# DAFTAR PUSTAKA

Arisma, V. Y., Mulyandari, E., & Teguh, Y. (2022, Januari). Evaluasi Dan Perencanaan Sistem Drainase Perkotaan Studi Kasus Jalan Kapten Mulyani Kabupaten Karanganyar. Jurnal Teknik Sipil Dan Arsitektur, 27, 56-62.

Anonim. 1990. *Petunjuk Desain Drainase Permukaan Jalan*

*No. 008/T/BNKT/1990.* Direktur Jendral Bina Marga Jakarta

Anonim. 1997. *Drainase Perkotaan*. Penerbit: Gunadarma, Jakarta Departemen Pekerjaan Umum, 2012

Defence,Sea Consultants. 2009. Peningkatan Sistem Drainase Perkotaan.BRR dan Royal Netherlands Emmbasy. Aceh.

Harsmar, H. (2011). *Drainalse Terapan*. Gunadarma, Yogyakarta Harsmar. 2002. Drainase Perkotaan. Penerbit: UII Press Hindarko. 2000. *Drainase Perkotaan*, Jakarta Penerbit: Esha

Ibrahim, N. I., Berhitu, P., & Puturuhu, F. (2022, Desember). Evaluasi Sistem Drainase Dalam Upaya Penanggulangan Banjir Di Kelurahan Honipotu Kota Ambon.

Jurnal Geografi, 20, 131-143.

Kusnadi, Kaslim D.Indra, Setiawan B.Sapei, Asep. Pratowo.Erizal.2006 *Perancangan Irigasi dan Drainase Interaktif Berbasis Teknologi Informasi*. Institut Pertanian Bogor (IPB). Bogor.

Lawalata, Greece M. 2013. *Modul Perancangan Drainase Jalan.*

Kementrian Pekerjaan Umum dan badan litbang Pusat penelitian dan pengembangan jalan dan jembatan.

Machairiyah. 2007. *Analisis Curah Hujan Untuk Pendugaan Debit denganMetode Rasional pada Das Percut Kabupaten Deli Serdang*. Sumatera Utara (USU). Medan

Marsyad, Hardoyo. 2009. *Mekanika Fluida Dasar*. Fakultas Teknik Universitas

Malahayati. Bandar Lampung.

Marsyad, Hardoyo. 2010. *Mekanika Fluida Lanjut*. Fakultas Teknik Universitas Malahayati. Bandar Lampung.

Muhamad, A. (2018). Evaluasi Kinerja Sistem Drainase Perkotaan Di Wilayah Purwokerto. Jurnal Teknik Sipil-UCY, XIII.

Mustofa , R., Fara, Saves, F., & Hudhiyantoro. (2022, Juni). Evaluasi Sistem Drainase Kawasan Peremahan Kepuh Permai Kec.Waru Kab. Sidoarjo. Jurnal Keilmuan Teknik Sipil, 5, 398-407.

Prasetyo, R. D., Cahyo, Y., & Ridwan, A. (2019, Juni). Analisa Perencanaan Sistem Drainase Dalam Upaya Penanggulangan Banjir Di Kecamatan Gandusari Kabupaten Trenggalek. Jurmateks, 2, 132-143.

Peraturan daerah Kota Bandar Lampung Nomor 10 Tahun 2011 tentang

*Tata Ruang Wilayah Tahun 2011 - 2030*

Santikaruni, A. M., Rizal, N. S., & Manggala, A. S. (2023, Januari). Kajian Evaluasi Sistem Drainase Perkotaan. Jurnal Smart Teknologi, 4, 242-255.

**LAMPIRAN**

# Lampiran 1 Koefisien kekasaran manning

**Tabel** Koefisien Kekasaran Manning

|  |  |
| --- | --- |
| Tipe Saluran | Kondi si |
| Baik | Cuku p | Buruk |
| a. Saluran buatan :1. Saluran tanah, lurus beraturan
2. Saluran tanah, digali biasanya
3. Saluran batuan, tidak lurus & tidak beraturan
4. Saluran batuan, lurus beraturan
5. Saluran batuan, vegetasi pada sisinya
6. Dasar tanah, sisi batuan koral
7. Saluran berliku-liku kecepatan rendah

b. Saluran alam :1. Bersih, lurus, tetapi tanpa pasir & tanpa celah
2. Berliku, bersih, tetapi berpasir & berlubang
3. Idem 2, tidak dalam, kurang beraturan.
4. Aliran lambat, banyak tanaman & lubang dalam
5. Tumbuh tinggi & padat

c. Saluran dilapisi :1. Batu kosong tanpa adukan
2. Idem 1, dengan adukan semen
3. Lapisan beton sangat halus
4. Lapisan beton biasa dengan tulangan baja
5. Idem 4, tetapi tulangan kayu
 | 0,020 | 0,023 | 0,025 |
| 0,028 | 0,030 | 0,025 |
| 0,040 | 0,045 | 0,045 |
| 0,030 | 0,035 | 0,035 |
| 0,030 | 0,035 | 0,040 |
| 0,030 | 0,030 | 0,040 |
| 0,025 | 0,028 | 0,030 |
| 0,028 | 0,030 | 0,033 |
| 0,035 | 0,040 | 0,045 |
| 0,045 | 0,050 | 0,065 |
| 0,060 | 0,070 | 0,080 |
| 0,100 | 0,125 | 0,150 |
| 0,030 | 0,033 | 0,035 |
| 0,020 | 0,025 | 0,030 |
| 0,011 | 0,012 | 0,013 |
| 0,014 | 0,014 | 0,015 |
| 0,016 | 0,016 | 0,018 |

**Lampiran 2. Nilai K untuk distribusi Log Pearson III Tabel** nilai k distribusi log pearson III

Sumber : Soewarno.1995

**Lampiran 3. Tabel *Reduce Mean* Yn**

Tabel *Reduce Mean* Yn

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | 0,5181 | 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 | 0,5477 | 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 | 0,5602 | 0,5603 | 0,5604 | 0,5606 | 0,5607 | 0,5608 | 0,5609 | 0,5610 | 0,5611 |

Sumber: Sistem Drainase Perkotaan yang Berkelanjutan, 2004

**Lampiran 4. Tabel *Reduce Standard Deviation* Sn Tabel** *Reduce Standard Deviation* Sn

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | 1,0411 | 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 | 1,1967 | 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 | 1,2069 | 1,2073 | 1,2077 | 1,2081 | 1,2084 | 1,2087 | 1,2090 | 1,2093 | 1,2096 |

Sumber: Sistem Drainase Perkotaan yang Berkelanjutan, 2004

**Lampiran 5. Tabel Nilai *reduced variate* (*Y Tr* ) sebagai fungsi periode ulang Tabel** Nilai *reduced variate* (*Y Tr* ) sebagai fungsi periode ulang

|  |  |  |  |
| --- | --- | --- | --- |
| Periode Ulang Tr (tahun) | *Reduced Variate Ytr* | Periode Ulang, Tr (tahun) | *Reduced Variate Ytr* |
| 2 | 0,3668 | 100 | 4,6012 |
| 5 | 1,5008 | 200 | 5,2969 |
| 10 | 2,5004 | 250 | 5,5206 |
| 20 | 2,9709 | 500 | 6,2149 |
| 25 | 3,1993 | 1000 | 6,9087 |
| 50 | 3,9028 | 5000 | 8,5188 |
| 75 | 4,3117 | 10000 | 9,2121 |

Sumber: Sistem Drainase Perkotaan yang Berkelanjutan, 2004

**Lampiran 6 Nilai kritis distribusi *chi-square***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1** | 2,705543 | **3,841459** | 5,023886 | 6,634897 | 7,879439 |
| **2** | 4,605170 | 5,991465 | 7,377759 | 9,210340 | 10,596635 |
| **3** | 6,251389 | 7,814728 | 9,348404 | 11,344867 | 12,838156 |
| **4** | 7,779440 | 9,487729 | 11,143287 | 13,276704 | 14,860259 |
| **5** | 9,236357 | 11,070498 | 12,832502 | 15,086272 | 16,749602 |
| **6** | 10,644641 | 12,591587 | 14,449375 | 16,811894 | 18,547584 |
| **7** | 12,017037 | 14,067140 | 16,012764 | 18,475307 | 20,277740 |
| **8** | 13,361566 | 15,507313 | 17,534546 | 20,090235 | 21,954955 |
| **9** | 14,683657 | 16,918978 | 19,022768 | 21,665994 | 23,589351 |
| **10** | 15,987179 | 18,307038 | 20,483177 | 23,209251 | 25,188180 |
| **11** | 17,275009 | 19,675138 | 21,920049 | 24,724970 | 26,756849 |
| **12** | 18,549348 | 21,026070 | 23,336664 | 26,216967 | 28,299519 |
| **13** | 19,811929 | 22,362032 | 24,735605 | 27,688250 | 29,819471 |
| **14** | 21,064144 | 23,684791 | 26,118948 | 29,141238 | 31,319350 |
| **15** | 22,307130 | 24,995790 | 27,488393 | 30,577914 | 32,801321 |
| **16** | 23,541829 | 26,296228 | 28,845351 | 31,999927 | 34,267187 |
| **17** | 24,769035 | 27,587112 | 30,191009 | 33,408664 | 35,718466 |
| **18** | 25,989423 | 28,869299 | 31,526378 | 34,805306 | 37,156451 |
| **19** | 27,203571 | 30,143527 | 32,852327 | 36,190869 | 38,582257 |
| **20** | 28,411981 | 31,410433 | 34,169607 | 37,566235 | 39,996846 |
| **21** | 29,615089 | 32,670573 | 35,478876 | 38,932173 | 41,401065 |
| **22** | 30,813282 | 33,924438 | 36,780712 | 40,289360 | 42,795655 |
| **23** | 32,006900 | 35,172462 | 38,075627 | 41,638398 | 44,181275 |
| **24** | 33,196244 | 36,415029 | 39,364077 | 42,979820 | 45,558512 |
| **25** | 34,381587 | 37,652484 | 40,646469 | 44,314105 | 46,927890 |
| **26** | 35,563171 | 38,885139 | 41,923170 | 45,641683 | 48,289882 |
| **27** | 36,741217 | 40,113272 | 43,194511 | 46,962942 | 49,644915 |
| **28** | 37,915923 | 41,337138 | 44,460792 | 48,278236 | 50,993376 |
| **29** | 39,087470 | 42,556968 | 45,722286 | 49,587884 | 52,335618 |
| **30** | 40,256024 | 43,772972 | 46,979242 | 50,892181 | 53,671962 |
| **31** | 41,421736 | 44,985343 | 48,231890 | 52,191395 | 55,002704 |
| **32** | 42,584745 | 46,194260 | 49,480438 | 53,485772 | 56,328115 |
| **33** | 43,745180 | 47,399884 | 50,725080 | 54,775540 | 57,648445 |
| **34** | 44,903158 | 48,602367 | 51,965995 | 56,060909 | 58,963926 |
| **35** | 46,058788 | 49,801850 | 53,203349 | 57,342073 | 60,274771 |
| **36** | 47,212174 | 50,998460 | 54,437294 | 58,619215 | 61,581179 |
| **37** | 48,363408 | 52,192320 | 55,667973 | 59,892500 | 62,883335 |
| **38** | 49,512580 | 53,383541 | 56,895521 | 61,162087 | 64,181412 |
| **39** | 50,659770 | 54,572228 | 58,120060 | 62,428121 | 65,475571 |
| **40** | 51,805057 | 55,758479 | 59,341707 | 63,690740 | 66,765962 |

|  |  |
| --- | --- |
| Gambar Jalan Mangun Sarkoro | Keterangan |
|  | Jalan Mangun Sarkoro |
|  | Mengukur dimensi drainase Jalan Mangun Sarkoro lebar 40 cm dan tinggi genangan 20 cm. Kondisi drainase bersih dan aliran drainase lancar. Namun banjir/genangan dari arah aliran drainase jalan Mangun Sarkro III |
|  | Mengukur Dimensi Drainase Jalan Mangun Sarkoro lebar 50cm dan tinggi genangan 5 cm. Kondisi drainase terlihat genangan air tidak begitu banyak air, tidak ada sampah. namun, banyak tumbuhan rumput liar dipermukaan drainase. |

|  |  |
| --- | --- |
|  | Kondisi saluran Jalan Mangun Sarkoro |
|  | Kondisi Sungai Sigeleng |
|  | Wawancara kepada warga Limbangan Kulon |





