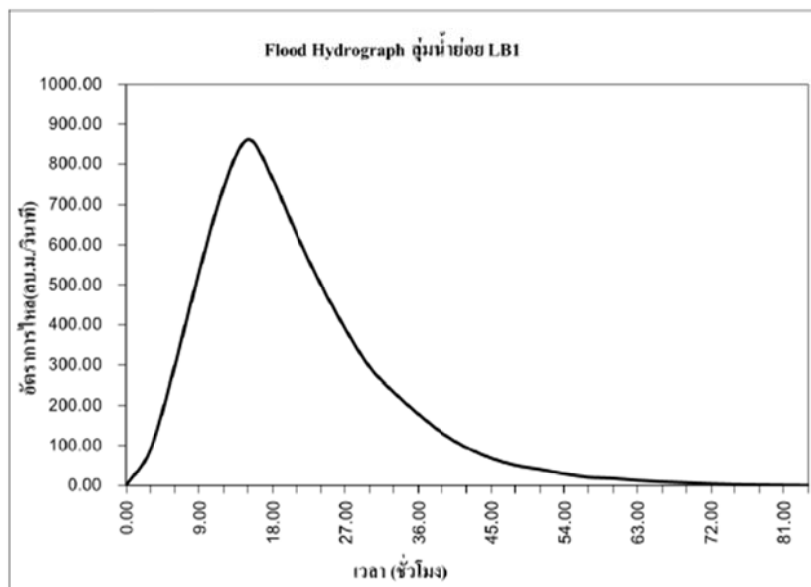


ภาคผนวก ข.

รายการคำนวณ Unit Hydrograph

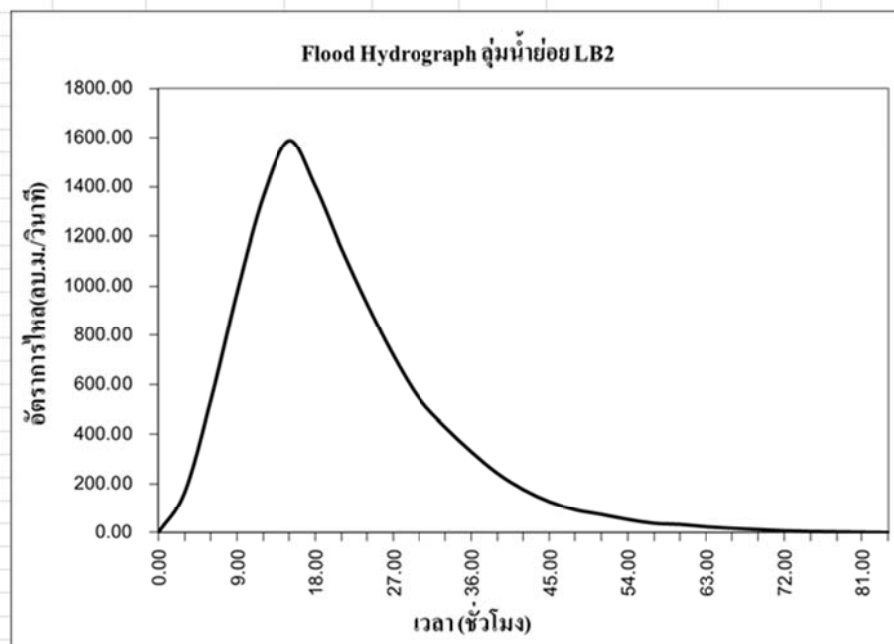
ตารางที่ ข.1 กราฟหนึ่งหน่วยน้ำท่าของกลุ่มน้ำย่อย LB1

Sasin	Code	Name					ER1	ER2	ER3	
	5	KHONG								
Calculate Tp,Qp,Tr,ER			Unit Hydrograph				Actual	Actual	Actual	Sum
A	438	sq.Km.	Dimensionless	Synthetic Hydrograph			Q(cms)	0	Q(cms)	Q(cms)
L	71.11	Km.	T/Tp	Q/Qp	T(hr)	Q(cms/mm)				
Lc	27.3	Km.	0.00	0.000	0.00	0.000	0.000			0.000
S	0.007		0.20	0.104	3.00	0.659	89.737			89.737
RF1	240.40	mm	0.40	0.340	6.00	2.155	293.371			293.371
RF2	152.00	mm	0.60	0.615	9.00	3.897	530.657			530.657
RF3	100.20	mm	0.80	0.858	12.00	5.437	740.331			740.331
Tp	15.485	hr.	1.00	1.000	15.00	6.337	862.856			862.856
Correct Tp	15	hr.	1.20	0.884	18.00	5.602	762.765			762.765
Qp	6.3373	cms/mm	1.40	0.726	21.00	4.601	626.434			626.434
Tr	2.8154	hr.	1.60	0.582	24.00	3.688	502.182	0.000		502.182
Correct Tr	2	hr.	1.80	0.452	27.00	2.864	390.011	45.820		435.831
ER1	136.16	mm	2.00	0.342	30.00	2.167	295.097	149.795		444.892
ER2	69.521	mm	2.20	0.270	33.00	1.711	232.971	270.953		503.924
ER3	39.429	mm	2.40	0.208	36.00	1.318	179.474	378.012		557.486
Row start ER2;k	14		2.60	0.153	39.00	0.970	132.017	440.573		572.590
Row start ER3;l	22		2.80	0.111	42.00	0.703	95.777	389.467		485.244
Part of Thailand	Code	Name	3.00	0.080	45.00	0.507	69.028	319.856		388.885
	2	NORTHEAST	3.20	0.059	48.00	0.374	50.909	256.414	0.000	307.322
Qmax	862.856	cms	3.40	0.047	51.00	0.298	40.554	199.139	25.987	265.680
Volume	116.675	mcm	3.60	0.034	54.00	0.215	29.337	150.676	84.957	264.970
Basin Unit Hydrograph			3.80	0.024	57.00	0.152	20.709	118.955	153.672	293.336
			4.00	0.021	60.00	0.133	18.120	91.639	214.392	324.151
			4.20	0.015	63.00	0.095	12.943	67.408	249.874	330.225
			4.40	0.011	66.00	0.070	9.491	48.904	220.889	279.284
			4.60	0.008	69.00	0.051	6.903	35.246	181.408	223.557
			4.80	0.005	72.00	0.032	4.314	25.994	145.427	175.735
			5.00	0.003	75.00	0.019	2.589	20.707	112.943	136.239
			5.20	0.002	78.00	0.013	1.726	14.979	85.457	102.162
			5.40	0.001	81.00	0.006	0.863	10.574	67.466	78.903
			5.60	0.000	84.00	0.000	0.000	9.252	51.974	61.226



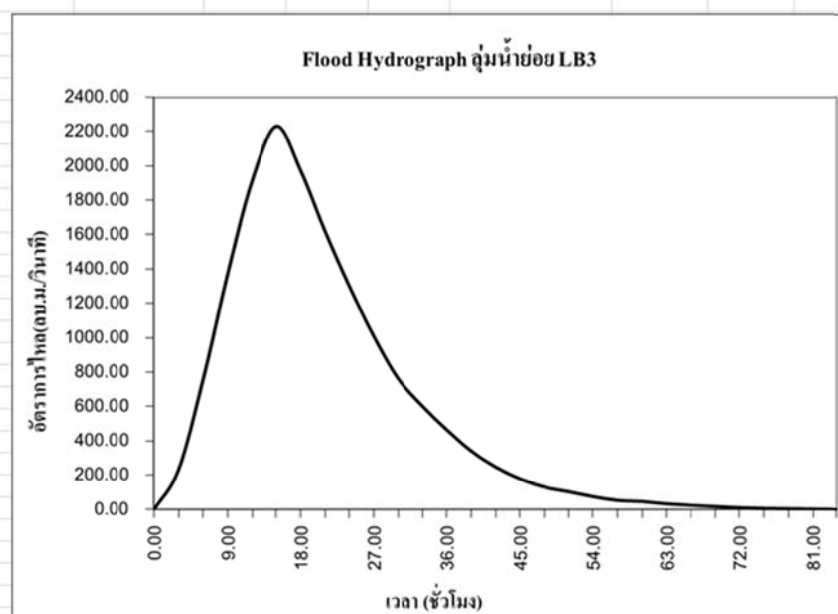
ตารางที่ ข.2 กราฟหนึ่งหน่วยน้ำท่าของกลุ่มน้ำย่อย LB2

Sasin	Code	Name					ER1	ER2	ER3
	5	khong							
Calculate Tp,Qp,Tr,ER			Unit Hydrograph						
A	808	sq.Km.	Dimensionless	Synthetic Hydrograph			Actual	Actual	Actual
L	64.08	Km.	T/Tp	Q/Qp	T(hr)	Q(cms/mm)	Q(cms)	0	Q(cms)
Lc	30.5	Km.	0.00	0.000	0.00	0.000	0.000		
S	0.002		0.20	0.104	3.00	1.216	165.123		
RF1	240.00	mm	0.40	0.340	6.00	3.975	539.825		
RF2	152.00	mm	0.60	0.615	9.00	7.190	976.448		
RF3	100.00	mm	0.80	0.858	12.00	10.031	1362.264		
Tp	19.921	hr.	1.00	1.000	15.00	11.691	1587.721		
Correct Tp	15	hr.	1.20	0.884	18.00	10.335	1403.545		
Qp	11.691	cms/mm	1.40	0.726	21.00	8.487	1152.685		
Tr	3.6221	hr.	1.60	0.582	24.00	6.804	924.053	0.000	
Correct Tr	2	hr.	1.80	0.452	27.00	5.284	717.650	84.526	
ER1	135.81	mm	2.00	0.342	30.00	3.998	543.000	276.334	
ER2	69.521	mm	2.20	0.270	33.00	3.156	428.685	499.839	
ER3	39.326	mm	2.40	0.208	36.00	2.432	330.246	697.337	
Row start ER2;k	14		2.60	0.153	39.00	1.789	242.921	812.747	
Row start ER3;l	22		2.80	0.111	42.00	1.298	176.237	718.468	
Part of	Code	Name	3.00	0.080	45.00	0.935	127.018	590.054	
Thailand	2	NORTHEAST	3.20	0.059	48.00	0.690	93.676	473.019	0.000
Qmax	1587.721	cms	3.40	0.047	51.00	0.549	74.623	367.362	47.814
Volume	214.842	mcm	3.60	0.034	54.00	0.397	53.983	277.960	156.314
Basin Unit Hydrograph			3.80	0.024	57.00	0.281	38.105	219.442	282.744
			4.00	0.021	60.00	0.246	33.342	169.051	394.462
			4.20	0.015	63.00	0.175	23.816	124.350	459.746
			4.40	0.011	66.00	0.129	17.465	90.215	406.416
			4.60	0.008	69.00	0.094	12.702	65.020	333.776
			4.80	0.005	72.00	0.058	7.939	47.952	267.572
			5.00	0.003	75.00	0.035	4.763	38.199	207.805
			5.20	0.002	78.00	0.023	3.175	27.633	157.233
			5.40	0.001	81.00	0.012	1.588	19.506	124.132
			5.60	0.000	84.00	0.000	0.000	17.068	95.627



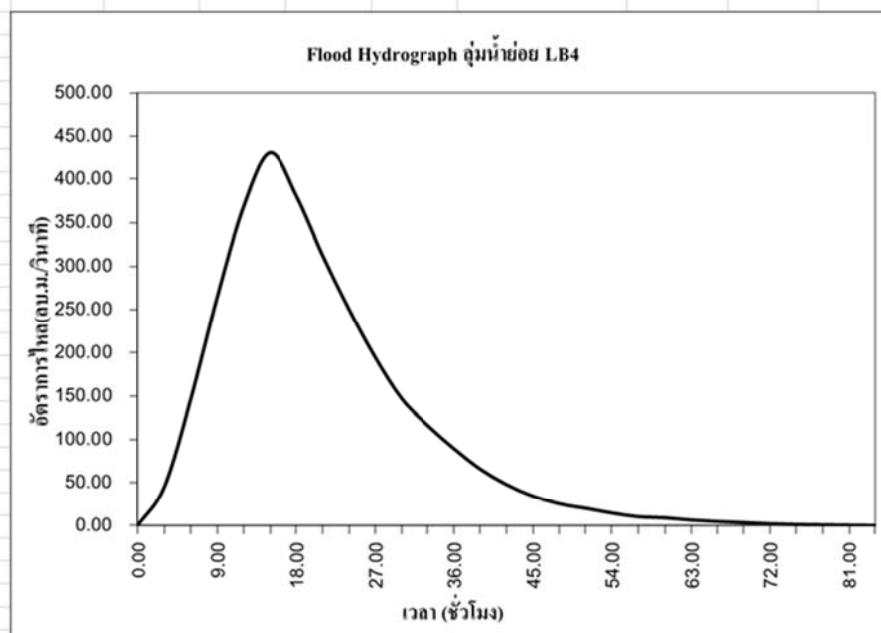
ตารางที่ ข.3 กราฟหนึ่งหน่วยน้ำท่าของกลุ่มน้ำย่อย LB3

Sasin	Code	Name					ER1	ER2	ER3	
	5	khong								
Calculate Tp,Qp,Tr,ER			Unit Hydrograph							
A	1135	sq.Km.	Dimensionless		Synthetic Hydrograph		Actual	Actual	Actual	Sum
L	69.08	Km.	T/Tp	Q/Qp	T(hr)	Q(cms/mm)	Q(cms)	0	Q(cms)	Q(cms)
Lc	19.4	Km.	0.00	0.000	0.00	0.000	0.000			0.000
S	0.002		0.20	0.104	3.00	1.708	231.949			231.949
RF1	240.00	mm	0.40	0.340	6.00	5.583	758.294			758.294
RF2	152.00	mm	0.60	0.615	9.00	10.099	1371.620			1371.620
RF3	100.00	mm	0.80	0.858	12.00	14.090	1913.577			1913.577
Tp	17.144	hr.	1.00	1.000	15.00	16.422	2230.276			2230.276
Correct Tp	15	hr.	1.20	0.884	18.00	14.517	1971.564			1971.564
Qp	16.422	cms/mm	1.40	0.726	21.00	11.922	1619.180			1619.180
Tr	3.1171	hr.	1.60	0.582	24.00	9.558	1298.021	0.000		1298.021
Correct Tr	2	hr.	1.80	0.452	27.00	7.423	1008.085	118.734		1126.818
ER1	135.81	mm	2.00	0.342	30.00	5.616	762.754	388.167		1150.922
ER2	69.521	mm	2.20	0.270	33.00	4.434	602.174	702.126		1304.300
ER3	39.326	mm	2.40	0.208	36.00	3.416	463.897	979.551		1443.449
Row start ER2;k	14		2.60	0.153	39.00	2.513	341.232	1141.668		1482.901
Row start ER3;l	22		2.80	0.111	42.00	1.823	247.561	1009.235		1256.795
Part of	Code	Name	3.00	0.080	45.00	1.314	178.422	828.851		1007.273
Thailand	2	NORTHEAST	3.20	0.059	48.00	0.969	131.586	664.451	0.000	796.037
Qmax	2230.276	cms	3.40	0.047	51.00	0.772	104.823	516.034	67.164	688.021
Volume	301.789	mcm	3.60	0.034	54.00	0.558	75.829	390.451	219.574	685.854
Basin Unit Hydrograph			3.80	0.024	57.00	0.394	53.527	308.250	397.171	758.948
			4.00	0.021	60.00	0.345	46.836	237.467	554.102	838.405
			4.20	0.015	63.00	0.246	33.454	174.675	645.807	853.936
			4.40	0.011	66.00	0.181	24.533	126.725	570.893	722.152
			4.60	0.008	69.00	0.131	17.842	91.333	468.856	578.032
			4.80	0.005	72.00	0.082	11.151	67.358	375.860	454.369
			5.00	0.003	75.00	0.049	6.691	53.658	291.905	352.254
			5.20	0.002	78.00	0.033	4.461	38.817	220.866	264.143
			5.40	0.001	81.00	0.016	2.230	27.400	174.368	203.998
			5.60	0.000	84.00	0.000	0.000	23.975	134.328	158.303



ตารางที่ ข.4 กราฟหนึ่งหน่วยน้ำท่าของกลุ่มน้ำย่อย LB4

Sasin	Code	Name					ER1	ER2	ER3	
	5	khong								
Calculate Tp,Qp,Tr,ER			Unit Hydrograph							
A	219	sq.Km.	Dimensionless	Synthetic Hydrograph		Actual	Actual	Actual	Sum	
L	43.25	Km.	T/Tp	Q/Qp	T(hr)	Q(cms/mm)	Q(cms)	0	Q(cms)	Q(cms)
Lc	25.4	Km.	0.00	0.000	0.00	0.000	0.000			0.000
S	0.001		0.20	0.104	3.00	0.330	44.755			44.755
RF1	240.00	mm	0.40	0.340	6.00	1.077	146.314			146.314
RF2	152.00	mm	0.60	0.615	9.00	1.949	264.656			264.656
RF3	100.00	mm	0.80	0.858	12.00	2.719	369.228			369.228
Tp	18.182	hr.	1.00	1.000	15.00	3.169	430.335			430.335
Correct Tp	15	hr.	1.20	0.884	18.00	2.801	380.416			380.416
Qp	3.1686	cms/mm	1.40	0.726	21.00	2.300	312.423			312.423
Tr	3.3059	hr.	1.60	0.582	24.00	1.844	250.455	0.000		250.455
Correct Tr	2	hr.	1.80	0.452	27.00	1.432	194.511	22.910		217.421
ER1	135.81	mm	2.00	0.342	30.00	1.084	147.175	74.897		222.072
ER2	69.521	mm	2.20	0.270	33.00	0.856	116.190	135.476		251.667
ER3	39.326	mm	2.40	0.208	36.00	0.659	89.510	189.006		278.516
Row start ER2;k	14		2.60	0.153	39.00	0.485	65.841	220.287		286.128
Row start ER3;l	22		2.80	0.111	42.00	0.352	47.767	194.733		242.501
Part of	Code	Name	3.00	0.080	45.00	0.253	34.427	159.928		194.355
Thailand	2	ORTHEAS	3.20	0.059	48.00	0.187	25.390	128.207	0.000	153.597
Qmax	430.335	cms	3.40	0.047	51.00	0.149	20.226	99.570	12.959	132.755
Volume	58.231	mcm	3.60	0.034	54.00	0.108	14.631	75.338	42.367	132.337
Basin Unit Hydrograph			3.80	0.024	57.00	0.076	10.328	59.477	76.635	146.440
			4.00	0.021	60.00	0.067	9.037	45.820	106.915	161.772
			4.20	0.015	63.00	0.048	6.455	33.704	124.609	164.768
			4.40	0.011	66.00	0.035	4.734	24.452	110.155	139.340
			4.60	0.008	69.00	0.025	3.443	17.623	90.466	111.532
			4.80	0.005	72.00	0.016	2.152	12.997	72.523	87.671
			5.00	0.003	75.00	0.010	1.291	10.353	56.323	67.968
			5.20	0.002	78.00	0.006	0.861	7.490	42.616	50.967
			5.40	0.001	81.00	0.003	0.430	5.287	33.645	39.362
			5.60	0.000	84.00	0.000	0.000	4.626	25.919	30.545



ตารางที่ ข.5 กราฟหนึ่งหน่วยน้ำท่าของกลุ่มน้ำย่อย LB5

Sasin	Code	Name					ER1	ER2	ER3	
Calculate Tp,Qp,Tr,ER			Unit Hydrograph				Actual	Actual	Actual	Sum
A	258	sq.Km.	Dimensionless	Synthetic Hydrograph		Q(cms)	0	Q(cms)	Q(cms)	
L	45	Km.	T/Tp	Q/Qp	T(hr)	Q(cms/mm)	Q(cms)	0	Q(cms)	Q(cms)
Lc	28	Km.	0.00	0.000	0.00	0.000	0.000			0.000
S	0.003		0.20	0.104	3.00	0.388	52.725			52.725
RF1	240.00	mm	0.40	0.340	6.00	1.269	172.370			172.370
RF2	152.00	mm	0.60	0.615	9.00	2.296	311.787			311.787
RF3	100.00	mm	0.80	0.858	12.00	3.203	434.980			434.980
Tp	15.432	hr.	1.00	1.000	15.00	3.733	506.970			506.970
Correct Tp	15	hr.	1.20	0.884	18.00	3.300	448.162			448.162
Qp	3.7329	cms/mm	1.40	0.726	21.00	2.710	368.060			368.060
Tr	2.8058	hr.	1.60	0.582	24.00	2.173	295.057	0.000		295.057
Correct Tr	2	hr.	1.80	0.452	27.00	1.687	229.151	26.990		256.140
ER1	135.81	mm	2.00	0.342	30.00	1.277	173.384	88.235		261.619
ER2	69.521	mm	2.20	0.270	33.00	1.008	136.882	159.602		296.484
ER3	39.326	mm	2.40	0.208	36.00	0.776	105.450	222.665		328.114
Row start ER2;k	14		2.60	0.153	39.00	0.571	77.566	259.516		337.082
Row start ER3;l	22		2.80	0.111	42.00	0.414	56.274	229.412		285.686
Part of	Code	Name	3.00	0.080	45.00	0.299	40.558	188.408		228.966
Thailand	2	NORTHEAST	3.20	0.059	48.00	0.220	29.911	151.038	0.000	180.949
Qmax	506.970	cms	3.40	0.047	51.00	0.175	23.828	117.301	15.267	156.396
Volume	68.601	mcm	3.60	0.034	54.00	0.127	17.237	88.754	49.912	155.903
Basin Unit Hydrograph			3.80	0.024	57.00	0.090	12.167	70.069	90.282	172.519
			4.00	0.021	60.00	0.078	10.646	53.979	125.955	190.580
			4.20	0.015	63.00	0.056	7.605	39.706	146.800	194.111
			4.40	0.011	66.00	0.041	5.577	28.806	129.771	164.154
			4.60	0.008	69.00	0.030	4.056	20.761	106.577	131.394
			4.80	0.005	72.00	0.019	2.535	15.311	85.438	103.284
			5.00	0.003	75.00	0.011	1.521	12.197	66.354	80.072
			5.20	0.002	78.00	0.007	1.014	8.824	50.206	60.043
			5.40	0.001	81.00	0.004	0.507	6.228	39.636	46.371
			5.60	0.000	84.00	0.000	0.000	5.450	30.534	35.984

Flood Hydrograph กลุ่มน้ำย่อย LB5

Y-axis: อัตราการไหล(ลบ.ม./วินาที) (Discharge in cms)

X-axis: เวลา (ชั่วโมง) (Time in hours)