

### Project Description

File Name ..... 304000087\_Stuttgart\_RWK\_c3\_EWNot.SPF

### Project Options

Flow Units ..... CMS  
 Elevation Type ..... Depth  
 Hydrology Method ..... EPA SWMM  
 EPA SWMM Infiltration Method ..... SCS Curve Number  
 Link Routing Method ..... Hydrodynamic  
 Enable Overflow Ponding at Nodes ..... YES  
 Skip Steady State Analysis Time Periods ..... YES

### Analysis Options

Start Analysis On ..... Aug 02, 1982 10:00:00  
 End Analysis On ..... Aug 02, 1982 14:00:00  
 Start Reporting On ..... Aug 02, 1982 10:00:00  
 Antecedent Dry Days ..... 0 days  
 Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss  
 Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss  
 Reporting Time Step ..... 0 00:05:00 days hh:mm:ss  
 Routing Time Step ..... 5 seconds

### Number of Elements

Qty  
 Rain Gages ..... 1  
 Subbasins ..... 12  
 Nodes ..... 17  
     *Junctions* ..... 14  
     *Outfalls* ..... 2  
     *Flow Diversions* ..... 0  
     *Inlets* ..... 0  
     *Storage Nodes* ..... 1  
 Links ..... 16  
     *Channels* ..... 0  
     *Pipes* ..... 14  
     *Pumps* ..... 0  
     *Orifices* ..... 0  
     *Weirs* ..... 1  
     *Outlets* ..... 1  
 Pollutants ..... 0  
 Land Uses ..... 0

### Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (mm)	Rainfall Distribution
1		Time Series	MODETyp EULII_n0.1	Cumulative	mm				0.00	

## Subbasin Summary

SN Subbasin ID	Area (ha)	Impervious Area (%)	Weighted Curve Number	Average Slope (%)	Equivalent Width (m)	Impervious Area Manning's Roughness	Pervious Area Manning's Roughness	Total Rainfall (mm)	Total Infiltration (mm)	Total Runoff (mm)	Total Runoff Volume (ha-mm)	Peak Runoff (cms)	Time of Concentration (days hh:mm:ss)
1 EZG-01	17.67	55.00	85.98	3.3300	627.79	0.0100	0.1000	42.24	9.4900	29.50	521.25	5.61	0 00:30:54
2 EZG-02	12.93	87.00	95.69	5.1300	210.99	0.0100	0.1000	42.24	1.1750	38.95	503.62	5.32	0 00:20:33
3 EZG-03	2.92	92.00	96.53	2.9200	309.21	0.0100	0.1000	42.24	0.6020	40.05	116.95	1.51	0 00:06:26
4 EZG-04	8.77	33.00	93.98	16.7900	290.46	0.0100	0.1000	42.24	7.9070	30.36	266.27	2.85	0 00:25:11
5 EZG-05	11.24	52.00	92.53	15.9100	261.17	0.0100	0.1000	42.24	6.6630	32.36	363.72	4.08	0 00:25:55
6 EZG-06	9.13	58.00	91.80	17.3600	344.85	0.0100	0.1000	42.24	6.2360	33.23	303.35	3.82	0 00:17:25
7 EZG-07	4.15	26.00	90.65	1.7400	152.53	0.0100	0.1000	42.24	12.0440	24.57	101.95	0.78	0 00:49:35
8 EZG-08	11.30	68.00	92.18	7.1700	242.34	0.0100	0.1000	42.24	4.5920	34.98	395.29	4.38	0 00:27:05
9 EZG-09	6.16	73.00	94.00	14.7700	156.94	0.0100	0.1000	42.24	3.1780	36.82	226.83	2.80	0 00:17:45
10 EZG-10	22.39	86.00	95.57	8.3800	244.33	0.0100	0.1000	42.24	1.2940	38.69	866.34	8.76	0 00:23:36
11 EZG-11	8.51	89.00	95.96	3.0800	323.58	0.0100	0.1000	42.24	0.9420	39.53	336.37	3.99	0 00:13:02
12 EZG-12	20.76	73.00	93.00	10.6000	511.93	0.0100	0.1000	42.24	3.5720	36.37	755.06	9.03	0 00:20:00

## Node Summary

SN Element ID	Element Type	Invert Elevation	Ground/Rim (Max) Elevation	Initial Water Elevation	Surcharge Elevation	Ponded Area	Peak Inflow	Max HGL Elevation Attained	Max Surcharge Depth Attained	Min Freeboard Attained	Time of Peak Flooding Occurrence	Total Flooded Volume	
		(m)	(m)	(m)	(m)	(m <sup>2</sup> )	(cms)	(m)	(m)	(m)	(days hh:mm)	(ha-mm)	
1	Gebietsauslaß Schloßgarten	Junction	239.30	242.30	239.30	248.30	100.00	9.74	240.73	0.00	2.27	0 00:00	0.00
2	Jun-15	Junction	263.15	266.15	263.15	272.15	100.00	19.63	265.21	0.00	1.54	0 00:00	0.00
3	Jun-16	Junction	315.50	321.50	315.50	327.50	100.00	8.65	316.29	0.00	5.21	0 00:00	0.00
4	Jun-17	Junction	289.70	295.70	289.70	301.70	100.00	0.00	289.70	0.00	6.00	0 00:00	0.00
5	Out-04	Junction	238.00	238.00	238.00	244.00	100.00	24.78	240.09	0.00	1.11	0 00:00	0.00
6	RWS-04	Junction	279.87	281.50	279.87	287.50	100.00	1.51	280.13	0.00	3.34	0 00:00	0.00
7	RWS-05	Junction	286.46	288.00	286.46	294.00	100.00	2.85	286.89	0.00	1.11	0 00:00	0.00
8	RWS-06	Junction	263.74	265.00	263.74	271.00	100.00	9.46	265.27	0.00	4.07	0 00:00	0.00
9	RWS-07	Junction	341.89	346.00	341.89	352.00	100.00	3.82	342.25	0.00	5.24	0 00:00	0.00
10	RWS-08	Junction	383.73	385.00	383.73	391.00	100.00	0.00	383.73	0.00	1.27	0 00:00	0.00
11	RWS-09	Junction	346.46	348.00	346.46	354.00	100.00	4.38	346.76	0.00	3.30	0 00:00	0.00
12	RWS-10	Junction	286.93	289.50	286.93	295.50	100.00	2.80	287.23	0.00	5.30	0 00:00	0.00
13	RWS-12	Junction	247.66	250.00	247.66	256.00	100.00	8.17	248.35	0.00	2.51	0 00:00	0.00
14	RWS-13	Junction	248.04	251.04	248.04	257.04	100.00	28.38	249.94	0.00	1.80	0 00:00	0.00
15	Gebietsauslaß	Outfall	237.00					9.74	237.70				
16	KanalBE	Outfall	237.00					24.64	238.44				
17	VolEinstau	Storage Node	239.30	242.80	239.30		0.00	20.08	242.07				0.00

Total Time  
Flooded

(min)  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
0.00  
  
0.00

## Link Summary

SN Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope (%)	Diameter or Height (mm)	Manning's Roughness	Peak Flow (cms)	Design Flow Capacity (cms)	Peak Flow/Design Flow Ratio	Peak Flow Velocity (m/sec)	Peak Flow Depth (m)	Peak Flow Depth/Total Depth Ratio	Total Time Reported Surcharged (min)	Condition	
1	BE 01	Pipe	RWS-13	Out-04	218.60	248.04	238.00	4.5900	1800.000	0.0150	18.92	21.35	0.89	7.54	1.78	1.00	2.00	SURCHARGED
2	BE 2	Pipe	Jun-15	Out-04	745.24	263.95	238.00	3.4800	1500.000	0.0150	6.14	6.26	0.98	5.60	1.35	0.92	0.00	Calculated
3	Link-01	Pipe	RWS-10	RWS-06	420.31	286.93	263.74	5.5200	5600.000	0.0150	2.65	482.76	0.01	1.05	0.88	0.16	0.00	Calculated
4	Link-02	Pipe	RWS-05	RWS-06	242.85	286.46	263.74	9.3600	1200.000	0.0150	2.81	10.34	0.27	3.44	0.81	0.68	0.00	Calculated
5	Link-03	Pipe	RWS-06	Jun-15	31.27	263.74	263.15	1.8900	3600.000	0.0150	8.24	86.90	0.09	1.63	1.73	0.50	0.00	Calculated
6	Link-06	Pipe	RWS-04	Jun-15	404.14	279.87	263.15	4.1400	3600.000	0.0150	1.41	128.68	0.01	0.51	1.13	0.32	0.00	Calculated
7	Link-07	Pipe	RWS-07	Jun-16	580.72	341.89	315.50	4.5400	5600.000	0.0150	3.59	438.13	0.01	2.83	0.55	0.10	0.00	Calculated
8	Link-08	Pipe	RWS-13	RWS-12	314.59	248.54	247.66	0.2800	3200.000	0.0150	8.17	24.44	0.33	3.71	0.87	0.32	0.00	Calculated
9	Link-09	Pipe	Jun-16	RWS-13	848.86	315.50	248.04	7.9500	1200.000	0.0150	7.36	9.53	0.77	7.33	0.97	0.83	0.00	Calculated
10	Link-10	Pipe	RWS-09	Jun-16	135.35	346.46	315.50	22.8700	3600.000	0.0150	4.35	302.58	0.01	4.82	0.52	0.15	0.00	Calculated
11	Link-17	Pipe	Jun-15	VolEinstau	420.45	264.15	239.30	5.9100	1500.000	0.0150	12.38	14.90	0.83	7.71	1.25	0.85	0.00	Calculated
12	Link-20	Pipe	RWS-12	VolEinstau	63.24	247.66	239.30	13.2200	1500.000	0.0150	7.83	22.28	0.35	5.66	0.99	0.73	0.00	Calculated
13	Link-39	Pipe	Gebietsauslaß	Schloßgarten	17.72	239.30	237.00	12.9800	1500.000	0.0150	9.75	22.08	0.44	7.36	1.06	0.71	0.00	Calculated
14	Link-42	Pipe	Out-04	KanalBE	60.50	238.00	237.00	1.6500	3200.000	0.0150	24.64	59.41	0.41	5.43	1.75	0.55	0.00	Calculated
15	Outlet-01	Outlet	VolEinstau	Gebietsauslaß	Schloßgarten	239.30	239.30				9.06							
16	Weir-01	Weir	VolEinstau	Gebietsauslaß	Schloßgarten	239.30	239.30				0.89							

## Subbasin Hydrology

### Subbasin : EZG-01

#### Input Data

Area (ha) ..... 17.67  
 Impervious Area (%) ..... 55.00  
 Weighted Curve Number ..... 85.98  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 3.3300  
 Equivalent Width (m) ..... 627.79  
 Impervious Area  
     *Manning's Roughness* ..... 0.0100  
 Pervious Area  
     *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

#### Composite Curve Number

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	18.84	-	85.98
Composite Area & Weighted CN	18.84		85.98

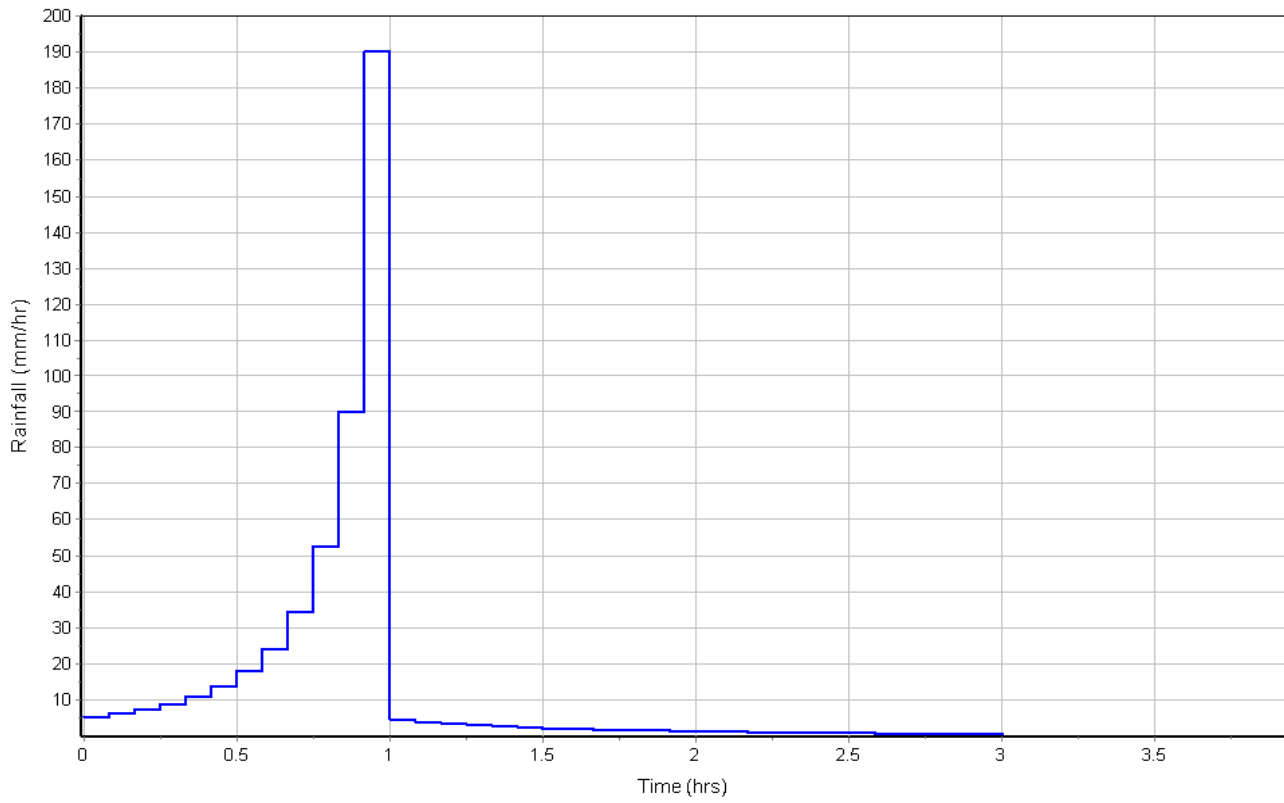
#### Subbasin Runoff Results

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 9.4900  
 Total Runoff (mm) ..... 29.50  
 Peak Runoff (cms) ..... 5.61  
 Weighted Curve Number ..... 85.98  
 Time of Concentration (days hh:mm:ss) .... 0 00:30:54

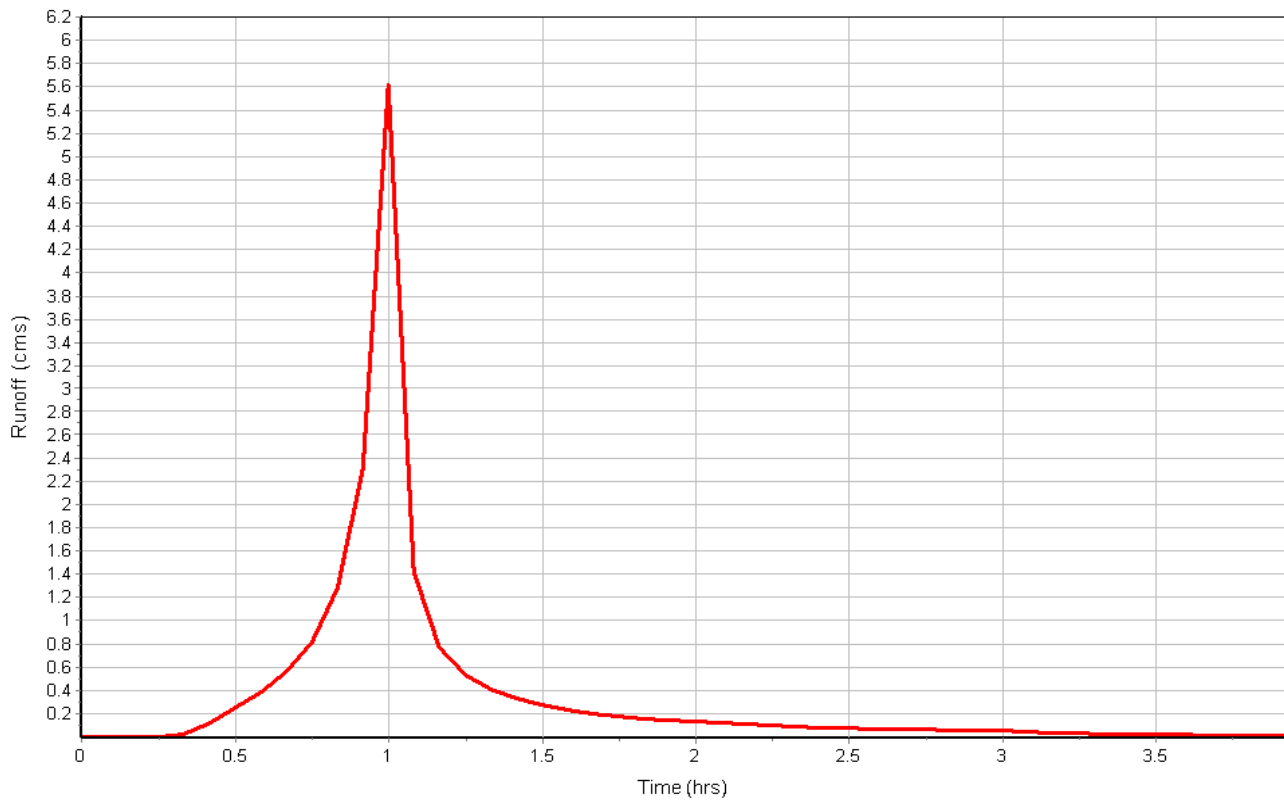


Subbasin : EZG-01

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-02****Input Data**

Area (ha) ..... 12.93  
 Impervious Area (%) ..... 87.00  
 Weighted Curve Number ..... 95.69  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 5.1300  
 Equivalent Width (m) ..... 210.99  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	12.93	-	95.69
Composite Area & Weighted CN	12.93		95.69

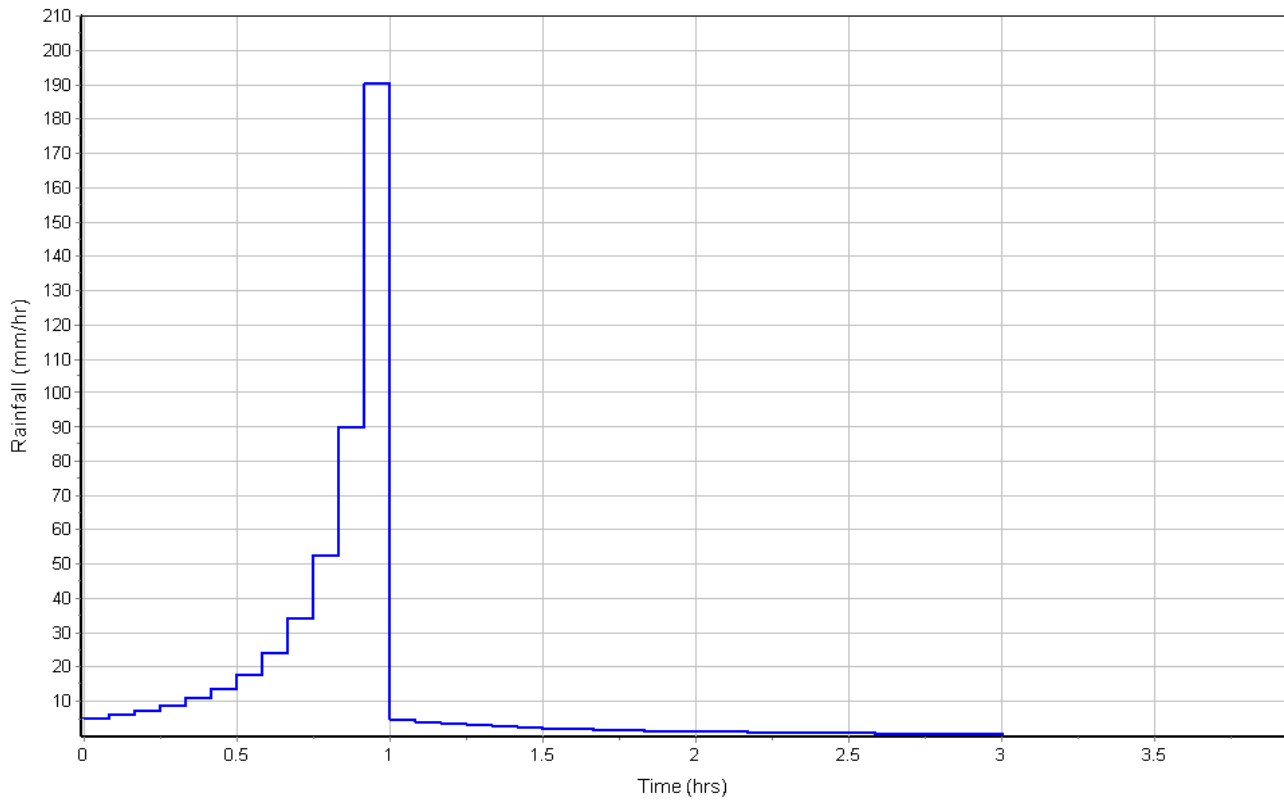
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 1.1750  
 Total Runoff (mm) ..... 38.95  
 Peak Runoff (cms) ..... 5.32  
 Weighted Curve Number ..... 95.69  
 Time of Concentration (days hh:mm:ss) .... 0 00:20:33

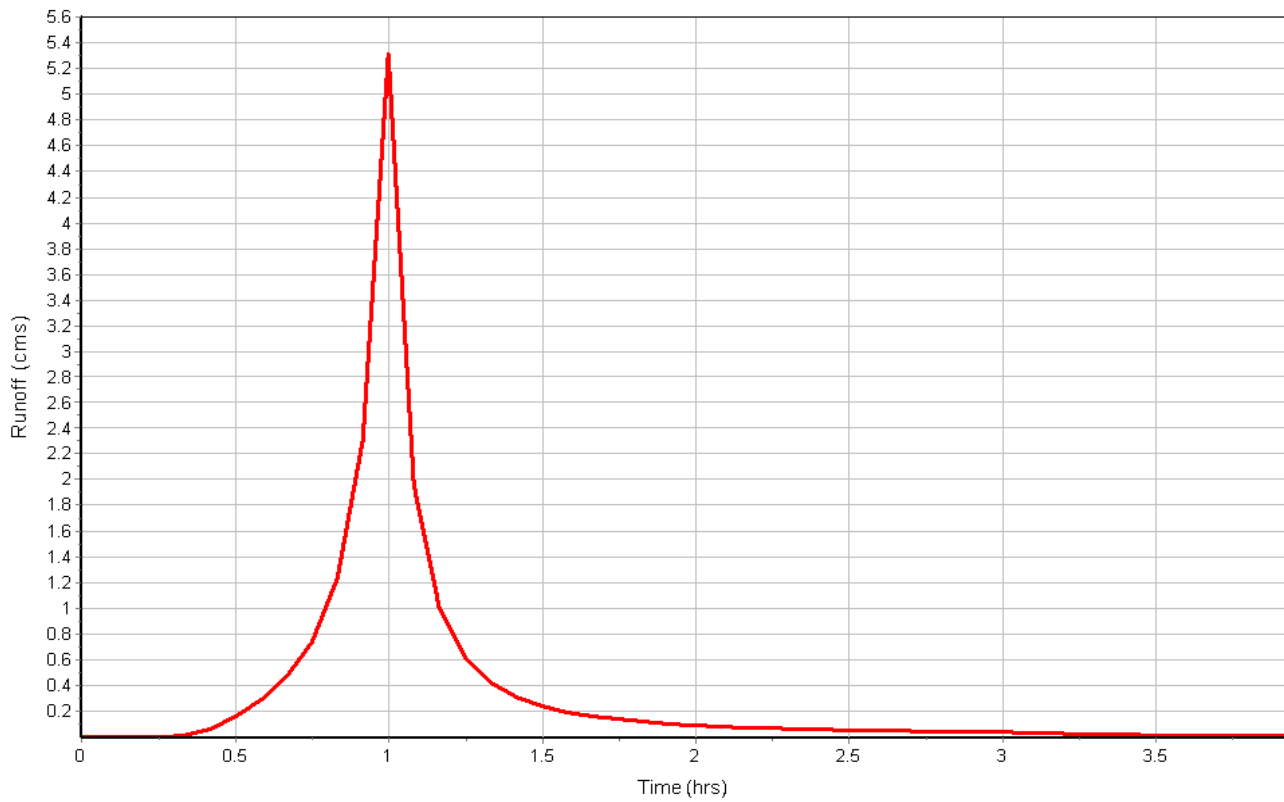


Subbasin : EZG-02

Rainfall Intensity Graph



Runoff Hydrograph





**Subbasin : EZG-03****Input Data**

Area (ha) ..... 2.92  
 Impervious Area (%) ..... 92.00  
 Weighted Curve Number ..... 96.53  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 2.9200  
 Equivalent Width (m) ..... 309.21  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	2.92	-	96.53
Composite Area & Weighted CN	2.92		96.53

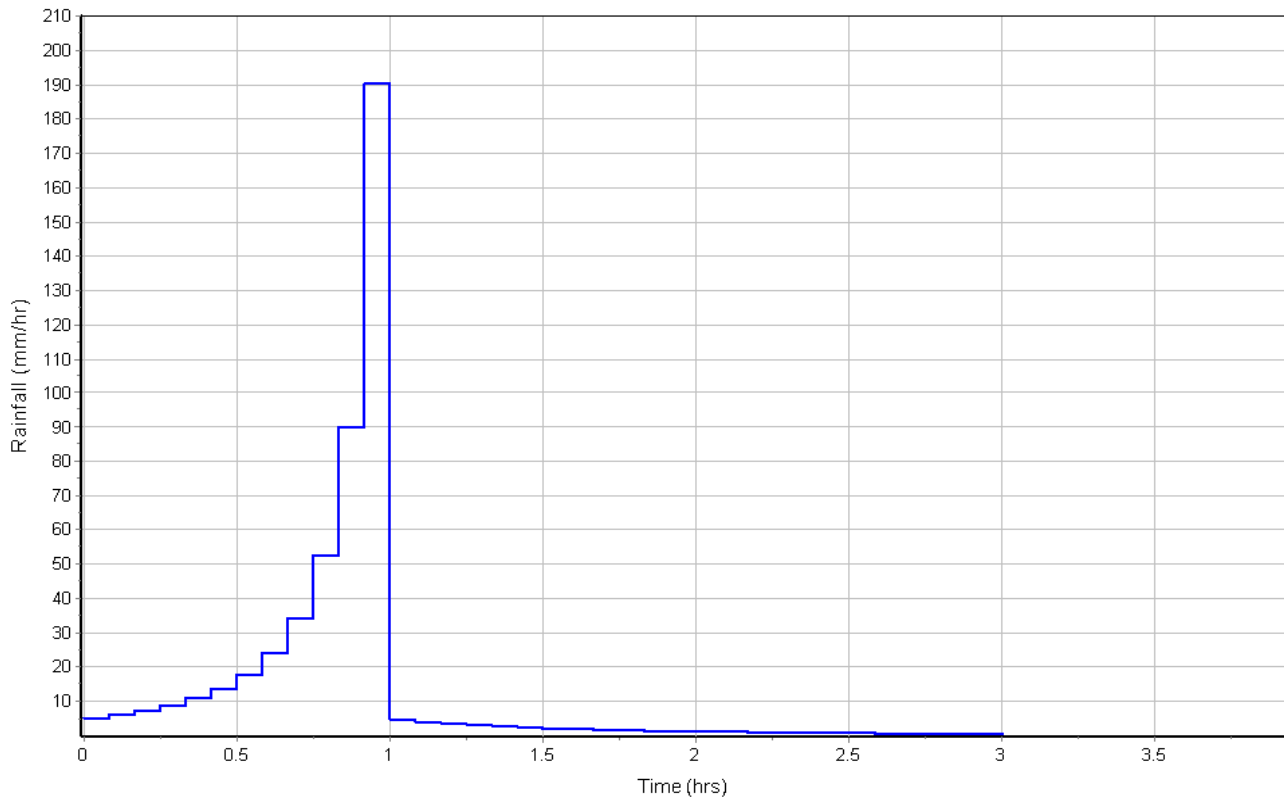
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 0.6020  
 Total Runoff (mm) ..... 40.05  
 Peak Runoff (cms) ..... 1.51  
 Weighted Curve Number ..... 96.53  
 Time of Concentration (days hh:mm:ss) .... 0 00:06:26

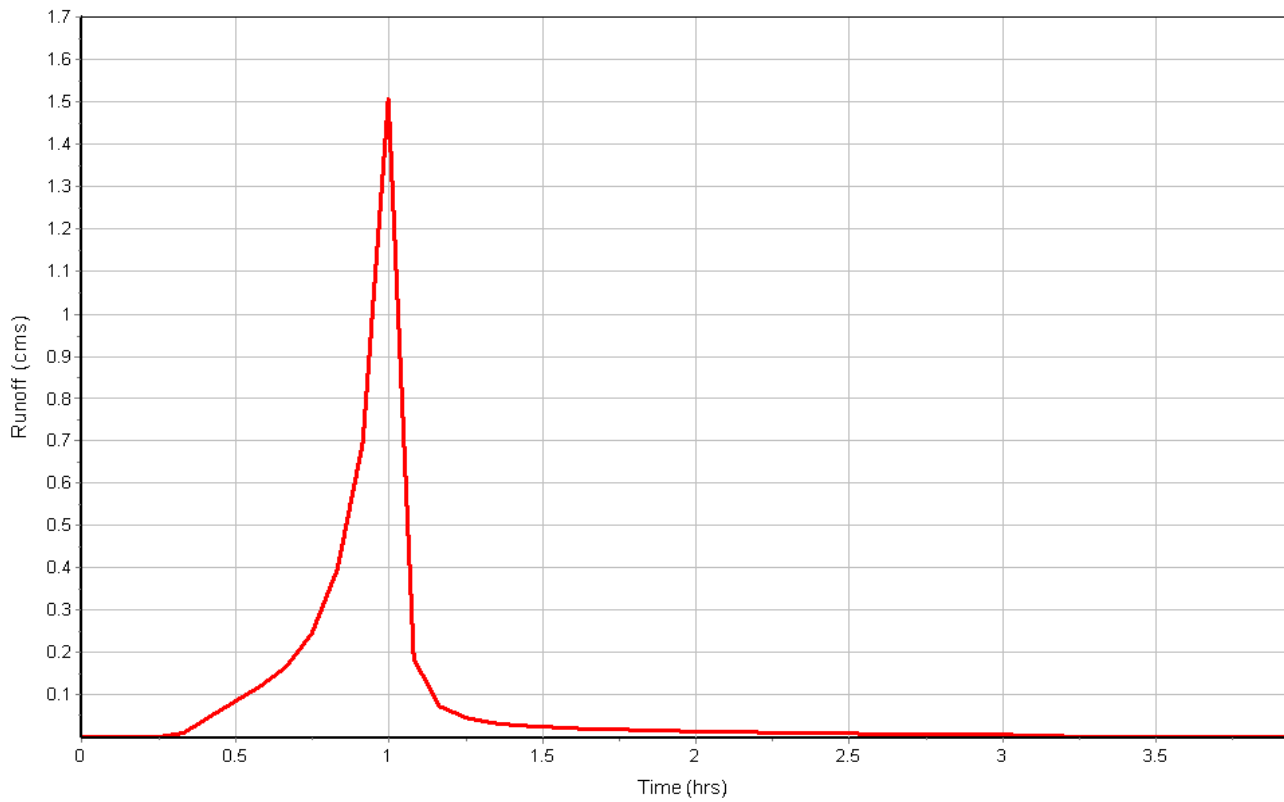


Subbasin : EZG-03

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-04****Input Data**

Area (ha) ..... 8.77  
 Impervious Area (%) ..... 33.00  
 Weighted Curve Number ..... 93.98  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 16.7900  
 Equivalent Width (m) ..... 290.46  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	6.47	-	93.98
Composite Area & Weighted CN	6.47		93.98

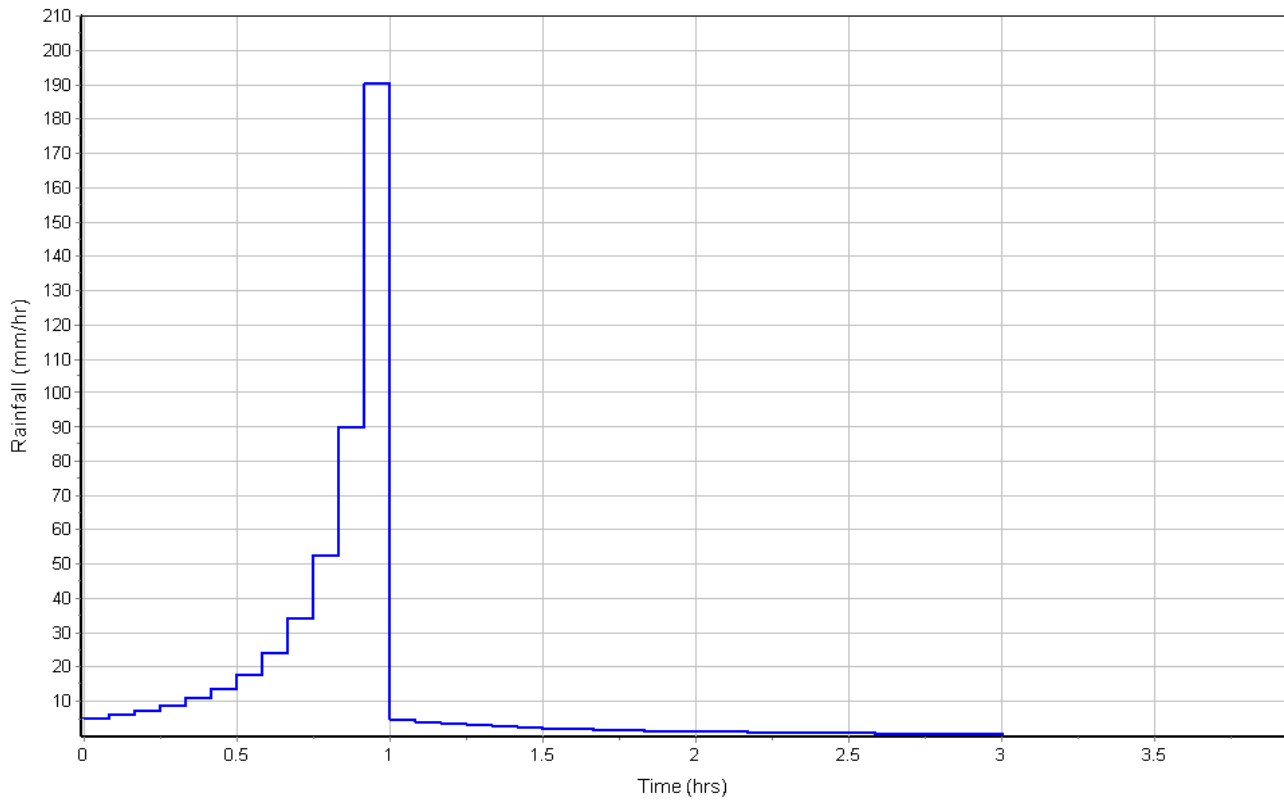
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 7.9070  
 Total Runoff (mm) ..... 30.36  
 Peak Runoff (cms) ..... 2.85  
 Weighted Curve Number ..... 93.98  
 Time of Concentration (days hh:mm:ss) .... 0 00:25:11

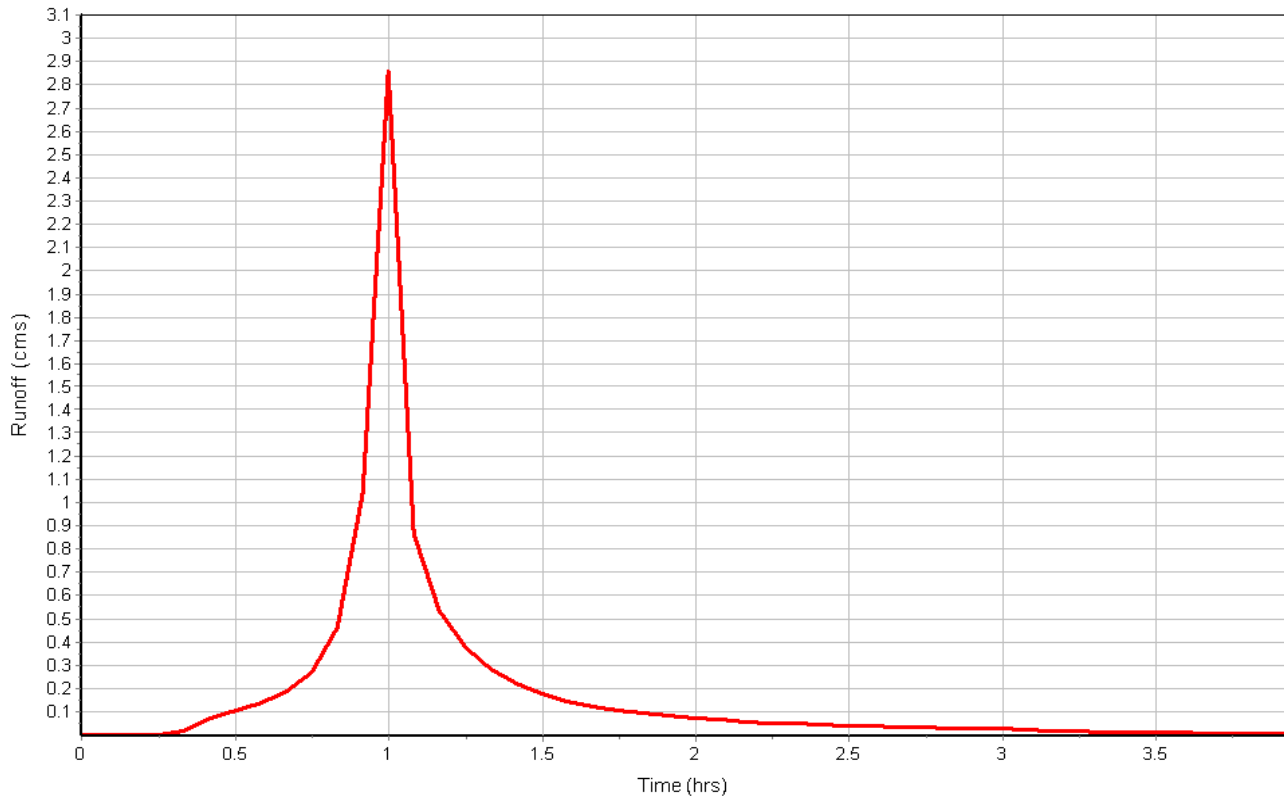


Subbasin : EZG-04

Rainfall Intensity Graph



Runoff Hydrograph





**Subbasin : EZG-05****Input Data**

Area (ha) ..... 11.24  
 Impervious Area (%) ..... 52.00  
 Weighted Curve Number ..... 92.53  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 15.9100  
 Equivalent Width (m) ..... 261.17  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	11.42	-	92.53
Composite Area & Weighted CN	11.42		92.53

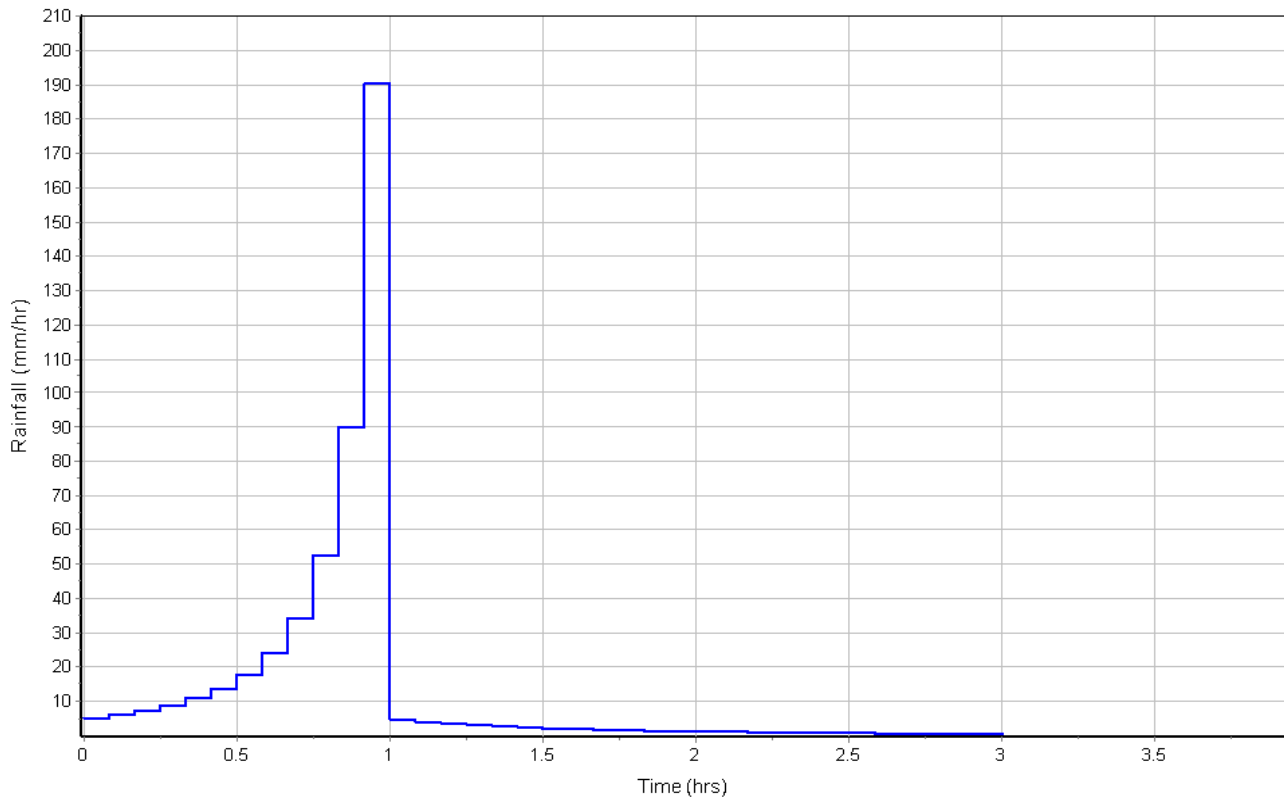
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 6.6630  
 Total Runoff (mm) ..... 32.36  
 Peak Runoff (cms) ..... 4.08  
 Weighted Curve Number ..... 92.53  
 Time of Concentration (days hh:mm:ss) .... 0 00:25:55

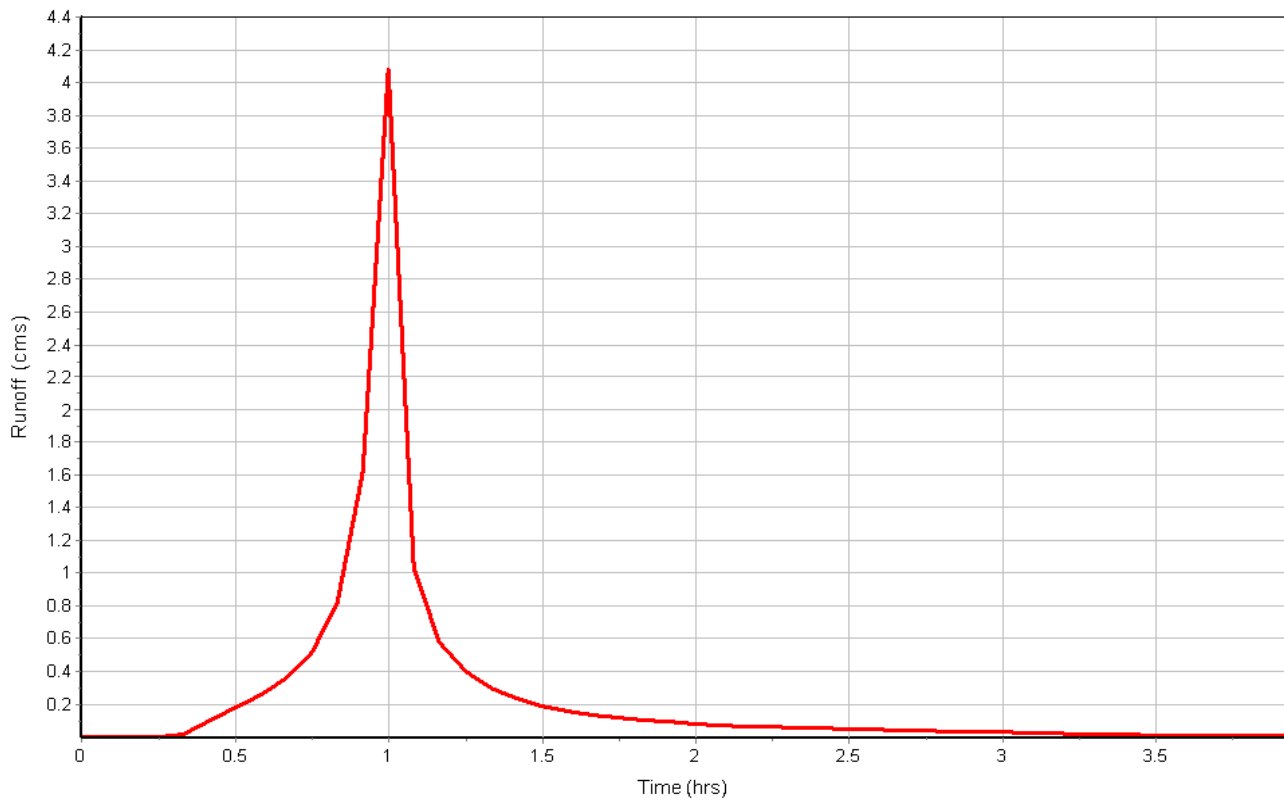


Subbasin : EZG-05

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-06****Input Data**

Area (ha) ..... 9.13  
 Impervious Area (%) ..... 58.00  
 Weighted Curve Number ..... 91.80  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 17.3600  
 Equivalent Width (m) ..... 344.85  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	9.13	-	91.80
Composite Area & Weighted CN	9.13		91.80

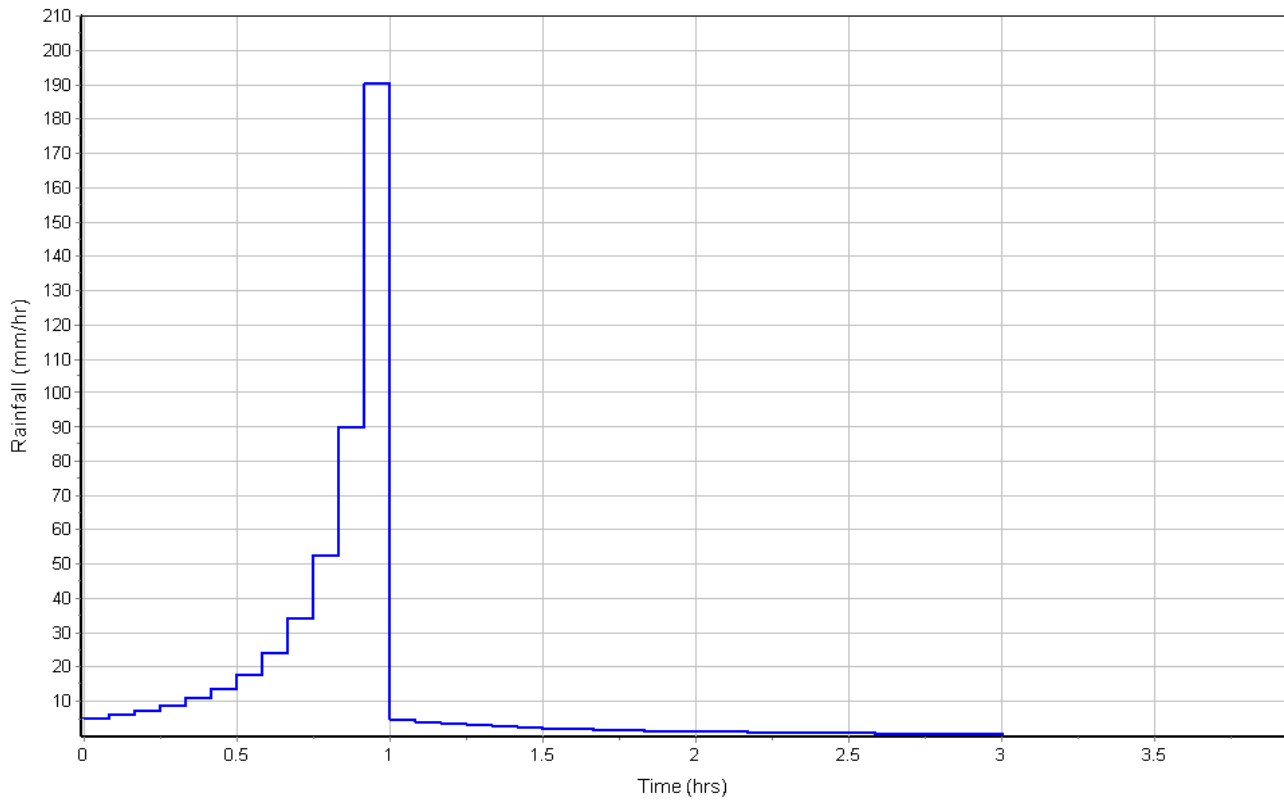
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 6.2360  
 Total Runoff (mm) ..... 33.23  
 Peak Runoff (cms) ..... 3.82  
 Weighted Curve Number ..... 91.80  
 Time of Concentration (days hh:mm:ss) .... 0 00:17:25

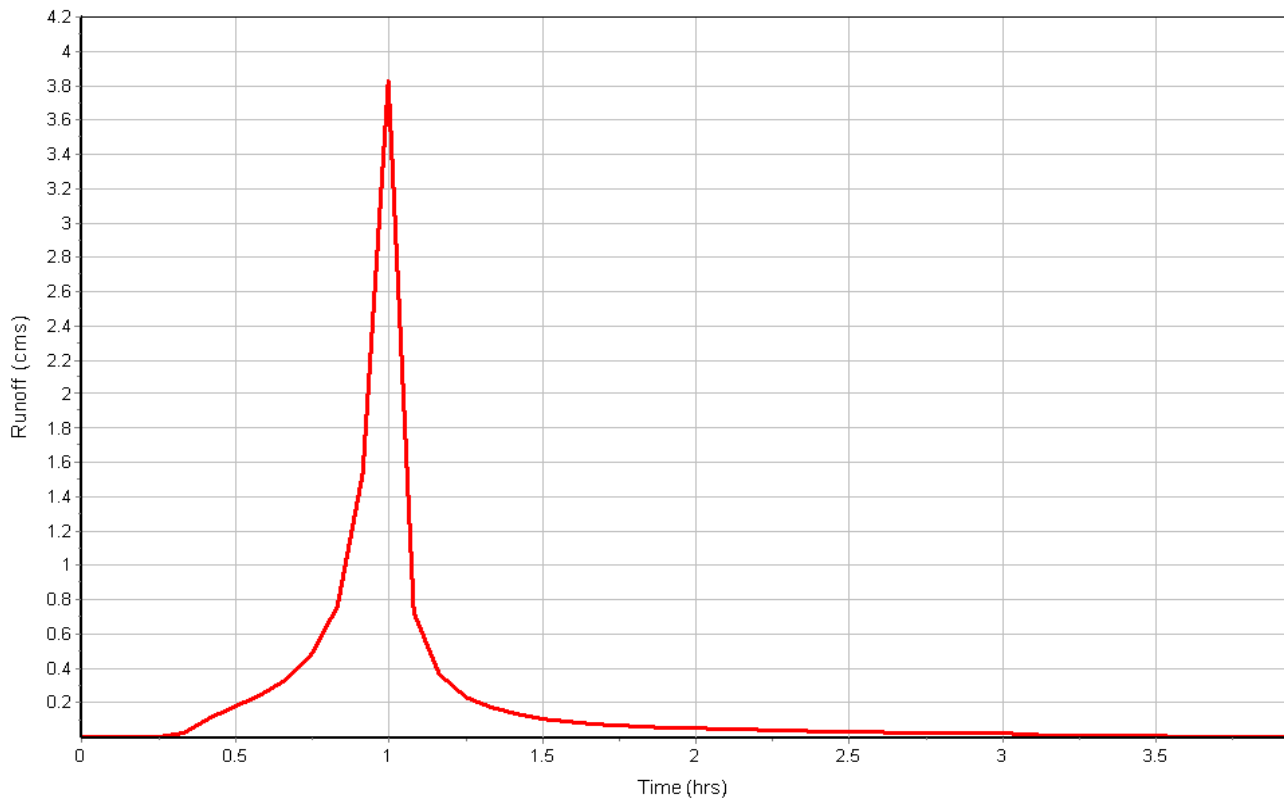


Subbasin : EZG-06

Rainfall Intensity Graph



Runoff Hydrograph





**Subbasin : EZG-07****Input Data**

Area (ha) ..... 4.15  
 Impervious Area (%) ..... 26.00  
 Weighted Curve Number ..... 90.65  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 1.7400  
 Equivalent Width (m) ..... 152.53  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	5.34	-	90.65
Composite Area & Weighted CN	5.34		90.65

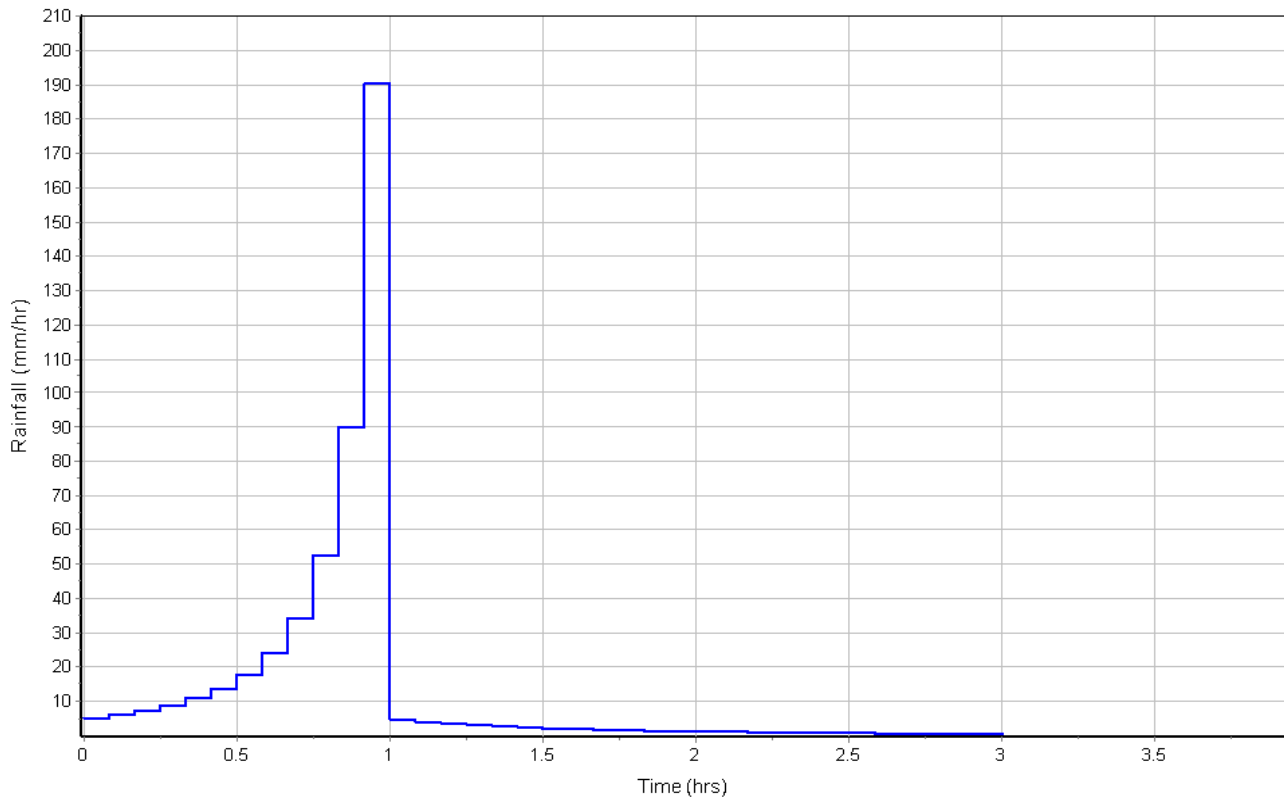
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 12.0440  
 Total Runoff (mm) ..... 24.57  
 Peak Runoff (cms) ..... 0.78  
 Weighted Curve Number ..... 90.65  
 Time of Concentration (days hh:mm:ss) .... 0 00:49:35

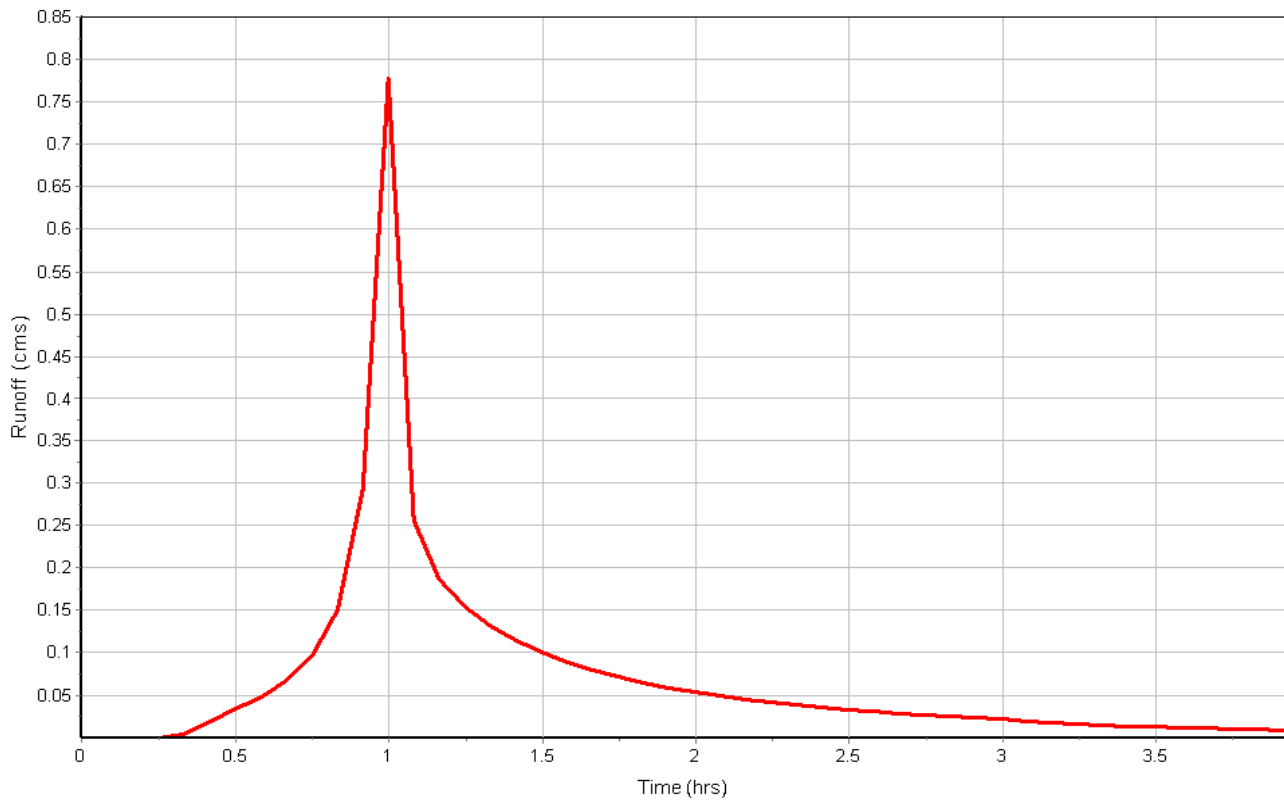


Subbasin : EZG-07

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-08****Input Data**

Area (ha) ..... 11.30  
 Impervious Area (%) ..... 68.00  
 Weighted Curve Number ..... 92.18  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 7.1700  
 Equivalent Width (m) ..... 242.34  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	11.30	-	92.18
Composite Area & Weighted CN	11.30		92.18

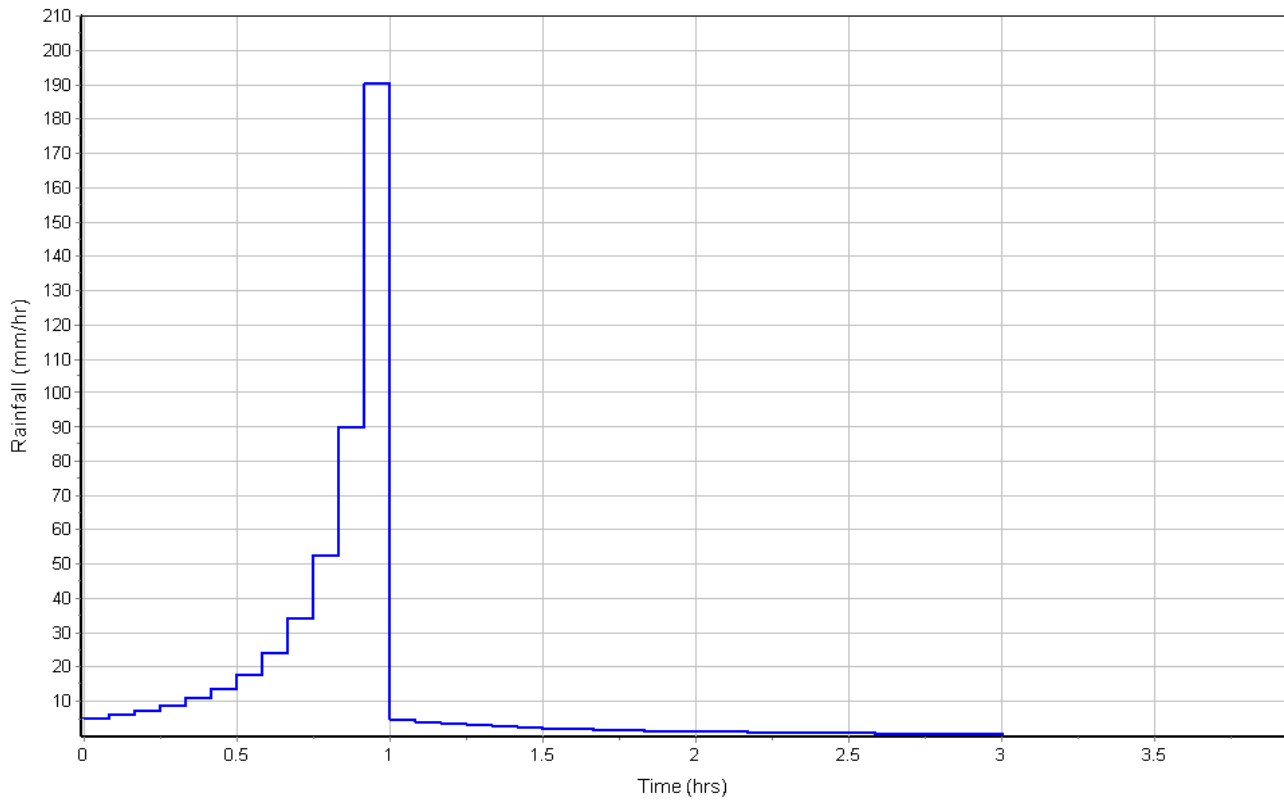
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 4.5920  
 Total Runoff (mm) ..... 34.98  
 Peak Runoff (cms) ..... 4.38  
 Weighted Curve Number ..... 92.18  
 Time of Concentration (days hh:mm:ss) .... 0 00:27:05

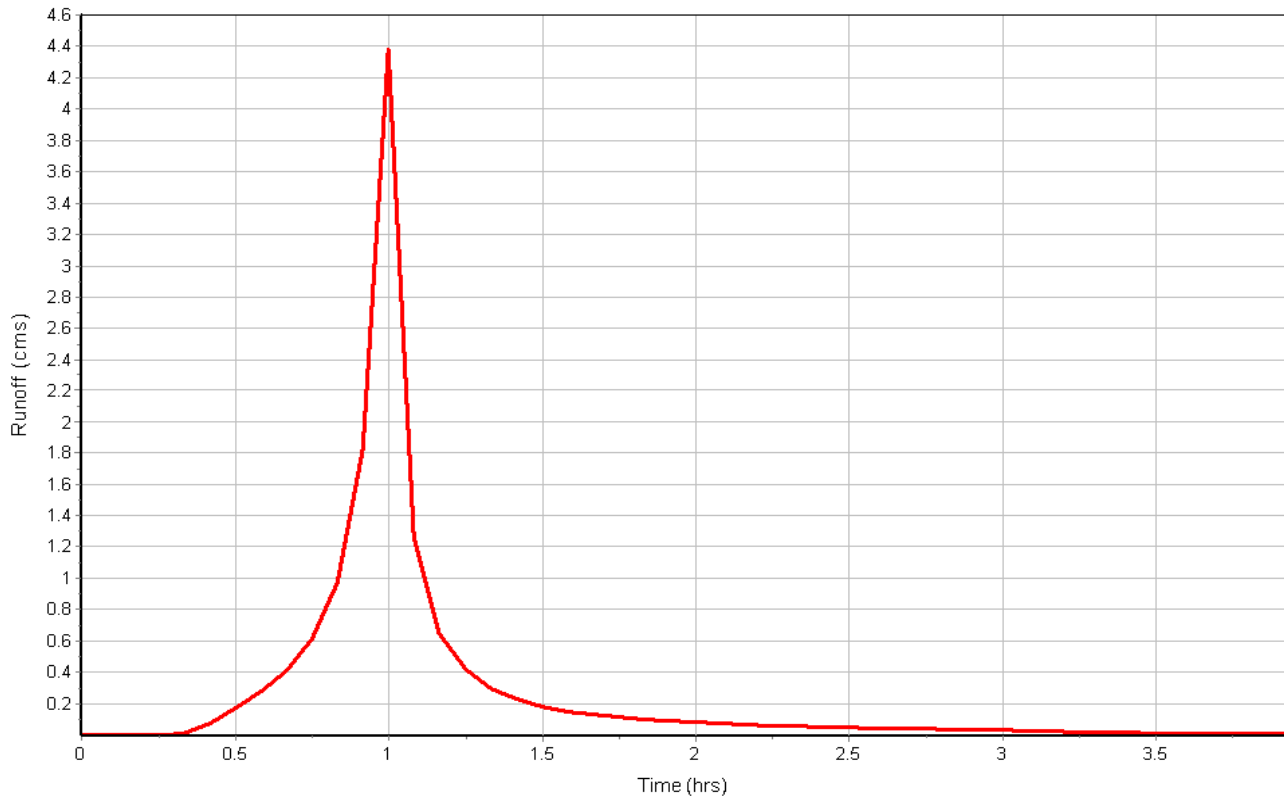


Subbasin : EZG-08

Rainfall Intensity Graph



Runoff Hydrograph





**Subbasin : EZG-09****Input Data**

Area (ha) ..... 6.16  
 Impervious Area (%) ..... 73.00  
 Weighted Curve Number ..... 94.00  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 14.7700  
 Equivalent Width (m) ..... 156.94  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	6.16	-	94.00
Composite Area & Weighted CN	6.16		94.00

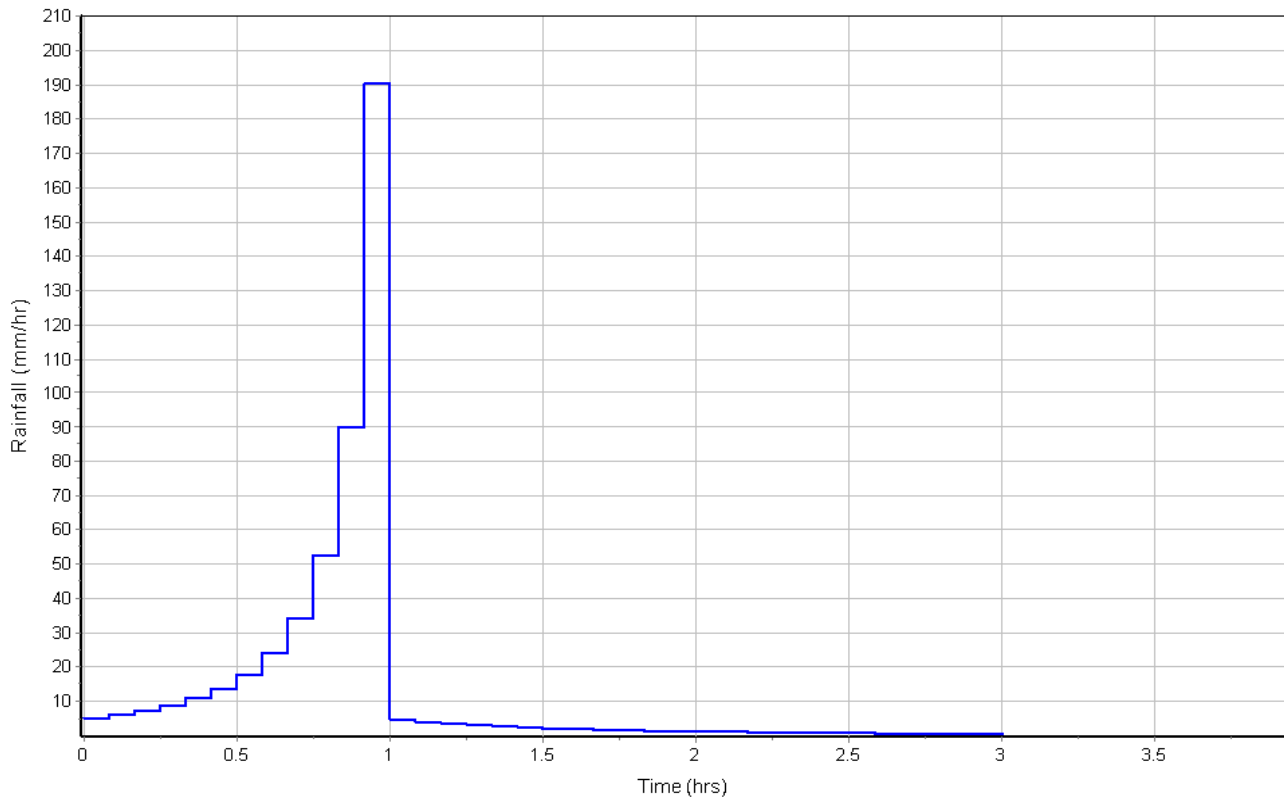
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 3.1780  
 Total Runoff (mm) ..... 36.82  
 Peak Runoff (cms) ..... 2.80  
 Weighted Curve Number ..... 94.00  
 Time of Concentration (days hh:mm:ss) .... 0 00:17:45

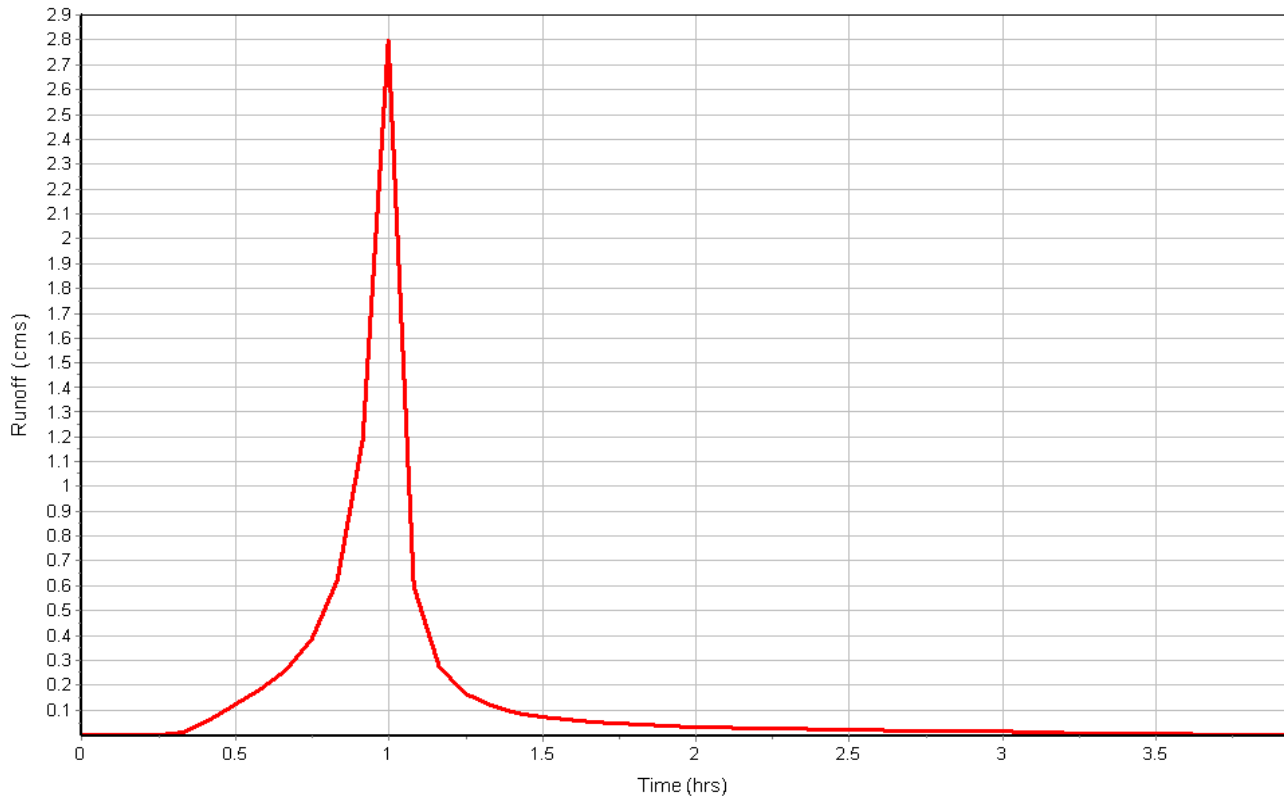


Subbasin : EZG-09

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-10****Input Data**

Area (ha) ..... 22.39  
 Impervious Area (%) ..... 86.00  
 Weighted Curve Number ..... 95.57  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 8.3800  
 Equivalent Width (m) ..... 244.33  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	22.39	-	95.57
Composite Area & Weighted CN	22.39		95.57

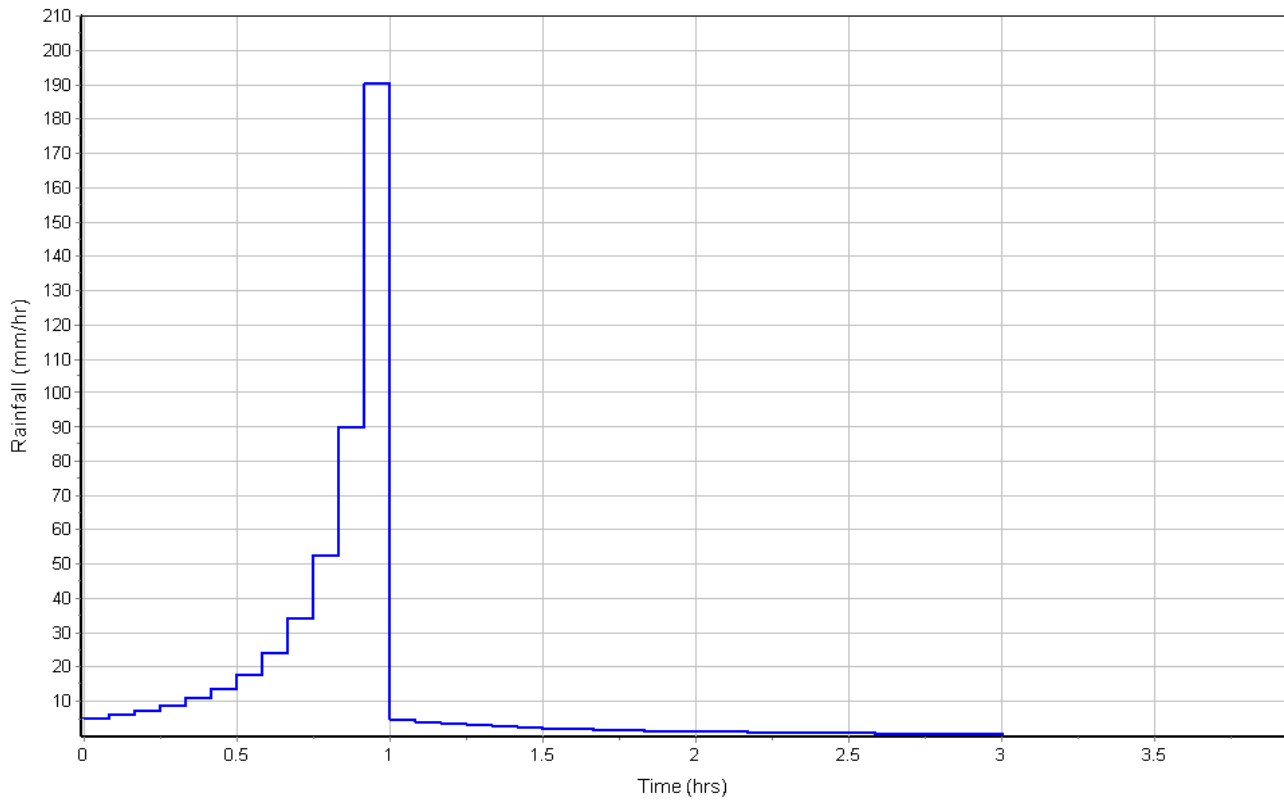
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 1.2940  
 Total Runoff (mm) ..... 38.69  
 Peak Runoff (cms) ..... 8.76  
 Weighted Curve Number ..... 95.57  
 Time of Concentration (days hh:mm:ss) .... 0 00:23:36

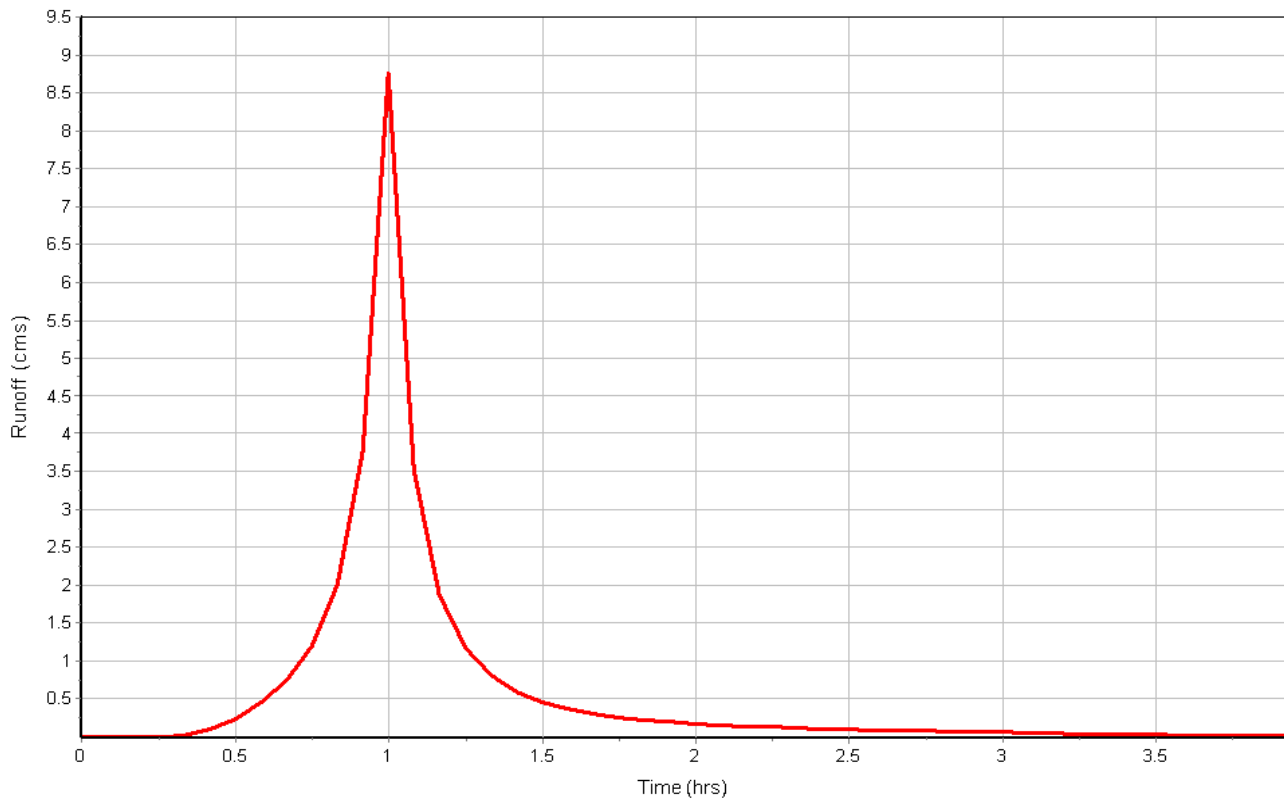


Subbasin : EZG-10

Rainfall Intensity Graph



Runoff Hydrograph





**Subbasin : EZG-11****Input Data**

Area (ha) ..... 8.51  
 Impervious Area (%) ..... 89.00  
 Weighted Curve Number ..... 95.96  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 3.0800  
 Equivalent Width (m) ..... 323.58  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	8.51	-	95.96
Composite Area & Weighted CN	8.51		95.96

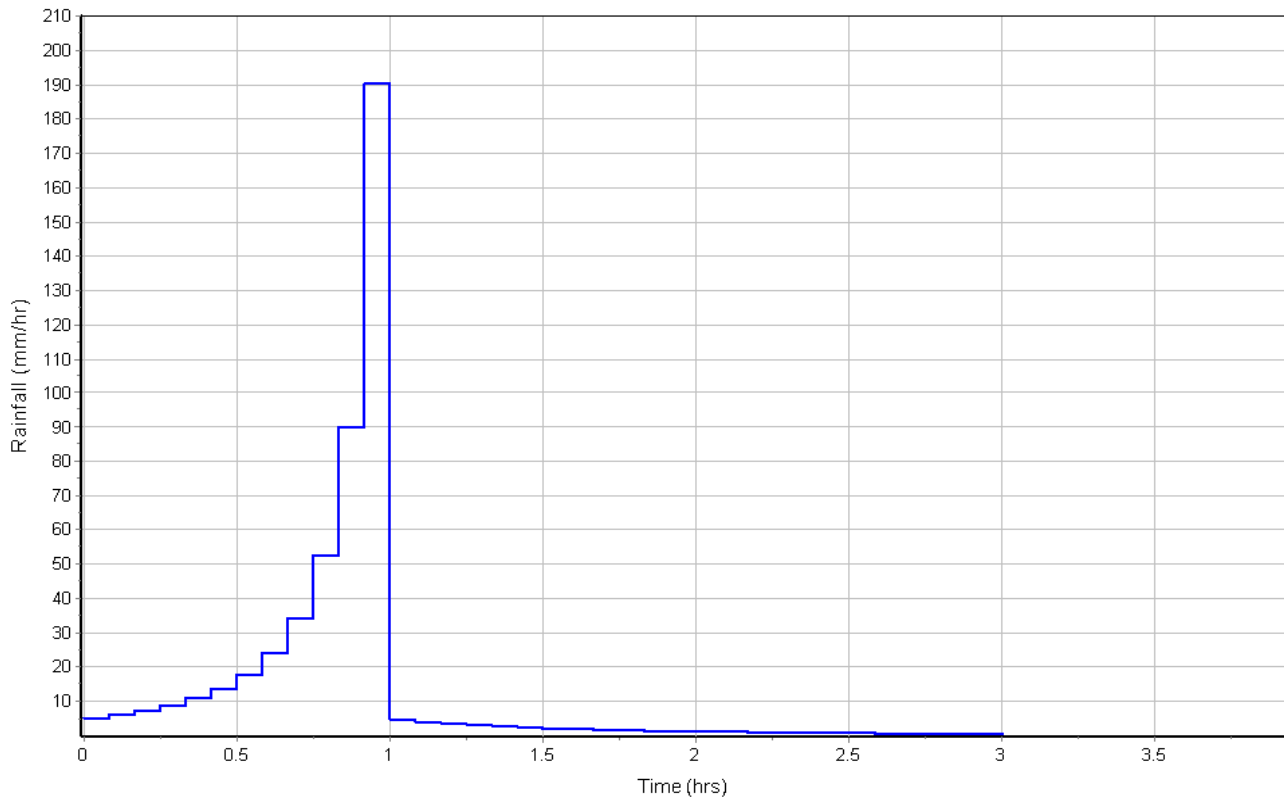
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 0.9420  
 Total Runoff (mm) ..... 39.53  
 Peak Runoff (cms) ..... 3.99  
 Weighted Curve Number ..... 95.96  
 Time of Concentration (days hh:mm:ss) .... 0 00:13:02

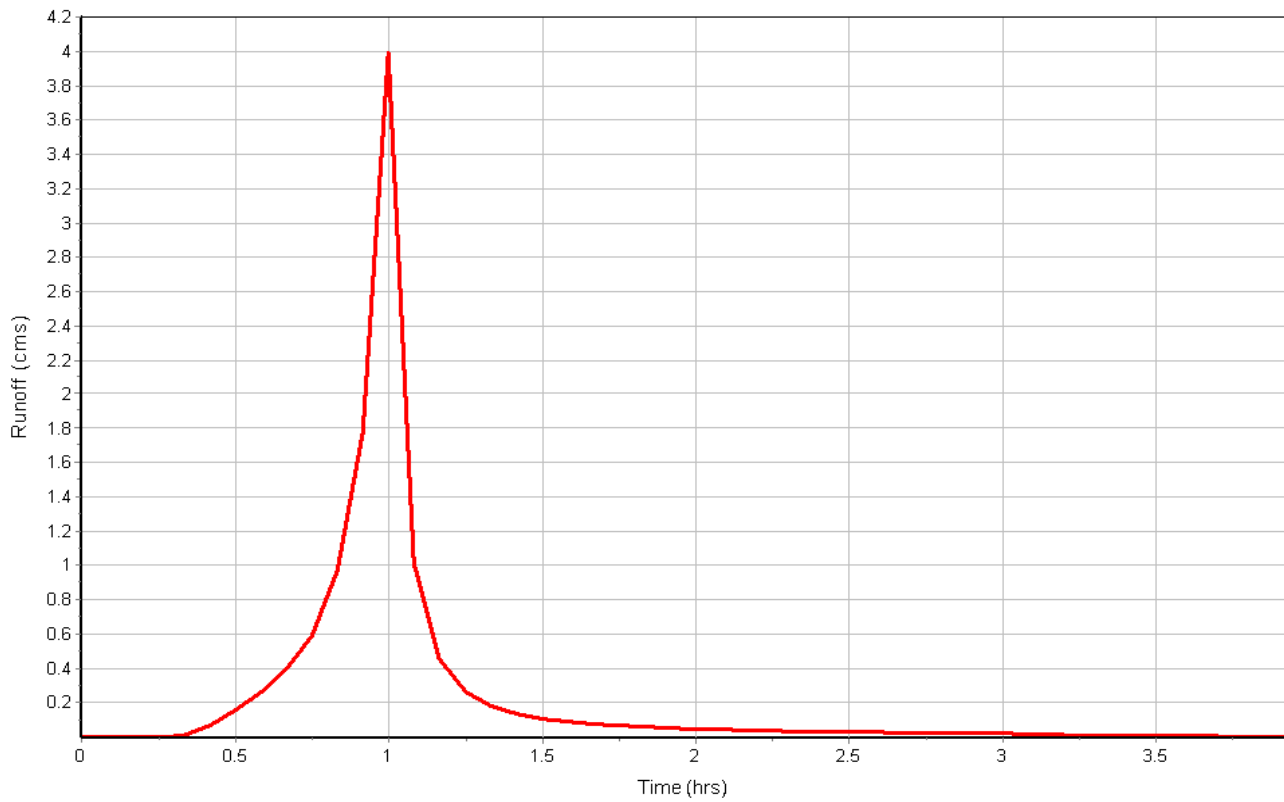


Subbasin : EZG-11

Rainfall Intensity Graph



Runoff Hydrograph







**Subbasin : EZG-12****Input Data**

Area (ha) ..... 20.76  
 Impervious Area (%) ..... 73.00  
 Weighted Curve Number ..... 93.00  
 Conductivity (mm/hr) ..... 0.1500  
 Drying Time (days) ..... 7.00  
 Average Slope (%) ..... 10.6000  
 Equivalent Width (m) ..... 511.93  
 Impervious Area  
   *Manning's Roughness* ..... 0.0100  
 Pervious Area  
   *Manning's Roughness* ..... 0.1000  
 Curb & Gutter Length (m) ..... 0.00  
 Rain Gage ID ..... Rain Gage-01

**Composite Curve Number**

Soil/Surface Description	Area (ha)	Soil Group	Curve Number
-	20.76	-	93.00
Composite Area & Weighted CN	20.76		93.00

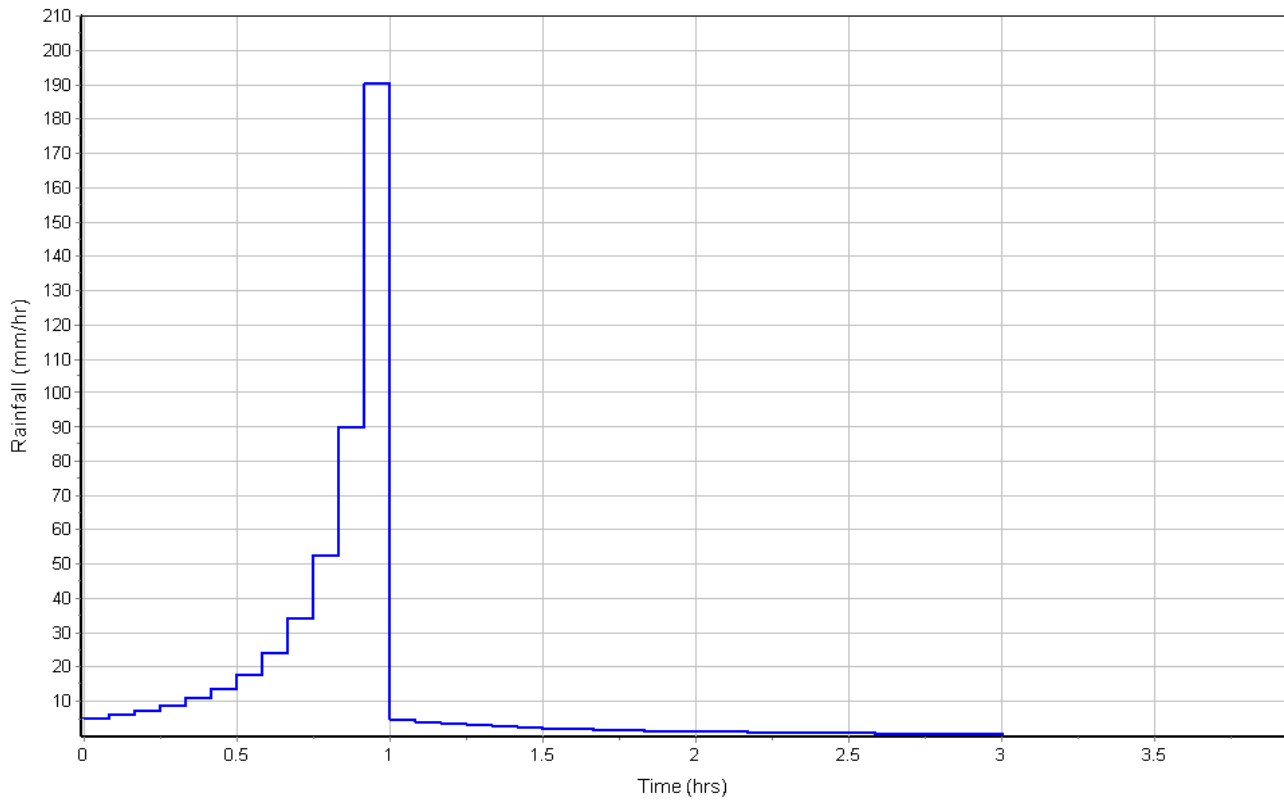
**Subbasin Runoff Results**

Total Rainfall (mm) ..... 42.24  
 Total Runon (mm) ..... 0.00  
 Total Evaporation (mm) ..... 0.0000  
 Total Infiltration (mm) ..... 3.5720  
 Total Runoff (mm) ..... 36.37  
 Peak Runoff (cms) ..... 9.03  
 Weighted Curve Number ..... 93.00  
 Time of Concentration (days hh:mm:ss) .... 0 00:20:00

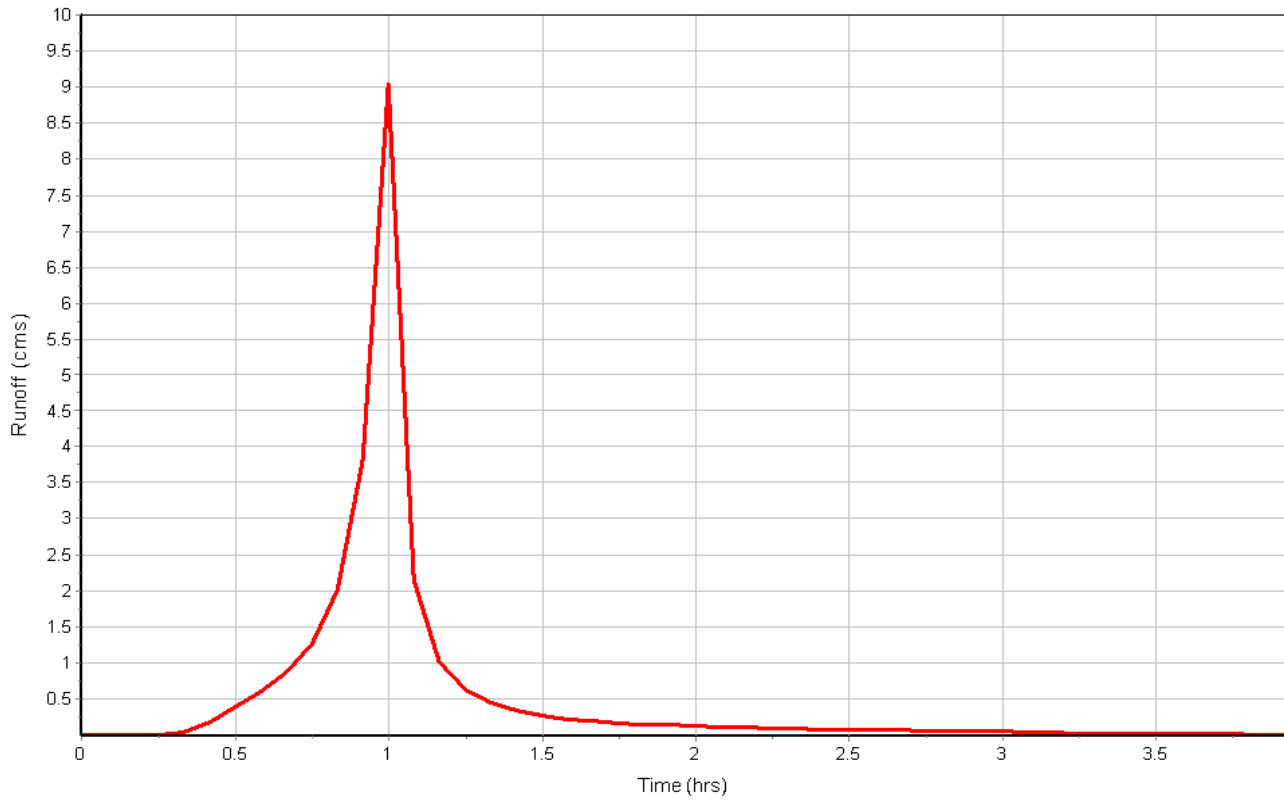


Subbasin : EZG-12

Rainfall Intensity Graph



Runoff Hydrograph





## Junction Input

SN Element ID	Invert Elevation (m)	Ground/Rim (Max) Elevation (m)	Ground/Rim (Max) Offset (m)	Initial Water Elevation (m)	Initial Water Depth (m)	Surcharge Elevation (m)	Surcharge Depth (m)	Ponded Area (m <sup>2</sup> )	Minimum Pipe Cover (mm)
1 Gebietsauslaß Schloßgarten	239.30	242.30	3.00	239.30	0.00	248.30	6.00	100.00	0.00
2 Jun-15	263.15	266.15	3.00	263.15	0.00	272.15	6.00	100.00	0.00
3 Jun-16	315.50	321.50	6.00	315.50	0.00	327.50	6.00	100.00	0.00
4 Jun-17	289.70	295.70	6.00	289.70	0.00	301.70	6.00	100.00	0.00
5 Out-04	238.00	238.00	0.00	238.00	0.00	244.00	6.00	100.00	0.00
6 RWS-04	279.87	281.50	1.63	279.87	0.00	287.50	6.00	100.00	0.00
7 RWS-05	286.46	288.00	1.54	286.46	0.00	294.00	6.00	100.00	0.00
8 RWS-06	263.74	265.00	1.26	263.74	0.00	271.00	6.00	100.00	0.00
9 RWS-07	341.89	346.00	4.11	341.89	0.00	352.00	6.00	100.00	0.00
10 RWS-08	383.73	385.00	1.27	383.73	0.00	391.00	6.00	100.00	0.00
11 RWS-09	346.46	348.00	1.54	346.46	0.00	354.00	6.00	100.00	0.00
12 RWS-10	286.93	289.50	2.57	286.93	0.00	295.50	6.00	100.00	0.00
13 RWS-12	247.66	250.00	2.34	247.66	0.00	256.00	6.00	100.00	0.00
14 RWS-13	248.04	251.04	3.00	248.04	0.00	257.04	6.00	100.00	0.00

## Junction Results

SN Element ID	Peak Inflow	Peak Lateral Inflow	Max HGL Elevation Attained	Max HGL Depth Attained	Max Surcharge Depth Attained	Min Freeboard Attained	Average HGL Elevation Attained	Average HGL Depth Attained	Time of Max HGL Occurrence	Time of Peak Flooding Occurrence	Total Flooded Volume	Total Time Flooded
	(cms)	(cms)	(m)	(m)	(m)	(m)	(m)	(m)	(days hh:mm)	(days hh:mm)	(ha-mm)	(min)
1 Gebietsauslaß Schloßgarten	9.74	0.00	240.73	1.43	0.00	2.27	239.67	0.37	0 01:10	0 00:00	0.00	0.00
2 Jun-15	19.63	10.93	265.21	2.06	0.00	1.54	264.28	1.13	0 01:06	0 00:00	0.00	0.00
3 Jun-16	8.65	0.78	316.29	0.79	0.00	5.21	315.72	0.22	0 01:06	0 00:00	0.00	0.00
4 Jun-17	0.00	0.00	289.70	0.00	0.00	6.00	289.70	0.00	0 00:00	0 00:00	0.00	0.00
5 Out-04	24.78	0.00	240.09	2.09	0.00	1.11	238.62	0.62	0 01:07	0 00:00	0.00	0.00
6 RWS-04	1.51	1.51	280.13	0.26	0.00	3.34	279.94	0.07	0 01:05	0 00:00	0.00	0.00
7 RWS-05	2.85	2.85	286.89	0.43	0.00	1.11	286.58	0.12	0 01:05	0 00:00	0.00	0.00
8 RWS-06	9.46	4.08	265.27	1.53	0.00	4.07	264.34	0.60	0 01:06	0 00:00	0.00	0.00
9 RWS-07	3.82	3.82	342.25	0.36	0.00	5.24	341.98	0.09	0 01:05	0 00:00	0.00	0.00
10 RWS-08	0.00	0.00	383.73	0.00	0.00	1.27	383.73	0.00	0 00:00	0 00:00	0.00	0.00
11 RWS-09	4.38	4.38	346.76	0.30	0.00	3.30	346.54	0.08	0 01:05	0 00:00	0.00	0.00
12 RWS-10	2.80	2.80	287.23	0.30	0.00	5.30	287.01	0.08	0 01:05	0 00:00	0.00	0.00
13 RWS-12	8.17	0.00	248.35	0.69	0.00	2.51	247.73	0.07	0 01:07	0 00:00	0.00	0.00
14 RWS-13	28.38	21.78	249.94	1.90	0.00	1.80	248.47	0.43	0 01:06	0 00:00	0.00	0.00

## Pipe Input

SN	Element ID	Length (m)	Inlet Invert Elevation (m)	Inlet Invert Offset (m)	Outlet Invert Elevation (m)	Outlet Invert Offset (m)	Total Drop (m)	Average Pipe Slope (%)	Pipe Shape	Pipe Diameter or Height (mm)	Pipe Width (mm)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow Gate	Flap	No. of Barrels
1	BE 01	218.60	248.04	0.00	238.00	0.00	10.04	4.5900	CIRCULAR	1800.000	1800.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
2	BE 2	745.24	263.95	0.80	238.00	0.00	25.95	3.4800	Egg	1500.000	1000.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
3	Link-01	420.31	286.93	0.00	263.74	0.00	23.19	5.5200	CIRCULAR	5600.000	5600.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
4	Link-02	242.85	286.46	0.00	263.74	0.00	22.72	9.3600	CIRCULAR	1200.000	1200.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
5	Link-03	31.27	263.74	0.00	263.15	0.00	0.59	1.8900	CIRCULAR	3600.000	3600.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
6	Link-06	404.14	279.87	0.00	263.15	0.00	16.72	4.1400	CIRCULAR	3600.000	3600.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
7	Link-07	580.72	341.89	0.00	315.50	0.00	26.39	4.5400	CIRCULAR	5600.000	5600.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
8	Link-08	314.59	248.54	0.50	247.66	0.00	0.88	0.2800	CIRCULAR	3200.000	3200.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
9	Link-09	848.86	315.50	0.00	248.04	0.00	67.46	7.9500	CIRCULAR	1200.000	1200.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
10	Link-10	135.35	346.46	0.00	315.50	0.00	30.96	22.8700	CIRCULAR	3600.000	3600.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
11	Link-17	420.45	264.15	1.00	239.30	0.00	24.85	5.9100	CIRCULAR	1500.000	1500.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
12	Link-20	63.24	247.66	0.00	239.30	0.00	8.36	13.2200	CIRCULAR	1500.000	1500.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
13	Link-39	17.72	239.30	0.00	237.00	0.00	2.30	12.9800	CIRCULAR	1500.000	1500.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1
14	Link-42	60.50	238.00	0.00	237.00	0.00	1.00	1.6500	CIRCULAR	3200.000	3200.000	0.0150	0.5000	0.5000	0.0000	0.00	No	1



## Pipe Results

SN Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
	(cms)	(days hh:mm)	(cms)		(m/sec)	(min)	(m)		(min)		
1 BE 01	18.92	0 01:04	21.35	0.89	7.54	0.48	1.78	1.00	2.00	1.77	SURCHARGED
2 BE 2	6.14	0 01:06	6.26	0.98	5.60	2.22	1.35	0.92	0.00	1.51	Calculated
3 Link-01	2.65	0 01:05	482.76	0.01	1.05	6.67	0.88	0.16	0.00	0.19	Calculated
4 Link-02	2.81	0 01:05	10.34	0.27	3.44	1.18	0.81	0.68	0.00	0.51	Calculated
5 Link-03	8.24	0 01:06	86.90	0.09	1.63	0.32	1.73	0.50	0.00	0.16	Calculated
6 Link-06	1.41	0 01:05	128.68	0.01	0.51	13.21	1.13	0.32	0.00	0.05	Calculated
7 Link-07	3.59	0 01:05	438.13	0.01	2.83	3.42	0.55	0.10	0.00	0.93	Calculated
8 Link-08	8.17	0 01:06	24.44	0.33	3.71	1.41	0.87	0.32	0.00	0.36	Calculated
9 Link-09	7.36	0 01:06	9.53	0.77	7.33	1.93	0.97	0.83	0.00	1.89	Calculated
10 Link-10	4.35	0 01:05	302.58	0.01	4.82	0.47	0.52	0.15	0.00	1.83	Calculated
11 Link-17	12.38	0 01:06	14.90	0.83	7.71	0.91	1.25	0.85	0.00	1.57	Calculated
12 Link-20	7.83	0 01:07	22.28	0.35	5.66	0.19	0.99	0.73	0.00	0.16	Calculated
13 Link-39	9.75	0 01:10	22.08	0.44	7.36	0.04	1.06	0.71	0.00	2.46	Calculated
14 Link-42	24.64	0 01:07	59.41	0.41	5.43	0.19	1.75	0.55	0.00	1.59	Calculated

## Storage Nodes

### Storage Node : VolEinstau

#### Input Data

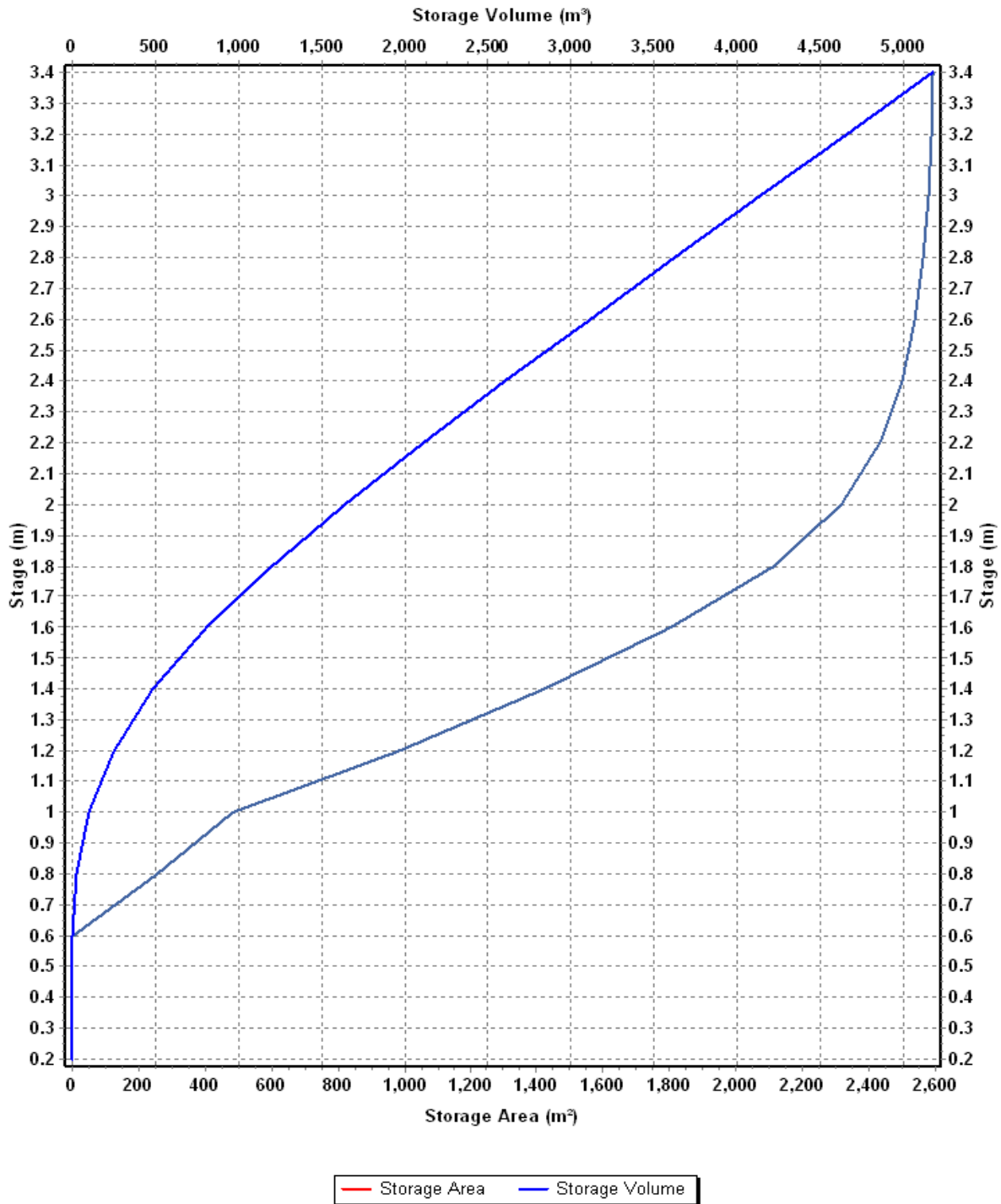
Invert Elevation (m) .....	239.30
Max (Rim) Elevation (m) .....	242.80
Max (Rim) Offset (m) .....	3.50
Initial Water Elevation (m) .....	239.30
Initial Water Depth (m) .....	0.00
Ponded Area (m <sup>2</sup> ) .....	0.00
Evaporation Loss .....	0.00

#### Storage Area Volume Curves

Storage Curve : RR NotEW

Stage	Storage Area	Storage Volume
(m)	(m <sup>2</sup> )	(m <sup>3</sup> )
0.2	0.96	0.096
0.4	0.96	0.29
0.6	1.77	0.56
0.8	254.88	26.22
1	486.71	100.38
1.2	980.79	247.13
1.4	1420.69	487.28
1.6	1803.36	809.69
1.8	2111.08	1201.13
2	2315.9	1643.83
2.2	2433.45	2118.77
2.4	2499.69	2612.08
2.6	2537.95	3115.84
2.8	2562.86	3625.92
3	2578.81	4140.09
3.2	2587.6	4656.73
3.4	2591.18	5174.61

### Storage Area Volume Curves



**Storage Node : VolEinstau (continued)****Outflow Weirs**

SN Element ID	Weir Type	Flap Gate	Crest Elevation (m)	Crest Offset (m)	Length (m)	Weir Total Height (m)	Discharge Coefficient
1 Weir-01	Rectangular	No	242.00	2.70	25.00	1.00	1.84

**Output Summary Results**

Peak Inflow (cms) .....	20.08
Peak Lateral Inflow (cms) .....	0.00
Peak Outflow (cms) .....	9.74
Peak Exfiltration Flow Rate (cmm) .....	0.00
Max HGL Elevation Attained (m) .....	242.07
Max HGL Depth Attained (m) .....	2.77
Average HGL Elevation Attained (m) .....	239.95
Average HGL Depth Attained (m) .....	0.65
Time of Max HGL Occurrence (days hh:mm) .....	0 01:10
Total Exfiltration Volume (1000-m³) .....	0.000
Total Flooded Volume (ha-mm) .....	0
Total Time Flooded (min) .....	0
Total Retention Time (sec) .....	0.00