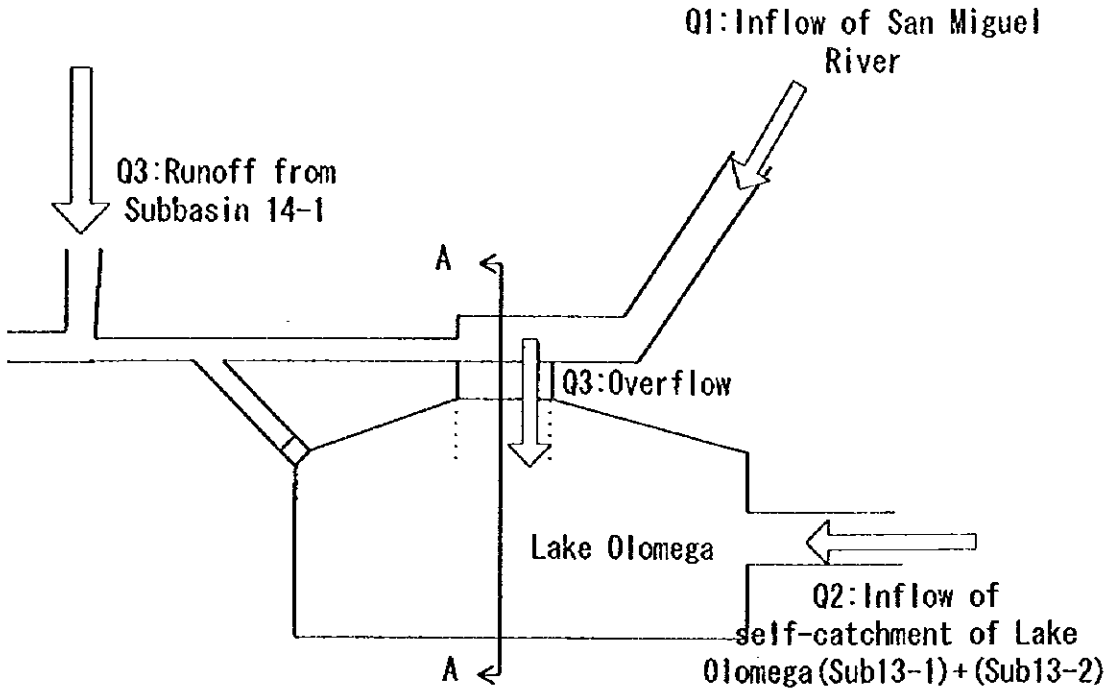
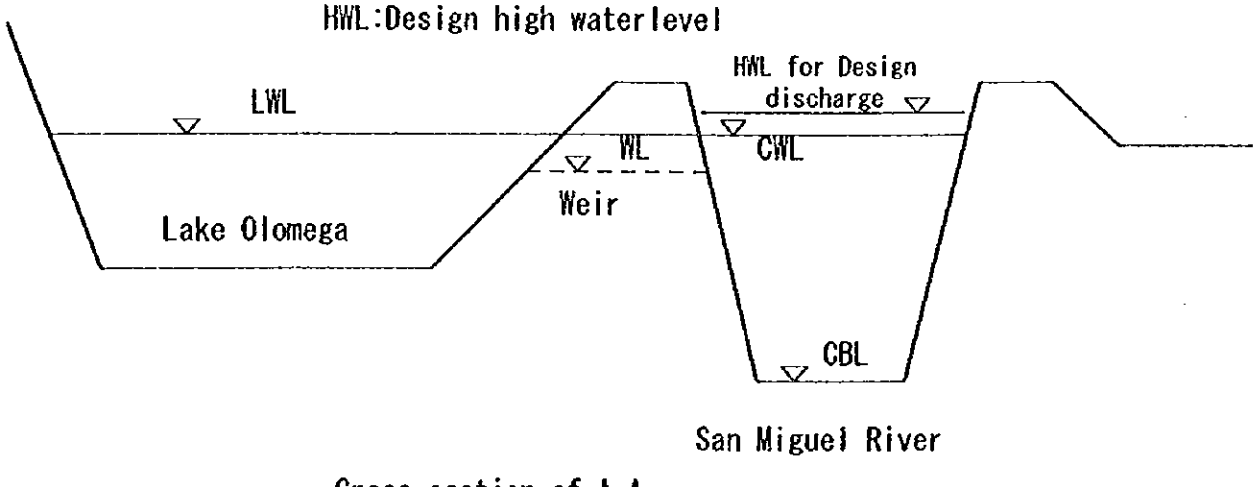


Figure 6. 2 DIVISION OF SUB-BASIN 14 AND 13



LWL:Waterlevel of Lake Olomega
WL:Weir height
CWL:Waterlevel in channel
CBL:Channel bed elevation
HWL:Design high waterlevel



Cross section of A-A

Figure 6.3 SCHEMATIC OF OLOMEGA DIVERSION SIMULATION

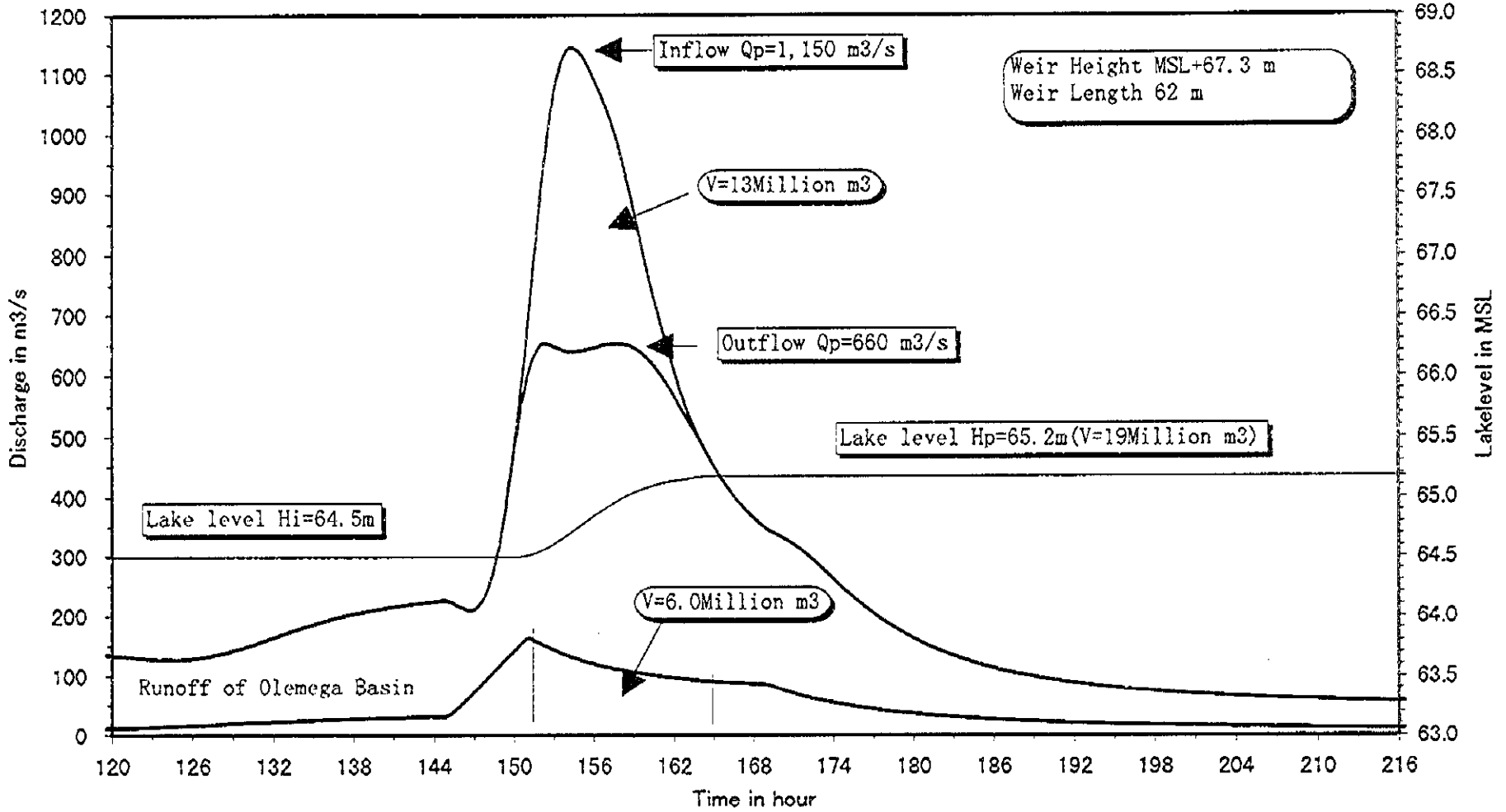


Figure 6. 4 HYDROGRAPH AT OLOMEGA DIVERSION FOR 10-yr. FLOOD

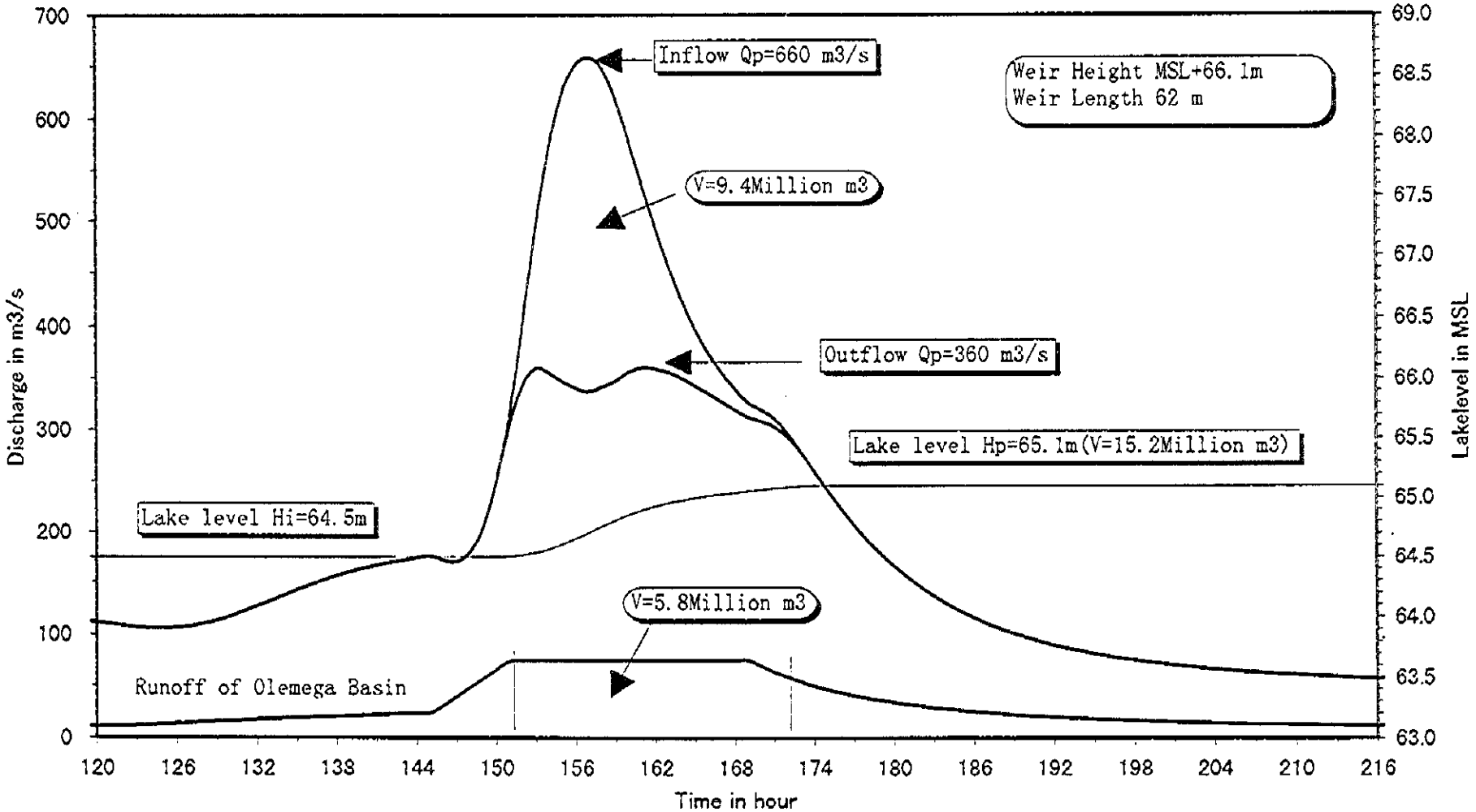


Figure 6. 5 HYDROGRAPH AT OLOMEGA DIVERSION FOR 2-yr. FLOOD

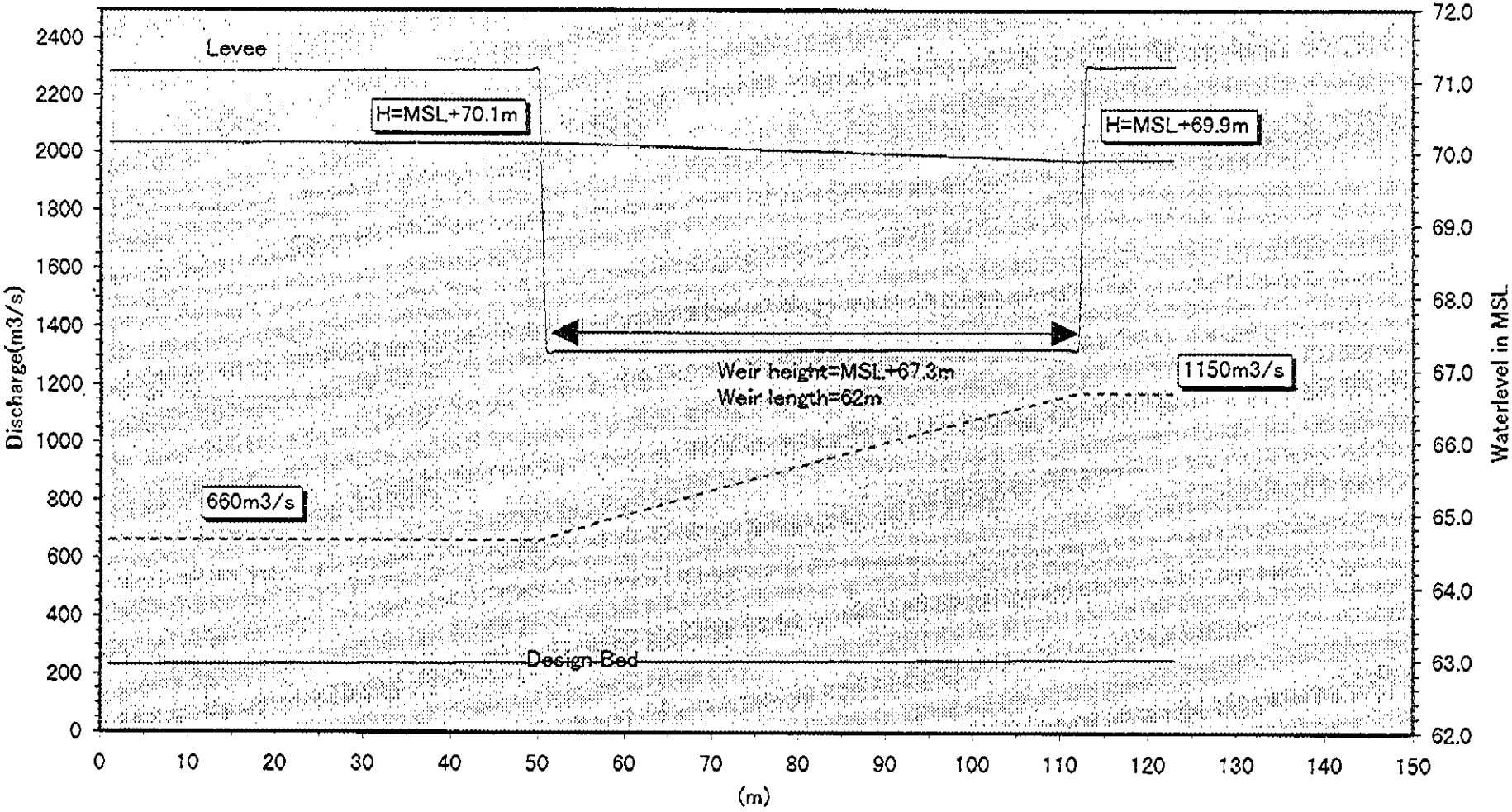


Figure 6. 6 **WATERLEVEL PROFILE FOR 10 yr. FLOOD UNDER M/P**

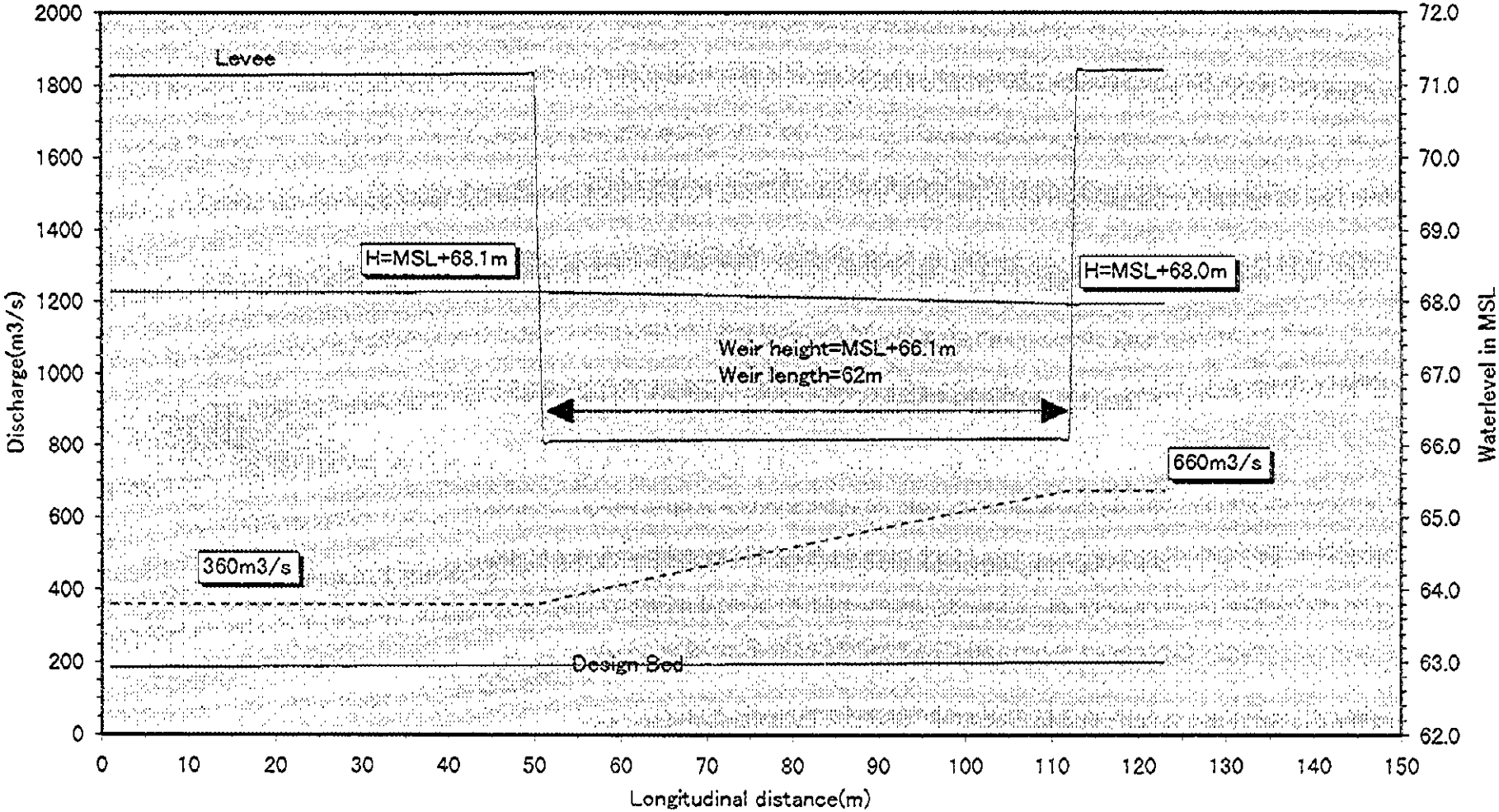


Figure 6. 7 WATERLEVEL PROFILE FOR 2 yr. FLOOD UNDER P/P