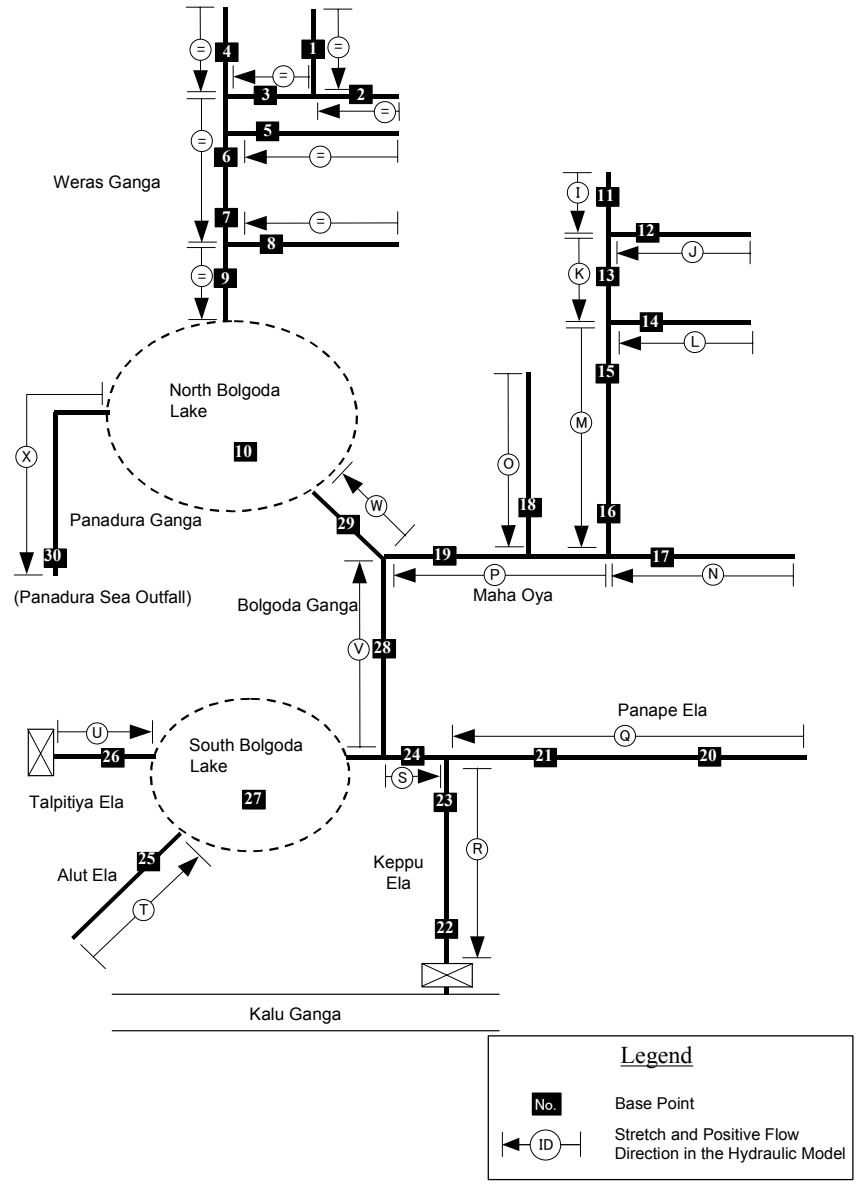
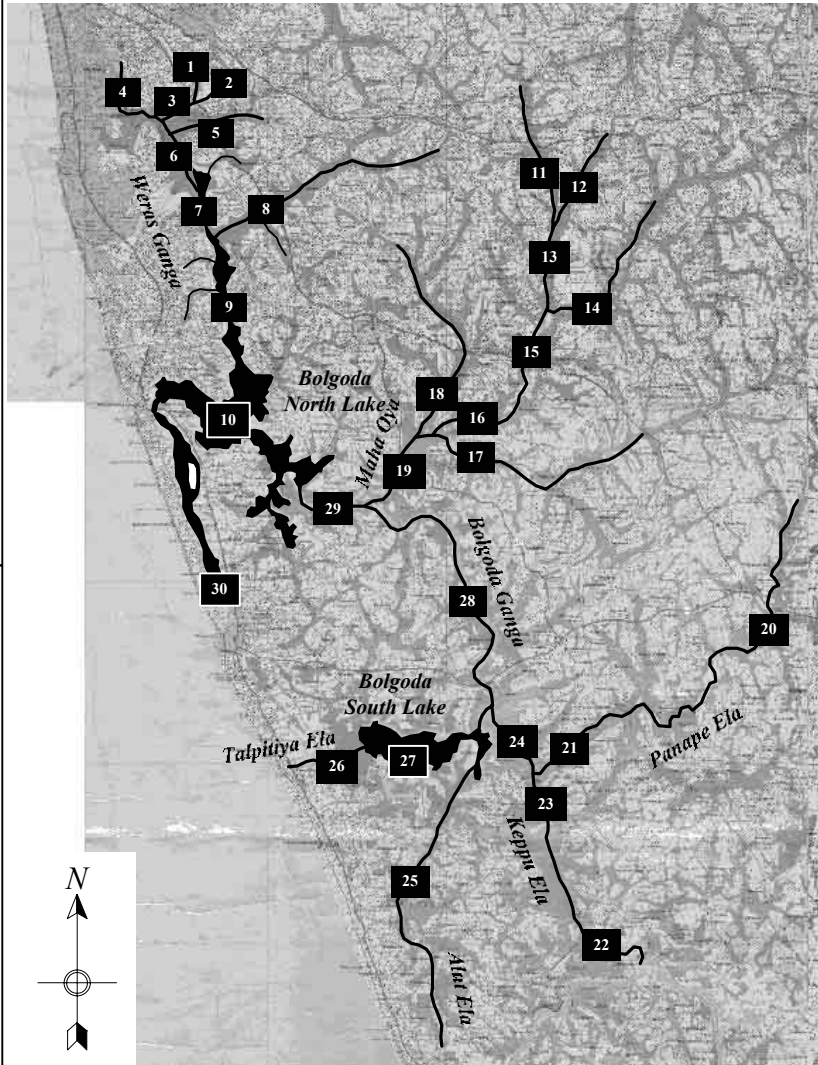
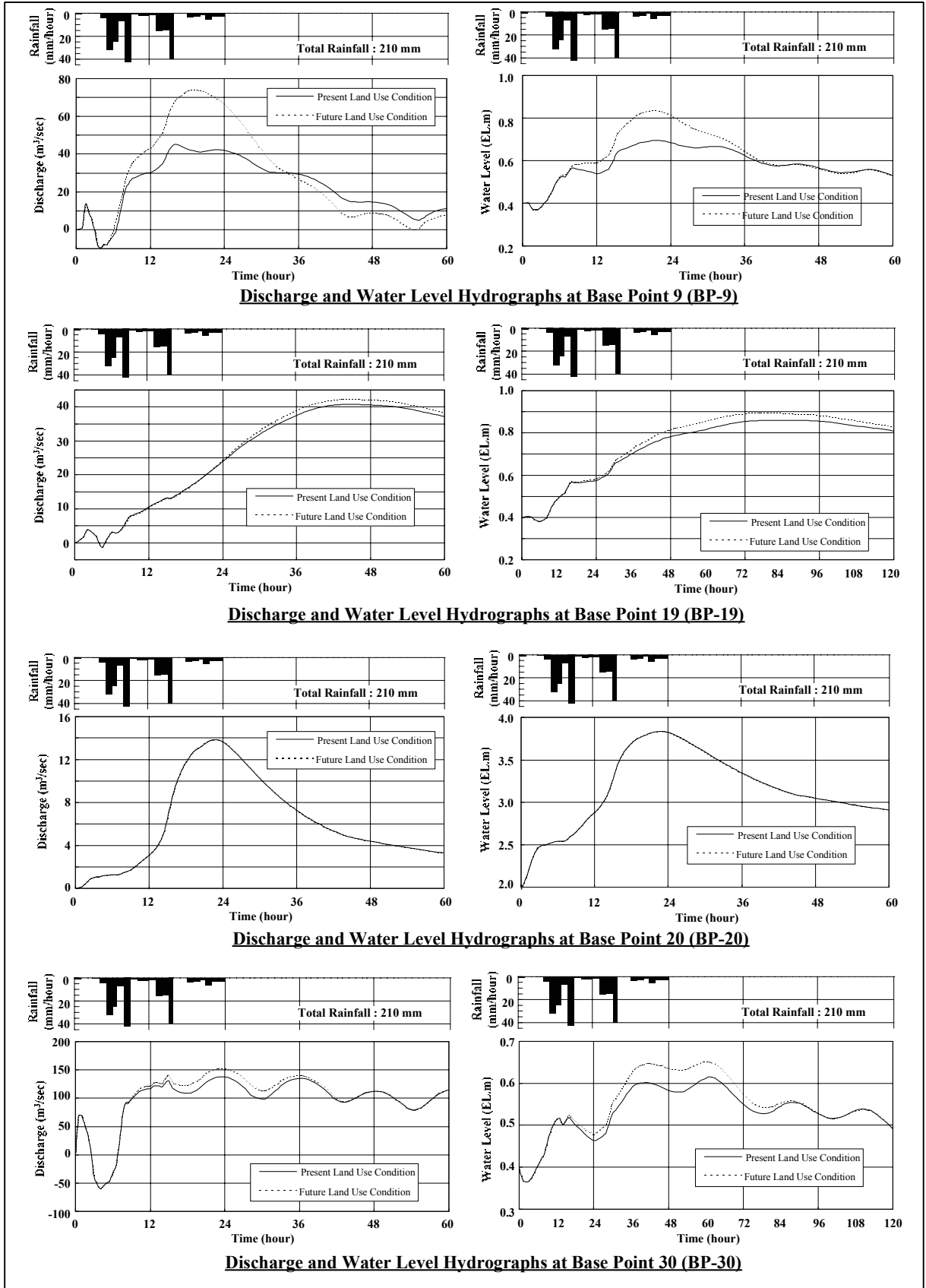


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Figure 4.8.18
Flood Inundation Maps of Greater Colombo
Basin (Future Land Use Condition)

Figure 4.8.19
Base Points in the Bolgoda Drainage System

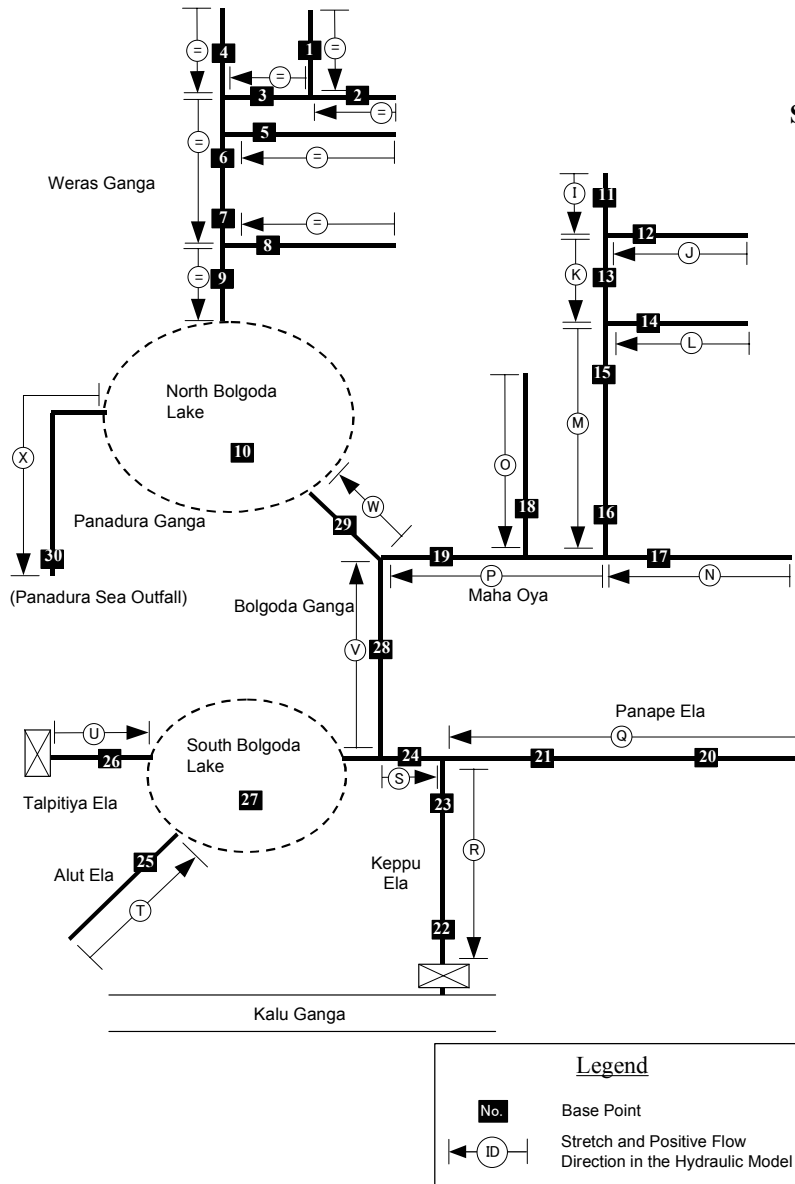




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Figure 4.8.20
Calculated 50-yr Probable Flood Hydrographs for the Bolgoda Basin



Legend

No. Base Point

← ID Stretch and Positive Flow Direction in the Hydraulic Model

Simulated Maximum Water Level and Discharge at Base Points and Stretches

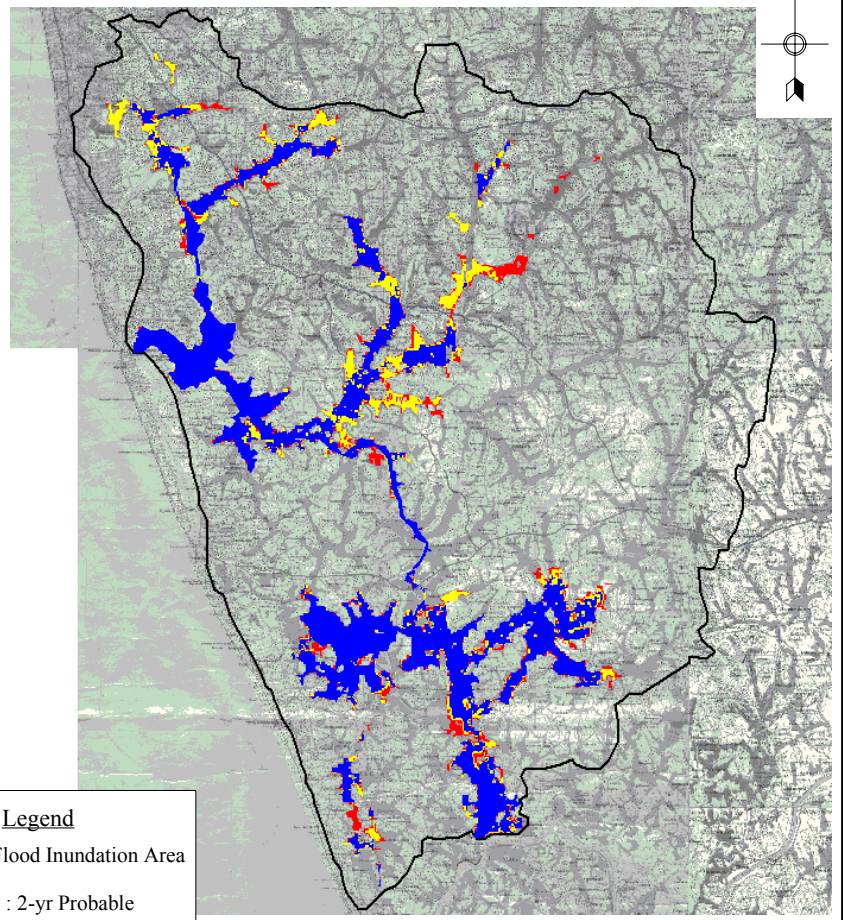
BP	2-year Probable Flood		5-year Probable Flood		10-year Probable Flood		25-year Probable Flood		50-year Probable Flood											
	PLU		FLU		PLU		FLU		PLU		FLU									
	H _{max}	Q _{max}	H _{max}	Q _{max}	H _{max}	Q _{max}	H _{max}	Q _{max}	H _{max}	Q _{max}	H _{max}	Q _{max}								
1	1.08	0.9	1.41	1.9	1.33	1.5	1.76	3.1	1.48	1.8	1.97	3.9	1.64	2.3	2.21	5.2	1.76	2.6	2.39	6.3
2	0.99	0.8	1.30	1.5	1.25	1.6	1.64	2.5	1.40	2.1	1.84	3.3	1.58	2.9	2.07	4.4	1.70	3.5	2.24	5.2
3	0.79	2.7	1.01	4.3	1.01	4.1	1.29	6.3	1.14	5.0	1.45	7.9	1.29	6.2	1.65	10.0	1.40	7.2	1.80	11.8
4	0.92	3.7	1.01	3.7	1.15	6.0	1.29	6.0	1.29	7.7	1.46	7.7	1.46	10.0	1.68	9.9	1.58	11.7	1.83	11.6
5	0.77	1.9	1.00	3.3	0.97	2.8	1.26	4.9	1.09	3.5	1.42	6.1	1.24	4.2	1.62	7.8	1.34	4.8	1.76	9.2
6	0.62	9.2	0.75	14.0	0.78	13.2	0.97	20.7	0.88	15.9	1.12	25.6	1.01	19.3	1.29	32.2	1.10	21.8	1.43	37.5
7	0.52	11.7	0.56	14.5	0.58	16.0	0.68	20.8	0.63	19.0	0.77	25.0	0.71	22.8	0.89	30.5	0.77	25.8	0.99	34.9
8	0.52	3.9	0.55	9.3	0.57	5.7	0.66	14.8	0.62	7.2	0.75	19.4	0.69	9.2	0.87	26.1	0.75	10.8	0.97	31.6
9	0.51	19.5	0.52	28.7	0.54	26.5	0.60	41.2	0.59	32.3	0.67	50.4	0.65	39.8	0.76	63.4	0.70	45.3	0.84	74.2
10	0.50	-	0.51	-	0.53	-	0.55	-	0.56	-	0.59	-	0.60	-	0.64	-	0.64	-	0.69	-
11	-	2.0	-	2.5	-	3.8	-	4.8	-	5.4	-	6.7	-	7.7	-	9.3	-	9.6	-	11.4
12	-	1.1	-	1.3	-	2.1	-	2.6	-	2.9	-	3.6	-	4.2	-	5.0	-	5.2	-	6.1
13	-	4.4	-	5.6	-	8.5	-	10.6	-	12.1	-	14.8	-	17.2	-	20.7	-	21.3	-	25.3
14	-	5.1	-	5.1	-	9.4	-	9.4	-	13.2	-	13.3	-	18.9	-	18.9	-	23.4	-	23.5
15	-	10.8	-	11.7	-	19.1	-	21.1	-	26.7	-	29.4	-	38.3	-	42.0	-	48.4	-	52.7
16	-	9.5	-	9.9	-	14.0	-	14.6	-	17.5	-	18.2	-	22.5	-	23.4	-	26.7	-	27.8
17	-	5.4	-	5.4	-	7.1	-	7.0	-	8.8	-	8.7	-	11.1	-	10.9	-	12.8	-	12.6
18	-	2.6	-	2.9	-	3.4	-	3.9	-	4.0	-	4.6	-	4.9	-	5.5	-	5.6	-	6.3
19	0.55	18.2	0.56	18.8	0.63	24.5	0.65	25.5	0.69	29.4	0.72	30.5	0.78	35.8	0.82	37.2	0.86	40.7	0.90	42.3
20	-	3.2	-	3.2	-	5.5	-	5.5	-	7.7	-	7.7	-	11.1	-	11.1	-	13.8	-	13.9
21	0.53	8.5	0.54	8.2	0.61	10.8	0.62	10.8	0.66	12.5	0.68	12.6	0.74	14.9	0.76	15.0	0.80	16.7	0.82	16.8
22	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.2	-	0.2	-	0.3	-	0.3
23	-	-4.0	-	-3.8	-	-4.4	-	-4.1	-	-4.8	-	-4.4	-	-5.2	-	-4.5	-	-5.4	-	-4.3
24	0.53	-13.5	0.53	-13.0	0.59	-16.4	0.60	-16.1	0.64	-18.4	0.66	-18.3	0.71	-21.1	0.73	-21.0	0.76	-23.0	0.79	-23.1
25	-	2.3	-	2.4	-	2.9	-	3.1	-	3.4	-	3.6	-	4.0	-	4.2	-	4.4	-	4.6
26	-	-4.1	-	-4.8	-	-6.3	-	-7.4	-	-7.9	-	-9.4	-	-10.2	-	-12.0	-	-12.0	-	-14.1
27	0.54	-	0.54	-	0.59	-	0.61	-	0.64	-	0.66	-	0.71	-	0.72	-	0.75	-	0.78	-
28	0.52	30.8	0.53	30.4	0.58	32.6	0.59	33.2	0.62	34.8	0.64	35.2	0.68	38.3	0.71	37.8	0.73	41.0	0.76	40.1
29	0.52	55.2	0.52	56.1	0.56	63.6	0.58	65.5	0.60	69.8	0.63	72.3	0.66	77.9	0.69	81.3	0.71	84.0	0.75	88.1
30	-	105.6	-	107.6	-	116.0	-	119.9	-	124.1	-	129.3	-	135.0	-	144.5	-	143.5	-	156.1

Stretch	2-year Flood Discharge (m ³ /sec)		5-year Flood Discharge (m ³ /sec)		10-year Flood Discharge (m ³ /sec)		25-year Flood Discharge (m ³ /sec)		50-year Flood Discharge (m ³ /sec)	
	PLU	FLU	PLU	FLU	PLU	FLU	PLU	FLU	PLU	FLU
A	1.3	2.5	2.0	4.2	2.5	5.3	3.1	7.1	3.5	8.5
B	1.0	1.8	1.8	3.0	2.5	3.8	3.4	5.1	4.1	6.1
C	2.8	5.0	4.3	8.3	5.4	10.7	7.0	14.2	8.2	17.1
D	5.1	6.5	8.3	10.1	10.5	12.9	13.5	16.7	15.8	19.6
E	2.0	3.6	3.1	5.8	3.7	7.6	4.6	10.1	5.2	12.0
F	12.2	15.0	16.6	21.2	19.7	25.7	23.6	32.2	26.5	37.5
G	3.9	13.4	6.3	23.0	8.9	29.9	12.5	39.8	15.4	47.6
H	19.2	28.3	26.0	40.7	30.9	49.8	38.0	62.6	43.2	73.2
I	2.5	3.1	4.8	6.0	6.8	8.4	9.7	11.7	12.0	14.3
J	1.3	1.7	2.5	3.2	3.6	4.4	5.1	6.2	6.4	7.6
K	5.6	7.1	10.9	13.5	15.3	18.8	21.8	26.0	26.9	32.0
L	5.5	5.5	10.0	10.1	14.1	14.2	20.1	20.2	25.0	25.0
M	5.6	7.1	10.9	13.5	15.3	18.8	21.8	26.0	26.9	32.0
N	5.6	5.7	8.6	8.6	11.5	11.5	15.4	15.5	18.5	18.6
O	2.7	3.1	3.7	4.4	4.5	5.5	5.6	7.0	6.6	8.2
P	18.9	19.6	25.3	26.2	30.1	31.2	36.4	37.8	41.3	42.9
Q	9.2	9.0	11.7	11.6	13.4	13.6	18.4	18.4	22.8	22.8
R	-4.3	-4.1	-5.1	-5.0	-5.9	-5.7	-7.0	-6.8	-8.0	-7.7
S	13.5	-13.7	-17.4	-16.9	-19.5	-19.1	-22.2	-21.9	-24.3	-24.0
T	2.4	2.5	3.1	3.2	3.5	3.7	4.0	4.3	4.6	5.2
U	8.7	7.3	1.6	1.6	0.6	0.6	0.6	0.6	0.6	0.6
V	35.6	35.4	38.2	38.3	40.6	40.4	43.9	42.9	46.3	44.7
W	58.6	59.5	66.7	68.8	72.7	75.5	80.5	84.3	86.7	91.1
X	105.6	107.6	116.0	119.9	124.1	129.3	135.0	144.5	143.5	156.1

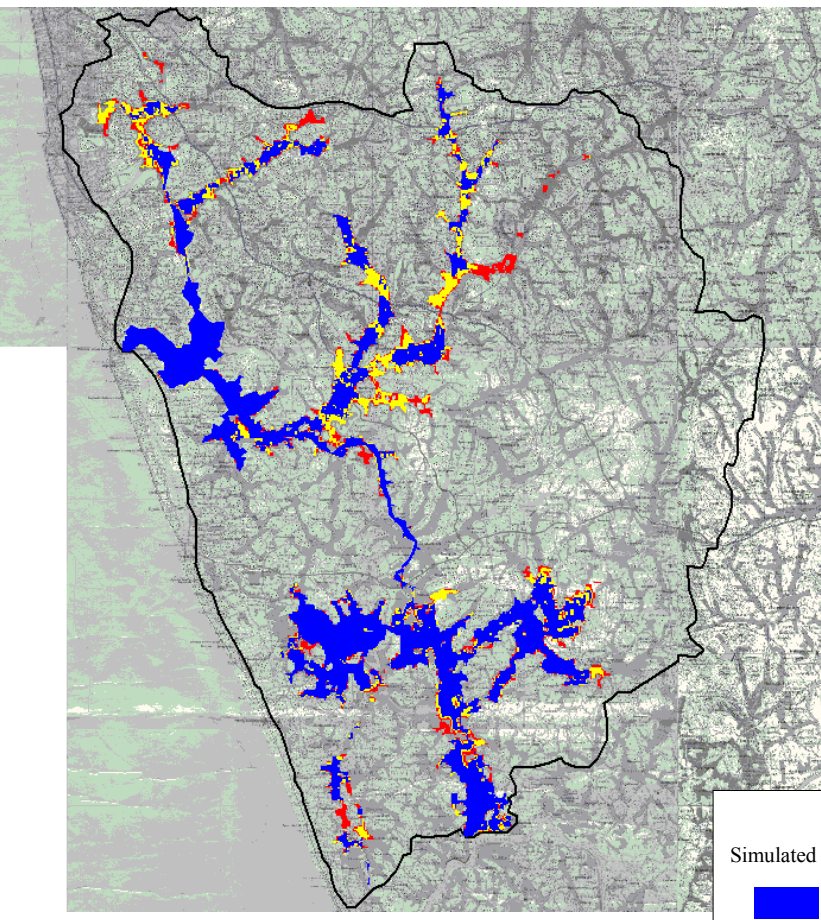
BP : Base Point, PLU : Present Land Use Condition, FLU : Future Land Use Condition,
H_{max} : Maximum Water Level (EL.m), Q_{max} : Maximum Discharge (m³/sec)



Future Condition

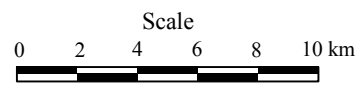


Present Condition



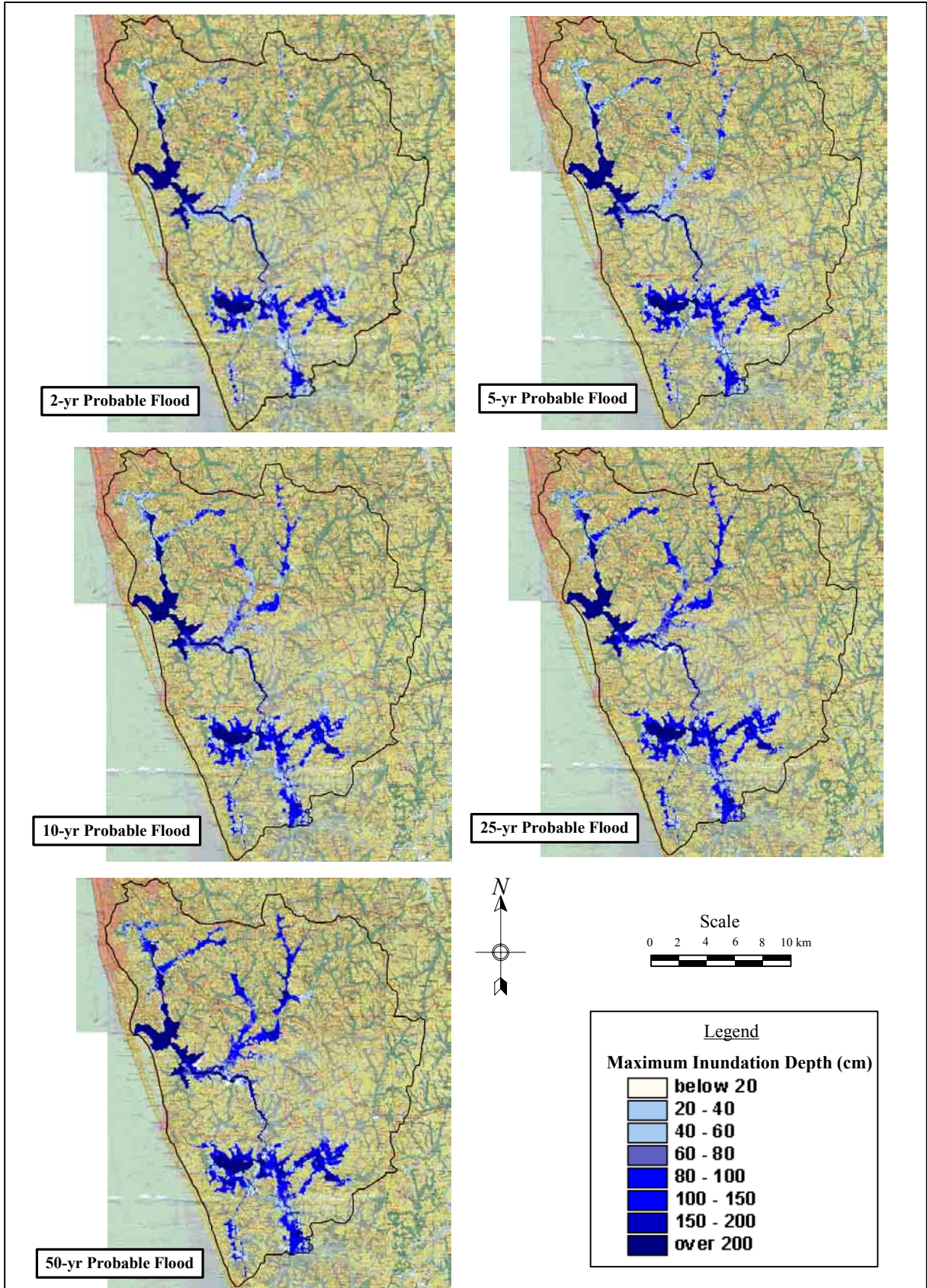
Legend
Simulated Flood Inundation Area

- : 2-yr Probable
- : 10-yr Probable
- : 50-yr Probable



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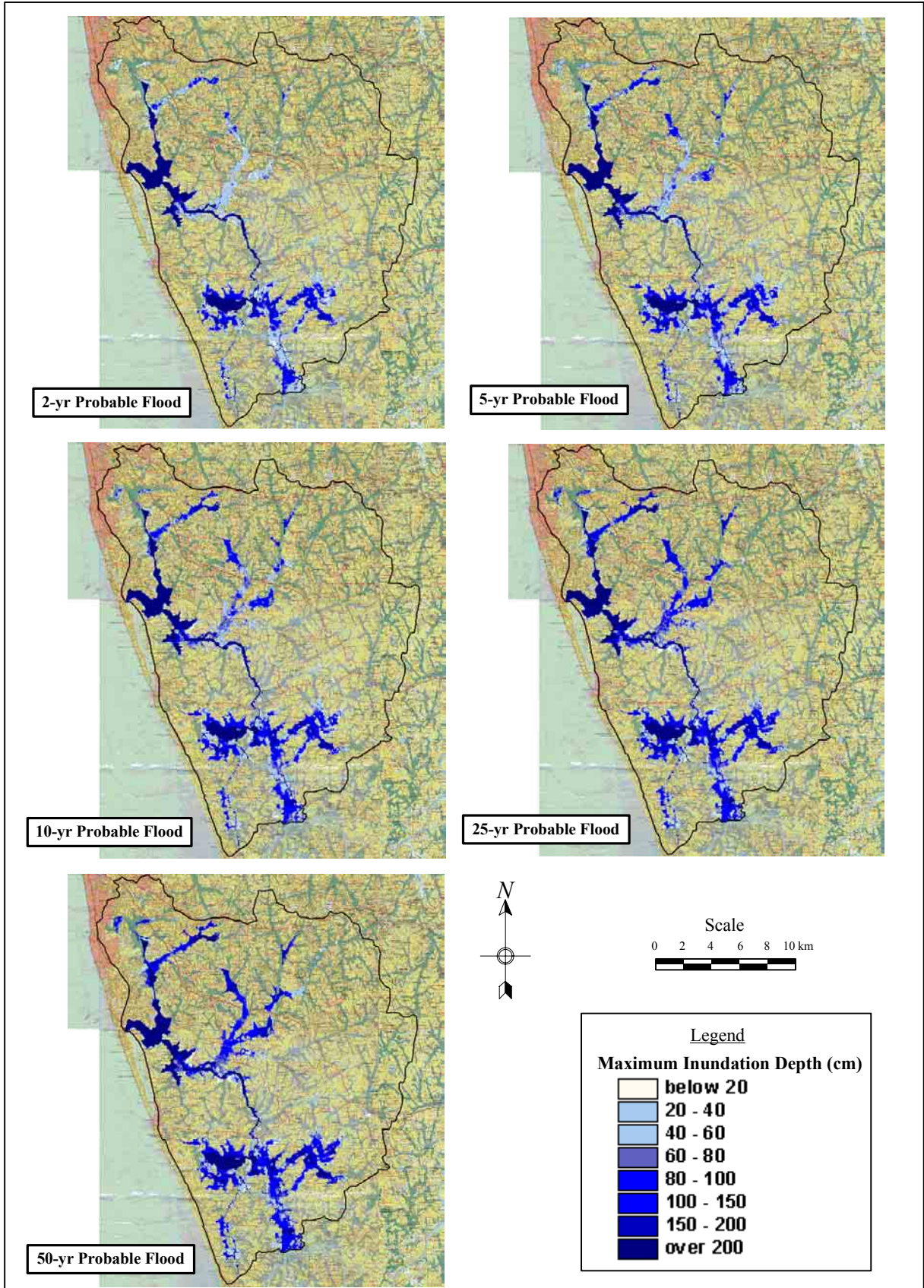
Figure 4.8.22
Simulated Flood Inundation Area in the
Bolgoda Basin



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Figure 4.8.23
Flood Inundation Maps of Bolgoda Basin
(Present Land Use Condition)



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Figure 4.8.24
Flood Inundation Maps of Bolgoda Basin
(Future Land Use Condition)