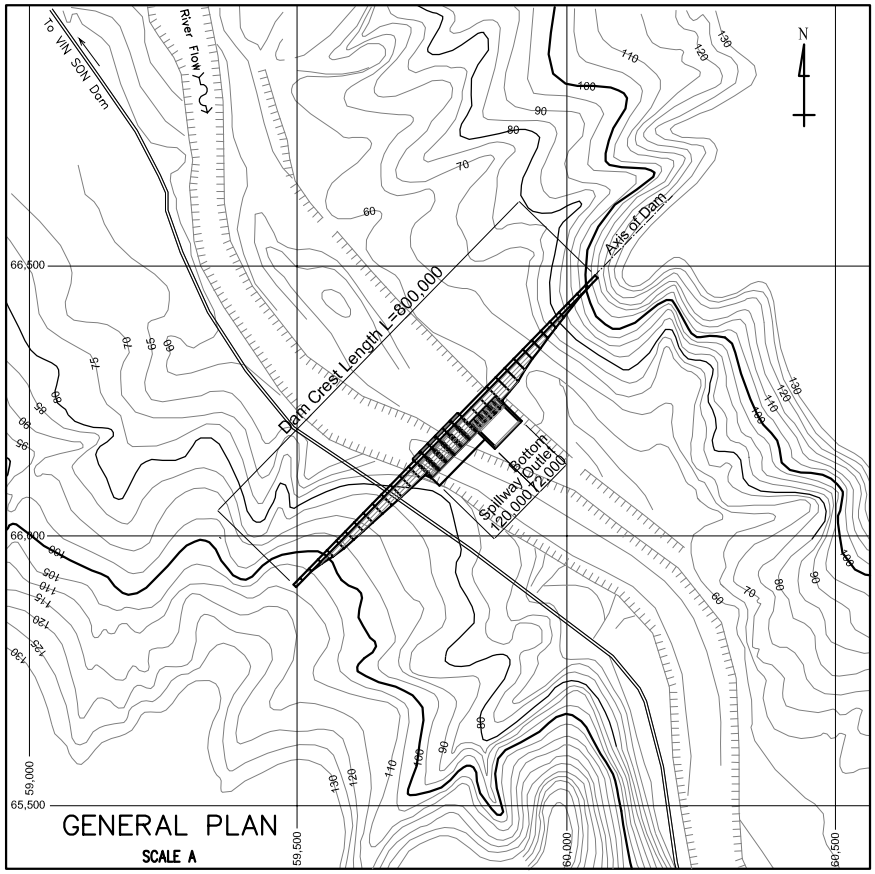
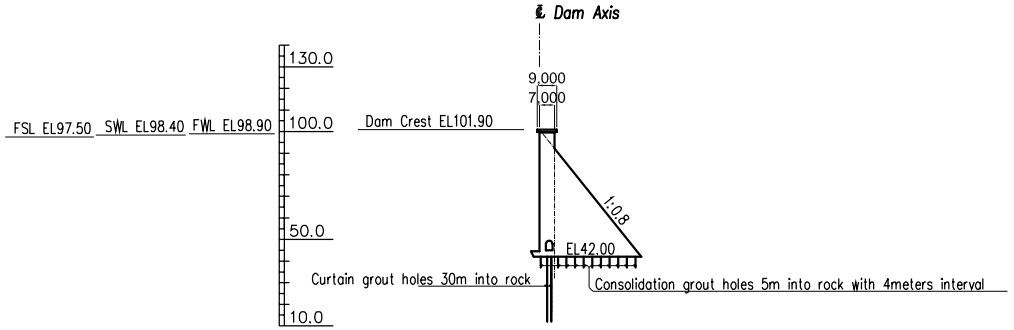
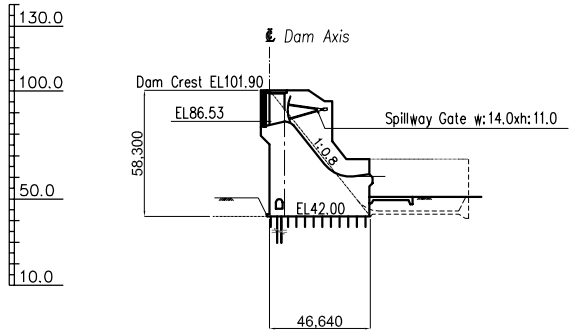


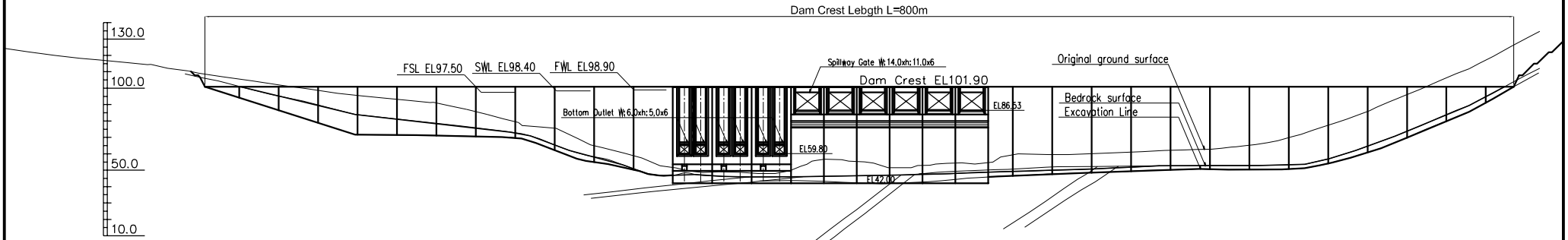
GENERAL PLAN
SCALE A



NON−OVERFLOW SECTION
SCALE B



OVERFLOW SECTION
SCALE B



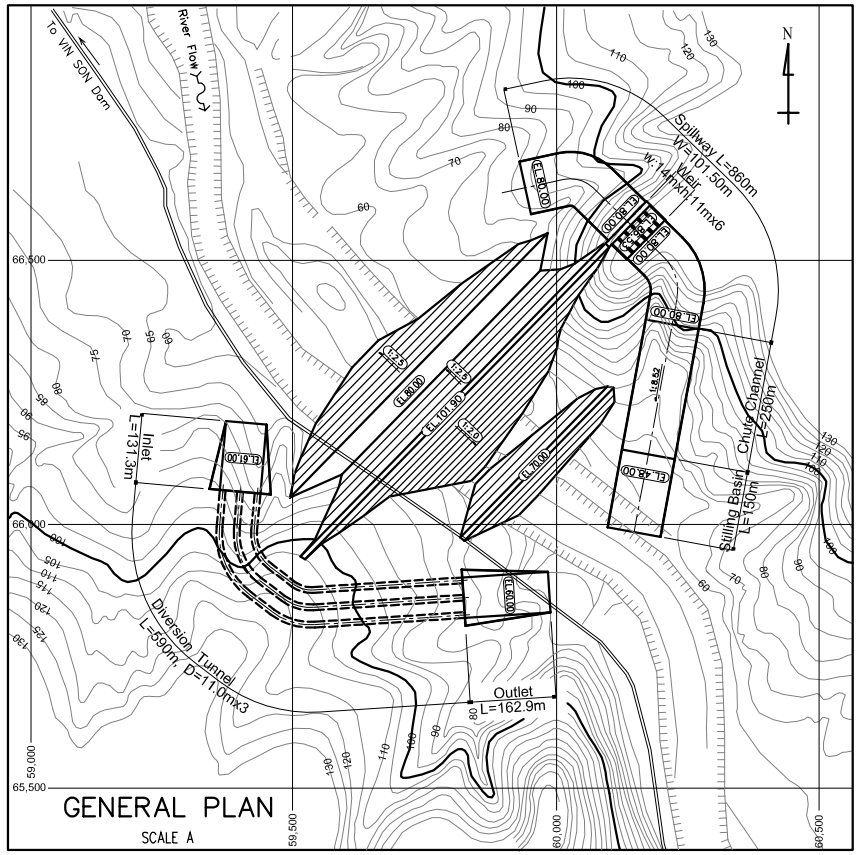
UPSTREAM ELEVATION SCALE B

SCALE A : 0 200 400m
SCALE B : 0 50 100m

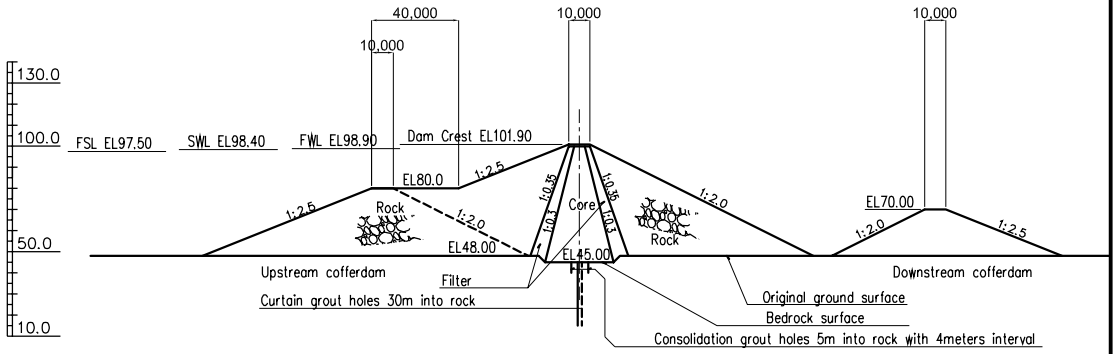
The Study on Nationwide Water Resources Development and Management in the Socialist Republic of Vietnam

JAPAN INTERNATIONAL COOPERATION AGENCY

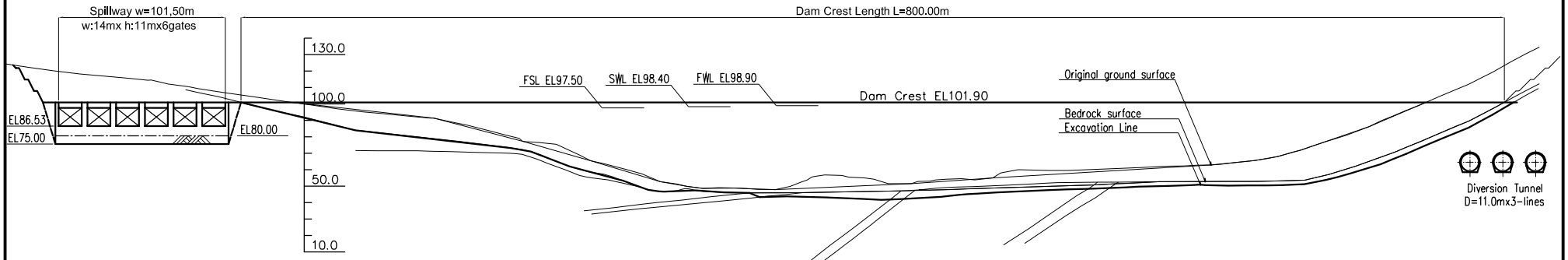
Figure 12.7
Site II Concrete Gravity Dam
General Plan



GENERAL PLAN
SCALE A



TYPICAL SECTION SCALE B



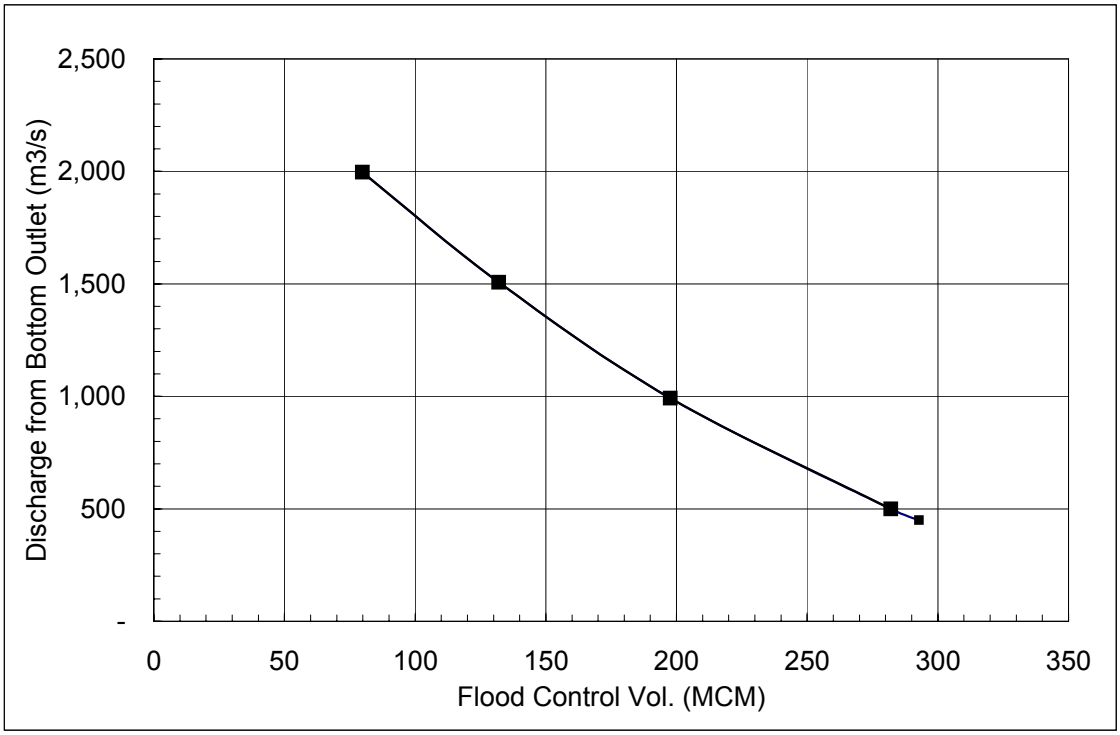
UPSTREAM ELEVATION SCALE B

SCALE A : 0 200 400m
SCALE B : 0 50 100m

The Study on Nationwide Water Resources Development and Management in the Socialist Republic of Vietnam

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure 12.8
Site II Rockfill Dam
General Plan



The Study on Nationwide Water Resources Development and Management in the Socialist Republic of Vietnam JAPAN INTERNATIONAL COOPERATION AGENCY	**Figure 12.9 (1)** **Relation between Flood Control Volume and Discharge from Bottom Outlet**

Figure 12.9 (2)
Relation between Reservoir W.L and Gate opening of Bottom Outlet
to maintain Qout=840m^3/s, (Dam Crest E.L=95.3m)

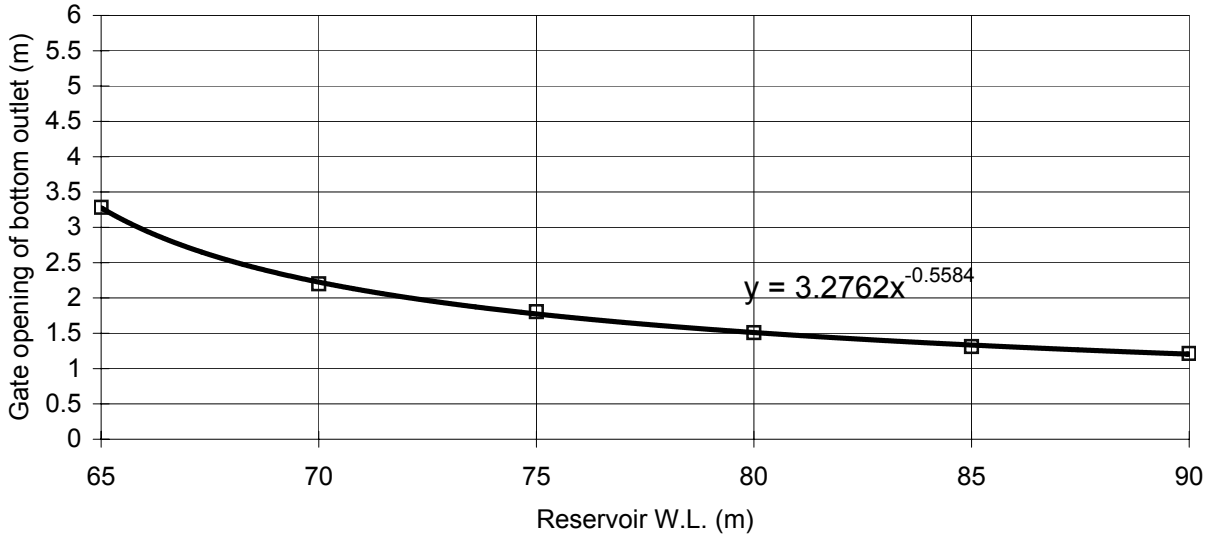


Figure 12.9 (3)
Relation between Reservoir W.L and Gate opening of Bottom Outlet,
to maintain Qout=2160m^3/s, (Dam Crest=E.L.95.3m)

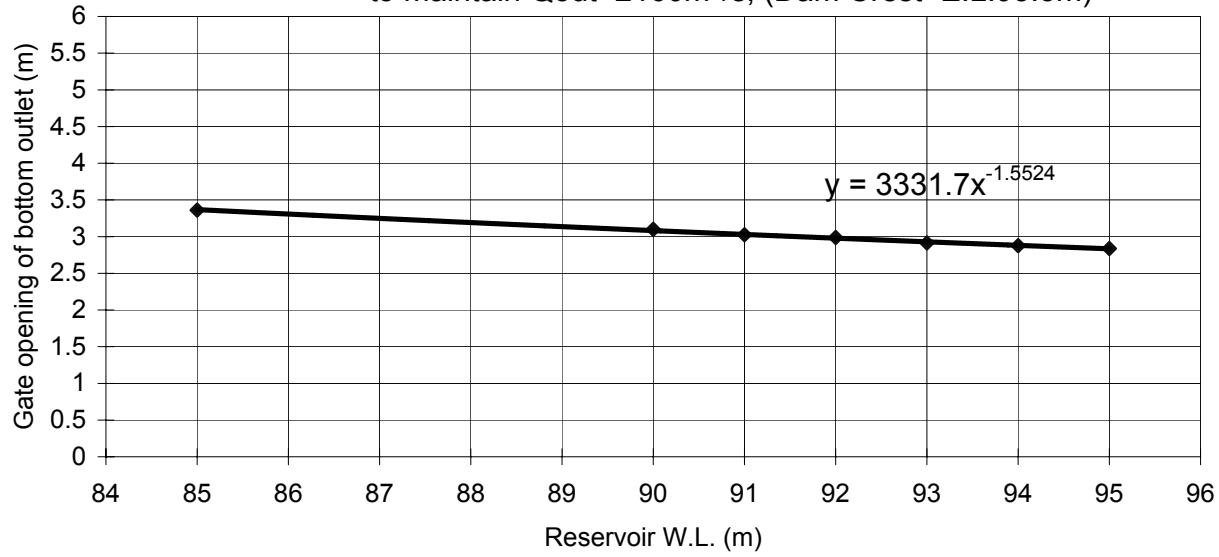


Figure 12.9 (4)
Relation between Reservoir W.L and Gate opening of Bottom Outlet,
to maintain Qout=450m^3/s, (Dam Crest=E.L.100.3m)

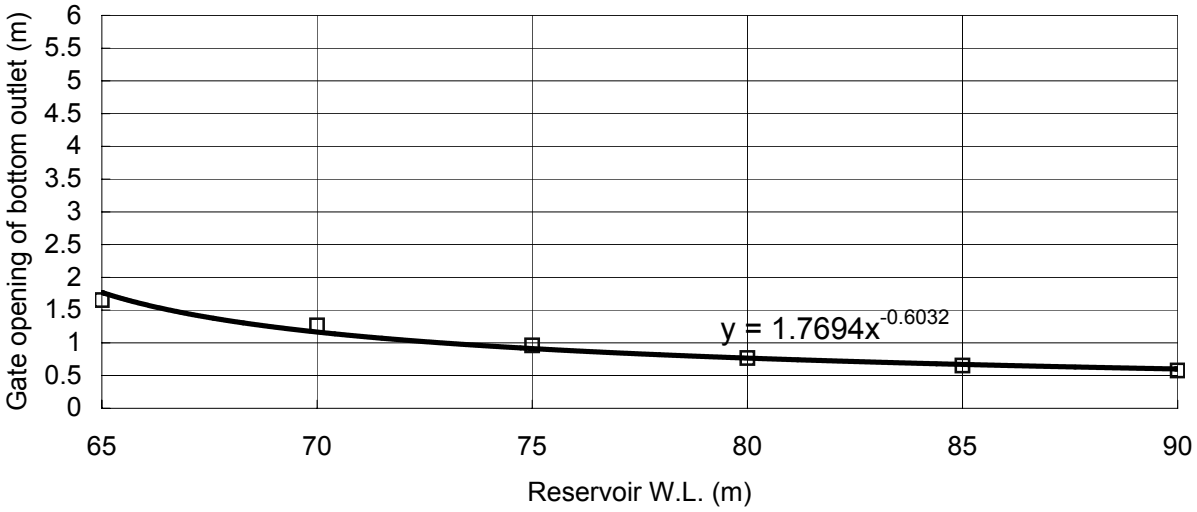


Figure 12.9 (5)
Relation between Reservoir W.L and Gate opening of Bottom Outlet, to
maintain Qout=2160m^3/s, (Dam Crest=E.L.100.3m)

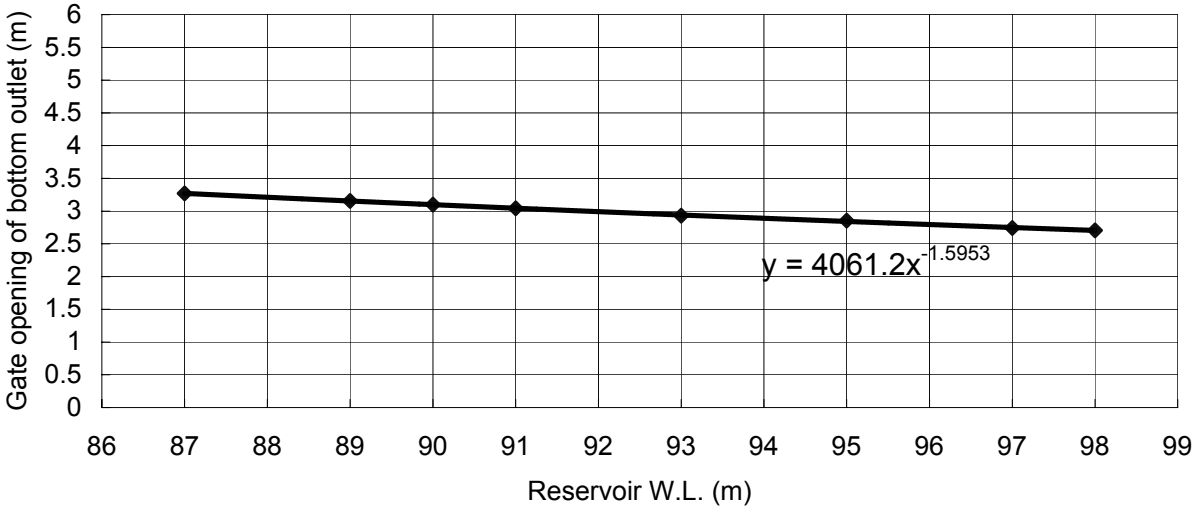
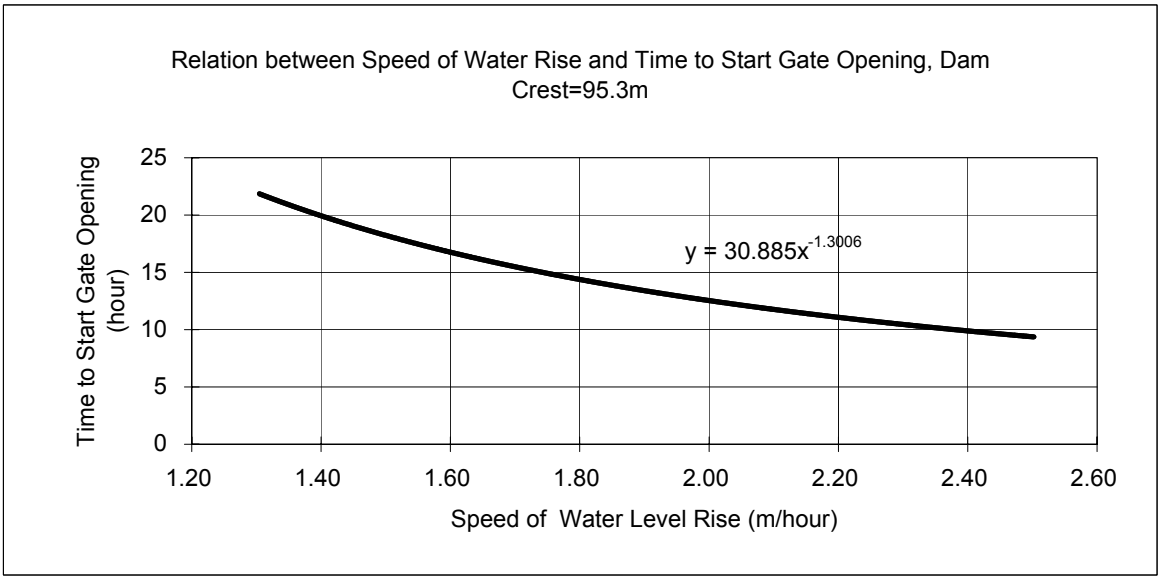


Figure 12.9 (6) Relation between Speed of Water Level Rise and Time to Start Gate Operation

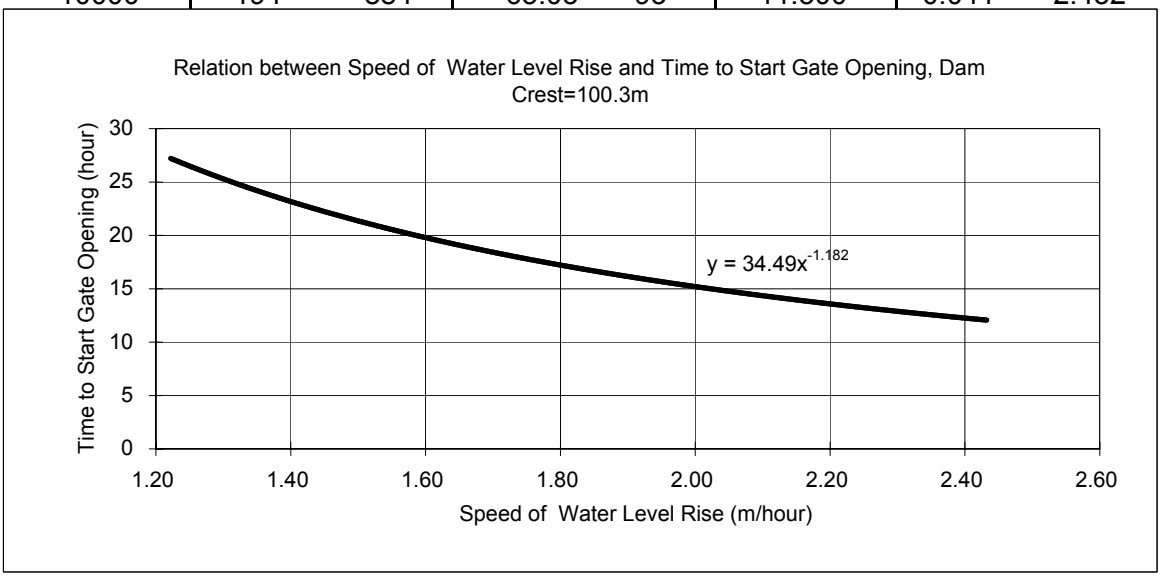
Dam Crest : 95.3m

Prob. Flood Year	Start (min)	End (min)	WL Start EL(m)	WL End EL(m)	Time to Start Gate	Speed of WL Rise (m/min)	(m/hour)
20	283	1554	65.01	92.65	21.183	0.022	1.305
100	249	1154	65.03	91.7	15.083	0.029	1.768
200	243	1061	65.03	91.2	13.633	0.032	1.920
1000	258	944	65.03	90.1	11.433	0.037	2.193
10000	236	770	65.03	87.3	8.900	0.042	2.502



Dam Crest : 100.3m

Prob. Flood Year	Start (min)	End (min)	WL. Start EL.(m)	WL End (m)	Time to Start Gate	Speed of WL Rise (m/min)	(m/hour)
20	222	1826	65.03	97.7	26.733	0.020	1.222
100	198	1331	65.03	97	18.883	0.028	1.693
200	193	1061	65.03	96.5	14.467	0.036	2.175
1000	213	1064	65.03	95	14.183	0.035	2.113
10000	194	884	65.03	93	11.500	0.041	2.432



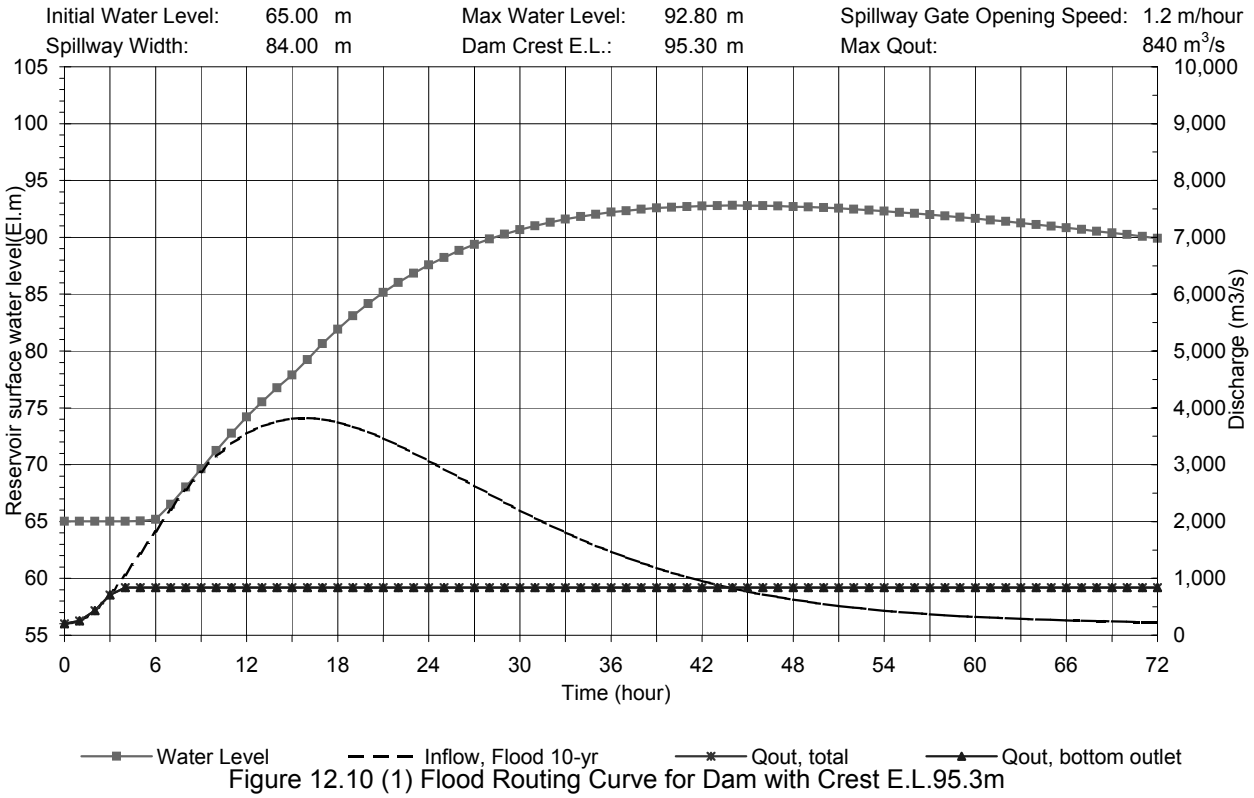


Figure 12.10 (1) Flood Routing Curve for Dam with Crest E.L.95.3m
(10-yr Probable Flood, Qp=3,821m^3/s, Initial WL=65.00m)

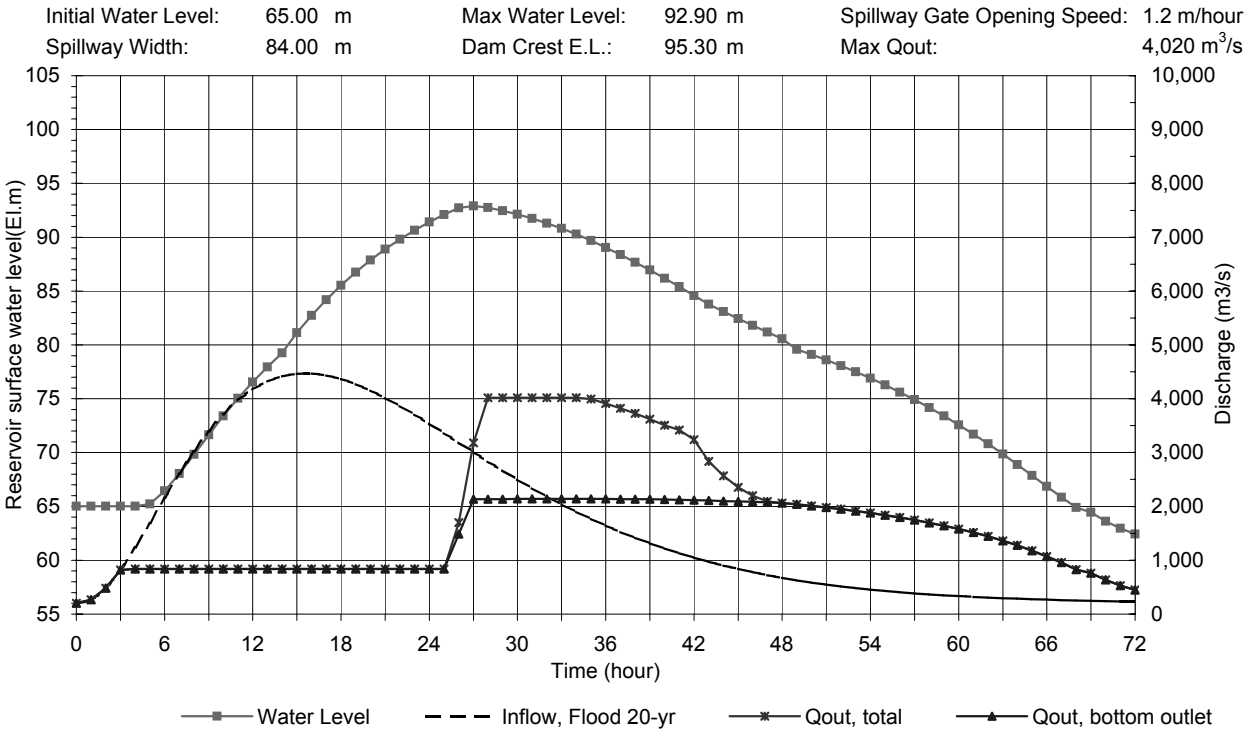


Figure 12.10 (2) Flood Routing Curve for Dam with Crest E.L.95.3m
(20-yr Probable Flood, Qp=4,475m^3/s, Initial WL=65.00m)

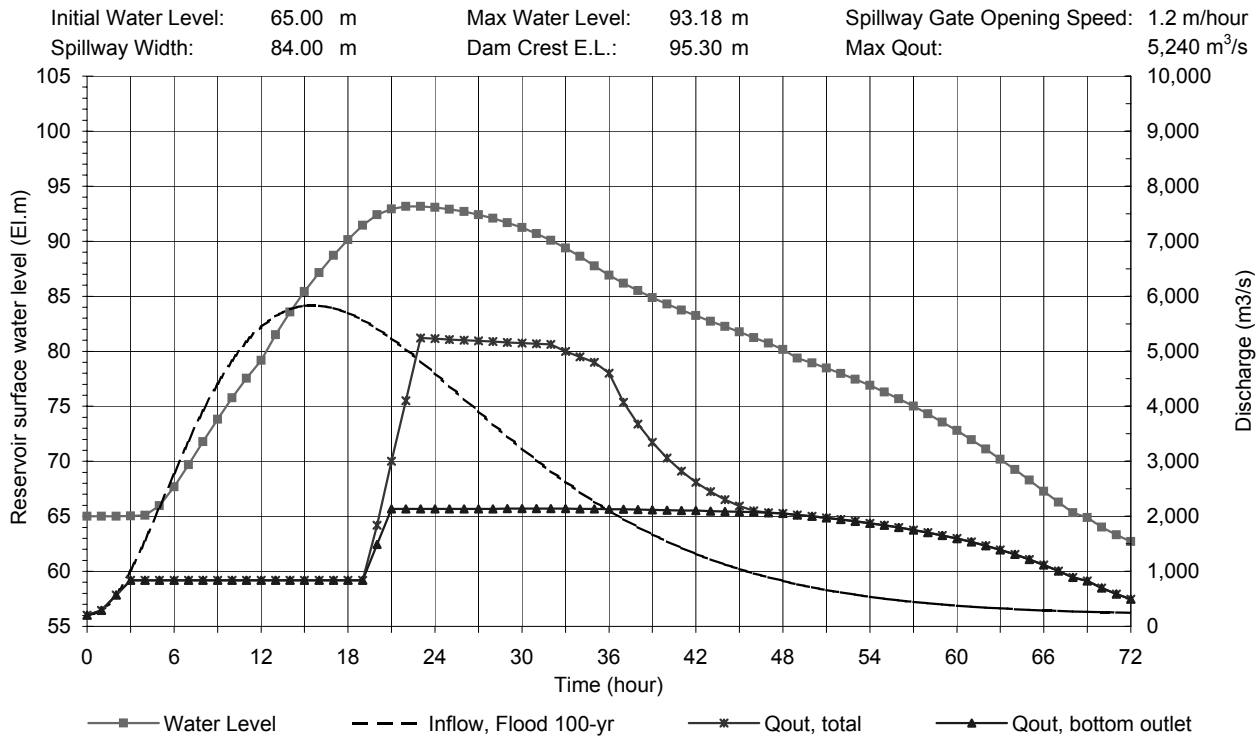


Figure 12.10 (3) Flood Routing Curve for Dam with Crest E.L.95.3m
(100-yr Probable Flood, Qp=5,832m^3/s, Initial WL=65.00m)

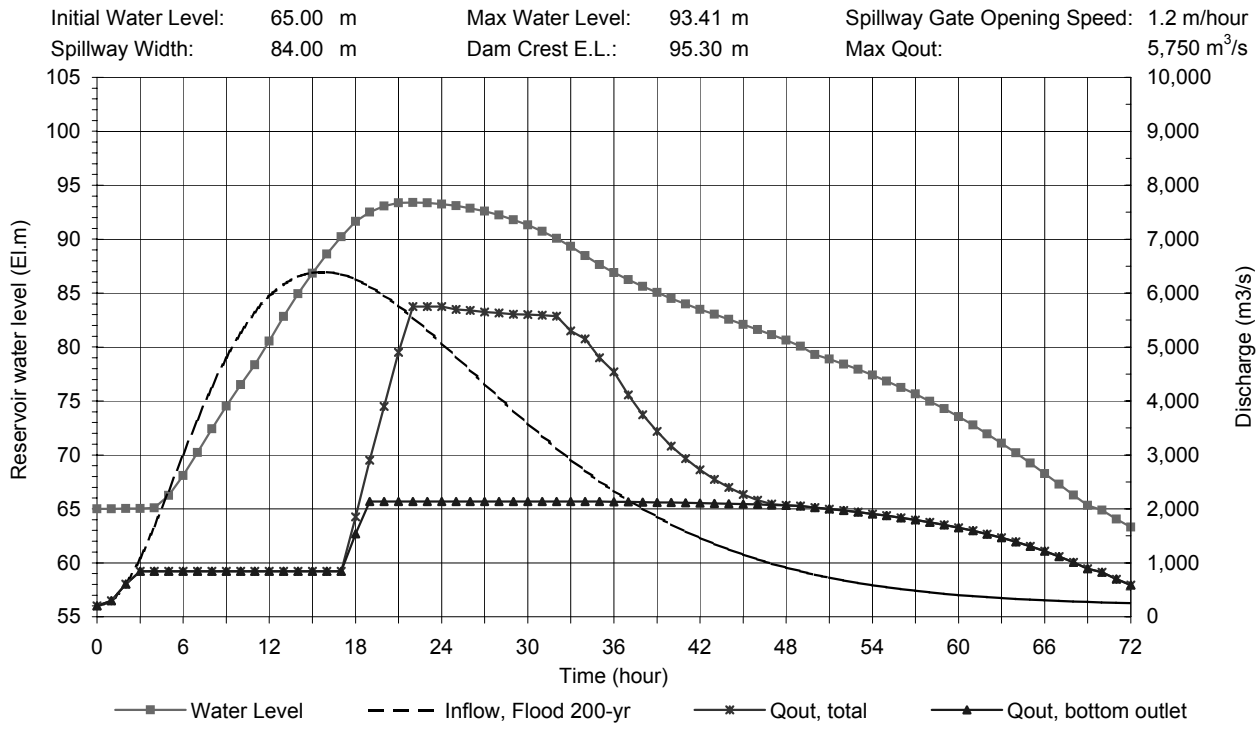


Figure 12.10 (4) Flood Routing Curve for Dam with Crest E.L.95.3m
(200-yr Probable Flood, Qp=6,397m^3/s, Initial WL=65.00m)

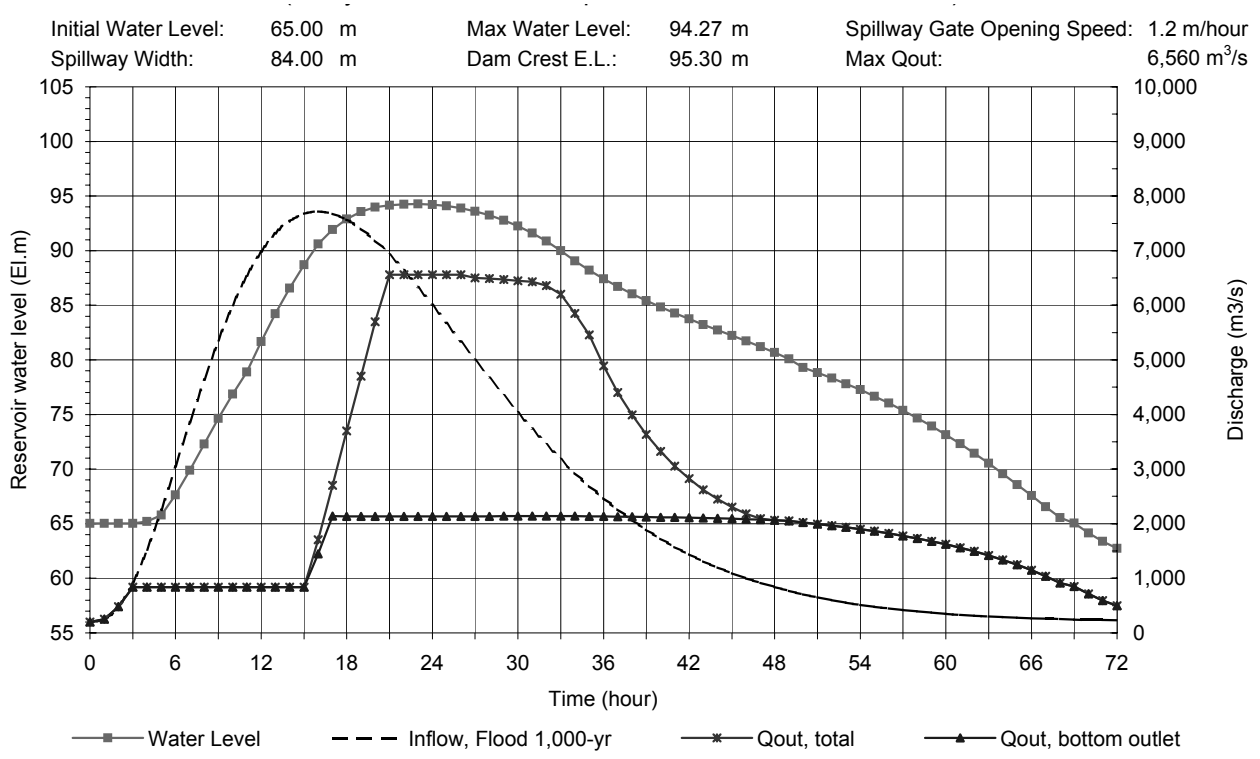


Figure 12.10 (5) Flood Routing Curve for Dam with Crest E.L.95.3m
(1,000-yr Probable Flood, Qp=7,718m^3/s, Initial WL=65.00m)

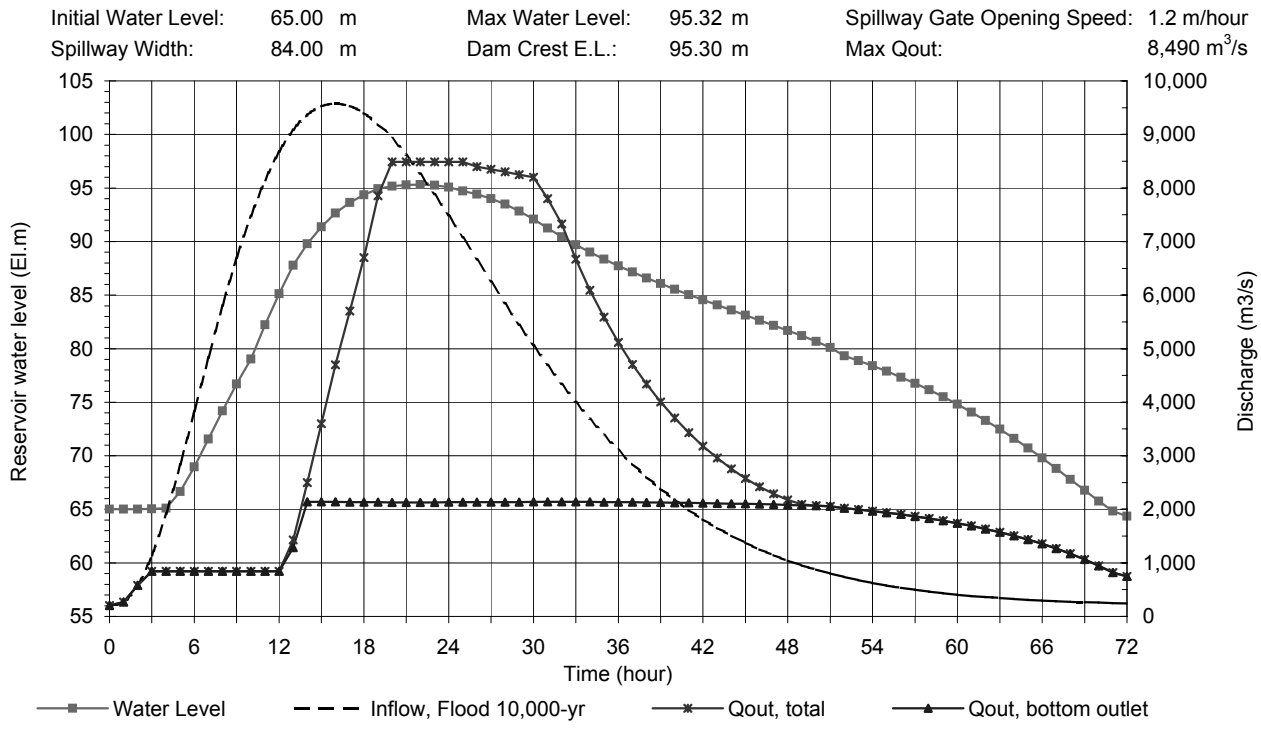


Figure 12.10 (6) Flood Routing Curve for Dam with Crest E.L.95.3m
(10,000-yr Probable Flood, Qp=9,578m^3/s, Initial WL=65.00m)

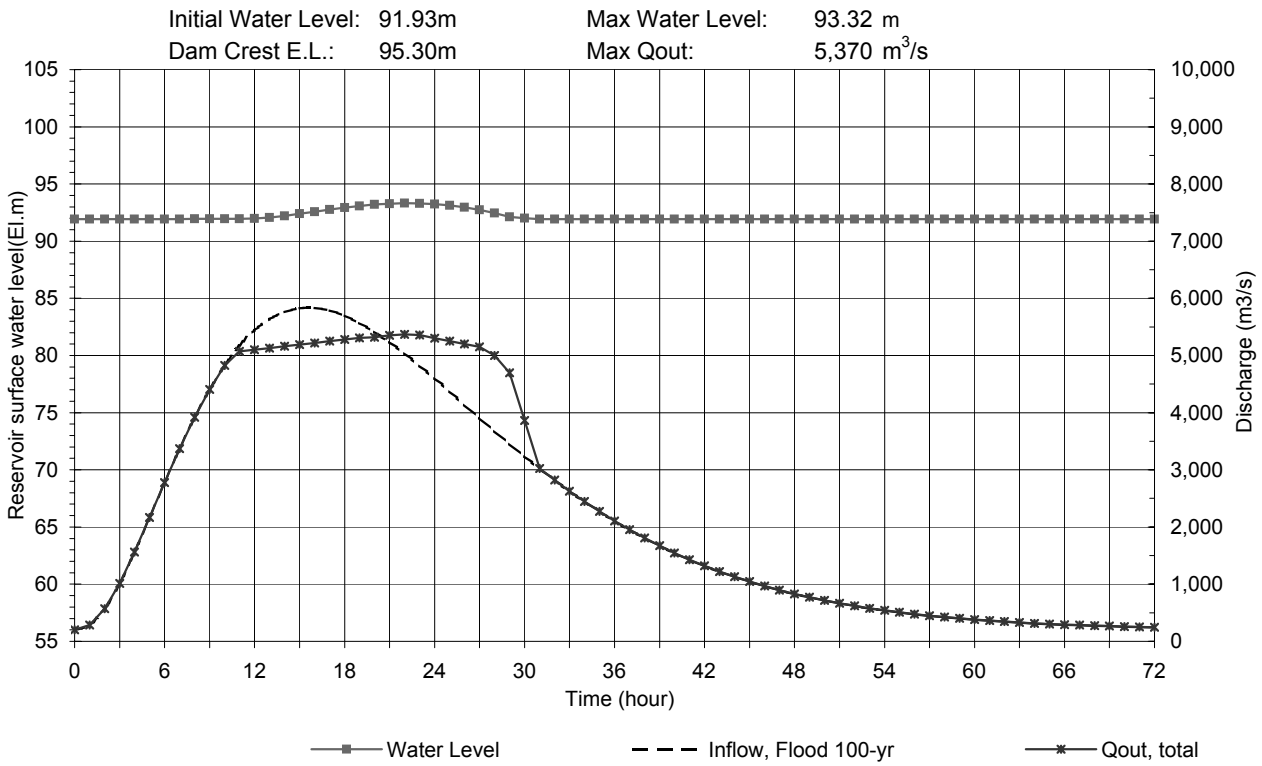


Figure 12.10 (7) Flood Routing Curve for Dam with Crest E.L.95.3m
(100-yr Probable Flood, Qp=5,832m^3/s, Initial WL=91.93m)

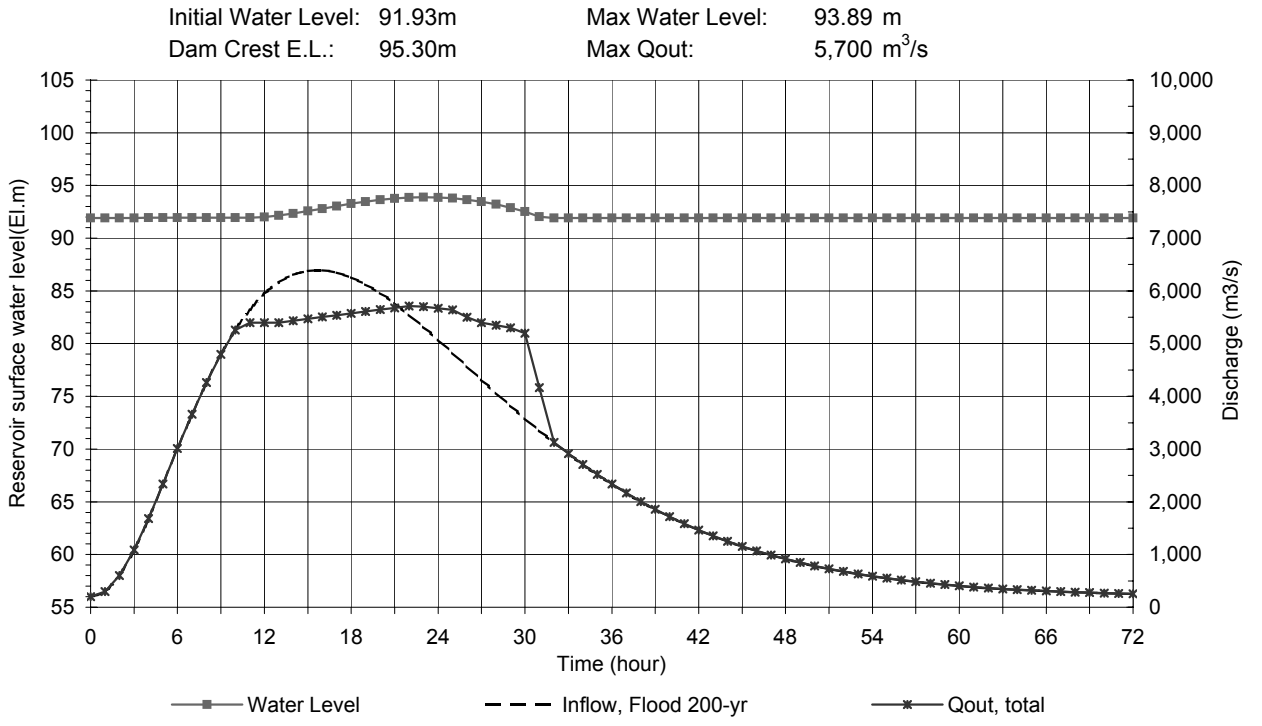


Figure 12.10 (8) Flood Routing Curve for Dam with Crest E.L.95.3m
(200-yr Probable Flood, Qp=6,394m^3/s, Initial WL=91.93m)

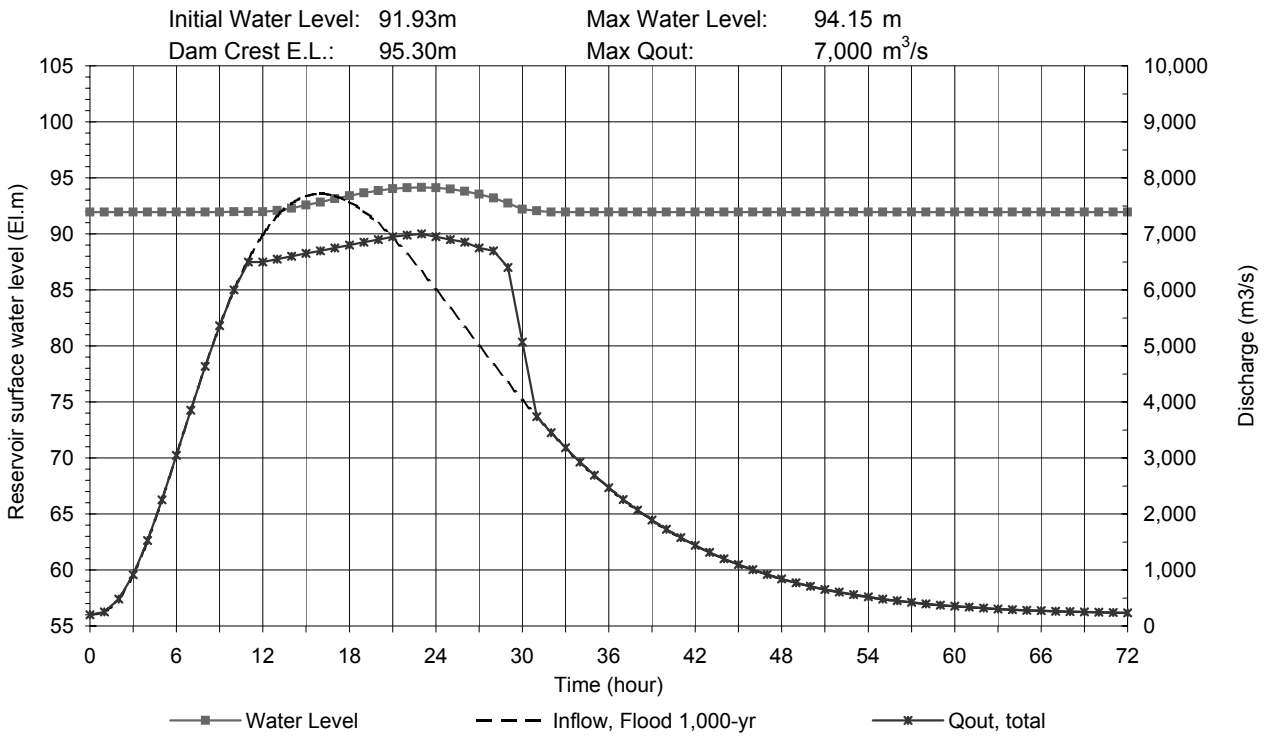


Figure 12.10 (9) Flood Routing Curve for Dam with Crest E.L.95.3m
(1,000-yr Probable Flood, Qp=7,718m^3/s, Initial WL=91.93m)

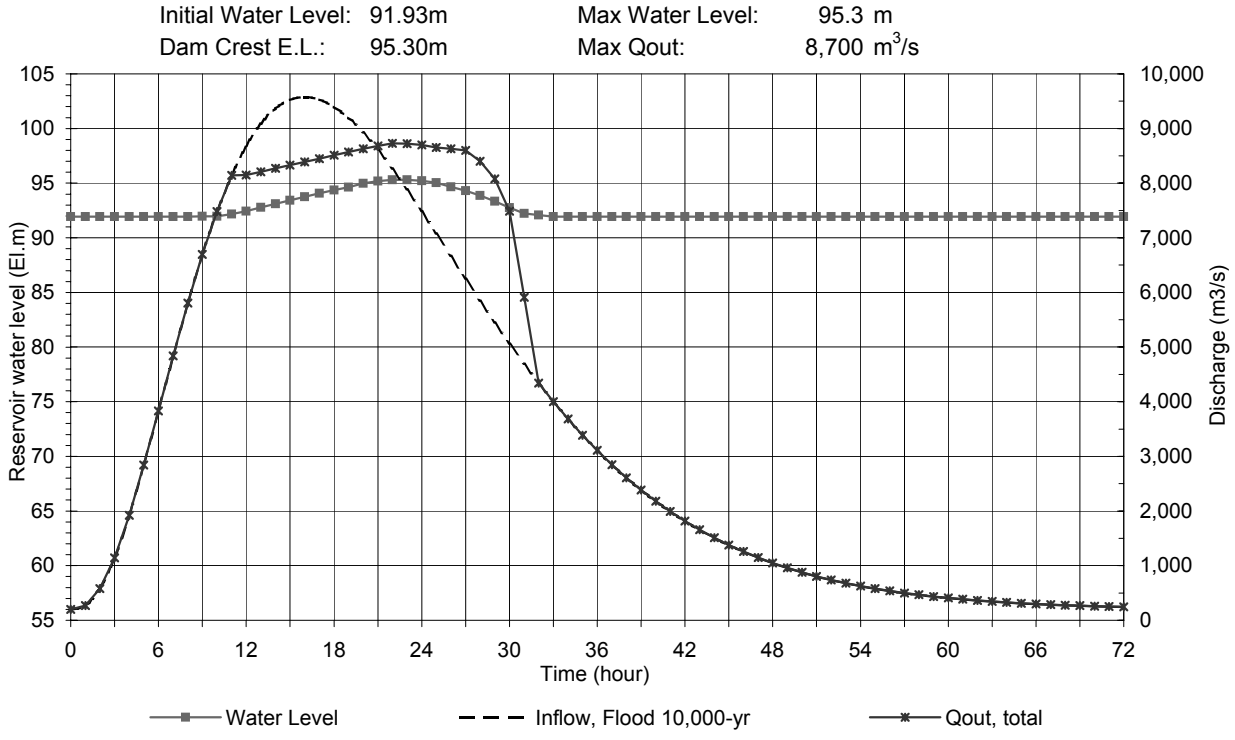


Figure 12.10 (10) Flood Routing Curve for Dam with Crest E.L.95.3m
(10,000-yr Probable Flood, Qp=9,578m^3/s, Initial WL=91.93m)

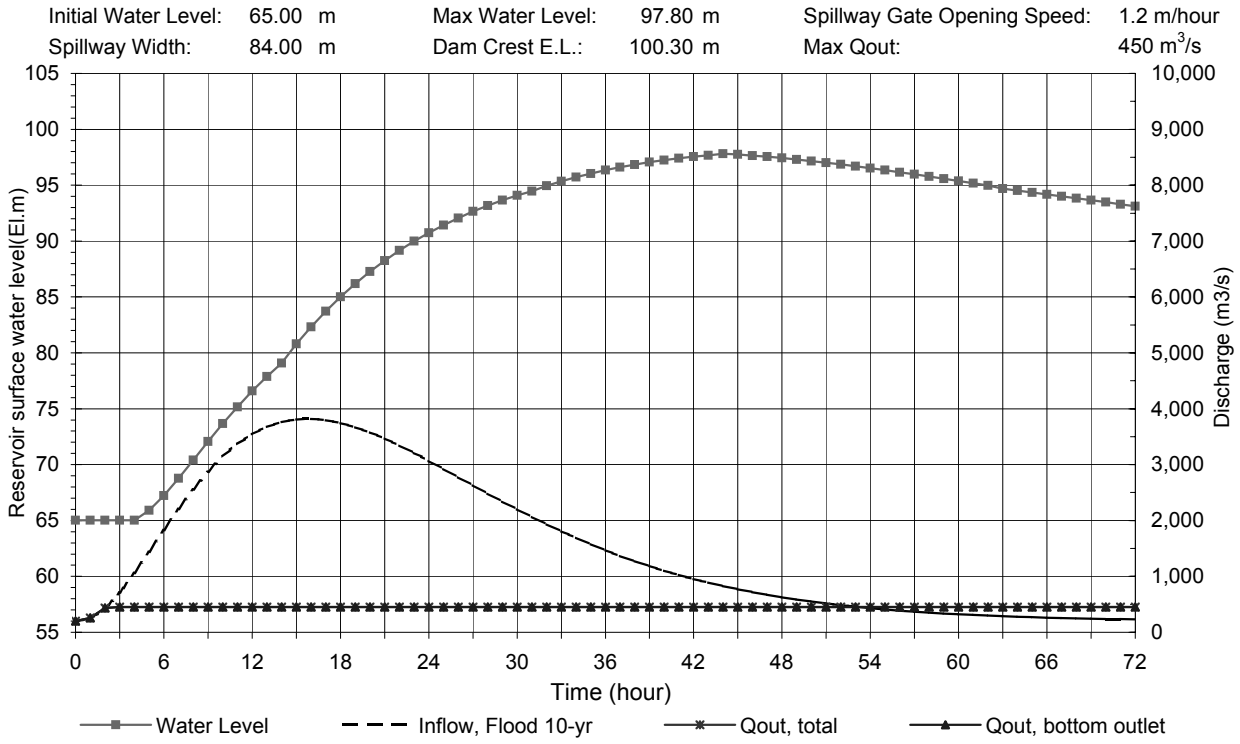


Figure 12.11 (1) Flood Routing Curve for Dam with Crest E.L.100.3m
(10-yr Probable Flood, Qp=3,821m^3/s, Initial WL=65.00m)

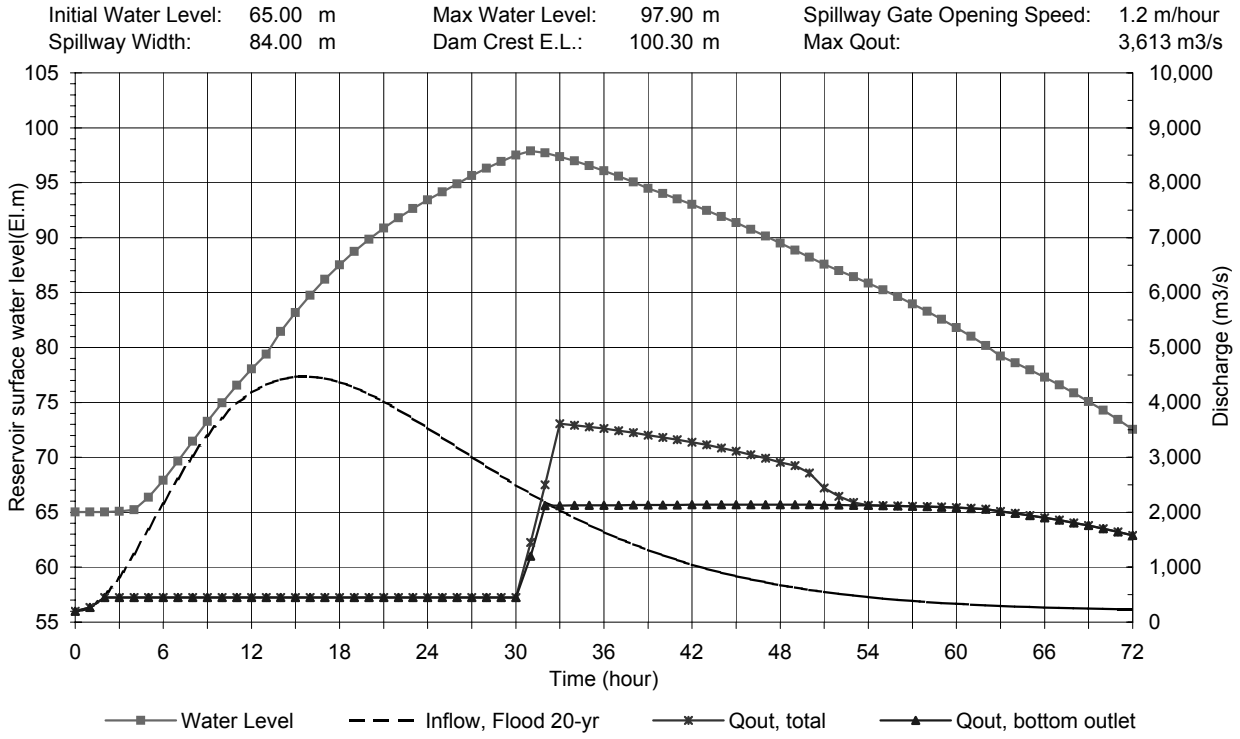


Figure 12.11 (2) Flood Routing Curve for Dam with Crest E.L.100.3m
(20-yr Probable Flood, Qp=4,475m^3/s, Initial WL=65.00m)

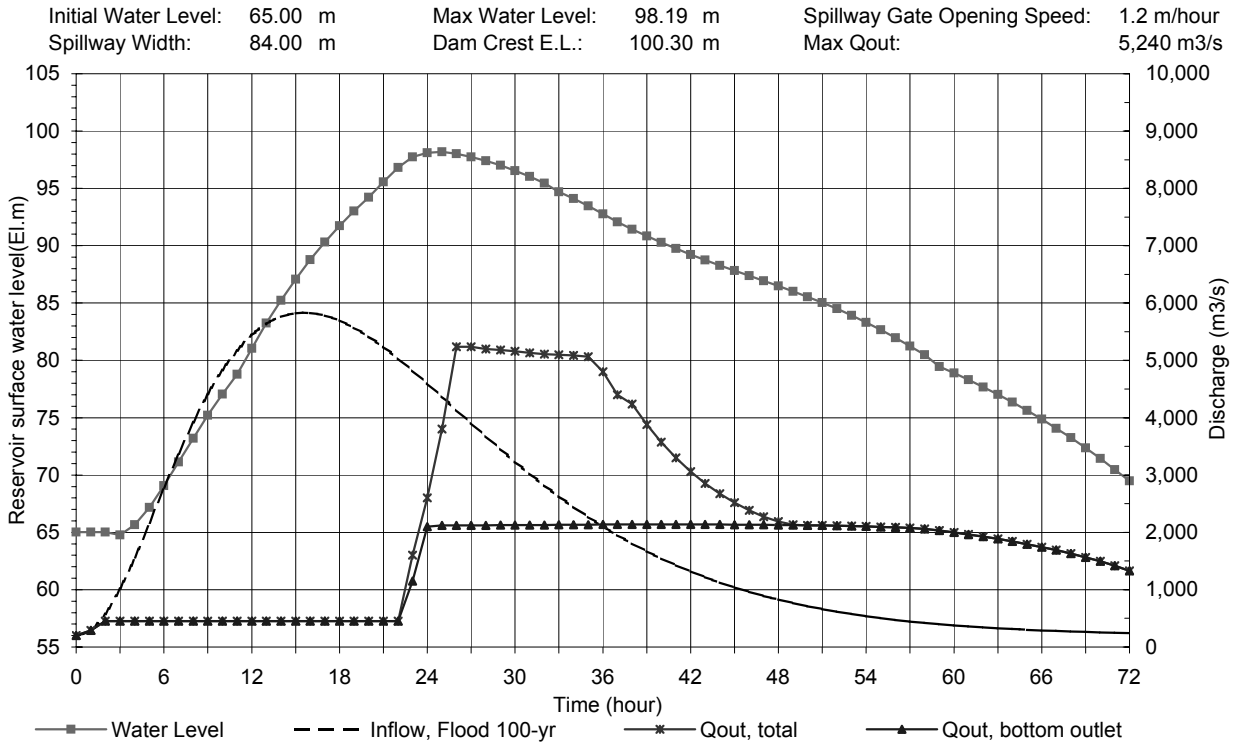


Figure 12.11 (3) Flood Routing Curve for Dam with Crest E.L.100.3m
(100-yr Probable Flood, Qp=5,832m^3/s, Initial WL=65.00m)

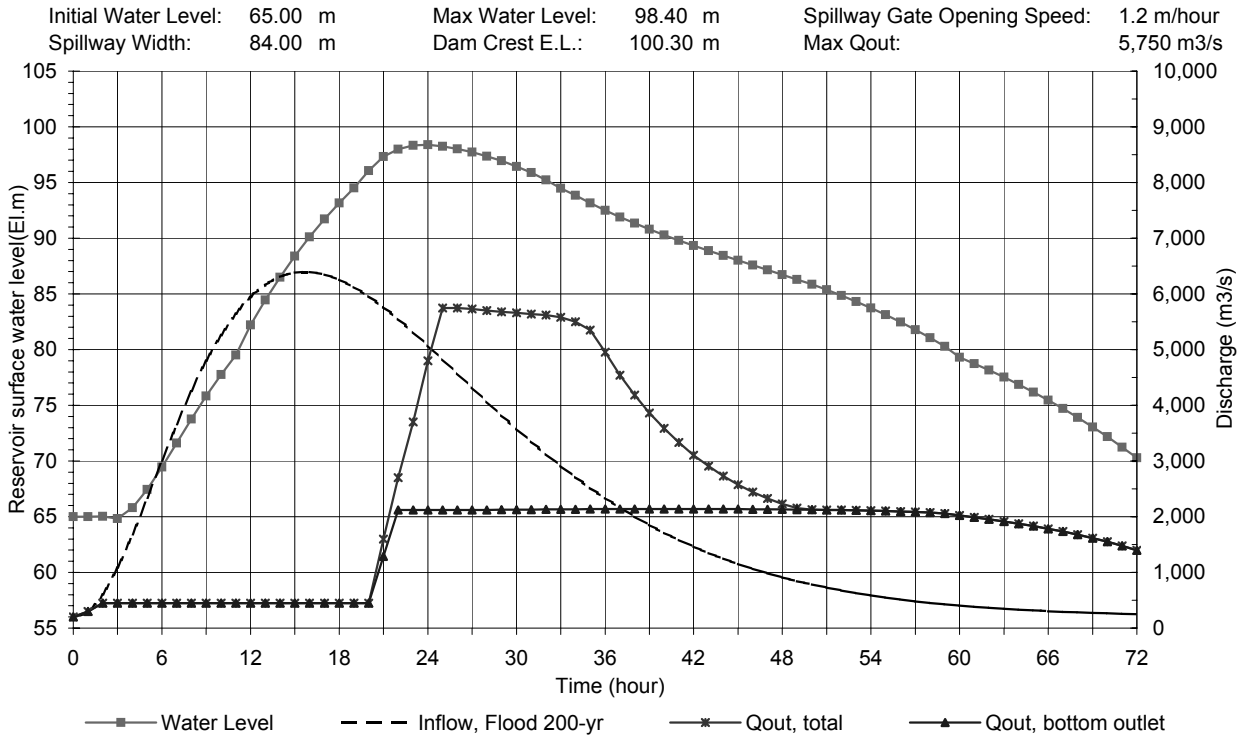


Figure 12.11 (4) Flood Routing Curve for Dam with Crest E.L.100.3m
(200-yr Probable Flood, Qp=6,397m^3/s, Initial WL=65.00m)

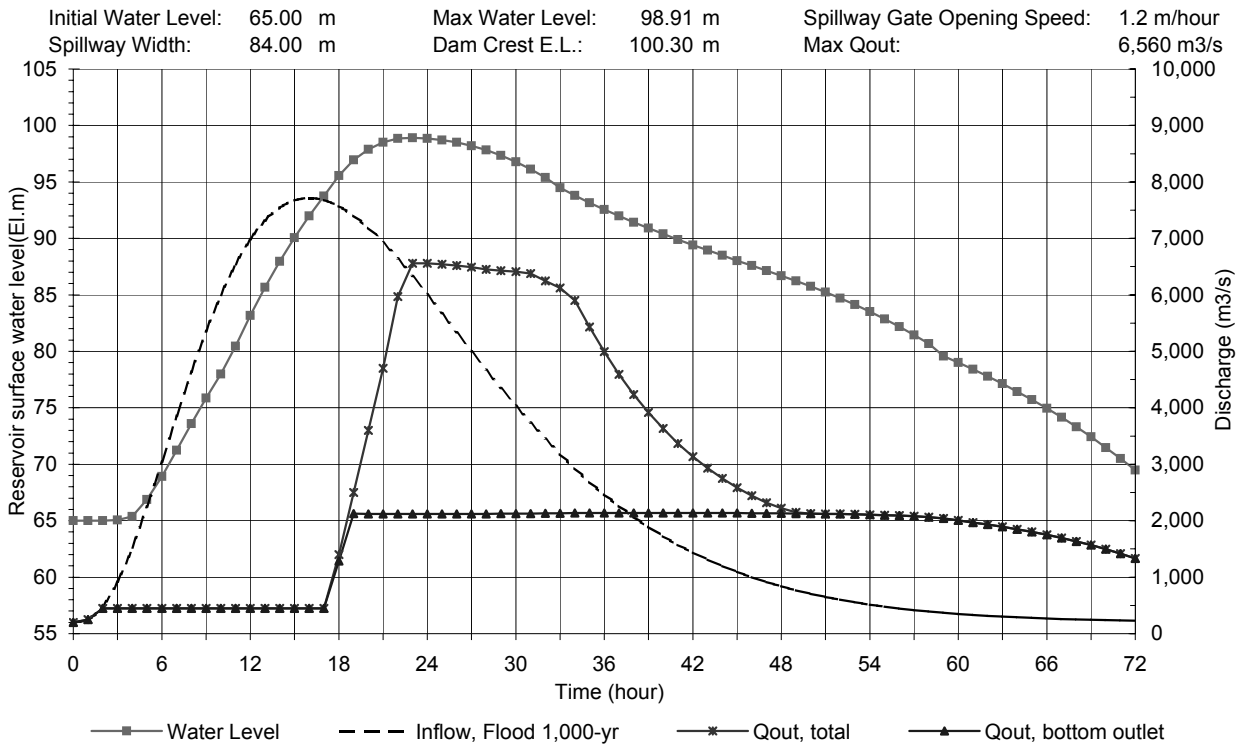


Figure 12.11 (5) Flood Routing Curve for Dam with Crest E.L.100.3m
(1,000-yr Probable Flood, Qp=7,718m^3/s, Initial WL=65.00m)

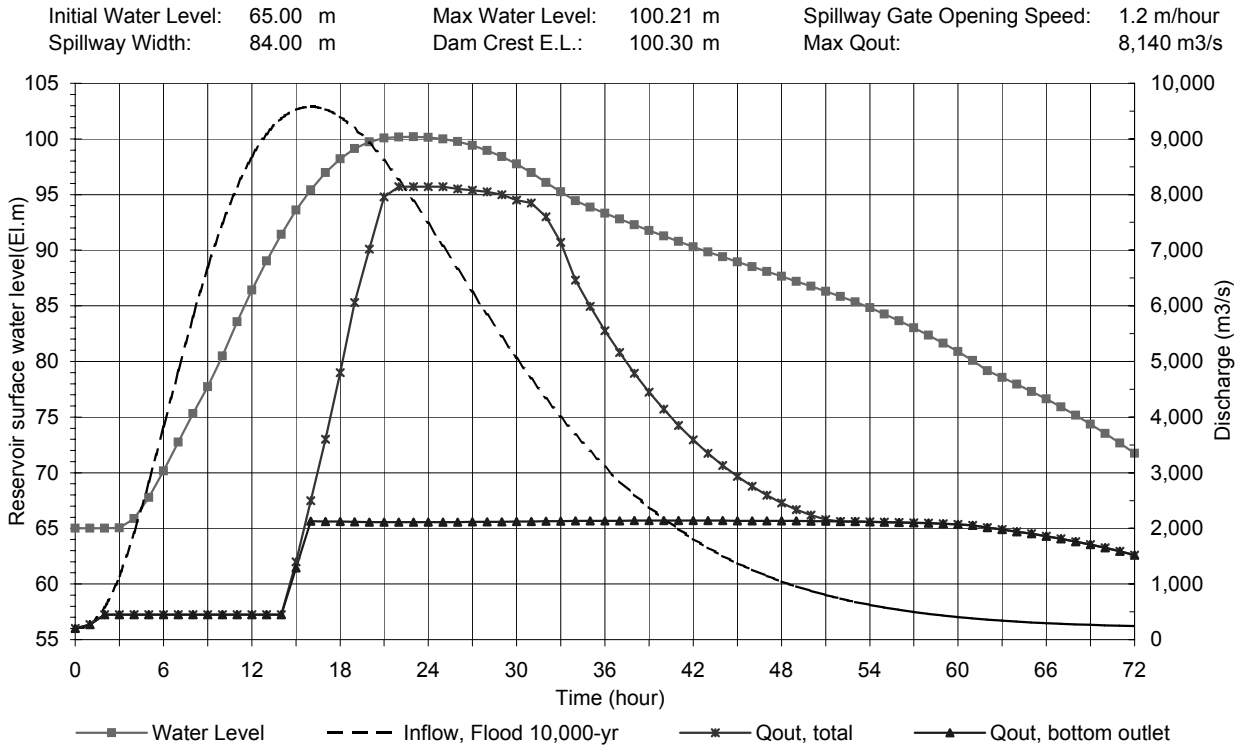


Figure 12.11 (6) Flood Routing Curve for Dam with Crest E.L.100.3m
(10,000-yr Probable Flood, Qp=9,578m^3/s, Initial WL=65.00m)

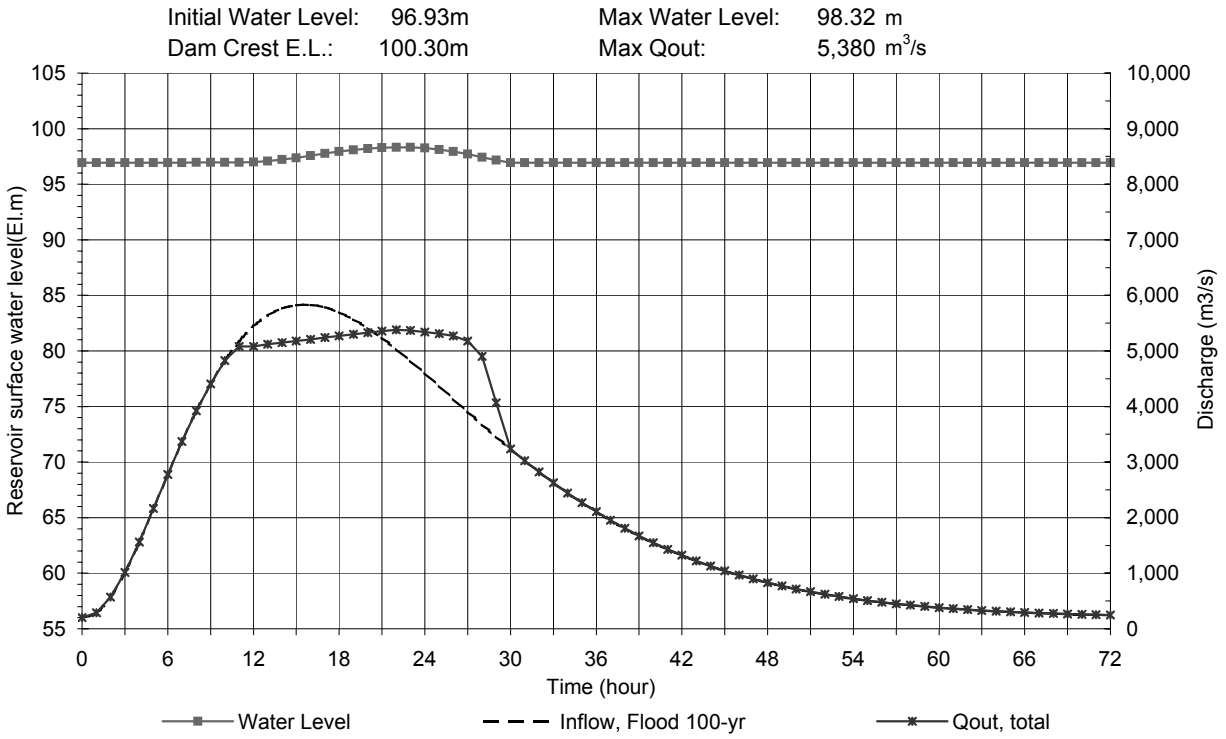


Figure 12.11 (7) Flood Routing Curve for Dam with Crest E.L.100.3m
(100-yr Probable Flood, Qp=5,832m^3/s, Initial WL=96.93m)

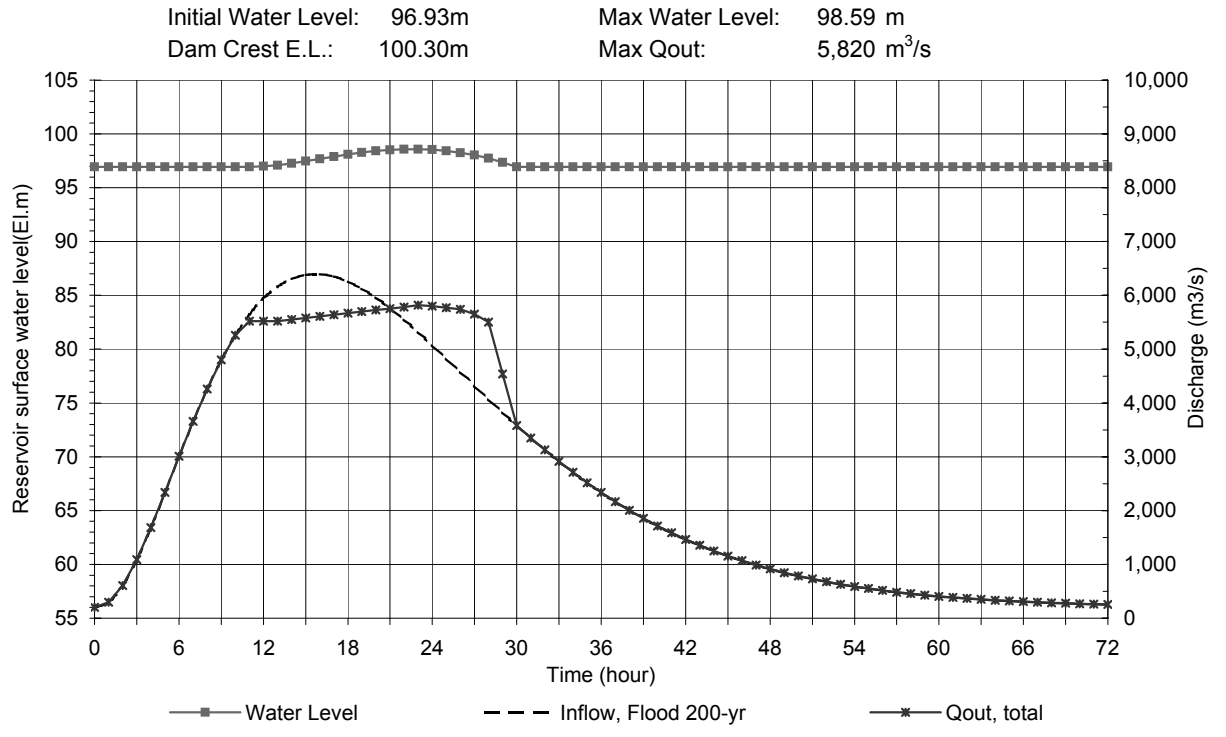


Figure 12.11 (8) Flood Routing Curve for Dam with Crest E.L.100.3m
(200-yr Probable Flood, Qp=6,394m^3/s, Initial WL=96.93m)

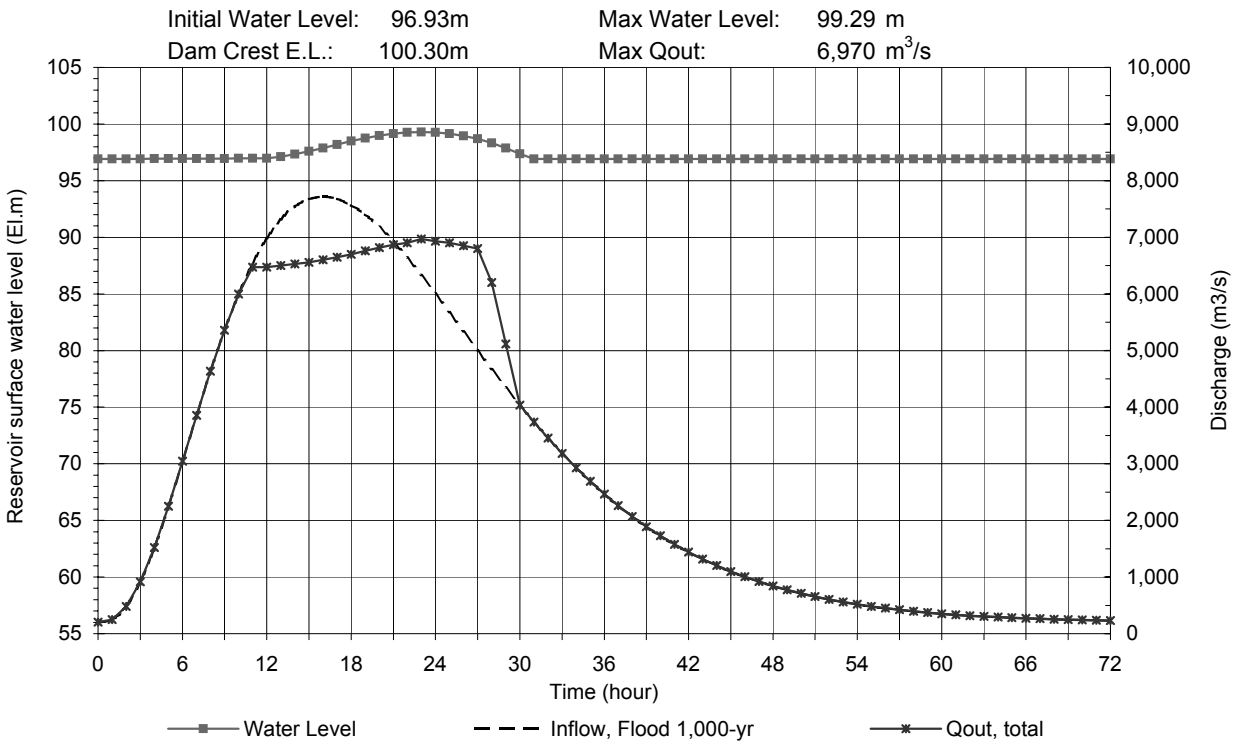


Figure 12.11 (9) Flood Routing Curve for Dam with Crest E.L.100.3m
(1,000-yr Probable Flood, Qp=7,718m^3/s, Initial WL=96.93m)

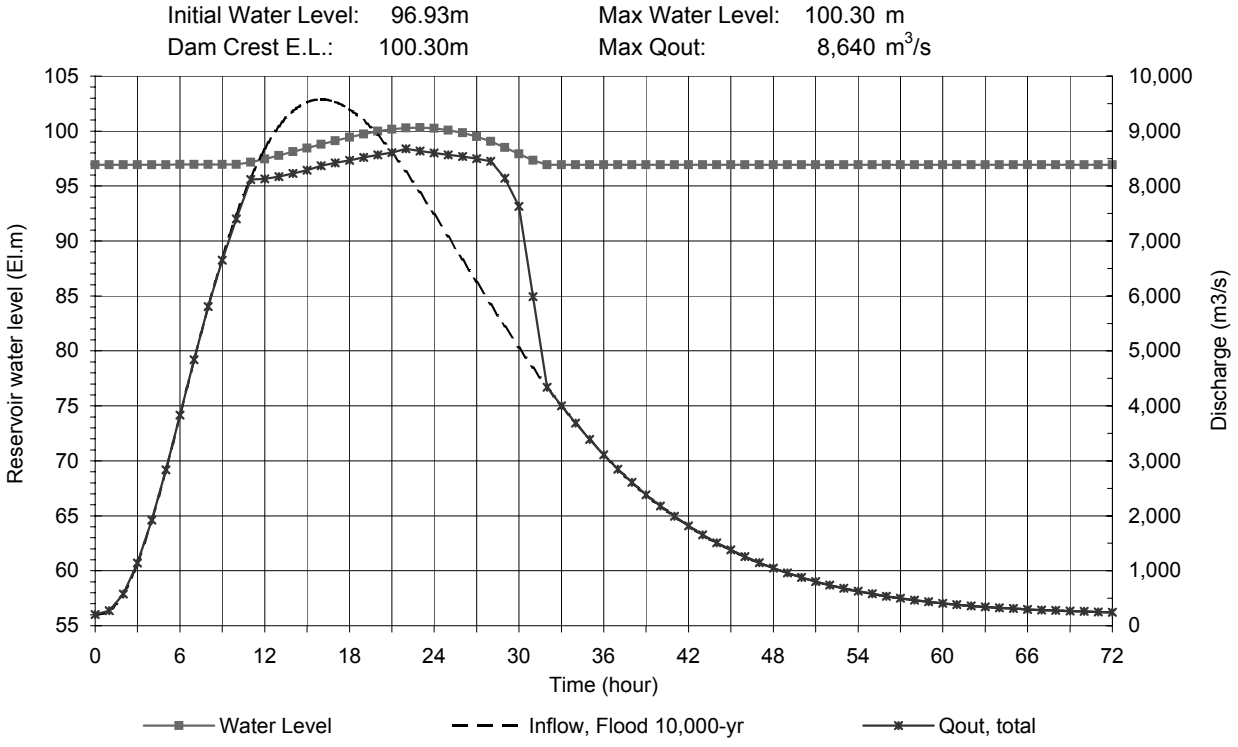


Figure 12.11 (10) Flood Routing Curve for Dam with Crest E.L.100.3m
(10,000-yr Probable Flood, Qp=9,578m^3/s, Initial WL=96.93m)

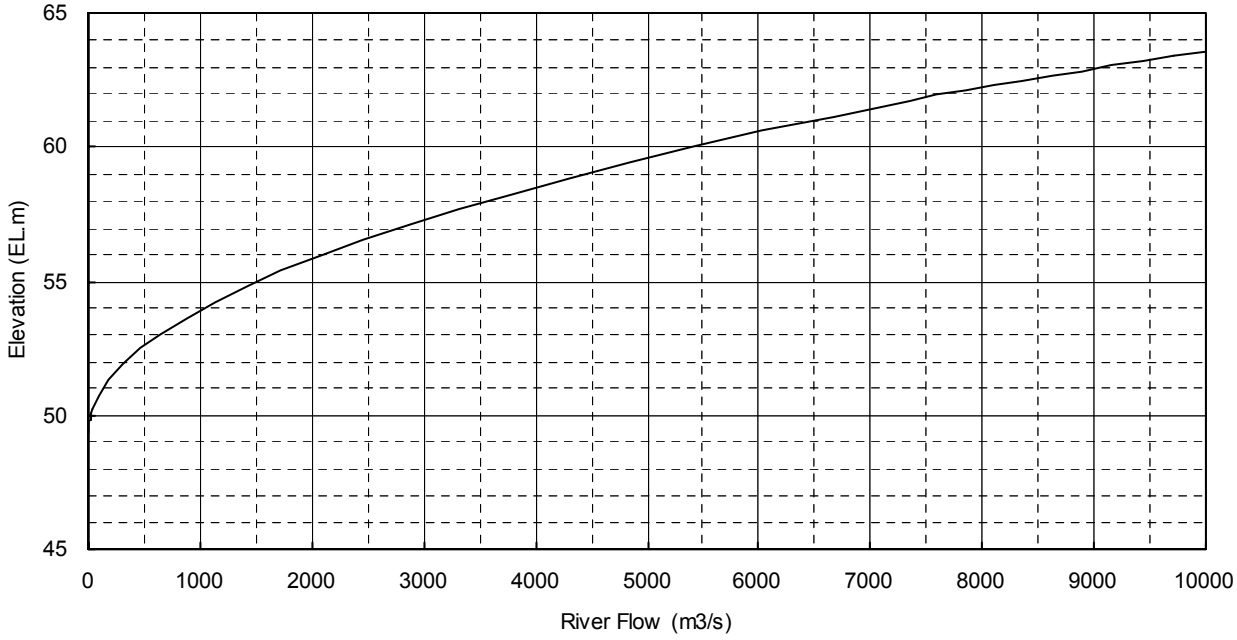


Figure 12.12 Tailwater Rating Curve at Dinh Binh Dam Site

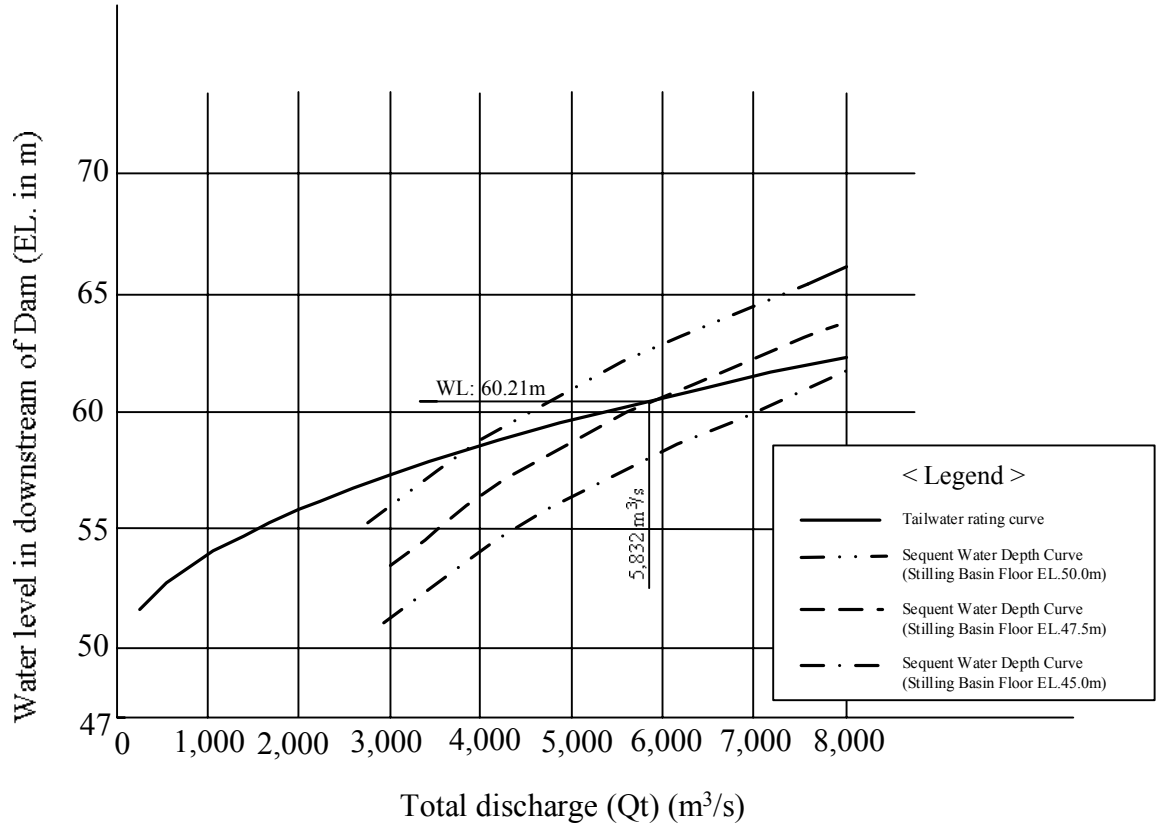
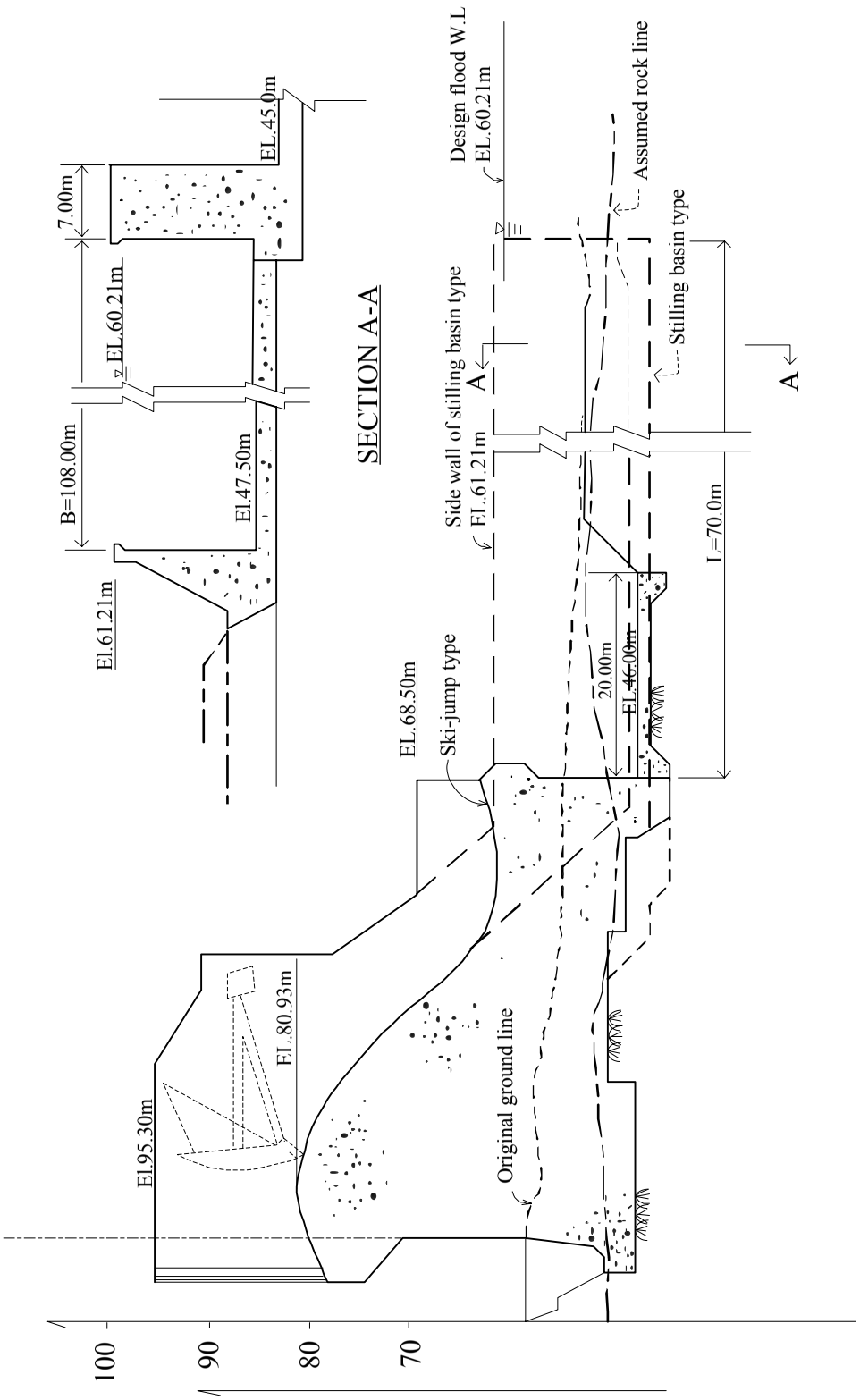
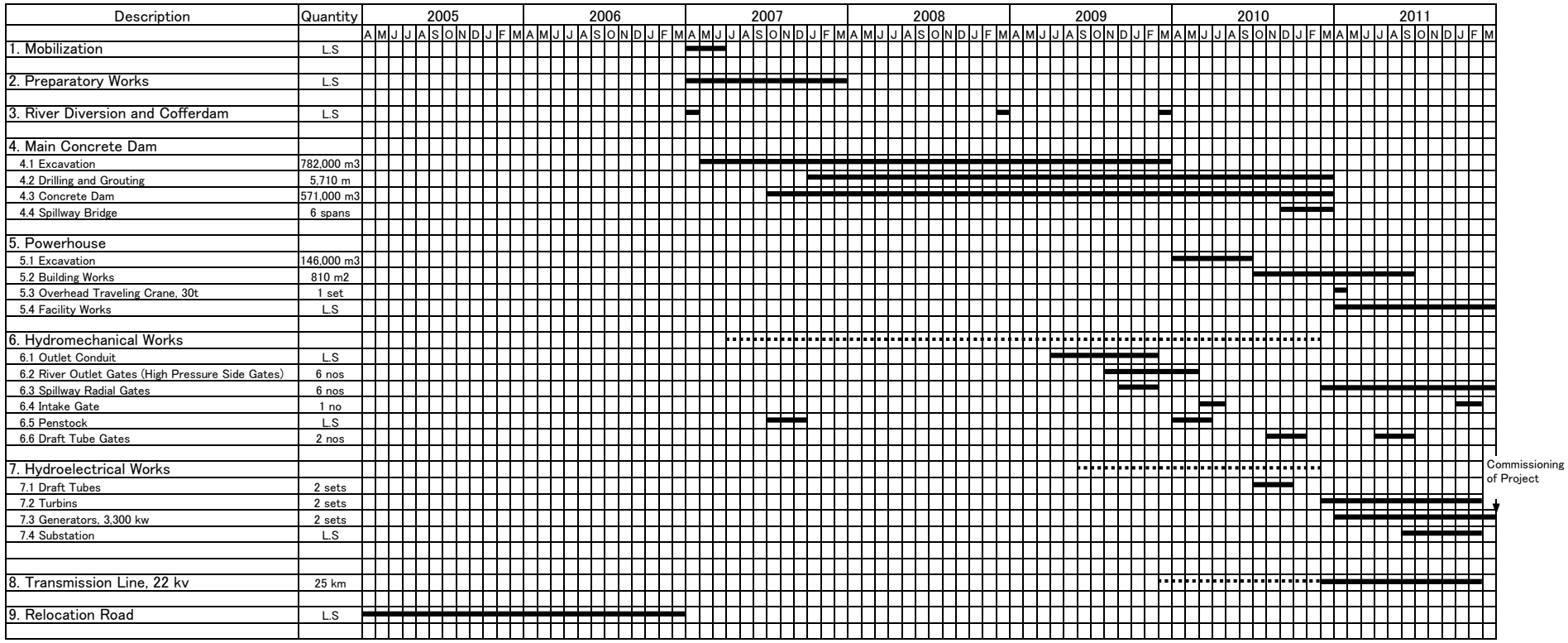


Figure 12.13 **Relation among Stilling Basin Flood Level, Sequent Water Level and Tailwater Rating Curve**



The Study on Nationwide Water Resources Development and Management in the Socialist Republic of Vietnam JAPAN INTERNATIONAL COOPERATION AGENCY	**Figure 12.14** **Comparison of Energy Dissipater between Ski-jump Type and Stilling Basin Type**

Figure 12.15 Construction Time Schedule for Dinh Binh Multipurpose Reservoir (Original Schedule)



Note : Marked with ▪▪▪▪ means design and manufacturing period

Figure 12.16 (1) Overall Implementation Schedule for Dinh Binh Multipurpose Reservoir Project (Accelerated Schedule)

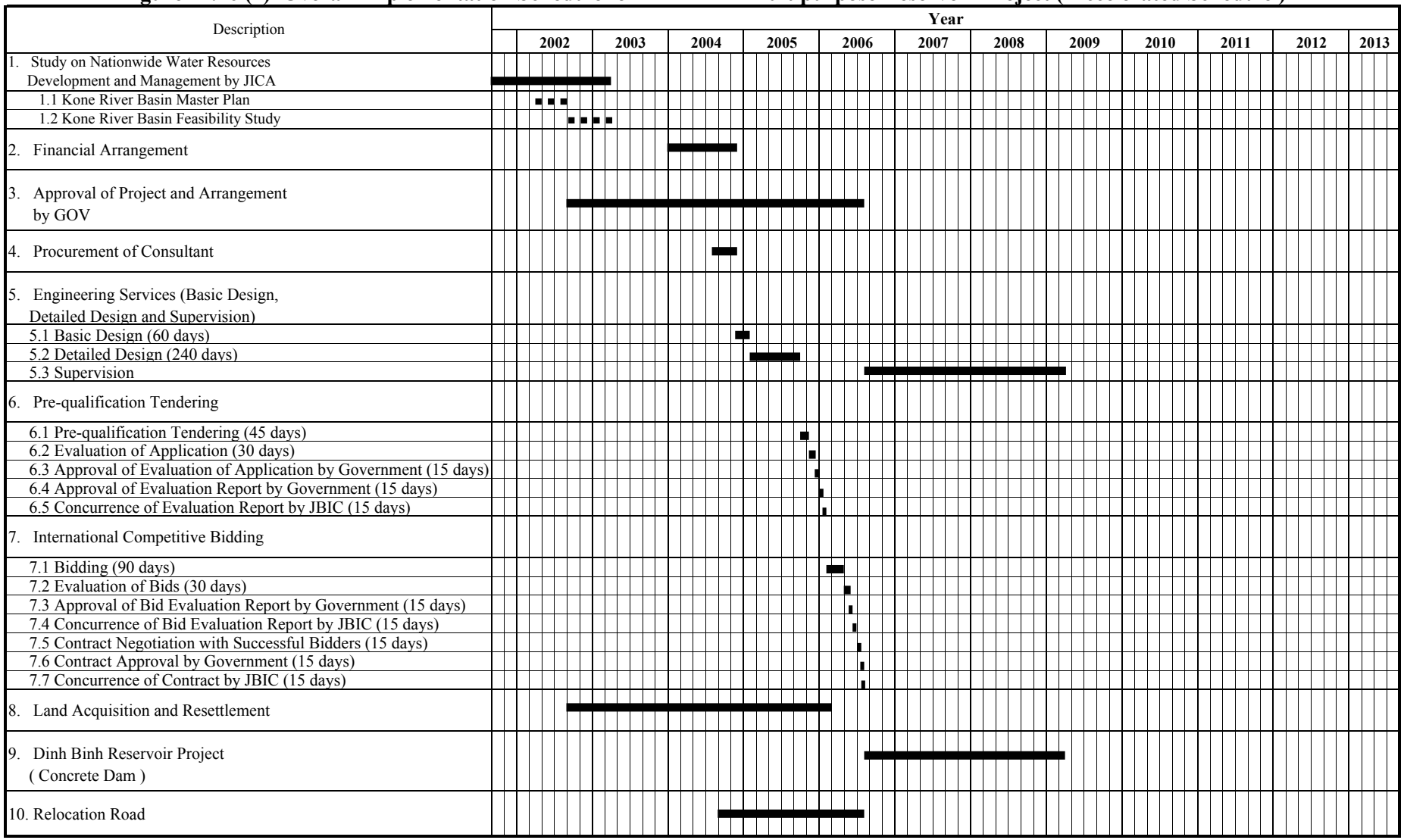
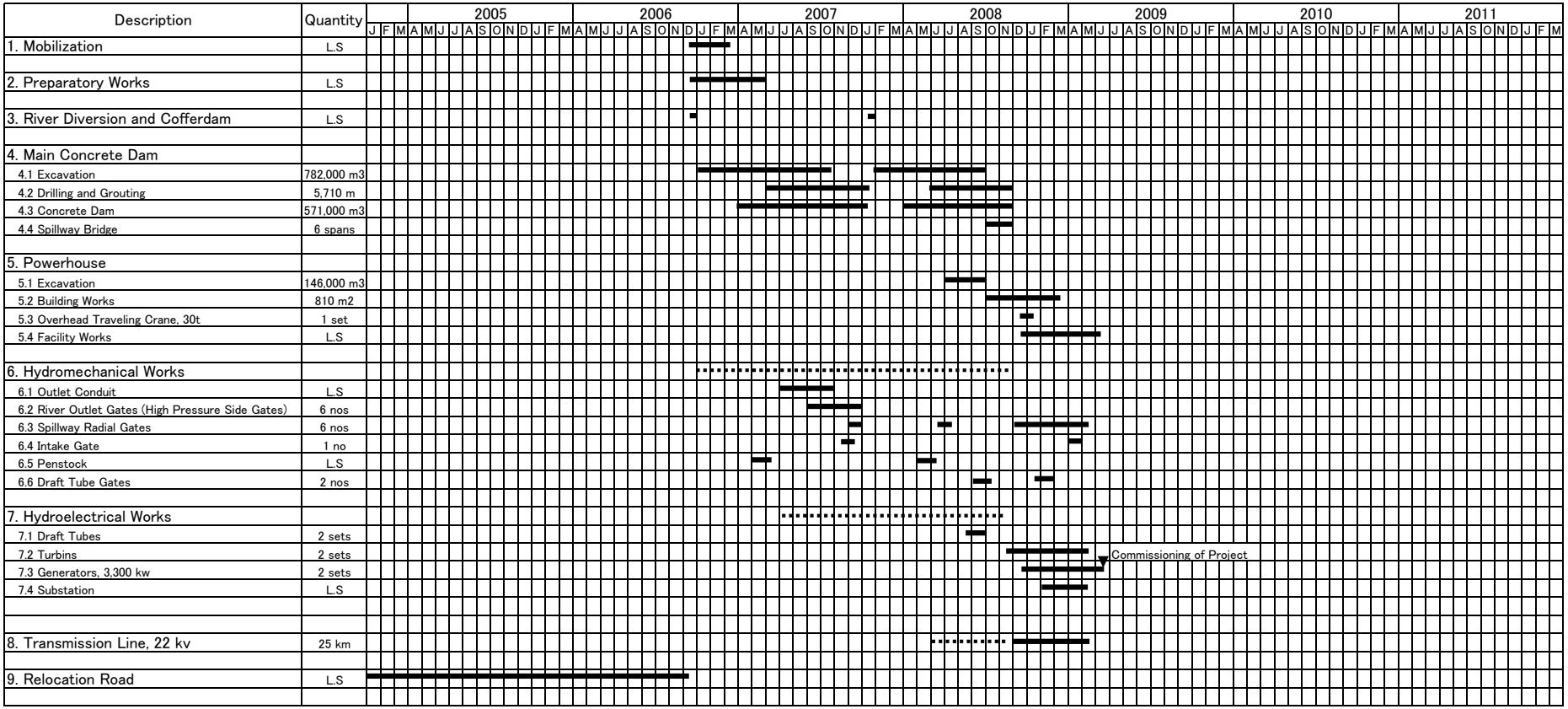


Figure 12.16 (2) Construction Time Schedule for Dinh Binh Multipurpose Reservoir Project (Accelerated Schedule)



Note : Marked with ▪▪▪▪ means design and manufacturing period

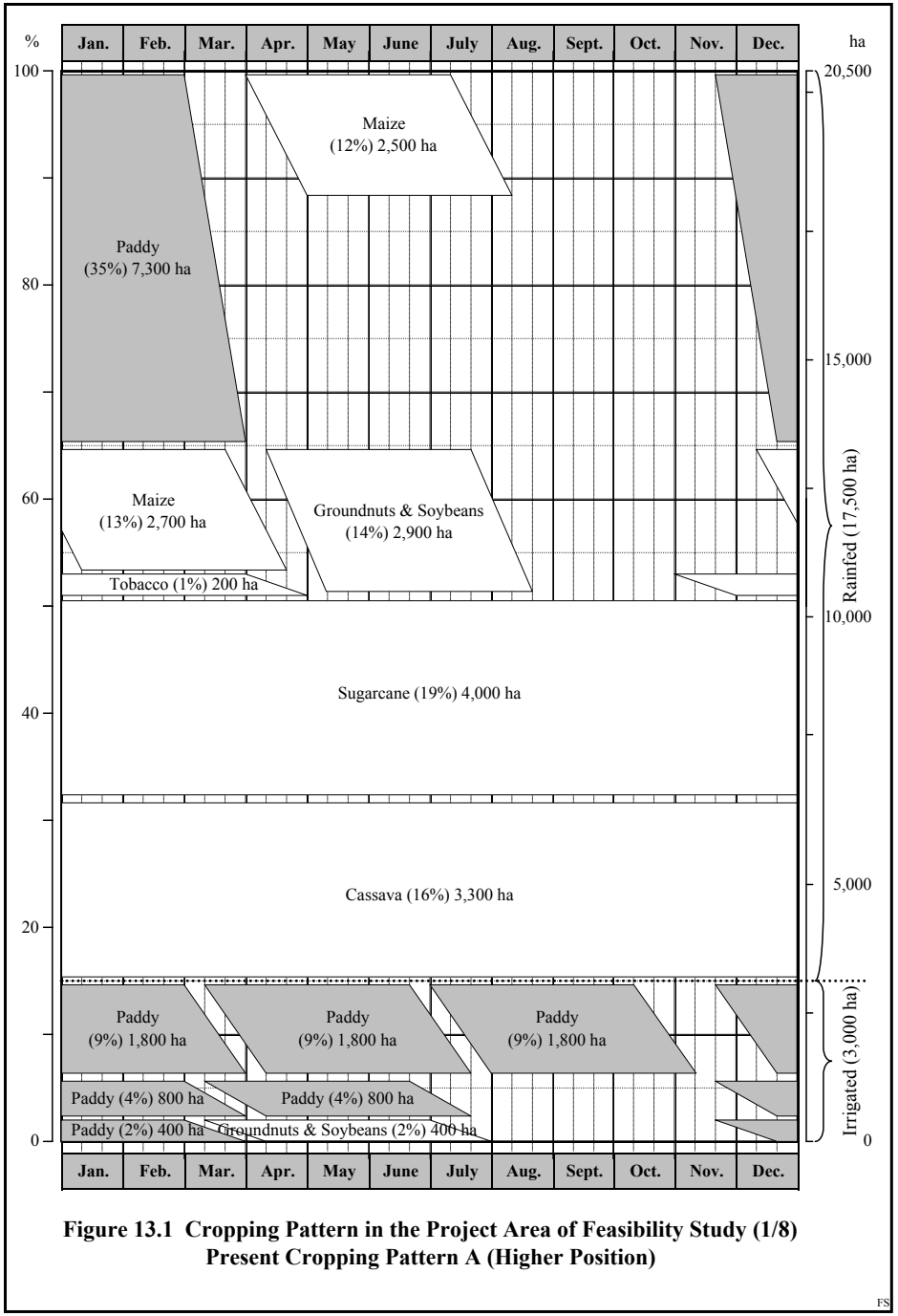


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (1/8)
Present Cropping Pattern A (Higher Position)

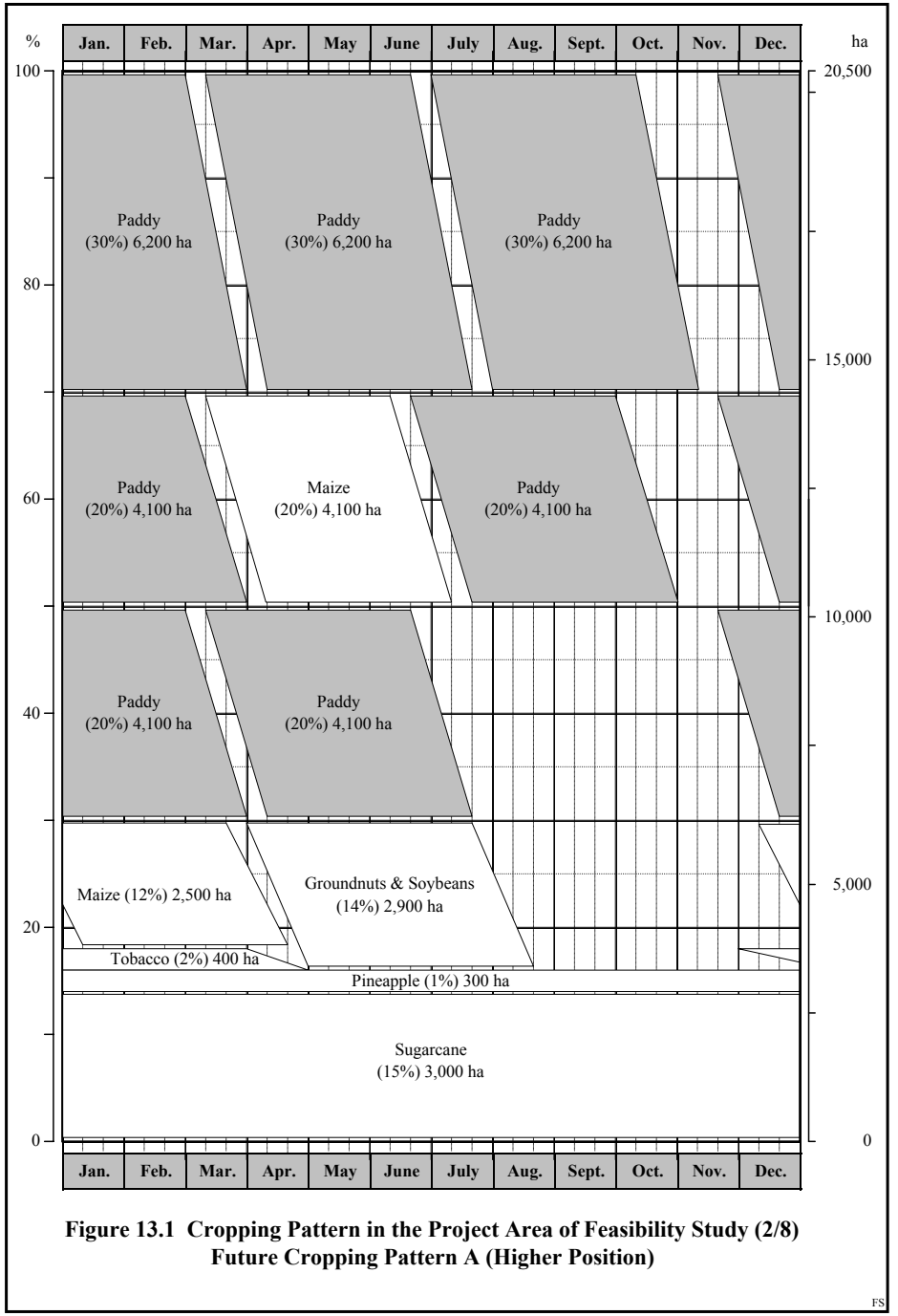


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (2/8)
Future Cropping Pattern A (Higher Position)

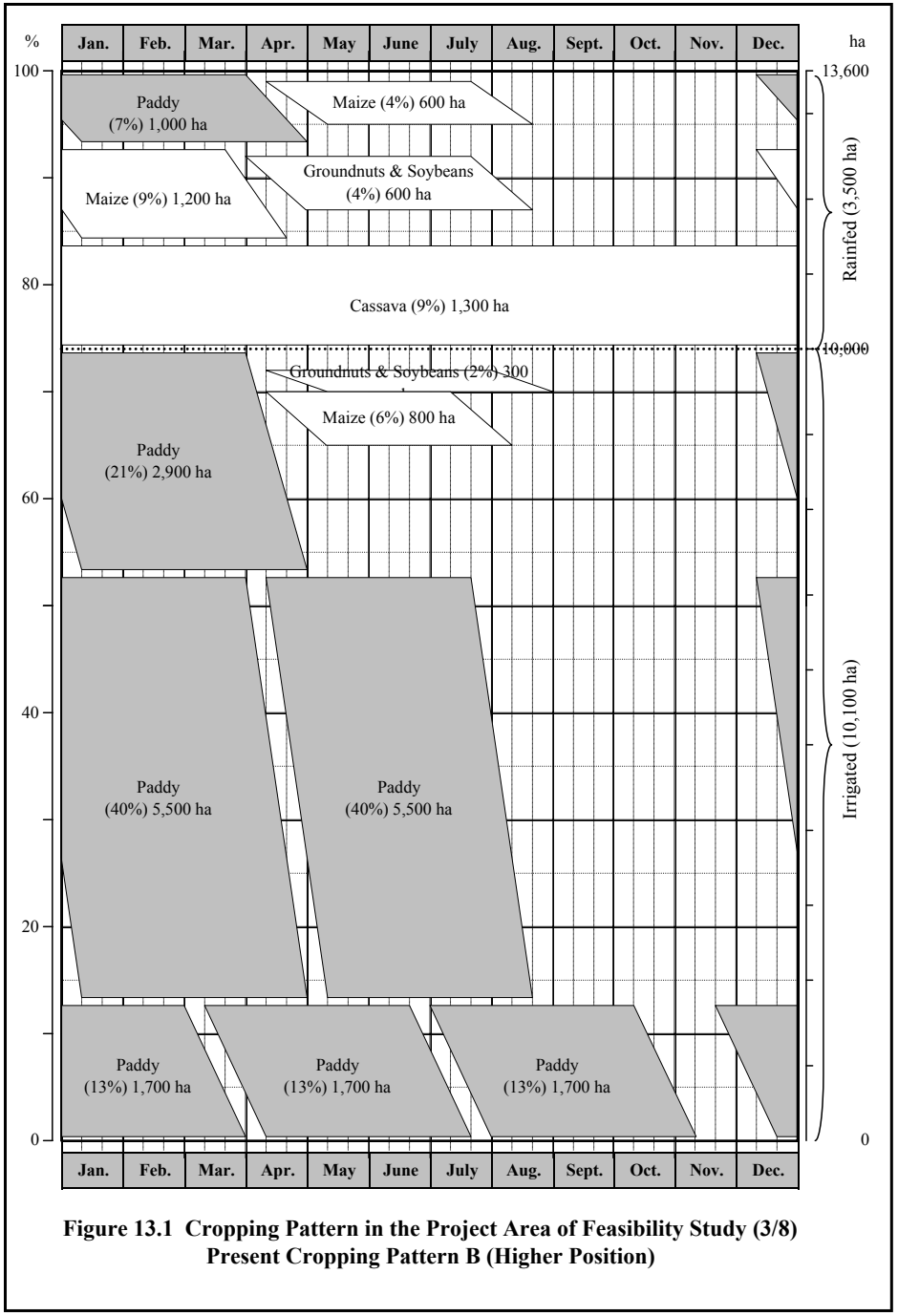


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (3/8)
Present Cropping Pattern B (Higher Position)

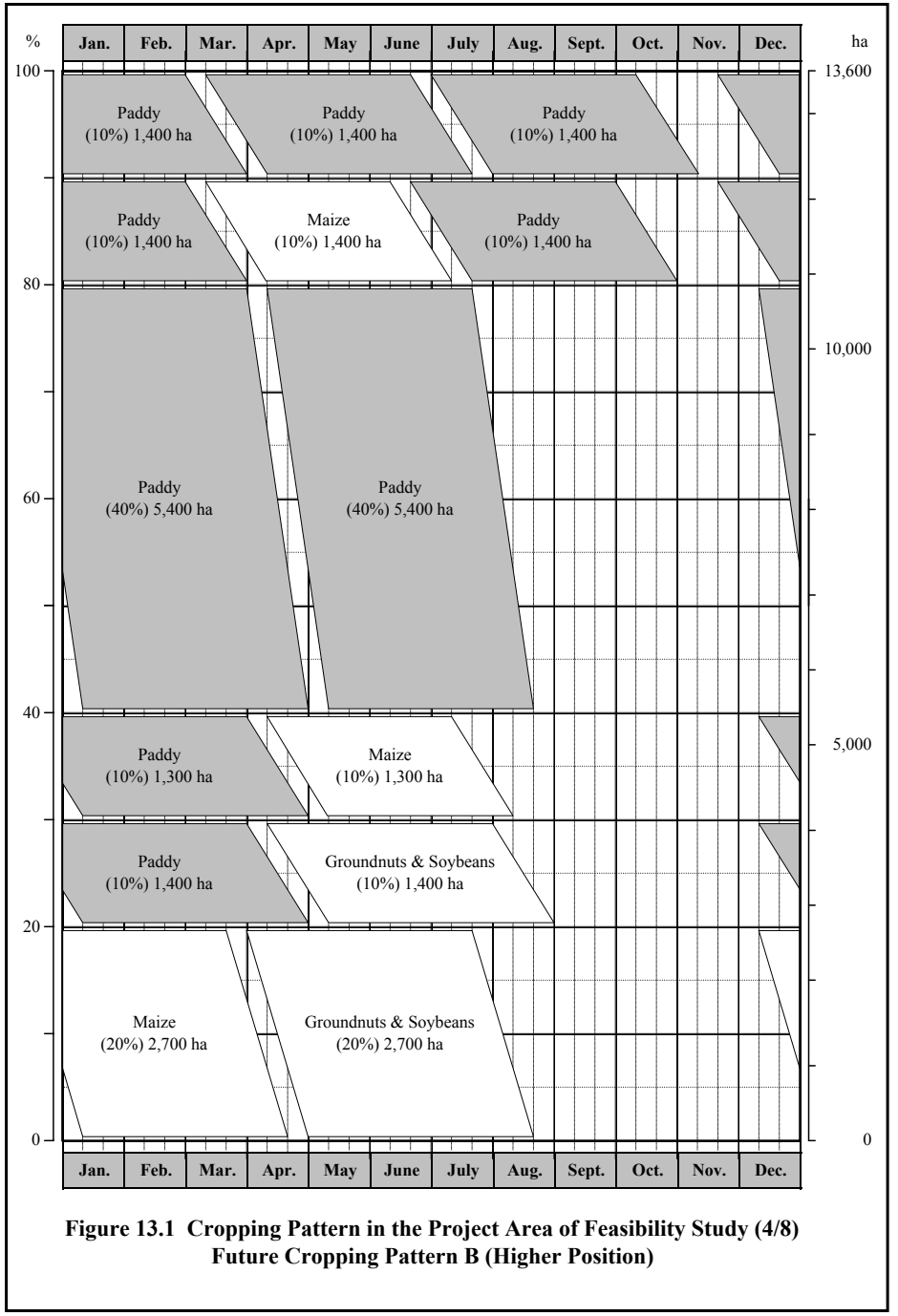


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (4/8)
Future Cropping Pattern B (Higher Position)

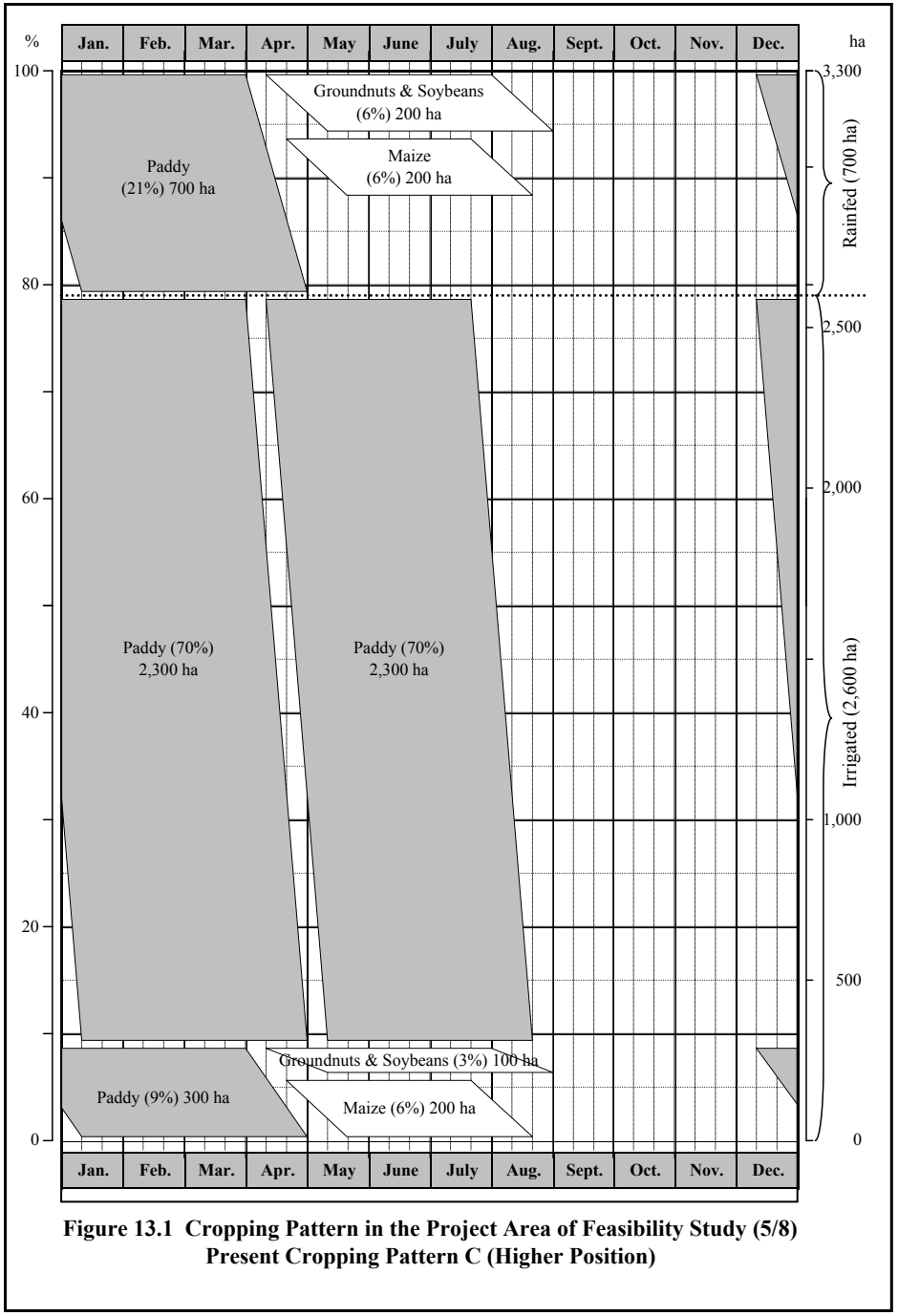


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (5/8)
Present Cropping Pattern C (Higher Position)

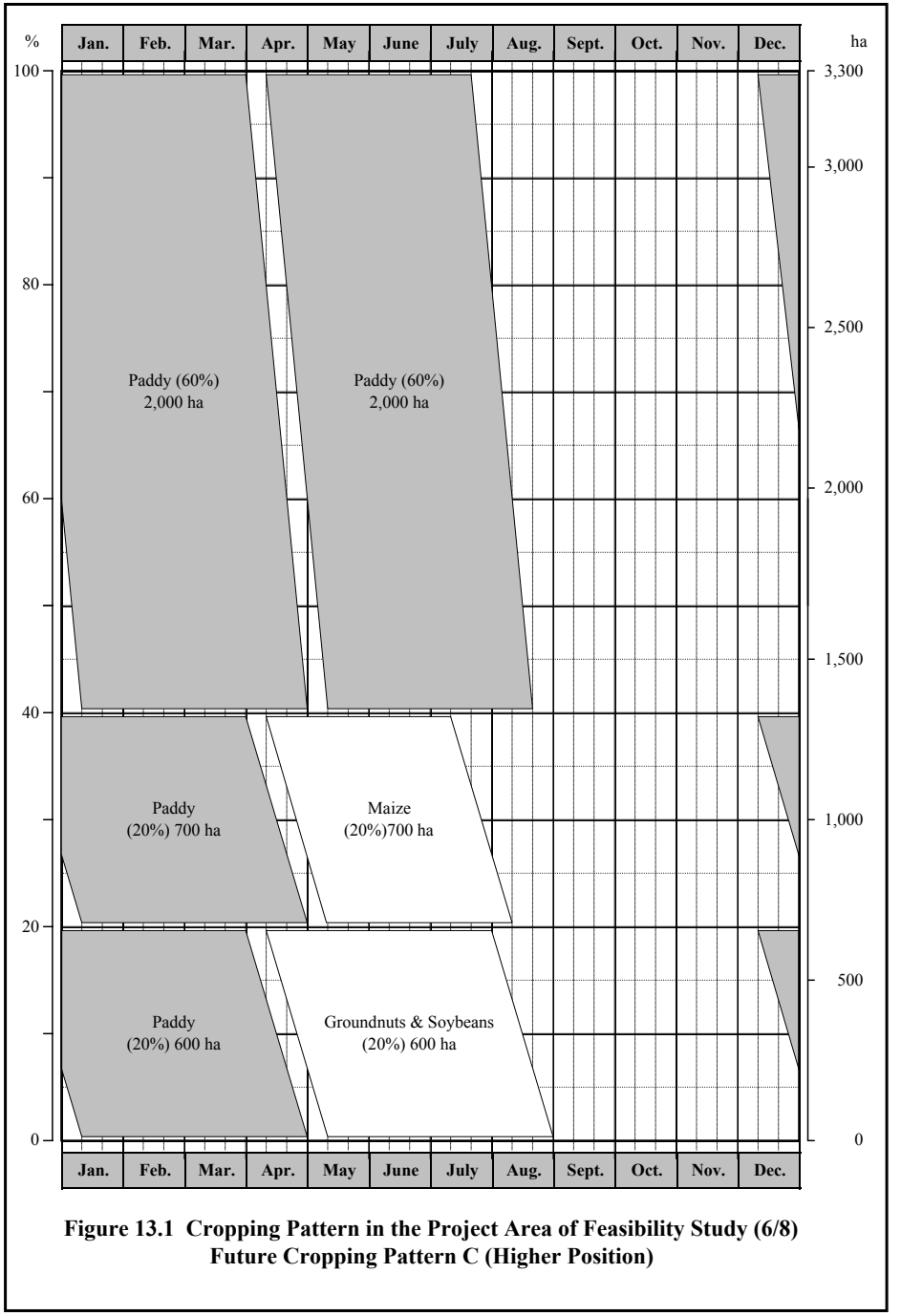


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (6/8)
Future Cropping Pattern C (Higher Position)

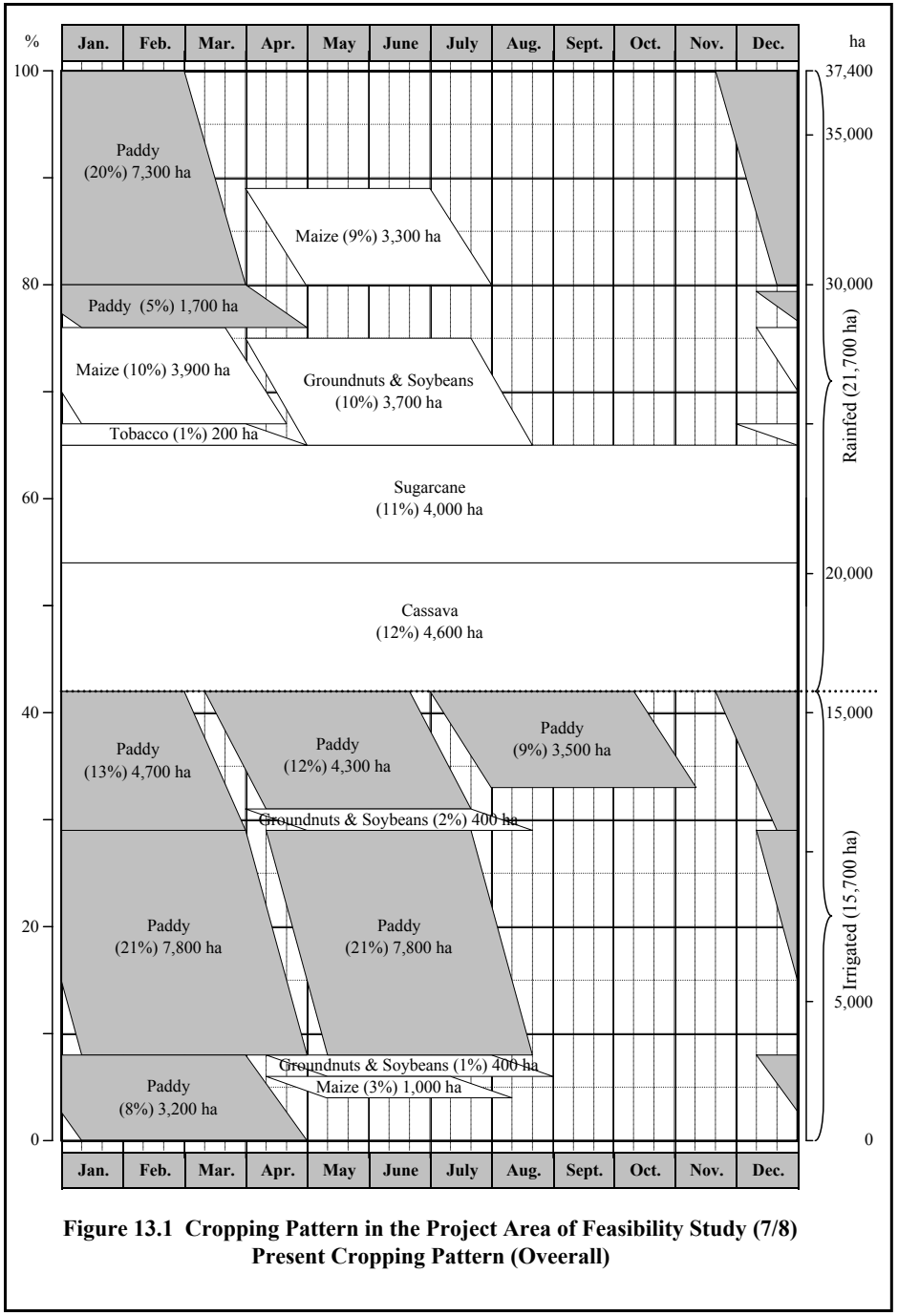


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (7/8)
Present Cropping Pattern (Oveerall)

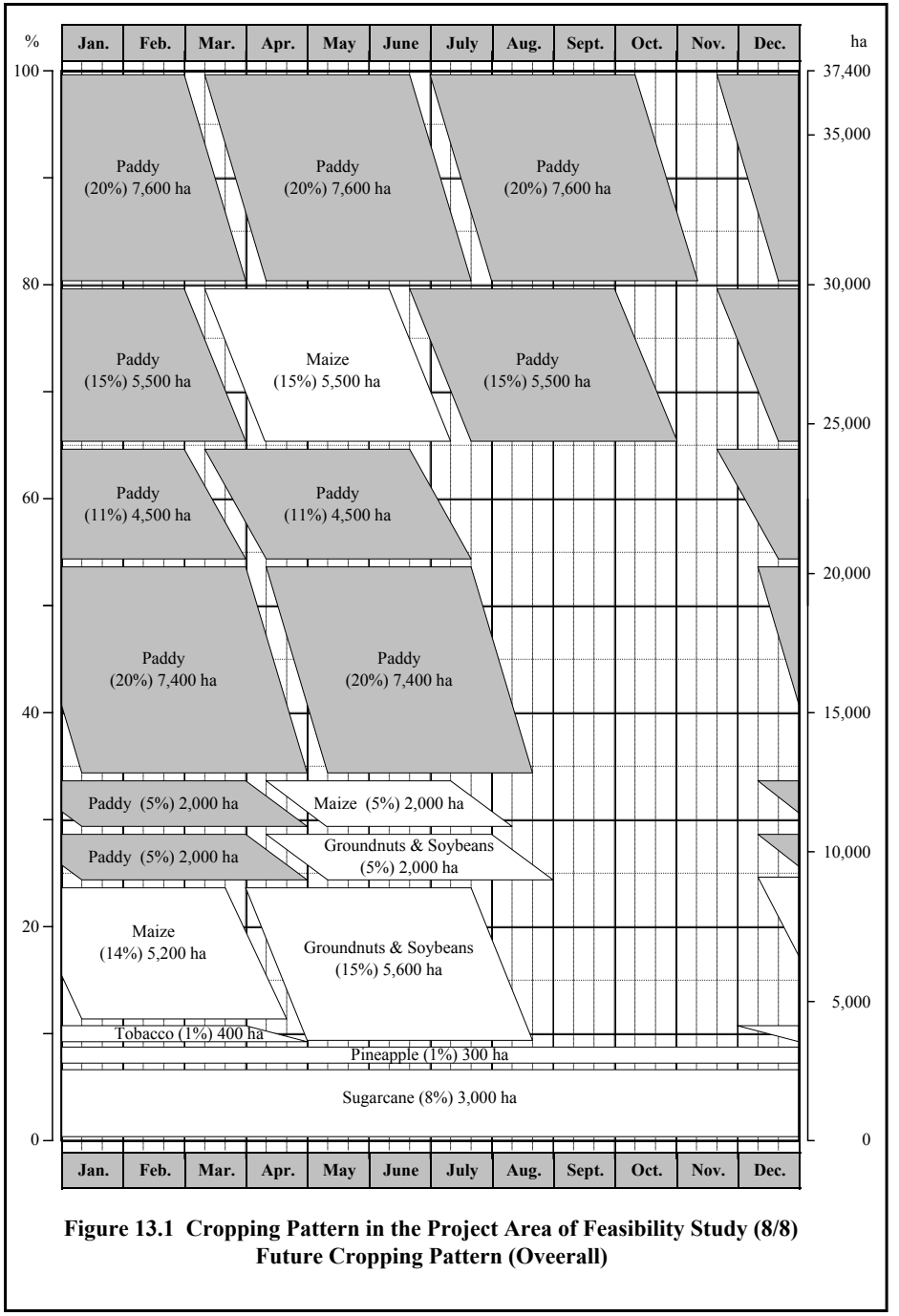


Figure 13.1 Cropping Pattern in the Project Area of Feasibility Study (8/8)
Future Cropping Pattern (Oveerall)