

LAMPIRAN 1
DATA CURAH HUJAN HARIAN MAKSIMUM TAHUNAN

Kota Depok
Stasiun : Pancoran Mas
Tahun Pengamatan : 1991 s/d 2007

Tahun	Curah Hujan Harian Max Tiap Bulan (CHH max) (mm)												CHH max Tiap Tahun = R ₂₄ (mm)
	Jan	Feb	Mar	Apr	Mei	Jun	Jul	Agus	Sept	Okt	Nov	Des	
1991	72	77	72	86	86	25	12	0	42	63	77	58	86
1992	57	66	53	39	78	15	42	28	38	76	82	84	84
1993	66	38	47	64	42	69	12	30	41	63	94	0	94
1994	75	75	37	71	100	25	2	15	10	60	72	35	100
1995	0	42	61	95	49	31	18	2	108	0	92	30	108
1996	67	74	64	70	31	23	51	99	75	98	66	34	99
1997	64	40	48	76	48	27	21	27	2	0	52	39	76
1998	126	57	59	105	40	60	76	13	40	43	3	32	126
1999	30	53	24	55	66	52	45	42	68	82	48	48	82
2000	82	25	13	22	37	72	27	57	18	54	53	24	82
2001	52	17	99	52	118	41	17	58	58	58	58	58	118
2002	111	117	40	41	8	21	71	6	4	47	42	32	117
2003	36	96	29	52	34	21	0	2	3	71	122	16	122
2004	17	72	43	105	58	5	88	1	8	37	78	57	105
2005	88	51	55	21	83	76	67	75	4	42	89	9	89
2006	92	81	21	21	21	9	33	0	0	91	88	77	92
2007	144	132	82	62	44	55	46	9	55	51	204	105	204

Sumber : Dinas PU Bidang PSDA, Kota Depok dan BMG Jakarta

LAMPIRAN 2

PERHITUNGAN KURVA IDF

CURAH HUJAN MAKSIMUM TAHUNAN

No.	Tahun	CHH Maks
1	1991	86
2	1992	84
3	1993	94
4	1994	100
5	1995	108
6	1996	99
7	1997	76
8	1998	126
9	1999	82
10	2000	82
11	2001	118
12	2002	117
13	2003	122
14	2004	105
15	2005	89
16	2006	92
17	2007	204

Jumlah Data, $n = 17$

$$\begin{aligned}\sigma_x &= 29.749 \\ \sigma_n &= 1.0411 \quad \text{diperoleh dari tabel a} \\ Y_n &= 0.5181 \quad \text{diperoleh dari tabel b} \\ \sigma_x/\sigma_n &= 28.575 \\ X_T &= 104.941 + 28.575 Y_T - 14.805 \\ X_T &= 90.136 + 28.575 Y_T\end{aligned}$$

Perhitungan analisa frekuensi dengan metode Gumbel

No.	x_i	x	$x_i - x$	$(x_i - x)^2$
1	204	104.94	99.06	9812.65
2	126	104.94	21.06	443.47
3	122	104.94	17.06	291.00
4	118	104.94	13.06	170.53
5	117	104.94	12.06	145.42
6	108	104.94	3.06	9.36
7	105	104.94	0.06	0.003
8	100	104.94	-4.94	24.42
9	99	104.94	-5.94	35.30
10	94	104.94	-10.94	119.71
11	92	104.94	-12.94	167.47
12	89	104.94	-15.94	254.12
13	86	104.94	-18.94	358.77
14	84	104.94	-20.94	438.53
15	82	104.94	-22.94	526.30
16	82	104.94	-22.94	526.30
17	76	104.94	-28.94	837.59
Jumlah	1784		Jumlah	14160.94
Rata-rata	104.94			

Periode ulang (tahun)	Y_T	X_T
10	2.2502	154.4368
25	3.1985	181.5349
50	3.9019	201.6349

LAMPIRAN 3

TABEL-TABEL

Tabel a
Harga Reduced Standard Deviation (σ_N)

n	0	1	2	3	4	5	6	7	8	9
10	0.9496	0.9676	0.9833	0.9971	1.0095	1.0206	1.0316	<u>1.0411</u>	1.0493	1.0565
20	1.0628	1.0696	1.0754	1.0811	1.0864	1.0915	1.0961	1.1004	1.1047	1.1086
30	1.1124	1.1159	1.1193	1.1226	1.1255	1.1285	1.1313	1.1339	1.1363	1.1388
40	1.1413	1.1436	1.1458	1.1480	1.1499	1.1519	1.1538	1.1557	1.1574	1.1590
50	1.1607	1.1623	1.1638	1.1658	1.1667	1.1681	1.1696	1.1708	1.1721	1.1734
60	1.1747	1.1759	1.1770	1.1782	1.1793	1.1803	1.1814	1.1824	1.1834	1.1844
70	1.1854	1.1863	1.1873	1.1881	1.1890	1.1898	1.1906	1.1915	1.1923	1.1930
80	1.1938	1.1945	1.1953	1.1959	1.1067	1.1973	1.1980	1.1987	1.1994	1.2001
90	1.2007	1.2013	1.2020	1.2026	1.2032	1.2038	1.2044	1.2049	1.2055	1.2060
100	1.2065									

Sumber: J. Nemec, Engineering Hidrology, Tata Mc. Graw Hill Publishing Company ltd, New Delhi, 1973

Tabel b
Harga Reduced Mean (Y_N)

n	0	1	2	3	4	5	6	7	8	9
10	0.4952	0.4996	0.5035	0.5070	0.5100	0.5128	0.5157	<u>0.5181</u>	0.5202	0.5220
20	0.5236	0.5252	0.5268	0.5283	0.5296	0.5309	0.5320	0.5332	0.5343	0.5353
30	0.5362	0.5371	0.5380	0.5388	0.5396	0.5402	0.5410	0.5418	0.5424	0.5430
40	0.5436	0.5442	0.5448	0.5453	0.5458	0.5463	0.5468	0.5473	0.5473	0.5481
50	0.5485	0.5489	0.5493	0.5497	0.5501	0.5504	0.5508	0.5511	0.5515	0.5518
60	0.5521	0.5524	0.5527	0.5530	0.5533	0.5535	0.5538	0.5540	0.5543	0.5545
70	0.5548	0.5550	0.5552	0.5555	0.5557	0.5559	0.5561	0.5563	0.5565	0.5567
80	0.5569	0.5570	0.5572	0.5574	0.5576	0.5578	0.5580	0.5581	0.5583	0.5585
90	0.5586	0.5587	0.5589	0.5591	0.5592	0.5593	0.5595	0.5596	0.5598	0.5599
100	0.5600									

Sumber: J. Nemec, Engineering Hidrology, Tata Mc. Graw Hill Publishing Company ltd, New Delhi, 1973

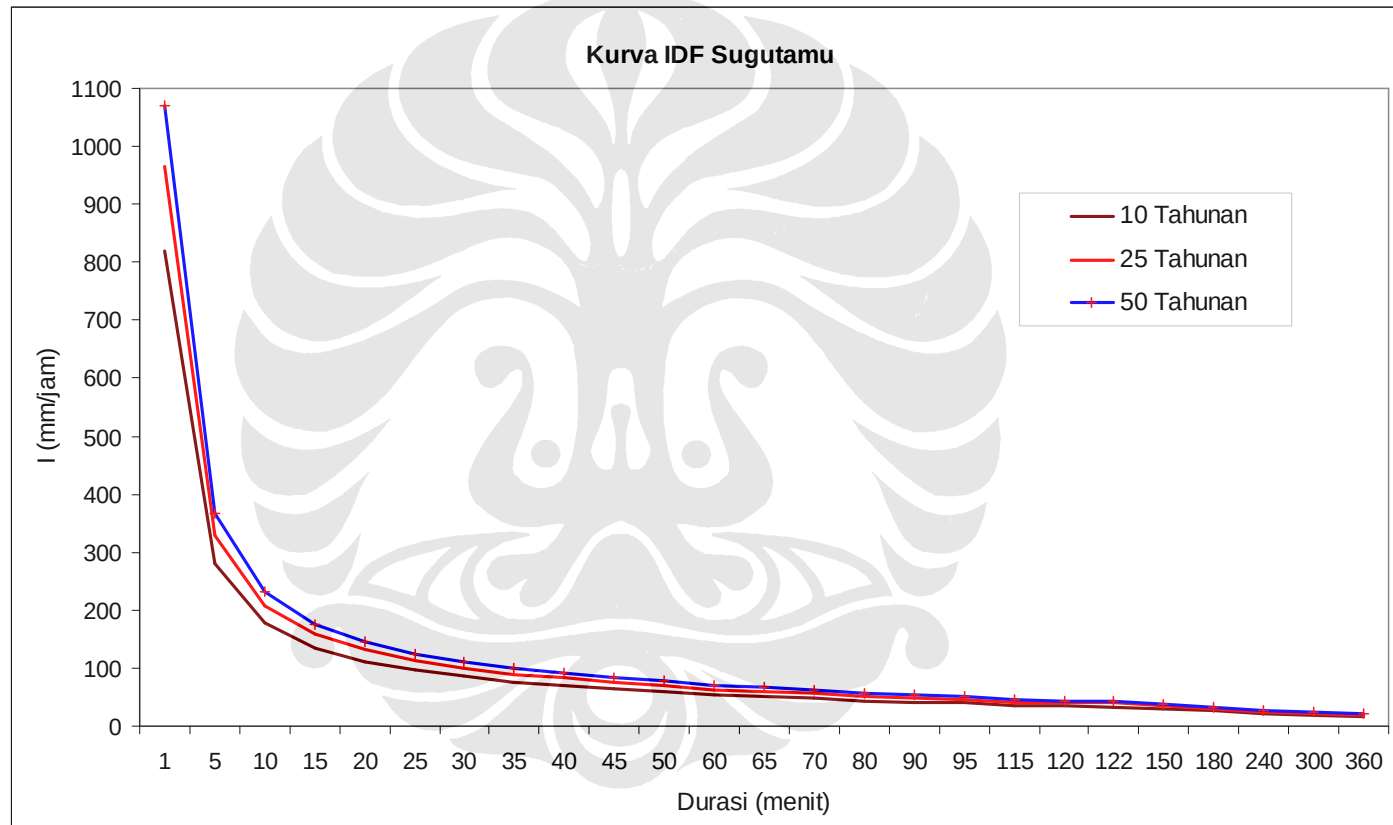
Tabel II.3
Harga Reduced Variated Berdasarkan Periode Ulang (Y_T)

Periode Ulang (tahun)	Reduced Variate (Y_T)
5	1.4999
10	2.2502
25	3.1985
50	3.9019
100	4.6000

LAMPIRAN 4
PERHITUNGAN INTENSITAS CURAH HUJAN

Td (menit)	Td (jam)	(I _{Tr,Td}) Periode Ulang		
		10 Tahun	25 Tahun	50 Tahun
1	0.02	820.568	964.548	1071.345
5	0.08	280.630	329.871	366.395
10	0.17	176.786	207.806	230.814
15	0.25	134.913	158.585	176.144
20	0.33	111.368	130.909	145.404
25	0.42	95.974	112.814	125.305
30	0.50	84.990	99.903	110.964
35	0.58	76.689	90.146	100.127
40	0.67	70.158	82.468	91.599
45	0.75	64.859	76.240	84.681
50	0.83	60.460	71.069	78.937
55	0.92	56.738	66.693	74.078
60	1	53.540	62.935	69.903
65	1.08	50.758	59.664	66.271
70	1.17	48.311	56.788	63.076
75	1.25	46.140	54.235	60.241
80	1.33	44.196	51.951	57.704
85	1.42	42.446	49.894	55.418
90	1.50	40.859	48.028	53.346
95	1.58	39.412	46.328	51.457
100	1.67	38.087	44.770	49.727
105	1.75	36.868	43.338	48.136
110	1.83	35.743	42.014	46.666
115	1.92	34.699	40.787	45.303
120	2	33.728	39.646	44.036
150	2.50	29.066	34.166	37.949
180	3	25.739	30.256	33.606
240	4	21.247	24.976	27.741
300	5	18.311	21.523	23.906
360	6	16.215	19.060	21.170

LAMPIRAN 5
KURVA IDF GABUNGAN



LAMPIRAN 6

TABEL KOEFISIEN ALIRAN

Table 2-2a Runoff curve numbers for urban areas ^{1/}					
Cover description		Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	Average percent impervious area ^{2/}	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ^{3/} :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ^{4/}		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ^{5/}		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

Sumber: USDA, TR-55

Kelompok Tanah	Penjelasan
A	Potensi pengaliran rendah, lapisan tanah dalam, daya infiltrasi dan drainase tinggi
B	Daya infiltrasi sedang, lapisan tanah berbutir berpasir sedang
C	Daya infiltrasi lambat, lapisan tanah dangkal dengan kandungan liat
D	Potensi pengaliran tinggi, daya infiltrasi lambat, terdapat lapisan kedap

Sumber : Hidrologi Untuk Perencanaan Bangunan Air, Imam Subarkah, 1980