

## **TUGAS AKHIR**

# **ANALISIS KERAPATAN JARINGAN STASIUN HUJAN DI DAS GANDONG, JAWA TIMUR (*ANALYSIS OF RAINFALL STATION NETWORK DENSITY IN DAS GANDONG, WEST JAVA*)**

**Diajukan Kepada Universitas Islam Indonesia Yogyakarta Untuk Memenuhi  
Persyaratan Memperoleh Derajat Sarjana Teknik Sipil**



**ARDHYA ZUHRA MANZILA  
20511352**

**PROGRAM STUDI TEKNIK SIPIL  
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN  
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Disusun oleh

**ARDHYA ZUHRA MANZILA**  
20511352

Telah diterima sebagai salah satu persyaratan  
untuk memperoleh derajat Sarjana Teknik Sipil

Diuji pada tanggal 13 Juni 2025

Oleh Dewan Penguji:

Pembimbing I



Shofwatul Fadilah, S.T.P., M.Eng.

NIK: 215111308

Penguji I



Dinia Anggraheni, S.T., M.Eng

NIK: 165110105

Penguji II



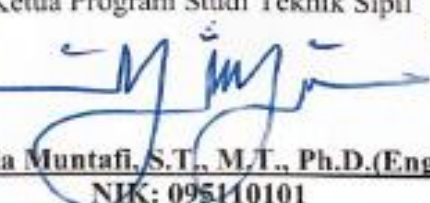
Dr. Ir. Sri Amini Yuni Astuti, M.T.

NIK: 885110101

Mengesahkan,



Ketua Program Studi Teknik Sipil

 25/7 2025  
H. Yunalia Muntafi, S.T., M.T., Ph.D.(Eng), IPM

NIK: 095110101

## PERNYATAAN BEBAS PLAGIASI

Saya menyatakan dengan sesungguhnya bahwa laporan Tugas Akhir yang saya susun sebagai syarat untuk penyelesaian program Sarjana di Program Studi Teknik Sipil, Fakultas Teknik Sipil dan Perencanaan, Universitas Islam Indonesia merupakan hasil karya saya sendiri. Adapun bagian-bagian tertentu dalam penulisan laporan Tugas Akhir yang saya kutip dari hasil karya orang lain telah dituliskan dalam sumbernya secara jelas sesuai dengan norma, kaidah, dan etika penulisan karya ilmiah. Apabila di kemudian hari ditemukan seluruh atau sebagian laporan Tugas Akhir ini bukan hasil karya saya sendiri atau adanya plagiasi dalam bagian-bagian tertentu, saya bersedia menerima sanksi, termasuk pencabutan gelar akademik yang saya sandang sesuai dengan perundang-undangan yang berlaku.

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Ardhya Zuhra Manzila  
(20511352)



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(20511352)

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## DAFTAR NOTASI DAN SINGKATAN

|                     |                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------|
| $A$                 | = luas DAS ( $\text{km}^2$ )                                                                 |
| $A_1, A_2$          | = luas bagian antar dua garis isohyet                                                        |
| $a$                 | = koefisien thiessen                                                                         |
| $n$                 | = banyaknya stasiun hujan                                                                    |
| $C_v$               | = koefisien variasi                                                                          |
| $C_s$               | = koefisien asimetri                                                                         |
| $C_k$               | = koefisien kurtosis                                                                         |
| $d$                 | = jarak antar stasiun (km)                                                                   |
| $d_0$               | = radius korelasi, yaitu jarak dalam km di mana koefisien korelasi berkurang dengan faktor e |
| $D_y$               | = deviasi standar penyimpangan                                                               |
| $D_y^2$             | = variansi penyimpangan                                                                      |
| $H_i$               | = hujan pada masing-masing stasiun (mm)                                                      |
| $H_d$               | = hujan rata-rata DAS (mm)                                                                   |
| $L$                 | = luas DAS ( $\text{km}^2$ )/jarak antar stasiun dalam segitiga sama sisi (km)               |
| $L_i$               | = luas masing-masing polygon (km)                                                            |
| $N$                 | = jumlah stasiun hujan                                                                       |
| $N_i$               | = hujan tahunan normal di stasiun i (mm)                                                     |
| $N_A$               | = hujan normal di stasiun A (mm)                                                             |
| $P_A$               | = hujan di stasiun A (mm)                                                                    |
| $P_i$               | = hujan pada stasiun i yang diperkirakan (mm)                                                |
| $Q$                 | = nilai maksimum dari penyimpangan yang telah distandarisasi                                 |
| $\bar{R}$           | = <i>curah hujan rata-rata (mm)</i>                                                          |
| $R$                 | = besarnya curah hujan pada masing-masing stasiun (mm)                                       |
| $R_1, R_2$          | = curah hujan rata-rata tahunan pada bagian $A_1, A_2, \dots A_n$                            |
| $R_{\text{hitung}}$ | = rentang antara nilai maksimum dan minimum dari penyimpangan yang distandarisasi            |

|            |                                                               |
|------------|---------------------------------------------------------------|
| $r$        | = korelasi                                                    |
| $r(d)$     | = koefisien korelasi untuk jarak $d$ km                       |
| $r(0)$     | = koefisien korelasi yang di ekstrapolasikan untuk jarak 0 km |
| $S$        | = simpangan baku                                              |
| $S_o^*$    | = nilai kumulatif penyimpangan awal                           |
| $S_k^{**}$ | = nilai kumulatif yang telah distandarisasi                   |
| $S_k^*$    | = nilai kumulatif penyimpangan hingga titik ke- $k$           |
| $\bar{x}$  | = rerata data hujan atau debit                                |
| $X_i$      | = varian yang berupa data hujan atau debit                    |
| $x$        | = curah hujan di stasiun pembanding                           |
| $Y$        | = curah hujan di stasiun A                                    |
| $Z_1$      | = kesalahan perataan (%)                                      |
| $Z_3$      | = kesalahan interpolasi (%)                                   |

## ABSTRAK

Data curah hujan menjadi komponen utama dalam analisis hidrologi, baik untuk perencanaan maupun pengelolaan sumber daya air. Kualitas data curah hujan mempengaruhi keakuratan analisis hidrologi. Hal ini dipengaruhi oleh beberapa faktor, seperti jumlah stasiun hujan, kerapatan, pola penyebaran, dan ketelitian pencatatan data. Penelitian ini bertujuan untuk menentukan jumlah stasiun hujan dan pola penyebarannya secara optimal, agar data hujan yang diperoleh dapat mewakili hujan kawasan yang sebenarnya.

Penelitian ini dilakukan di Daerah Aliran sungai (DAS) Gandong, Kabupaten Magetan, Jawa Timur. Data-data yang digunakan terdiri dari peta DAS dan data curah hujan. Analisis dilakukan dengan menggunakan standar *World Meteorological Organization (WMO)* dan metode *Kagan-rodde*. Selanjutnya, dilakukan penggambaran jaringan stasiun hujan berdasarkan jumlah stasiun hujan yang direkomendasikan masing-masing metode, sehingga diperoleh konfigurasi jaringan stasiun hujan yang sesuai standar.

Jumlah stasiun yang diperlukan di DAS Gandong bervariasi sesuai metode yang digunakan. Kondisi eksisting stasiun hujan DAS Gandong sudah sangat cukup baik, namun dalam analisis standar *WMO*, cukup dibutuhkan satu stasiun dengan kerapatan 162,797 km<sup>2</sup>/stasiun. Berdasarkan analisis metode *Kagan-rodde* jumlah stasiun hujan dan penyebarannya ditentukan oleh kesalahan kerapatan dan kesalahan interpolasi, baik data hujan bulanan dan harian. Hasil dari Metode *Kagan-rodde* untuk kerapatan data hujan harian untuk kesalahan 10% memiliki kerapatan 81,398 km<sup>2</sup>/stasiun, sedangkan kesalahan 5% memiliki kerapatan 20,349 km<sup>2</sup>/stasiun. Kesalahan kerapatan data hujan bulanan, untuk kesalahan 10% memiliki kerapatan 162,797 km<sup>2</sup>/stasiun, sedangkan kesalahan 5% memiliki 1, kerapatan 40,698 km<sup>2</sup>/stasiun.

**Kata kunci:** Kerapatan, *Kagan-rodde*, Stasiun hujan, *WMO*

## **ABSTRACT**

*Rainfall data serves as a primary component in hydrological analysis, both for the planning and management of water resources. The quality of rainfall data significantly affects the accuracy of hydrological assessments. This quality is influenced by several factors, including the number of rainfall stations, their density, spatial distribution patterns, and the precision of data recording. This study aims to determine the optimal number and spatial distribution of rainfall stations so that the collected rainfall data can accurately represent the actual regional precipitation.*

*This study was conducted in the Gandong Watershed (DAS), located in Magetan Regency, East Java. The data used include watershed maps and rainfall data. The analysis was carried out based on the standards of the World Meteorological Organization (WMO) and the Kagan-Rodda method. Subsequently, rainfall station network mapping was performed based on the number of rainfall stations recommended by each method, resulting in a rainfall station network configuration that complies with established standards.*

*The required number of rainfall stations in the Gandong Watershed varies depending on the method applied. The existing condition of rainfall stations in the Gandong Watershed is considered to be quite adequate. However, based on the WMO standard analysis, only one station is needed, with a density of 162.797 km<sup>2</sup> per station. According to the Kagan-Rodda method, the number and distribution of rainfall stations are determined by density error and interpolation error, using both monthly and daily rainfall data. The results of the Kagan-Rodda method show that for daily rainfall data, a 10% error corresponds to a station density of 81.398 km<sup>2</sup> per station, while a 5% error corresponds to a density of 20.349 km<sup>2</sup> per station. For monthly rainfall data, a 10% error yields a density of 162.797 km<sup>2</sup> per station, whereas a 5% error results in a density of 40.698 km<sup>2</sup> per station.*

**Keywords:** *Density, Kagan-rodde, Rainfall station, WMO*

# **BAB I**

## **PENDAHULUAN**

### **1.1 Latar Belakang**

Analisis hidrologi merupakan satu bagian analisis awal dalam perencanaan, pengembangan, dan pengelolaan sumber daya air. Analisis hidrologi menjadi dasar acuan untuk tahapan analisis lanjutan. Komponen masukan utama dalam analisis hidrologi merupakan suatu proses yang melibatkan penggunaan data curah hujan yang diperoleh melalui pengukuran yang dilakukan pada stasiun hujan. Data tersebut digunakan untuk memahami pola aliran air, perhitungan debit sungai, serta untuk merancang sistem pengelolaan sumber daya air yang efektif. Namun, dalam penentuan nilai curah hujan yang terjadi di suatu Daerah Aliran Sungai (DAS), terdapat dua masalah utama, yaitu jumlah stasiun pemantau curah hujan yang ada dalam suatu DAS serta pola distribusi stasiun-stasiun tersebut di wilayah tersebut (Harto, 2022). Data curah hujan memiliki variasi intensitas, distribusi, dan jumlah hujan yang tidak merata di setiap wilayah sehingga penempatan strategis dan penyebaran stasiun pencatatan curah hujan menjadi krusial untuk memastikan representasi yang akurat dari lokasi tempat stasiun-stasiun tersebut berada.

Pola penyebaran dan jumlah stasiun dengan besaran tertentu diperlukan agar besaran curah hujan dapat mewakili hujan sebenarnya yang terjadi pada suatu DAS sehingga dapat mewakili hujan yang terjadi pada DAS tersebut. Memperhatikan hal tersebut, maka jaringan stasiun hujan harus direncanakan agar bisa menghasilkan informasi yang maksimum sesuai dengan keperluan kemanfaatan data curah hujan yang akan dikumpulkan. Penempatan stasiun hujan umumnya didasarkan pada kebutuhan sektoral dalam jangka pendek dan menengah, sehingga belum sepenuhnya mempertimbangkan pengelolaan sumber daya air secara menyeluruh (Deno, 2014). Kerapatan stasiun yang direkomendasikan oleh *World Meteorological Organization (WMO)* adalah 1 stasiun per 100-250 km<sup>2</sup>, karena curah hujan di wilayah DAS Gandong ini cenderung lebih tinggi dan bervariasi.

Pola persebaran stasiun hujan di Daerah Aliran Sungai (DAS) di Indonesia hingga saat ini masih kurang mendapatkan perhatian yang memadai, hal ini tercermin dari ketiadaan pedoman yang baku mengenai metode yang tepat dalam penentuan lokasi dan persebaran stasiun hujan (Ayu, 2015). Salah satu masalah yang dihadapi adalah kurangnya kualitas stasiun hujan yang optimal, atau ketidakakuratan dalam kalibrasi yang dilakukan, yang pada gilirannya dapat memengaruhi keandalan data yang diperoleh. Oleh karena itu, diperlukan pendekatan perhitungan yang lebih tepat untuk menentukan jumlah serta penempatan stasiun hujan yang ideal.

DAS Gandong terletak di Kabupaten Magetan, Provinsi Jawa Timur, yang terletak di pulau Jawa. Wilayah ini berada di dataran tinggi, tepatnya di lereng Gunung Lawu, yang merupakan wilayah hulu dari salah satu anak sungai Bengawan Solo. Kabupaten Magetan terbagi menjadi 7 Daerah Aliran Sungai (DAS), dengan sungai Gondang sebagai sungai terbesar dan terpanjang di daerah tersebut. Hal ini berkaitan dengan berapa sebaran dan kerapatan titik stasiun hujan dalam suatu (DAS). Faktor kepadatan stasiun hujan dalam suatu DAS menjadi salah satu aspek penting dalam analisis kerapatan jaringan stasiun hujan, maka tujuan dari penelitian ini diharapkan dapat menghasilkan rancangan yang sesuai dengan standar *WMO* dan metode *Kagan-rodde* agar dapat berfungsi baik fungsional dan struktural dalam jangka waktu yang ditetapkan.

## 1.2 Rumusan Masalah

Berdasarkan latar belakang yang telah di uraikan, dirumuskan masalah yang akan dibahas dalam penelitian ini adalah sebagai berikut.

1. Bagaimana pola persebaran dan kerapatan jaringan stasiun hujan yang ada di DAS Gandong berdasarkan standar *WMO*?
2. Bagaimana pola persebaran dan kerapatan jaringan stasiun hujan yang ada di DAS Gandong berdasarkan metode *Kagan-rodde*?
3. Bagaimana perbandingan luasan optimal berdasarkan standar *WMO* dan metode *Kagan-rodde* yang dapat diwakili oleh 1 buah stasiun hujan?

### 1.3 Tujuan Penelitian

Berdasarkan rumusan masalah di atas, didapatkan tujuan penelitian yaitu sebagai berikut.

1. Mengetahui pola penyebaran stasiun hujan DAS yang sesuai standar *WMO*.
2. Mengetahui pola penyebaran stasiun hujan DAS yang sesuai metode *Kagan-rodha*.
3. Mengetahui kerapatan jaringan stasiun hujan yang optimal pada DAS Gandong sesuai standar *WMO* dan metode *Kagan-rodha*.

### 1.4 Manfaat Penelitian

Penelitian ini diharapkan dapat memberikan kontribusi yang signifikan sebagai bahan pertimbangan bagi pemerintah dan instansi terkait dalam merencanakan kerapatan serta pola distribusi stasiun hujan, sehingga dapat menghasilkan data yang memiliki ketelitian yang memadai untuk mewakili Daerah Aliran Sungai (DAS) Gondang. Selain itu, penelitian ini juga bertujuan untuk mengevaluasi kinerja jaringan stasiun hujan yang ada setelah periode waktu tertentu, guna mengidentifikasi stasiun mana yang harus diprioritaskan atau dipertahankan, terutama apabila terdapat kebutuhan untuk menghapus atau mengganti stasiun yang ada.

### 1.5 Batasan Penelitian

Batasan penelitian sebagai tinjauan agar penelitian terarah dan mudah dipahami, untuk itu diperlukan adanya batasan penelitian sebagai berikut.

1. Lokasi Studi pada sub DAS Gondang yang ada di Kabupaten Magetan, Provinsi Jawa Timur.
2. Analisis dilakukan dengan 2 metode, yaitu sesuai standar *WMO* dan metode *Kagan-rodha*.
3. Data curah hujan dari tahun 2014 sampai dengan 2023 (periode 10 tahun).
4. Data yang digunakan dalam analisis adalah data hujan harian dan bulanan.
5. Pengujian metode kagan-rodha dilakukan dengan membandingkan curah hujan rancangan berdasarkan jaringan stasiun hujan yang ada. Dalam pengujian ini

ditetapkan bahwa besarnya kesalahan relatif tidak boleh melebihi 10% untuk setiap kala ulang yang ditinjau.

## **BAB II**

### **TINJAUAN PUSTAKA**

#### **2.1 Tinjauan Umum**

Tinjauan pustaka merupakan rangkuman pandangan, pendapat, dan hasil penelitian atau perancangan yang didapatkan dari berbagai sumber yang ada, di mana sumber tersebut memiliki topik yang sejenis dengan penelitian yang dilakukan oleh penulis. Dengan adanya tinjauan pustaka ini dapat menjadikan sebuah acuan dalam melakukan penelitian dan dapat memberikan gambaran terhadap penelitian yang kelak akan dilakukan. Tinjauan pustaka juga dapat menjadi sebuah pembanding pada saat akan melakukan penelitian, dengan adanya pembanding ini diharapkan penelitian dapat meningkatkan kualitas dari penelitian sebelumnya.

#### **2.2 Daerah Aliran Sungai**

Berdasarkan Peraturan Pemerintah Nomor 37 Tahun 2012, Daerah Aliran Sungai (DAS) didefinisikan sebagai wilayah daratan yang membentuk satu kesatuan ekosistem dengan sungai dan anak-anak sungainya. Wilayah ini berfungsi untuk menampung, menyimpan, serta mengalirkan air hujan secara alami menuju danau atau laut. Batas DAS di daratan ditentukan oleh pemisah topografis, sedangkan batas di laut ditetapkan hingga daerah perairan yang masih dipengaruhi oleh aktivitas daratan. Menurut Peraturan Menteri Pekerjaan Umum No. 39/PRT/1989, sungai merupakan sistem pengaliran air yang mengalir dari mata air hingga ke muara, yang dibatasi oleh sempadan di kedua sisi sepanjang aliran sungai. Sempadan sungai berbeda dengan bantaran sungai. Berdasarkan PP No. 35 Tahun 1991 tentang sungai, bantaran sungai adalah area di kedua sisi sepanjang palung sungai yang diukur dari tepi dalam hingga kaki tanggul sebelah dalam. Fungsi bantaran sungai adalah untuk menampung sebagian debit air sungai saat terjadi banjir (saluran air tinggi).

Sempadan sungai adalah kawasan yang terletak di sepanjang kedua sisi sungai, termasuk sungai buatan, yang memiliki peran penting dalam menjaga

kelestarian sungai. Pada musim hujan, ketika debit sungai meningkat, sempadan sungai berfungsi sebagai area luapan air, memungkinkan air meresap ke dalam tanah (Ayu, 2015). Selain itu, sempadan sungai berperan sebagai zona pengelolaan tata air yang memiliki mekanisme inflow ke sungai dan outflow ke air tanah. Proses inflow dan outflow ini merupakan bagian dari konservasi hidrolis sungai dan air tanah secara keseluruhan. Sungai juga menjadi habitat bagi berbagai komponen ekologi yang berkembang di dalamnya.

### 2.3 Jaringan Stasiun Hujan

Sistem jaringan stasiun hujan dirancang sesuai dengan kebutuhan data curah hujan yang akan dikumpulkan. Data curah hujan yang diperlukan untuk analisis hidrologi umumnya adalah data curah hujan rerata dari wilayah yang bersangkutan. Secara teoritis, semakin tinggi kerapatan jaringan stasiun hujan, semakin akurat dan representatif data curah hujan yang diperoleh, meskipun hal ini memerlukan biaya dan waktu yang lebih besar. Curah hujan di suatu wilayah sungai merupakan komponen utama dalam siklus hidrologi, kedalaman curah hujan dapat dikonversikan menjadi aliran sungai melalui proses limpasan permukaan, aliran antara, dan aliran dasar (Harto, 2022). Untuk mengetahui kedalaman hujan, diperlukan alat ukur penakar hujan yang dipasang di DAS yang akan dikembangkan. Harto (1987) menyatakan jaringan pengamatan hidrologi (*hydrologic network*) dapat diartikan sebagai sekumpulan stasiun pengukuran yang diatur sedemikian rupa untuk menentukan nilai variabel di berbagai titik dalam wilayah tersebut. Jaringan pengamatan ini penting dalam pengumpulan data untuk dua alasan (Harto, 1987), yaitu sebagai berikut.

1. Keingintahuan terhadap fenomena yang terjadi.
2. Variabilitas data yang sangat tinggi memerlukan tambahan secara teratur dan menerus untuk dapat mengetahui karakter variabel tersebut.

Menurut Wilson (1994) dalam Deno (2014) menyatakan tabel untuk menentukan kerapatan stasiun hujan berdasarkan keluasan dari DAS seperti pada Tabel 2.1.

**Tabel 2.1 Jumlah Stasiun Hujan Yang Diperlukan Berdasarkan Luasan DAS**

| Luas DAS         |                 | Jumlah stasiun hujan |
|------------------|-----------------|----------------------|
| mil <sup>2</sup> | km <sup>2</sup> |                      |
| 10               | 26              | 2                    |
| 100              | 260             | 6                    |
| 500              | 1300            | 12                   |
| 10000            | 2600            | 15                   |
| 20000            | 5200            | 20                   |
| 30000            | 7800            | 24                   |

Sumber: Wilson (1994) dalam Deno (2014)

Metode Kagan-rodde dianggap cukup sederhana dibaanding metode lainnya, seperti *Kriging* dan *Stepwise*. Metode ini, yang dikembangkan oleh Kagan (1972), bertujuan untuk menentukan stasiun pengukur hujan berdasarkan jumlah, kerapatan, ketelitian, dan pola distribusinya. Selain untuk menentukan jumlah stasiun yang diperlukan dengan tingkat ketelitian tertentu, metode Kagan juga berguna dalam merancang pola penempatan stasiun hujan yang optimal.

## 2.4 Penelitian Terdahulu

Penelitian sebelumnya mengenai kerapatan jaringan stasiun hujan telah banyak dilakukan di Indonesia dan sering dijadikan referensi dalam pengembangan penelitian lebih lanjut. Bunganaen, dkk. (2012) melakukan penelitian berjudul Penggunaan Metode *Kagan-rodde* untuk Analisis Kerapatan Jaringan Stasiun Hujan pada Wilayah Sungai (WS) Wae-Jamal di Pulau Flores. Penelitian ini bertujuan untuk menghitung kesalahan perataan dan kesalahan interpolasi pada jumlah stasiun dengan batas kesalahan 10% dan 5% untuk curah hujan harian dan bulanan. Metode yang digunakan dalam penelitian ini adalah *Kagan-rodde*, yang memungkinkan untuk mengevaluasi ketepatan distribusi stasiun hujan. Hasil analisis menunjukkan bahwa pada tujuh stasiun yang tersebar di WS Wae-Jamal, kesalahan perataan curah hujan harian mencapai 11,242%, sedangkan untuk curah hujan bulanan, kesalahan yang terukur adalah 13,809%. Temuan ini memberikan wawasan tentang pentingnya akurasi distribusi stasiun dalam menghasilkan data curah hujan yang representatif.

Krisnayanti, dkk. (2012) juga melakukan penelitian dengan judul serupa, Penggunaan Metode Kagan untuk Analisis Kerapatan Jaringan Stasiun Hujan pada Wilayah Sungai (WS) Aesesa di Pulau Flores. Penelitian ini bertujuan untuk mengevaluasi kesalahan perataan dan interpolasi dalam perhitungan jumlah stasiun dengan tingkat kesalahan 10% dan 5% untuk curah hujan harian dan bulanan. Seperti halnya penelitian .

Vidyasena dan Suhartanto (2018) dalam penelitiannya yang berjudul Evaluasi dan Kerapatan Jaringan Pos Hujan dengan Metode *Kriging* Menurut Rekomendasi *World Meteorological Organization* di Wilayah Sungai Kampar Provinsi Riau bertujuan untuk menentukan jarak antara titik yang dicari dengan titik yang telah terukur. Penelitian ini menggunakan dua metode, yaitu standar *WMO* dan *Kriging*, untuk menilai keakuratan penempatan stasiun hujan yang ada. Hasil penelitian menunjukkan bahwa penentuan lokasi stasiun hujan baru dilakukan melalui simulasi yang berdasarkan peta galat baku prediksi dari stasiun yang ada. Penerapan metode *Kriging* dalam penelitian ini memungkinkan untuk memperoleh distribusi stasiun hujan yang lebih representatif dan akurat. Temuan ini penting karena dapat membantu dalam merancang jaringan stasiun hujan yang lebih optimal dan mendukung pengambilan keputusan terkait pengelolaan sumber daya air di wilayah tersebut.

Prawati, dkk. (2020) dalam penelitiannya yang berjudul Rasionalisasi Jaringan Stasiun Hujan Menggunakan Metode Kagan-rodha dengan Memperhitungkan Faktor Topografi pada Daerah Aliran Sungai (DAS) Sampean, Kab Bondowoso, Jawa timur, yang bertujuan untuk menganalisis pola distribusi stasiun hujan di Daerah Aliran Sungai (DAS) Sampean dengan menggunakan metode *Kagan-rodha*. Penelitian ini dilakukan untuk mengetahui sejauh mana jaringan stasiun hujan dapat memberikan data yang representatif terhadap curah hujan di wilayah tersebut. Hasil perhitungan debit banjir rancangan menggunakan HSS Nakayasu di dapat nilai sebesar kala ulang 2 tahun adalah 7759,08 m<sup>3</sup>/detik, untuk kala ulang 5 tahun adalah 9773,87 m<sup>3</sup>/detik, untuk kala ulang 10 tahun adalah 11534,87 m<sup>3</sup>/detik, untuk kala ulang 25 tahun adalah 14273,82 m<sup>3</sup>/detik, untuk kala ulang 50 tahun adalah 16652,00 m<sup>3</sup>/detik, untuk kala ulang 100 tahun adalah

19572,58 m<sup>3</sup>/detik, untuk kala ulang 200 tahun adalah 22875,96 m<sup>3</sup>/detik, dan untuk kala ulang 1000 tahun adalah 32903,04 m<sup>3</sup>/detik.

Rahmadani dan Hutaeruk (2022) dalam penelitiannya yang berjudul Analisis Pola Distribusi Stasiun Hujan di Kota Medan bertujuan untuk mengidentifikasi pola penyebaran stasiun hujan dan curah hujan pada Daerah Aliran Sungai (DAS) di Kota Medan. Penelitian ini menggunakan metode Kagan-Rodda untuk menganalisis distribusi stasiun hujan secara lebih mendalam. Hasil penelitian menunjukkan bahwa pemetaan pola distribusi stasiun hujan menggunakan *Polygon Thiessen* dan *ArcGIS 10.82* menghasilkan koordinat untuk stasiun Helvetia pada bujur 98,63 dan lintang 3,60, dengan area pengaruh terbesar sebesar 28,30 km<sup>2</sup>, yang mencakup 71% dari total area 39,85 km<sup>2</sup>. Temuan ini memberikan gambaran yang jelas tentang pentingnya pemilihan lokasi stasiun hujan yang tepat dalam memperoleh data yang akurat dan representatif untuk pengelolaan sumber daya air dan perencanaan pembangunan wilayah..

Wahyuni (2022) dengan judul Rasionalisasi kerapatan stasiun hujan di Sub DAS Ngasinan Hulu menggunakan data hujan pengukuran dan satelit. Tujuan dari penelitian ini yaitu untuk mengetahui pola penyebaran dan curah hujan pada DAS. Metode yang digunakan adalah Standar *WMO* dan *Kaggan-rodde*, dengan hasil evaluasi jaringan stasiun hujan eksisting berdasarkan standar *WMO* menunjukkan bahwa Sub DAS Ngasinan Hulu dengan luas sebesar 657 km<sup>2</sup> cukup diwakilkan 6 stasiun saja sedangkan saat ini Sub DAS Ngasinan hulu memiliki 10 stasiun.

Harahap, dkk. (2023) melakukan penelitiandengan judul Evaluasi pola Distribusi Stasiun Hujan Kota Medan. Penelitian ini bertujuan untuk mengetahui pola penyebaran dan curah hujan pada DAS. Metode yang digunakan yaitu metode Poligon Thiessen, dengan hasil evaluasi luas total daerah pengaruh sebesar 39.85 km<sup>2</sup> dengan menggunakan *Polygon Thiessen* dan *ArcGIS 10.82*. Penelitian serupa dengan penelitian yang dilakukan peneliti, memuat nama peneliti, tahun penelitian, metode yang digunakan, dan hasil penelitian dapat dilihat pada Tabel 2.2.

**Tabel 2.2 Penelitian Terdahulu**

| <b>No</b> | <b>Nama Penulis</b>     | <b>Judul</b>                                                                                                               | <b>Tujuan</b>                                                              | <b>Metode</b>      | <b>Hasil</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|-------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.        | Bunganaen, dkk. (2011)  | Penggunaan metode kagan untuk analisis kerapatan jaringan stasiun hujan pada Wilayah Sungai (WS) Wae-Jamal di Pulau Flores | Mengetahui perhitungan kesalahan perataan dan kesalahan interpolasi.       | <i>Kagan-rodde</i> | Jarak antar stasiun hujan mempengaruhi akurasi data curah hujan, sehingga pemilihan lokasi dan jarak stasiun harus diperhatikan. Analisis di WS Wae-Jamal menunjukkan kesalahan perataan curah hujan harian 11,242% dan bulanan 13,809%, yang menunjukkan perlunya evaluasi distribusi stasiun. Perhitungan data curah hujan harian dan bulanan membantu mengevaluasi distribusi stasiun dan ketepatannya. Disarankan menambah tiga stasiun untuk curah hujan harian dan delapan stasiun untuk bulanan, guna meningkatkan akurasi data dan pengelolaan sumber daya air.                                                                 |
| 2.        | Krisnayant, dkk. (2012) | Analisis kerapatan jaringan stasiun hujan pada Wilayah Sungai (WS) Aesesa Di Pulau Flores.                                 | Mengetahui kesalahan perataan untuk delapan stasiun yang ada di WS Aesesa. | <i>Kagan-rodde</i> | Korelasi antara hujan harian (0.184) dan hujan bulanan (0.293) menunjukkan hubungan yang lemah. Kesalahan perataan untuk hujan harian adalah 12.925%, dan untuk hujan bulanan 10.108%. Analisis Cara Kagan merekomendasikan 42 stasiun dengan jarak 14.953 km untuk hujan harian (kesalahan 5%) dan 14 stasiun dengan jarak 25.899 km untuk hujan harian (kesalahan 10%). Untuk hujan bulanan, dibutuhkan 45 stasiun dengan jarak 14.446 km (kesalahan 5%) dan 15 stasiun dengan jarak 25.021 km (kesalahan 10%). Rekomendasi untuk daerah sabana: 6 stasiun untuk hujan harian dan 7 stasiun untuk hujan bulanan dengan kesalahan 10%. |

**Lanjutan Tabel 2.2 Penelitian Terdahulu**

| <b>No</b> | <b>Nama Penulis</b>             | <b>Judul</b>                                                                                                                                                                   | <b>Tujuan</b>                                                   | <b>Metode</b>       | <b>Hasil</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.        | Vidyasena dan Suhartanto (2018) | Evaluasi dan kerapatan jaringan pos hujan dengan metode krigging menurut rekomendasi ( <i>World Meteorological Organization</i> ) Di Wilayah Sungai Kampar Provinsi Riau       | Mengetahui jarak antara titik yang dicari dengan titik terukur. | <i>WMO, Kriging</i> | Metode <i>Kriging</i> digunakan untuk menentukan lokasi stasiun hujan baru melalui simulasi berdasarkan peta galatbaku prediksi stasiun hujan eksisting. Rekomendasi stasiun hujan dilakukan dengan mengurangi dan menggeser stasiun untuk mendapatkan jumlah minimum yang optimal di Wilayah Sungai Kampar. Keoptimalan posisi stasiun dihitung dengan membandingkan nilai <i>RMSE</i> dan <i>MAE</i> antara stasiun eksisting dan rekomendasi. Hasil perhitungan menunjukkan bahwa nilai <i>RMSE</i> dan <i>MAE</i> pada stasiun hujan rekomendasi lebih kecil dibandingkan dengan stasiun eksisting, dengan nilai <i>RMSE</i> 266,3 dan <i>MAE</i> 207,9 pada metode <i>Gaussian</i> . |
| 4.        | Prawati, dkk. (2020)            | Rasionalisasi Jaringan Stasiun Hujan Menggunakan Metode Kagan-rodha dengan Memperhitungkan Faktor Topografi pada Daerah Aliran Sungai (DAS) Sampean, Kab Bondowoso, Jawa timur | Mengetahui pola penyebaran dan curah hujan pada DAS.            | <i>Kagan-rodha</i>  | Hasil perhitungan debit banjir rancangan menggunakan HSS Nakayasu di dapat nilai sebesar kala ulang 2 tahun adalah 7759,08 m <sup>3</sup> /detik, untuk kala ulang 5 tahun adalah 9773,87 m <sup>3</sup> /detik, untuk kala ulang 10 tahun adalah 11534,87 m <sup>3</sup> /detik, untuk kala ulang 25 tahun adalah 14273,82 m <sup>3</sup> /detik, untuk kala ulang 50 tahun adalah 16652,00 m <sup>3</sup> /detik, untuk kala ulang 100 tahun adalah 19572,58 m <sup>3</sup> /detik, untuk kala ulang 200 tahun adalah 22875,96 m <sup>3</sup> /detik, dan untuk kala ulang 1000 tahun adalah 32903,04 m <sup>3</sup> /detik.                                                            |

**Lanjutan Tabel 2.2 Penelitian Terdahulu**

| No | Nama Penulis                   | Judul                                                                                                        | Tujuan                                               | Metode                              | Hasil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----|--------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. | Rahmadani dan Hutaurok, (2022) | Analisis Pola Distribusi Stasiun Hujan di Kota Medan.                                                        | Mengetahui pola penyebaran dan curah hujan pada DAS. | <i>Kagan-rodha</i> dan <i>WMO</i> . | Pola pemetaan menggunakan <i>Polygon Thiessen</i> dan <i>ArcGIS</i> 10.82 menunjukkan bahwa stasiun Helvetia terletak pada koordinat bujur 98,63 dan lintang 3,60 dengan area pengaruh terbesar sebesar 28,30 km <sup>2</sup> atau 71% dari total area 39,85 km <sup>2</sup> . Hasil analisis menyatakan bahwa kondisi kepadatan jaringan penempatan stasiun hujan tidak memenuhi standar minimum dari Organisasi Meteorologi Dunia ( <i>WMO</i> ), sehingga diperlukan pola pemindahan menggunakan metode Kagan-Rodda. |
| 6. | Wahyuni, dkk. (2022)           | Rasionalisasi kerapatan stasiun hujan di Sub DAS Ngasinan Hulu menggunakan data hujan pengukuran dan satelit | Mengetahui pola penyebaran dan curah hujan pada DAS  | <i>WMO</i> dan <i>Kagan-rodha</i>   | Hasil evaluasi jaringan stasiun hujan eksisting berdasarkan standar <i>WMO</i> menunjukkan bahwa Sub DAS Ngasinan Hulu seluas 657 km <sup>2</sup> cukup diwakili oleh 6 stasiun, meskipun saat ini terdapat 10 stasiun                                                                                                                                                                                                                                                                                                  |

**Lanjutan Tabel 2.2 Penelitian Terdahulu**

| No | Nama Penulis         | Judul                                                                | Tujuan                                              | Metode                             | Hasil                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|----------------------|----------------------------------------------------------------------|-----------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. | Harahap, dkk. (2023) | Evaluasi pola distribusi stasiun hujan Kota Medan                    | Mengetahui pola penyebaran dan curah hujan pada DAS | Metode <i>Polygon Thiessen</i>     | Hasil evaluasi menggunakan <i>Polygon Thiessen</i> dan <i>ArcGIS</i> 10.82 menunjukkan luas total daerah pengaruh sebesar 39.85 km <sup>2</sup> . Stasiun Helvetia memiliki daerah pengaruh terbesar, yaitu 28.30 km <sup>2</sup> (71% dari total luas). Rasionalisasi dengan Kagan-Rodda menghasilkan panjang sisi segitiga (L) sebesar 3.02 km. Kebutuhan stasiun hujan di Kota Medan sudah dapat mewakili seluruh kawasan dengan nilai kesalahan pemerataan <5%, yakni 4.83%. |
| 8. | Manzila (2024)       | Analisis kerapatan jaringan stasiun hujan di DAS Gandong, Jawa Timur | Mengetahui pola penyebaran dan curah hujan pada DAS | <i>WMO</i> dan <i>Kaggar-rodde</i> | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## **BAB III**

### **LANDASAN TEORI**

#### **3.1 Hujan**

Hujan terjadi ketika massa udara yang mengandung uap air dalam jumlah yang cukup naik ke ketinggian tertentu, sehingga suhunya menurun hingga berada di bawah titik embun. Ketika udara terangkat dan mendingin akibat penurunan suhu secara adiabatik, serta mencapai ketinggian yang cukup untuk terjadinya kondensasi, awan akan terbentuk. Hujan baru akan terjadi ketika tetesan air tumbuh hingga mencapai ukuran lebih dari 1 mm. Proses ini memerlukan waktu agar tetesan air dapat berkembang dari ukuran awal sekitar 1–100 mikron (Harto, 2022). Pergerakan udara ke atas dipengaruhi oleh berbagai faktor yang kemudian menentukan jenis hujan, yaitu hujan konvektif, hujan siklonik, dan hujan orografik

#### **3.2 Hujan Rerata DAS**

Data curah hujan yang diperoleh dari alat pengukur curah hujan hanya merepresentasikan hujan yang terjadi pada satu titik saja (*point rainfall*). Mengingat bahwa curah hujan memiliki variasi yang signifikan berdasarkan lokasi (*spatial variability*), satu alat pengukur curah hujan tidak cukup untuk menggambarkan curah hujan secara representatif di wilayah yang luas. Oleh karena itu, diperlukan data curah hujan kawasan yang dihitung berdasarkan rata-rata curah hujan dari masing-masing stasiun pengukur yang terdapat di area tersebut. Terdapat tiga metode yang dapat digunakan untuk menghitung hujan rata-rata pada Daerah Aliran Sungai (DAS), yaitu sebagai berikut.

1. Cara rata-rata hitung

Cara menghitung rata-rata aritmatik adalah cara yang paling sederhana. Metode ini dilakukan dengan mengukur serempak untuk lama waktu tertentu dari semua alat pengukur dan dijumlahkan seluruhnya. Kemudian hasil penjumlahannya dibagi dengan jumlah pengukur hujan maka akan dihasilkan rata-rata curah hujan di daerah tersebut. Jika dirumuskan dalam suatu

Persamaan 3.1 dan sketsa stasiun curah hujan pada Gambar 3.1 adalah sebagai berikut.

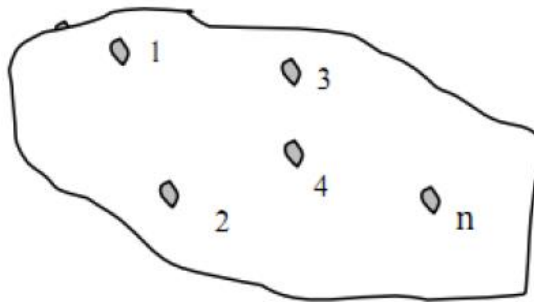
$$\bar{R} = \frac{R_1 + R_2 + R_3 + \dots + R_n}{n} \quad (3.1)$$

dengan:

$\bar{R}$  = curah hujan rata-rata (mm),

$R$  = besarnya curah hujan pada masing-masing stasiun (mm), dan

$n$  = banyaknya stasiun hujan.



**Gambar 3.1 Sketsa Stasiun Curah Hujan Cara Rata-rata Hitung**

Metode rata-rata hitung memberikan hasil yang baik apabila:

- a. Distribusi hujan yang terjadi relatif merata pada seluruh DAS dan
- b. Stasiun hujan tersebar secara merata di DAS dalam jumlah yang cukup.

## 2. Cara *polygon thiessen*

Cara ini memperhitungkan luas daerah yang mewakili dari stasiun-stasiun hujan yang bersangkutan, untuk digunakan sebagai faktor bobot dalam perhitungan curah hujan rata-rata. Cara ini digunakan untuk daerah yang tidak seragam dan variasi CH besar. Curah hujan rata-rata dihitung dengan mempertimbangkan pengaruh tiap-tiap stasiun pengamatan, yaitu dengan cara menggambar garis tegak lurus dan membagi dua sama panjang garis penghubung dari dua stasiun pengamatan. Curah hujan pada wilayah tersebut

dapat dihitung dengan Persamaan 3.2 dan Persamaan 3.3 dan pembagian daerah dengan cara *polygon thiessen* pada Gambar 3.2 sebagai berikut.

$$H_d = \sum a H_i \quad (3.2)$$

$$a = \frac{L_i}{L} \quad (3.3)$$

dengan:

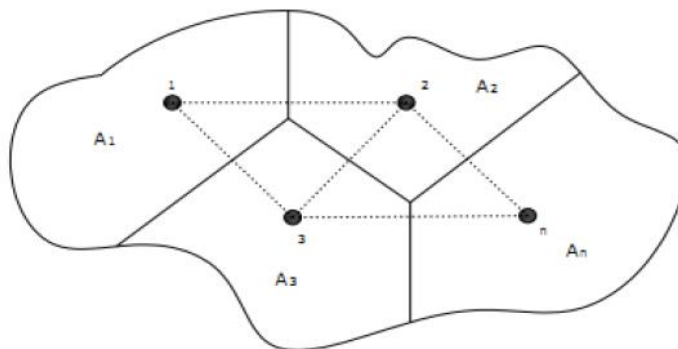
$H_d$  = hujan rata-rata DAS (mm),

$H_i$  = hujan pada masing-masing stasiun (mm),

$a$  = koefisien thiessen,

$L_i$  = luas masing-masing *polygon* (km), dan

$L$  = luas DAS (km<sup>2</sup>).



**Gambar 3.2 Pembagian Daerah dengan Cara *Polygon Thiessen***

### 3.3 Kelengkapan Data

Data curah hujan yang digunakan dalam analisis hidrologi haruslah data yang memiliki tingkat kesalahan serendah mungkin, mengingat bahwa penghilangan kesalahan secara total adalah hal yang tidak mungkin tercapai (Harto, 2022). Besaran curah hujan merupakan salah satu variabel paling penting dalam analisis. Apabila terdapat kesalahan yang signifikan dalam data curah hujan, maka hasil dari analisis tersebut akan diragukan keakuratannya.

Untuk mengurangi kesulitan dalam analisis, upaya dilakukan dengan memperkirakan besarnya data yang hilang, karena kehilangan data yang terlalu sering dapat memberikan dampak negatif. Kehilangan data terkadang dijadikan

alasan untuk tidak menggunakan data dari stasiun tersebut dalam analisis, padahal pengurangan jumlah stasiun yang digunakan justru dapat menyebabkan kesalahan lain. Beberapa metode yang umum digunakan untuk mengatasi hal ini adalah metode rasional (*normal ratio method*) dan metode resiprokal (*reciprocal method*).

### 3.4 Pengujian Kepanggahan

Data yang diperoleh dari stasiun hujan ada kemungkinan yang sifatnya tidak panggah (*inconsistent*). Ketidakpanggahan seperti ini bisa terjadi karena alat ukur diganti dengan spesifikasi yang berbeda, alat pernah berpindah tempat karena lokasi alat terganggu, alat pernah rusak. Cara pengujian kepanggahan antara lain dapat dilakukan dengan cara sebagai berikut.

#### 1. *Rescaled Adjusted Partial Sums* (RAPS)

Uji kepanggahan dapat dilakukan dengan menggunakan Persamaan 3.4-3.12.

$$S_k^* = \sum_{i=1}^k (Y_i - \bar{Y}), \text{ dengan } k = 1, 2, 3, \dots, n \quad (3.4)$$

$$S_o^* = 0 \quad (3.5)$$

$$S_k^{**} = \frac{S_k^*}{D_y} \quad (3.6)$$

$$D_y^2 = \sum_{i=1}^n \frac{(Y_i - \bar{Y})^2}{n} \quad (3.7)$$

$$D_y = \sqrt{\sum D_y^2} \quad (3.8)$$

Statistik yang digunakan sebagai alat penguji kepanggahan yaitu sebagai berikut.

$$Q = \max |S_k^{**}| \quad (3.9)$$

Atau nilai *range*:

$$R = \max S_k^{**} - \min S_k^{**} \quad (3.10)$$

$$Q/\sqrt{n}_{hitung} < Q/\sqrt{n}_{tabel} \quad (3.11)$$

$$R/\sqrt{n}_{hitung} < R/\sqrt{n}_{tabel} \quad (3.12)$$

dengan:

$S_k^*$  = nilai kumulatif penyimpangan hingga titik ke-k,

$S_o^*$  = nilai kumulatif penyimpangan awal,

$S_k^{**}$  = nilai kumulatif yang telah distandarisasi,

$D_y$  = deviasi standar penyimpangan,

$D_y^2$  = variansi penyimpangan,

$Q$  = nilai maksimum dari penyimpangan yang telah distandarisasi, dan

$R$  = rentang antara nilai maksimum dan minimum dari penyimpangan yang distandarisasi.

Nilai kritik Q dan R dapat dilihat pada Tabel 3.1 berikut.

**Tabel 3.1 Nilai Kritik Q dan R**

| N        | $Q/\sqrt{n}$ |      |      | $R/\sqrt{n}$ |      |      |
|----------|--------------|------|------|--------------|------|------|
|          | 90%          | 95%  | 99%  | 90%          | 95%  | 99%  |
| 10       | 1,05         | 1,14 | 1,29 | 1,21         | 1,28 | 1,38 |
| 20       | 1,10         | 1,22 | 1,42 | 1,34         | 1,43 | 1,60 |
| 30       | 1,12         | 1,24 | 1,46 | 1,40         | 1,50 | 1,70 |
| 40       | 1,13         | 1,26 | 1,26 | 1,42         | 1,53 | 1,74 |
| 50       | 1,14         | 1,27 | 1,27 | 1,44         | 1,55 | 1,78 |
| 100      | 1,17         | 1,29 | 1,29 | 1,50         | 1,62 | 1,86 |
| $\infty$ | 1,22         | 1,36 | 1,36 | 1,62         | 1,75 | 2,00 |

Sumber: Harto (2009)

### 3.5 Parameter Statistik

Dalam analisis kerapatan stasiun hujan, terdapat parameter-parameter statistik yang ditunjukkan pada Persamaan 3.13-3.18.

1. Nilai rerata ( $\bar{x}$ )

$$(\bar{x}) = \frac{\sum_{i=0}^n X_1}{n} \quad (3.13)$$

## 2. Simpangan baku

$$(s) = \frac{\sum_{i=0}^n (X_i - \bar{x})}{(n-1)} \quad (3.14)$$

3. Koefisien asimetri (*Skewness*) (CS)

$$CS = \frac{n \sum_{i=1}^n (X_i - \bar{x})^3}{(n-1)(n-2)S^3} \quad (3.15)$$

## 4. Koefisien variasi (CV)

$$CV = \frac{s}{x} \quad (3.16)$$

## 5. Koefisien kurtosis (CK)

$$CK = \frac{n}{(n-1)(n-2)S^4} \sum_{i=1}^n (X_i - \bar{x})^4 \quad (3.17)$$

## 6. Korelasi (r)

$$r = \frac{(n \sum XY) - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \quad (3.18)$$

dengan:

$X_i$  = varian yang berupa data hujan atau debit,

$\bar{x}$  = rerata data hujan atau debit,

$n$  = jumlah data,

$s$  = simpangan baku,

$CS$  = koefisien asimetri,

$CV$  = koefisien variasi,

$CK$  = koefisien kurtosis,

$x$  = curah hujan di stasiun A,

$Y$  = curah hujan di stasiun pembanding, dan

$r$  = korelasi.

### 3.6 Metode *World Metrological Organization*

Metode kerapatan yang ditetapkan oleh Organisasi Meteorologi Dunia (*WMO*) merupakan pendekatan yang menggabungkan unsur-unsur topografi dan luas pengaruh dari setiap pos atau stasiun pengamatan hidrologi. Analisis ini bertujuan untuk menilai apakah jumlah stasiun hujan yang ada saat ini dapat mewakili kondisi wilayah yang diteliti, sehingga dapat mengoptimalkan jumlah stasiun hujan yang diperlukan. Berdasarkan standar *WMO*, untuk daerah pegunungan, luas area yang dapat dilayani oleh satu stasiun hujan berkisar antara 100 hingga 250 km<sup>2</sup>. Standar kerapatan jaringan stasiun hujan menurut *WMO* dapat dilihat pada Tabel 3.2.

**Tabel 3.2 Standar Kerapatan Jaringan Stasiun Hujan Menurut *WMO***

| Jenis wilayah              | Kerapatan minimum stasiun hujan       |
|----------------------------|---------------------------------------|
| Wilayah Dataran Rendah     | 1 stasiun per 600-900 km <sup>2</sup> |
| Wilayah Pegunungan         | 1 stasiun per 100-250 km <sup>2</sup> |
| Wilayah Semi-Arid (Kering) | 1 stasiun per 4.500 km <sup>2</sup>   |
| Wilayah Kepulauan Tropis   | 1 stasiun per 25-100 km <sup>2</sup>  |

Sumber: Linsley (1986) dalam Vidyatama dan Suhartanto (2018)

### 3.7 Metode Kagan-Rodda

Dari beberapa cara penetapan jaringan pengukuran hujan, terdapat cara yang relatif sederhana, baik dalam hal kebutuhan data maupun prosedur analisisnya. Cara yang dikemukakan oleh Kagan (1972) ini memiliki keuntungan selain untuk mendapatkan jumlah stasiun yang dibutuhkan dengan tingkat ketelitian tertentu, sekaligus dapat memberikan pola penempatan stasiun hujan dengan jelas. Dengan metode ini, kesalahan yang diinginkan dalam perhitungan jaringan dapat ditentukan dan jumlah serta dapat diperoleh pola penempatan stasiun hujan yang optimal. Data yang digunakan dalam metode ini adalah data hujan bulanan karena apabila digunakan data hujan harian maka hasil yang didapatkan tidak rasional.

Penetapan jaringan pengukuran yang dikemukakan oleh Kagan (1972) pada dasarnya menggunakan analisis statistik dengan mengaitkan kerapatan jaringan dengan kesalahan interpolasi dan kesalahan perataan (*interpolation error and averaging error*) (Harto, 1993). Kagan mengembangkan cara evaluasi jaringan stasiun hujan berdasarkan Persamaan 3.20-3.22.

$$r_{(d)} = r_{(0)} e^{-d/d_0} \quad (3.19)$$

Nilai  $r_{(d)}$  bisa diperoleh dari regresi eksponensial sehingga diperoleh nilai  $d_0$ , karena pada analisis jaringan stasiun hujan grafik turun maka pangkat eksponensial negatif. Tingkat korelasi data curah hujan semakin jauh jarak stasiun hujannya maka nilainya menjauhi 1, sehingga nilai  $d_0$  didapat dari hasil regresi dengan 1 dibagi pangkat eksponensial. Hasilnya mendapatkan nilai radius korelasi, yaitu jarak dalam km di mana koefisien korelasi berkurang dengan faktor e.

$$Z_1 = CV \sqrt{\frac{1 - r(0) + 0,23 \frac{\sqrt{A}}{d_0 \sqrt{N}}}{N}} \quad (3.20)$$

$$L = 1,07 \sqrt{\frac{A}{N}} \quad (3.21)$$

$$Z_3 = CV \sqrt{\frac{1}{3}} |1 - r(0)| + 0,52 \frac{r(0)}{d_0} \sqrt{\frac{A}{N}} \quad (3.22)$$

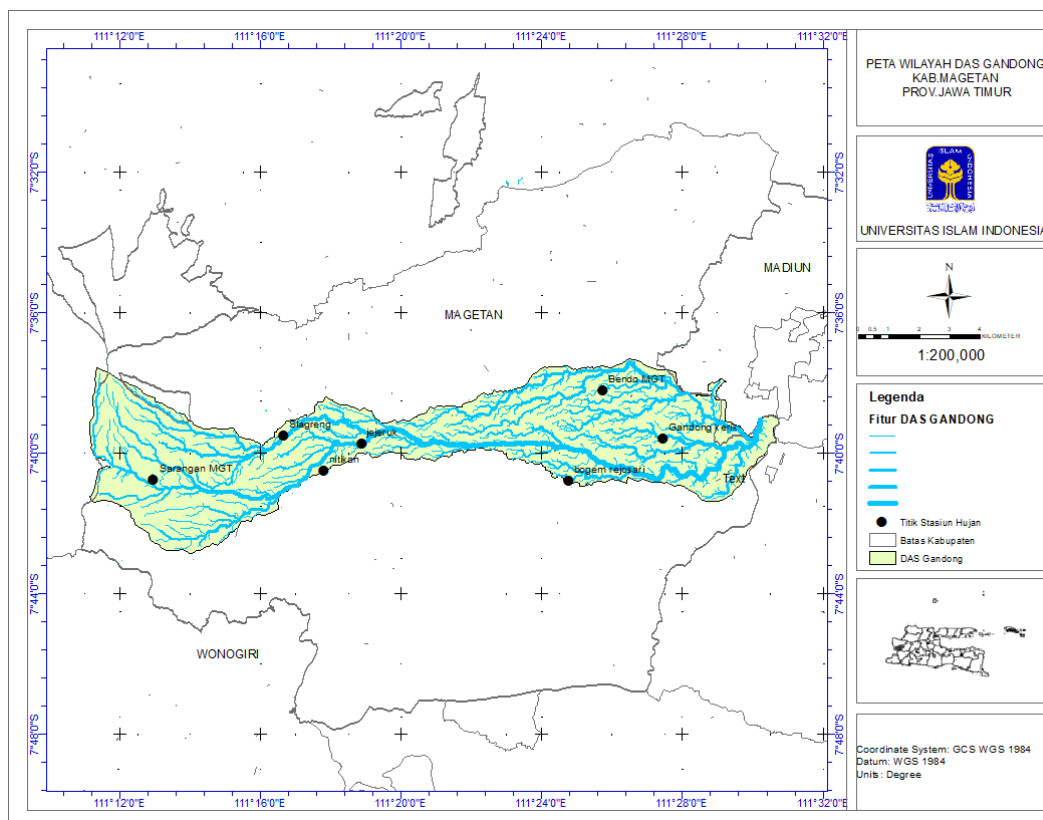
dengan:

- $d$  = jarak antar stasiun (km),
- $d_0$  = radius korelasi, yaitu jarak dalam km di mana koefisien korelasi berkurang dengan faktor e,
- $CV$  = koefisien variasi,
- $r_{(d)}$  = koefisien korelasi untuk jarak d km,
- $r_{(0)}$  = koefisien korelasi yang di ekstrapolasikan untuk jarak 0 km,
- $A$  = luas DAS (km<sup>2</sup>),
- $N$  = jumlah stasiun hujan,
- $L$  = jarak antar stasiun dalam segitiga sama sisi (km),
- $Z_1$  = kesalahan kerapatan (%), dan
- $Z_3$  = kesalahan interpolasi (%).

## BAB IV METODE PENELITIAN

### 4.1 Lokasi Penelitian

Lokasi penelitian terletak di lingkup DAS Gandong yang merupakan kesatuan ekosistem yang meliputi wilayah kabupaten dan kota di provinsi Jawa Timur. Panjang Sungai Gandong adalah 138,10 km dan Luas DAS Gandong adalah 162,797 km<sup>2</sup>. DAS Gandong secara administratif mencangkup Kabupaten Magetan. Persentase wilayah administrasi Kabupaten/Kota di wilayah Provinsi Jawa Timur yang termasuk dalam wilayah DAS Gandong ditunjukkan pada Tabel 4.1. DAS gondong memiliki 7 buah stasiun hujan yang letaknya seperti pada Gambar 4.1 berikut.



Gambar 4.1 Peta Topografi DAS Gondong

## 4.2 Pengumpulan Data

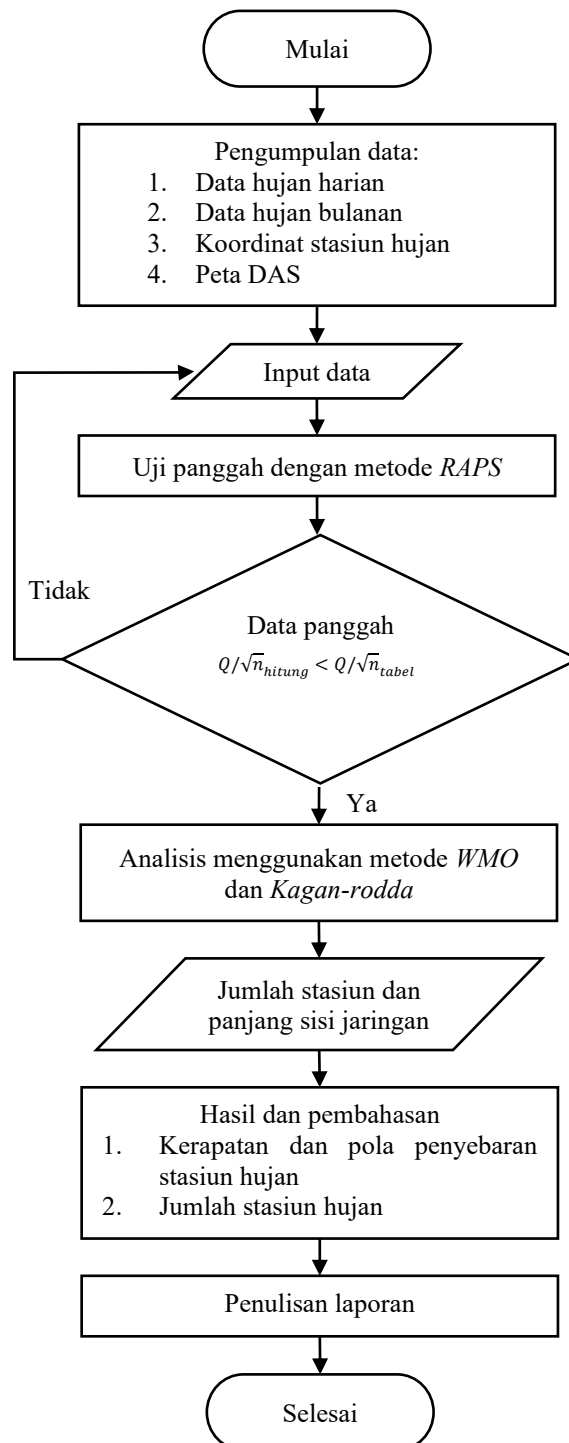
Data yang digunakan dalam penelitian ini adalah data sekunder yang berupa data curah hujan yang diperoleh dari PU Sumber Daya Air Jawa Timur dengan panjang pencatatan data selama 10 tahun yaitu dari tahun 2014 sampai dengan tahun 2023. Pengambilan data curah hujan diambil dari 7 stasiun hujan yang masing-masing tersebar di wilayah Magetan. Data curah hujan yang digunakan dalam analisis ini adalah data curah hujan harian dan bulanan yang tercatat pada stasiun hujan.

## 4.3 Analisis Data

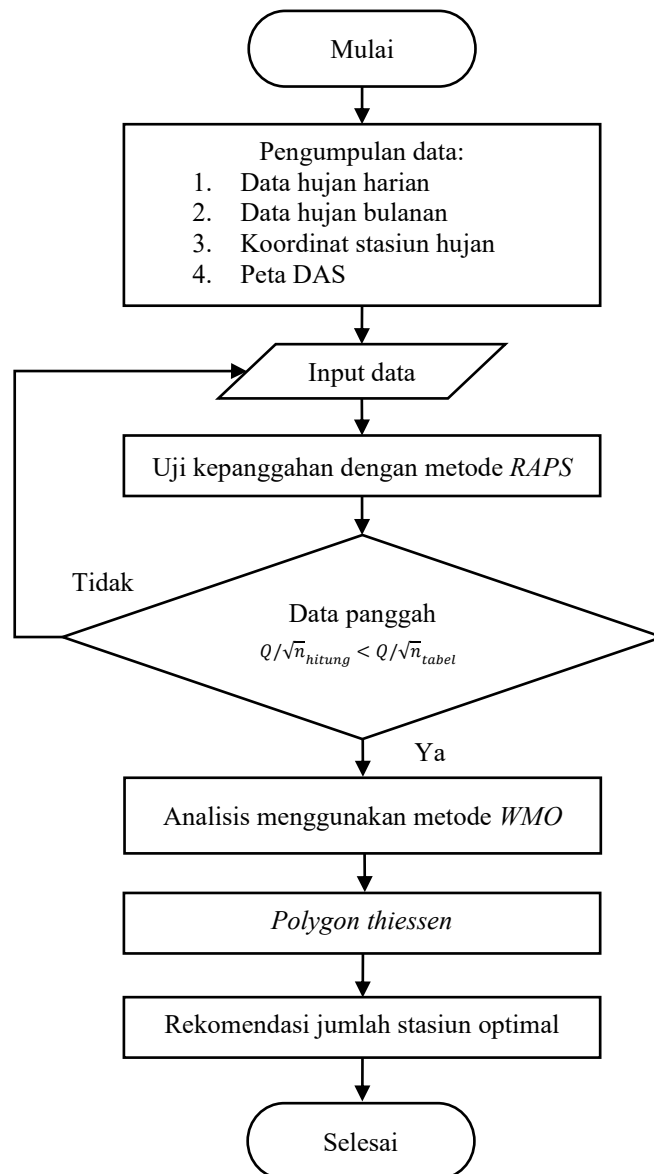
Metode yang digunakan dalam analisis adalah metode WMO dan Kagan-rodha yang merupakan metode untuk menetapkan jaringan hujan. Dengan kedua metode ini dapat diketahui perbandingan jumlah stasiun hujan yang dibutuhkan maupun pola penempatannya sehingga diperoleh jaringan stasiun hujan yang optimal. Tahap analisis dilakukan dengan langkah-langkah sebagai berikut.

1. Menghitung nilai koefisien variasi ( $C_v$ ) berdasarkan data hujan rata-rata DAS maksimum baik harian maupun bulanan.
2. Mengilustrasikan hubungan antara jarak antar stasiun ( $d$ ) dengan korelasi data antar stasiun ( $r(d)$ ). Hubungan ini dapat digambarkan melalui suatu hubungan eksponensial.
3. Dilakukan penghitungan nilai kesalahan perataan ( $Z_I$ ) dan kesalahan interpolasi ( $Z_3$ ) dari parameter yang dihasilkan dari perhitungan sebelumnya.
4. Menggambarkan jaring-jaring segitiga sama sisi pada DAS dengan panjang sisi 1, kemudian dilakukan penggeseran-penggeseran sehingga jumlah simpul segitiga dalam DAS sama dengan jumlah stasiun yang didapat dari perhitungan. Segitiga sama sisi metode kagan rodha dapat dilihat pada Gambar 4.2.

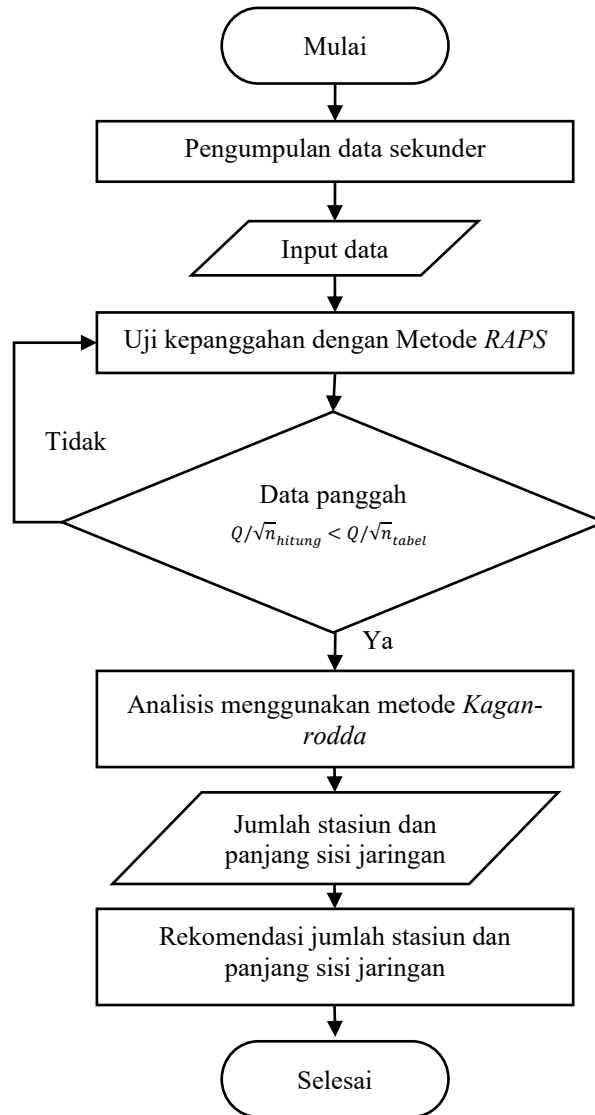




**Gambar 4.3 Bagan Alir Kerapatan Penelitian**



**Gambar 4.4 Bagan Alir Kerapatan Stasiun Hujan Metode Standar *WMO***



**Gambar 4.5 Bagan Alir Kerapatan Stasiun Hujan Metode *Kagan Rodda***

## BAB V ANALISIS DAN PEMBAHASAN

### 5.1 Kondisi Eksisting Stasiun Curah Hujan

Daerah Aliran Sungai (DAS) Gandong terletak pada wilayah Kabupaten Magetan, Jawa Timur. Data dari peta DEMNAS DAS Gandong memiliki luas daerah tangkapan air sebesar 162,797 km<sup>2</sup> dengan panjang sungai utama 138,10 km. DAS Gandong memiliki 7 stasiun hujan otomatis, yaitu Gandong Kerik, Bendo MGT, Bogem Rejosari, Jejeruk, Nitikan, Slagreng MGT, Sarangan MGT. Stasiun hujan tersebut tersebar di wilayah DAS Gandong dengan koordinat sesuai Tabel 5.1.

**Tabel 5.1 Stasiun Hujan DAS Gandong**

| No. | Nama Stasiun Hujan | Koordinat       |             |
|-----|--------------------|-----------------|-------------|
|     |                    | Lintang Selatan | Bujur timur |
| 1.  | Gandong Kerik      | -7,659889       | 111,457806  |
| 2.  | Bendo MGT          | -7,637028       | 111,429575  |
| 3.  | Bogem Rejosari     | -7,680028       | 111,413167  |
| 4.  | Jejeruk            | -7,662361       | 111,315222  |
| 5.  | Nitikan            | -7,67501        | 111,29662   |
| 6.  | Slagreng           | -7,658408       | 111,278161  |
| 7.  | Sarangan MGT       | -7,6796         | 111,2164    |

### 5.2 Uji Kepanggahan Data Hujan

Pengujian kepanggahan data hujan dilakukan dengan menggunakan metode *Rescaled Adjusted Partial Sums* (RAPS). Data yang digunakan untuk uji kepanggahan adalah data hujan tahunan. Data hujan tahunan dapat dilihat pada Tabel 5.3. Hasil uji kepanggahan data curah hujan untuk masing-masing stasiun pada stasiun DAS Gandong menggunakan metode *RAPS* dapat disimpulkan bahwa keseluruhannya panggah dan dapat dilihat pada Tabel 5.4. Hal tersebut dikarenakan berdasarkan Tabel 5.2, data dinyatakan panggah apabila nilai  $Q/\sqrt{n}_{hitung} < Q/\sqrt{n}_{tabel}$ .

**Tabel 5.2 Nilai  $Q/\sqrt{n}$  dan  $R/\sqrt{n}$** 

| N        | $Q/\sqrt{n}$ |      |      | $R/\sqrt{n}$ |      |      |
|----------|--------------|------|------|--------------|------|------|
|          | 90%          | 95%  | 99%  | 90%          | 95%  | 99%  |
| 10       | 1,05         | 1,14 | 1,29 | 1,21         | 1,28 | 1,38 |
| 20       | 1,10         | 1,22 | 1,42 | 1,34         | 1,43 | 1,60 |
| 30       | 1,12         | 1,24 | 1,46 | 1,40         | 1,50 | 1,70 |
| 40       | 1,13         | 1,26 | 1,26 | 1,42         | 1,53 | 1,74 |
| 50       | 1,14         | 1,27 | 1,27 | 1,44         | 1,55 | 1,78 |
| 100      | 1,17         | 1,29 | 1,29 | 1,50         | 1,62 | 1,86 |
| $\infty$ | 1,22         | 1,36 | 1,36 | 1,62         | 1,75 | 2,00 |

Sumber: Harto (2009)

**Tabel 5.3 Data Hujan Tahunan pada DAS Gandong**

| No. | Tahun | Curah hujan |           |                |         |         |              |          |
|-----|-------|-------------|-----------|----------------|---------|---------|--------------|----------|
|     |       | Gon Kerik   | Bendo MGT | Bogem Rejosari | Jejeruk | Nitikan | Sarangan MGT | Slagreng |
| 1.  | 2014  | 1343        | 2046      | 1521           | 2200    | 2709    | 2352         | 3602     |
| 2.  | 2015  | 1828        | 1927      | 1727           | 1865    | 2801    | 2023         | 3186     |
| 3.  | 2016  | 2663        | 4205      | 2848           | 3275    | 4527    | 4191         | 4954     |
| 4.  | 2017  | 2362        | 2710      | 1673           | 2768    | 3833    | 2602         | 3625     |
| 5.  | 2018  | 1643        | 1177      | 1209           | 1726    | 2453    | 1952         | 2275     |
| 6.  | 2019  | 1883        | 1196      | 1366           | 1506    | 2679    | 1362         | 282      |
| 7.  | 2020  | 2441        | 1877      | 1770           | 2386    | 2068    | 2588         | 2762     |
| 8.  | 2021  | 2387        | 1812      | 1811           | 2365    | 2236    | 2695         | 3338     |
| 9.  | 2022  | 2197        | 1648      | 1733           | 2716    | 2363    | 2911         | 3015     |
| 10. | 2023  | 1494        | 1133      | 1050           | 1620    | 1498    | 2085         | 1807     |

**Tabel 5.4 Stasiun Hujan DAS Gandong**

| No. | Stasiun        | $Q/\sqrt{n}_{hitung}$ | $R/\sqrt{n}_{hitung}$ | $Q/\sqrt{n}_{tabel}$ | $R/\sqrt{n}_{tabel}$ | Pangkah/Tidak Pangkah |
|-----|----------------|-----------------------|-----------------------|----------------------|----------------------|-----------------------|
| 1.  | Gandong Kerik  | 0,626                 | 1,004                 | 1,14                 | 1,28                 | PANGGAH               |
| 2.  | Bendo MGT      | 0,602                 | 0,602                 |                      |                      | PANGGAH               |
| 3.  | Bogem Rejosari | 0,561                 | 0,638                 |                      |                      | PANGGAH               |
| 4.  | Jejeruk        | 0,698                 | 0,956                 |                      |                      | PANGGAH               |
| 5.  | Nitikan        | 0,504                 | 0,505                 |                      |                      | PANGGAH               |
| 6.  | Slagreng       | 0,615                 | 0,615                 |                      |                      | PANGGAH               |
| 7.  | Sarangan MGT   | 0,212                 | 0,309                 |                      |                      | PANGGAH               |

Contoh perhitungan data hujan pada stasiun Jejeruk dengan menggunakan *RAPS* dapat dilakukan dengan menggunakan Persamaan 3.4-3.12. Rekapitulasi dari perhitungan *RAPS* dapat dilihat pada Tabel 5.4.

1. Perhitungan nilai kumulatif penyimpangan ( $S_k^*$ )

$$S_k^* = (Y_i - \bar{Y})$$

$$S_k^* = (2200 - 2242,7)$$

$$S_k^* = -42,7$$

2. Perhitungan nilai kumulatif yang telah distandarisasi ( $S_k^{**}$ )

$$S_k^{**} = \frac{S_k^*}{D_y}$$

$$S_k^{**} = \frac{-42,7}{515,319}$$

$$S_k^{**} = -0,0828$$

3. Perhitungan variansi penyimpangan ( $D_y^2$ )

$$D_y^2 = \frac{(Y_i - \bar{Y})^2}{n}$$

$$D_y^2 = \frac{(2200 - 2242,7)^2}{10}$$

$$D_y^2 = 182,3$$

4. Perhitungan deviasi standar penyimpangan ( $D_y$ )

$$D_y = \sqrt{\sum D_y^2}$$

$$D_y = \sqrt{265553,8^2}$$

$$D_y = 515,319$$

Persamaan yang digunakan sebagai alat penguji kepanggaan yaitu sebagai berikut.

5. Perhitungan nilai statistik (Q)

$$Q = maks | S_k^{**} |$$

$$Q = maks | (-0,082) + (-0,81) + 1,18 + 2,206 + 1,20 + (-0,22) + 0,05 + 0,28 + 1,2 + 5,77 \times 10^{-16} |$$

$$Q = 2,206$$

6. Perhitungan nilai statistik (R)

$$R = maks S_k^{**} - min S_k^{**}$$

$$R = 1,930 - 5,77 \times 10^{-16}$$

$$R = 3,022$$

7. Perhitungan rentang antara nilai maksimum dan minimum dari penyimpangan yang distandarisasi ( $Q/\sqrt{n_{hitung}}$ )

$$Q/\sqrt{n}_{hitung} < Q/\sqrt{n}_{hitung}$$

$$\left(\frac{2,206}{\sqrt{10}}\right) < 1,14$$

$$0,697 < 1,14$$

$$\left(\frac{Q}{\sqrt{n}_{hitung}} < \frac{Q}{\sqrt{n}_{tabel}}\right) = 0,697 < 1,14 \quad \text{maka hasilnya Panggah}$$

8. Perhitungan rentang antara nilai maksimum dan minimum dari penyimpangan yang distandarisasi ( $R/\sqrt{n}_{hitung}$ )

$$R/\sqrt{n}_{hitung} < R/\sqrt{n}_{tabel}$$

$$\left(\frac{3,022}{\sqrt{10}}\right) < 1,28$$

$$0,955 < 1,28$$

$$\left(\frac{Q}{\sqrt{n}_{hitung}} < \frac{Q}{\sqrt{n}_{tabel}}\right) = 0,955 < 1,28 \quad \text{maka hasilnya Panggah}$$

**Tabel 5.5 Pengujian Stasiun Jejeruk dengan RAPS**

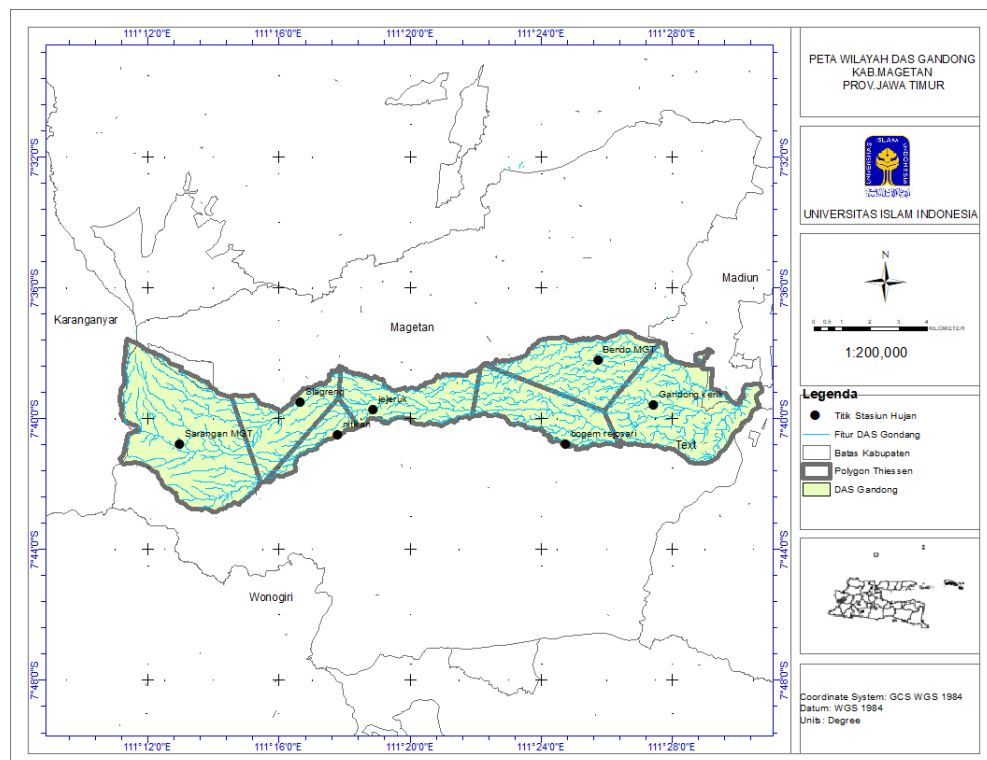
| No. | Tahun                                | $Y_i$ (mm)                   | $(Y_i - \bar{Y})$ (mm) | $S_k^*$ | $D_y^2$  | $S_k^{**}$ | $ S_k^{**} $ |
|-----|--------------------------------------|------------------------------|------------------------|---------|----------|------------|--------------|
| 1.  | 2014                                 | 2200                         | -42,7                  | -42,7   | 182,3    | -0,0829    | 0,0829       |
| 2.  | 2015                                 | 1865                         | -377,7                 | -420,4  | 17673,6  | -0,8158    | 0,8158       |
| 3.  | 2016                                 | 3275                         | 1032,3                 | 611,9   | 37442,2  | 1,1874     | 1,1874       |
| 4.  | 2017                                 | 2768                         | 525,3                  | 1137,2  | 129322,4 | 2,2068     | 2,2068       |
| 5.  | 2018                                 | 1726                         | -516,7                 | 620,5   | 38502,0  | 1,2041     | 1,2041       |
| 6.  | 2019                                 | 1506                         | -736,7                 | -116,2  | 1350,2   | -0,2255    | 0,2255       |
| 7.  | 2020                                 | 2386                         | 143,3                  | 27,1    | 73,4     | 0,0526     | 0,0526       |
| 8.  | 2021                                 | 2365                         | 122,3                  | 149,4   | 2232,0   | 0,2899     | 0,2899       |
| 9.  | 2022                                 | 2716                         | 473,3                  | 622,7   | 38775,5  | 1,2084     | 1,2084       |
| 10. | 2023                                 | 1620                         | -622                   | 0       | 0        | 0          | 0            |
|     |                                      | <b><math>Y_i</math> (mm)</b> |                        |         |          |            |              |
|     | Jumlah                               | 22427                        |                        |         |          |            |              |
|     | Rata-rata                            | 2242,7                       |                        |         |          |            |              |
|     | n                                    | 10                           |                        |         |          |            |              |
|     | Dy                                   | 515,3191                     |                        |         |          |            |              |
|     | Q <sub>hitung</sub>                  | 2,206                        |                        |         |          |            |              |
|     | R <sub>hitung</sub>                  | 3,0226                       |                        |         |          |            |              |
|     | Q/n <sup>0.5</sup> <sub>hitung</sub> | 0,6978                       |                        |         |          |            |              |
|     | R/n <sup>0.5</sup> <sub>hitung</sub> | 0,9558                       |                        |         |          |            |              |
|     | Jumlah $D_y^2$                       | 265553,8                     |                        |         |          |            |              |

Dari Tabel 5.5 didapatkan nilai Q maksimum berdasarkan Persamaan 3.9 adalah sebesar 2,206 yang terjadi pada tahun ke 4 kemudian diperoleh nilai  $Q/\sqrt{n}_{hitung} = 0,698$ . Nilai ini kemudian dibandingkan dengan nilai kritik yang terdapat pada Tabel 5.2 dengan  $n = 10$  dan *Confidence Interval* sebesar 95% yang

besarnya adalah 1.14. Dapat disimpulkan bahwa data hujan pada stasiun Jejeruk pangkah karena nilai  $Q/\sqrt{n}_{hitung} < Q/\sqrt{n}_{tabel}$ .

### 5.3 Kerapatan Jaringan Stasiun Hujan Sesuai Standar WMO

Menurut kriteria yang direkomendasikan oleh WMO (*World Meteorological Organization*), kepadatan minimum jaringan stasiun hujan di wilayah pegunungan adalah 100–250 km<sup>2</sup> per stasiun. Daerah Aliran Sungai (DAS) Gandong memiliki 7 stasiun hujan. Untuk mengetahui hasil dari luas pengaruh masing-masing stasiun dapat menggunakan metode spasial, salah satunya *Polygon Thiessen*. Dengan pendekatan ini, kerapatan jaringan stasiun hujan standar WMO dengan menggunakan *software QGIS* dapat membantu dalam perencanaan dan pengelolaan sumber daya air secara lebih efisien dan berbasis data. Hasil analisis kerapatan jaringan stasiun hujan sesuai standar WMO menggunakan metode *Polygon Thiessen* dengan bantuan *software QGIS* dapat dilihat pada Gambar 5.1. Luas masing-masing daerah pengaruh stasiun hujan dan besar nilai Koefisien *Thiessen* dapat dilihat pada Tabel 5.6.



**Gambar 5.1 Peta *Polygon Thiessen* DAS Gandong**

**Tabel 5.6 Luas Stasiun dan Koefisien *Thiessen***

| No.              | Nama Stasiun Hujan | Luas (km <sup>2</sup> ) | Alpa  | Luas pengaruh (%) | Keterangan          |
|------------------|--------------------|-------------------------|-------|-------------------|---------------------|
| 1.               | Gandong Kerik      | 33,647                  | 0,206 | 20,668            | < kerapatan minimum |
| 2.               | Bendo MGT          | 22,662                  | 0,139 | 13,920            | < kerapatan minimum |
| 3.               | Bogem Rejosari     | 19,293                  | 0,118 | 11,850            | < kerapatan minimum |
| 4.               | Jejeruk            | 17,733                  | 0,108 | 10,892            | < kerapatan minimum |
| 5.               | Nitikan            | 5,769                   | 0,035 | 3,543             | < kerapatan minimum |
| 6.               | Slagreng           | 16,071                  | 0,098 | 9,871             | < kerapatan minimum |
| 7.               | Sarangan MGT       | 47,622                  | 0,292 | 29,252            | < kerapatan minimum |
| Luas DAS Gandong |                    | 162,797                 | 1     | 100               |                     |

Analisis luas wilayah pengaruh stasiun hujan di DAS Gandong menggunakan metode *Polygon Thiessen* menunjukkan variasi yang signifikan. Wilayah pengaruh terbesar tercatat pada stasiun Sarangan MGT, yang terletak di bagian barat DAS Gandong, dengan luas 47,622 km<sup>2</sup>. Sebaliknya, wilayah pengaruh terkecil terdapat pada stasiun Nitikan, dengan luas 5,769 km<sup>2</sup>. Berdasarkan Tabel 5.6, diketahui bahwa tujuh stasiun hujan aktif di DAS Gandong, sudah memiliki tingkat kerapatan jaringan stasiun curah hujan yang sangat baik atau lebih dari cukup. Kerapatan jaringan minimum yang disyaratkan oleh *WMO* sesuai pada Tabel 3.1, yaitu 100–250 km<sup>2</sup> karena DAS Gandong masuk ke jenis wilayah daerah pegunungan. DAS Gandong rata-rata memiliki luas pengaruh per-stasiun < 100 km seperti pada Tabel 5.6. Contoh perhitungan luas pengaruh dan koefisien *thiessen*. Rekapitulasi dari perhitungan *Polygon Thiessen* dapat dilihat pada Tabel 5.6.

1. Perhitungan Alpa

$$\alpha = \frac{A_i}{\text{luas DAS}}$$

$$\alpha = \frac{33,647 \text{ km}^2}{162,797 \text{ km}^2}$$

$$\alpha = 0,206$$

2. Perhitungan luas pengaruh (%)

$$Luas\ pengaruh = \alpha_1 \times 100$$

$$Luas\ pengaruh = 0,206 \times 100$$

$$Luas\ pengaruh = 20,668 \%$$

#### 5.4 Kerapatan Jaringan Stasiun Hujan Metode *Kagan-rodde*

Metode *Kagan-rodde* adalah pendekatan yang digunakan untuk menentukan kerapatan optimal jaringan stasiun hujan dalam suatu wilayah berdasarkan kebutuhan akurasi data curah hujan. Metode ini memanfaatkan analisis statistik dan distribusi spasial curah hujan untuk mengestimasi tingkat kesalahan kerapatan dan kesalahan interpolasi yang timbul akibat jarak antar stasiun hujan.

##### 5.4.1 Jarak dan Korelasi Antar Jarak Stasiun Hujan

Penentuan jarak antar stasiun hujan bergantung pada kerapatan jaringan yang diperlukan untuk merepresentasikan distribusi curah hujan secara akurat. Pengukuran jarak antar stasiun menggunakan *google earth* dengan mencari sesuai titik-titik koordinat stasiun hujan yang sudah diketahui dari data. Hasil jarak antar stasiun hujan DAS Gandong pada Tabel 5.7.

**Tabel 5.7 Jarak Antar Stasiun Hujan (km)**

| <i>stasiun/stasiun</i> | Gandong kerik | Bendo MGT | Bogem Rejosari | Jejeruk | Nitikan | Slagreng | Sarangan MGT |
|------------------------|---------------|-----------|----------------|---------|---------|----------|--------------|
| <b>Gandong Kerik</b>   | 0             | 4,01      | 5,43           | 15,7    | 17,8    | 19,8     | 25,8         |
| <b>Bendo MGT</b>       | 4,01          | 0         | 5,1            | 12,9    | 15,2    | 16,8     | 23,1         |
| <b>Bogem Rejosari</b>  | 5,43          | 5,1       | 0              | 11      | 12,8    | 15       | 20,8         |
| <b>Jejeruk</b>         | 15,7          | 12,9      | 11             | 0       | 2,45    | 4,12     | 10,2         |
| <b>Nitikan</b>         | 17,8          | 15,2      | 12,8           | 2,45    | 0       | 2,74     | 7,97         |
| <b>Slagreng</b>        | 19,8          | 16,8      | 15             | 4,12    | 2,74    | 0        | 6,23         |
| <b>Sarangan MGT</b>    | 25,8          | 23,1      | 20,8           | 10,2    | 7,97    | 6,23     | 0            |
| <b>Rata-rata</b>       | 12,648        | 11,015    | 10,018         | 8,052   | 8,422   | 9,241    | 13,442       |

Evaluasi tentang korelasi antar stasiun hujan sebaiknya dilakukan berdasarkan data curah hujan bulanan dengan data curah hujan bulanan hal sama dilakukan untuk data curah hujan harian yang digunakan dalam analisis korelasi antar stasiun. Hubungan antara jarak  $d$  dan korelasi  $r(d)$  yang diperoleh digambarkan dalam sebuah grafik lengkung eksponensial. Dari grafik tersebut dapat diperoleh besaran  $(d_{(0)})$  dan  $(r_{(0)})$ . Jarak antar stasiun dan perhitungan analisis

korelasi antar stasiun pada DAS Gandong terhadap stasiun Jejeruk untuk data hujan harian dan bulanan ditunjukkan pada Tabel 5.8.

1. Perhitungan hubungan jarak stasiun 1 terhadap stasiun pembanding.
  - a. Jarak Stasiun Gandong kerik terhadap Stasiun Jejeruk 15,7 km,
  - b. Jarak Stasiun Bendo MGT terhadap Stasiun Jejeruk 12,9 km,
  - c. Jarak Stasiun Bogem Rejosari kerik terhadap Stasiun Jejeruk 11 km,
  - d. Jarak Stasiun Nitikan kerik terhadap Stasiun Jejeruk 2,45 km,
  - e. Jarak Stasiun Slagreng terhadap Stasiun Jejeruk 4,12 km, dan
  - f. Jarak Stasiun Sarangan MGT terhadap Stasiun Jejeruk 10,2 km.
2. Perhitungan korelasi data curah hujan harian Stasiun Gandong kerik terhadap Stasiun Jejeruk (r).

$$r = \frac{(n \sum XY) - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

$$r = \frac{(3660 \times 461018) - (20241) \times (22427)}{\sqrt{(3660 \times 796621 - 20241^2) - (3660 \times 876197 - 22427^2)}}$$

$$r = 0,473$$

3. Perhitungan korelasi data curah hujan bulanan Stasiun Gandong Kerik terhadap Stasiun Jejeruk (r).

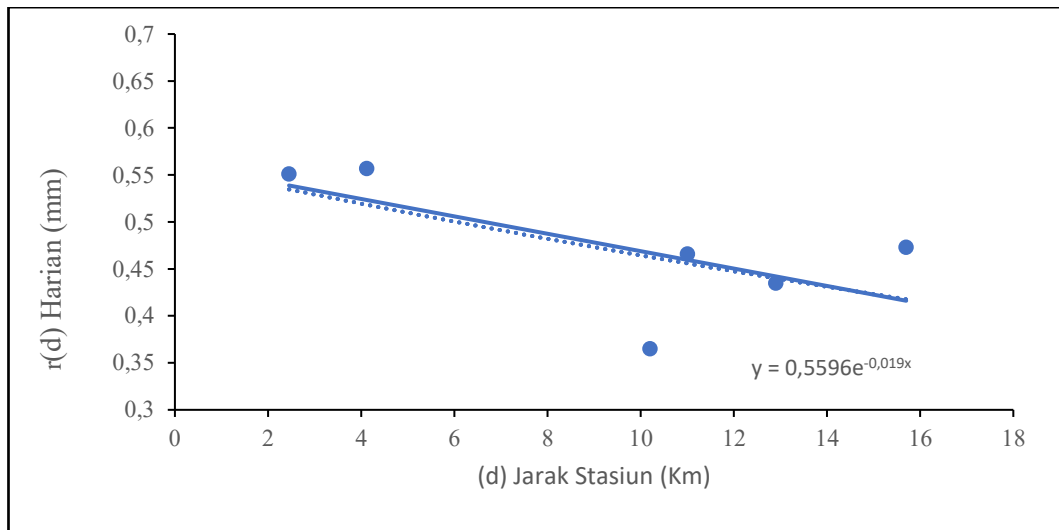
$$r = \frac{(n \sum XY) - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

$$r = \frac{(120 \times 6230938) - (20241) \times (22427)}{\sqrt{(120 \times 6339725 - 20241^2) - (120 \times 7014923 - 22427^2)}}$$

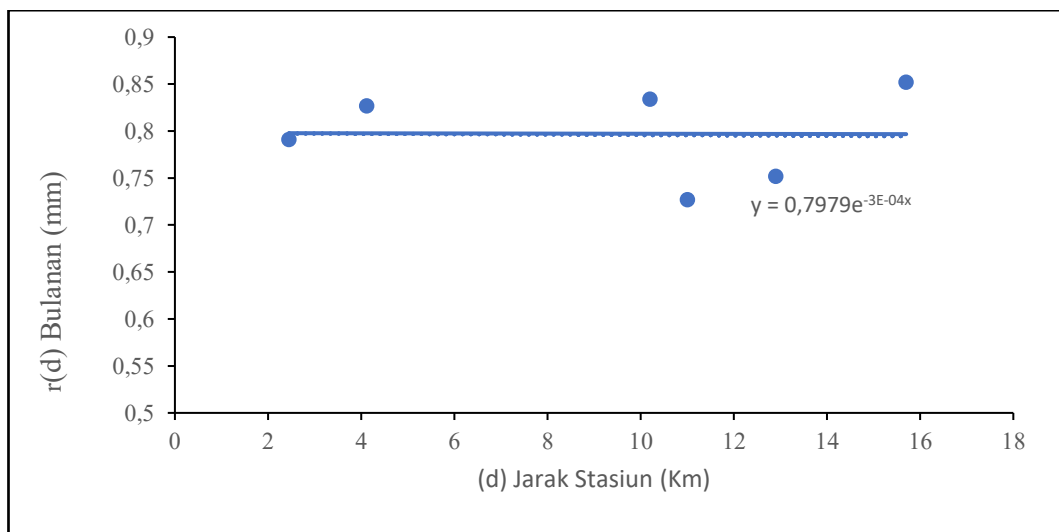
$$r = 0,852$$

**Tabel 5.8 Hubungan Jarak dan Korelasi Terhadap Stasiun Jejeruk**

| No. | Stasiun        | d (km) | r bulanan | r harian |
|-----|----------------|--------|-----------|----------|
| 1.  | Gandong Kerik  | 15,7   | 0,852     | 0,473    |
| 2.  | Bendo MGT      | 12,9   | 0,752     | 0,435    |
| 3.  | Bogem Rejosari | 11     | 0,727     | 0,466    |
| 4.  | Nitikan        | 2,45   | 0,791     | 0,551    |
| 5.  | Slagreng       | 4,12   | 0,827     | 0,557    |
| 6.  | Sarangan MGT   | 10,2   | 0,834     | 0,365    |



**Gambar 5.2 Hubungan antara Jarak Stasiun dengan Koefisien Korelasi DAS Gandong untuk Data Hujan Harian**



**Gambar 5.3 Hubungan antara Jarak Stasiun dengan Koefisien Korelasi DAS Gandong untuk Data Hujan Bulanan**

Gambar 5.2 dan 5.3 menunjukkan hubungan antara jarak antar stasiun hujan dengan koefisien korelasi curah hujan pada DAS Gandong mencerminkan sejauh mana pola curah hujan di satu stasiun berkorelasi dengan pola curah hujan di stasiun lainnya, yang dipengaruhi oleh jarak geografis. Hubungan antara jarak antar stasiun hujan dengan koefisien korelasi pada DAS Gandong menunjukkan bahwa semakin jauh jarak antar stasiun, semakin rendah koefisien korelasinya. Analisis ini sangat

penting untuk perencanaan jaringan stasiun hujan yang optimal dan pemodelan hidrologi yang akurat.

Nilai koefisien korelasi ( $r_{(0)}$ ) baik ketika nilainya 0,06 sampai 0,56 untuk data curah hujan harian, sedangkan untuk data curah hujan bulanan angka itu bervariasi antara 0,67 sampai 0,94 (Harto, 2022). Berdasarkan persamaan yang diperoleh dari grafik, untuk data hujan harian diperoleh nilai koefisien awal (*intercept*) dari fungsi eksponensial ( $r_{(0)}$ ) sebesar 0,5596 dan nilai radius korelasi ( $d_{(0)}$ ) didapat dari 1 dibagi dengan 0,019 hasilnya 52,631 km. Hasil perhitungan menggunakan data hujan bulanan diperoleh nilai koefisien awal (*intercept*) dari fungsi eksponensial ( $r_{(0)}$ ) sebesar 0,7979 dan nilai radius korelasi ( $d_{(0)}$ ) sebesar 2500 km. Berikut perhitungan nilai radius korelasi  $d_{(0)}$ .

1. Perhitungan radius korelasi data curah hujan harian.

$$r_{(d)} = r_{(0)}e^{-d/d_0}$$

$$d_0 = \frac{1}{0,019}$$

$$d_0 = 52,631 \text{ km}$$

2. Perhitungan radius korelasi data curah hujan bulanan.

$$r_{(d)} = r_{(0)}e^{-d/d_0}$$

$$d_0 = \frac{1}{0,0004}$$

$$d_0 = 2500 \text{ km}$$

#### 5.4.2 Koefisien Thiessen

Analisis koefisien variasi didasarkan pada hujan rata-rata DAS yang diperoleh dengan menggunakan cara *Polygon Thiessen*. Dari *Polygon Thiessen* yang sudah dibuat selanjutnya dihitung luas masing-masing wilayah dengan menggunakan program *QGIS*. Cara menghitung hujan rata-rata DAS dengan metode *Polygon Thiessen* dilakukan dengan cara memasukkan faktor pembobot pengaruh luas daerah yang dicakup suatu stasiun hujan terhadap luas DAS yang disebut Koefisien *Thiessen*. Besarnya Koefisien *Thiessen* tergantung dari luas daerah pengaruh stasiun hujan. Koefisien *thiessen* dan curah hujan rata-rata DAS Gandong dapat dilihat pada Tabel 5.9.

Tabel 5.9 Luas Stasiun dan Koefisien *Thiessen*

| No. | Stasiun          | Luas (km <sup>2</sup> ) | Alpa (α) |
|-----|------------------|-------------------------|----------|
| 1.  | Gandong Kerik    | 33,647                  | 0,206681 |
| 2.  | Bendo MGT        | 22,662                  | 0,139204 |
| 3.  | Bogem Rejosari   | 19,293                  | 0,11851  |
| 4.  | Jejeruk          | 17,733                  | 0,108927 |
| 5.  | Nitikan          | 5,769                   | 0,035437 |
| 6.  | Slagreng         | 16,071                  | 0,098718 |
| 7.  | Sarangan MGT     | 47,622                  | 0,292524 |
|     | Luas DAS Gandong | 162,797                 | 1        |

Contoh perhitungan faktor pembobot dan curah hujan rata-rata menggunakan metode *thiessen* sebagai berikut.

1. Faktor pembobot ( $a$ )

$$a = \frac{L_i}{L}$$

$$a = \frac{33,647 \text{ km}^2}{162,797 \text{ km}^2}$$

$$a = 0,206$$

2. Curah hujan rata-rata ( $H_d$ )

$$H_d = \sum a H_i$$

$$H_d = 39,68 + 15,88 + 50,49 + 36,49 + 17,58 + 59,53 + 100,04$$

$$H_d = 319,69 \text{ mm}$$

**Tabel 5.10 Curah Hujan Rata-rata Metode *Thiessen* pada Tahun 2014**

| No | Bulan     | Gandong Kerik |          | Bendo MGT |          | Bogem Rejosari |          | Jejeruk |          | Nitikan |          | Slagreng |          | Sarangan MGT |          | P DAS<br>(mm) | P MAKS<br>TAHUNAN<br>(mm) |
|----|-----------|---------------|----------|-----------|----------|----------------|----------|---------|----------|---------|----------|----------|----------|--------------|----------|---------------|---------------------------|
|    |           | p             | p x apha | p         | p x apha | p              | p x apha | p       | p x apha | p       | p x apha | p        | p x apha | p            | p x apha |               |                           |
| 1  | Januari   | 192           | 39,68    | 134       | 15,88    | 426            | 50,49    | 335     | 36,49    | 496     | 17,58    | 603      | 59,53    | 342          | 100,04   | 319,69        | 354,26                    |
| 2  | Februari  | 152           | 31,42    | 304       | 36,03    | 508            | 60,20    | 282     | 30,72    | 273     | 9,67     | 355      | 35,04    | 210          | 61,43    | 264,51        |                           |
| 3  | Maret     | 99            | 20,46    | 457       | 54,16    | 217            | 25,72    | 469     | 51,09    | 548     | 19,42    | 462      | 45,61    | 201          | 58,80    | 275,25        |                           |
| 4  | April     | 231           | 47,74    | 375       | 44,44    | 460            | 54,51    | 171     | 18,63    | 339     | 12,01    | 367      | 36,23    | 285          | 83,37    | 296,94        |                           |
| 5  | Mei       | 70            | 14,47    | 124       | 14,70    | 47             | 5,57     | 278     | 30,28    | 284     | 10,06    | 198      | 19,55    | 164          | 47,97    | 142,60        |                           |
| 6  | Juni      | 20            | 4,13     | 58        | 6,87     | 0              | 0        | 127     | 13,83    | 138     | 4,89     | 206      | 20,34    | 271          | 79,27    | 129,34        |                           |
| 7  | Juli      | 20            | 4,13     | 37        | 4,38     | 0              | 0        | 54      | 5,88     | 43      | 1,52     | 81       | 8        | 69           | 20,18    | 44,10         |                           |
| 8  | Agustus   | 0             | 0        | 0         | 0        | 0              | 0        | 0       | 0        | 0       | 0        | 0        | 0        | 0            | 0        | 0             |                           |
| 9  | September | 0             | 0        | 0         | 0        | 0              | 0        | 0       | 0        | 0       | 0        | 0        | 0        | 0            | 0        | 0             |                           |
| 10 | Oktober   | 0             | 0        | 0         | 0        | 0              | 0        | 0       | 0        | 0       | 0        | 0        | 0        | 35           | 10,24    | 10,24         |                           |
| 11 | November  | 223           | 46,09    | 240       | 28,44    | 98             | 11,61    | 271     | 29,52    | 322     | 11,41    | 688      | 67,92    | 356          | 104,14   | 299,13        |                           |
| 12 | Desember  | 336           | 69,44    | 317       | 37,57    | 242            | 28,68    | 213     | 23,20    | 266     | 9,43     | 642      | 63,38    | 419          | 122,57   | 354,26        |                           |

### 5.4.3 Koefisien Variasi

Nilai koefisien variasi ( $C_v$ ) dihitung sebagai perbandingan antara standar deviasi dan rata-rata curah hujan dari stasiun-stasiun yang ada. Semakin rendah nilai ( $C_v$ ), semakin homogen karakteristik dimensionalanya (Reksoatmodjo, 2009), yang menunjukkan distribusi curah hujan yang lebih merata. Sebaliknya, nilai ( $C_v$ ) yang tinggi mengindikasikan variasi yang besar dalam data hujan, yang bisa berarti kebutuhan untuk meningkatkan kerapatan jaringan stasiun untuk mendapatkan representasi yang lebih baik dari kondisi hujan di wilayah tersebut. Nilai Hujan rata-rata DAS harian maupun bulanan dapat dihitung berdasarkan Persamaan 3.2, kemudian didapat koefisien variasi ( $C_v$ ) harian sebesar 0,206 dan koefisien variasi ( $C_v$ ) bulanan sebesar 0,228. Berikut tabel analisis koefisien variasi pada Tabel 5.11.

**Tabel 5.11 Analisis Koefisien Variasi**

| <b>Tahun</b> | <b>Hujan rata-rata DAS harian maksimum (mm)</b> | <b>Hujan rata-rata DAS bulanan maksimum (mm)</b> |
|--------------|-------------------------------------------------|--------------------------------------------------|
| 2014         | 52,613                                          | 354,263                                          |
| 2015         | 48,684                                          | 484,505                                          |
| 2016         | 86,137                                          | 604,531                                          |
| 2017         | 61,140                                          | 471,711                                          |
| 2018         | 44,458                                          | 501,847                                          |
| 2019         | 44,943                                          | 306,705                                          |
| 2020         | 50,655                                          | 360,874                                          |
| 2021         | 57,677                                          | 417,937                                          |
| 2022         | 60,608                                          | 328,343                                          |
| 2023         | 50,666                                          | 347,409                                          |
| Rata-rata    | 55,758                                          | 417,813                                          |
| S            | 11,513                                          | 95,373                                           |
| $C_v$        | 0,206                                           | 0,228                                            |
| $C_s$        | 2,270                                           | 0,748                                            |

Dalam analisis kerapatan stasiun hujan, terdapat parameter-parameter statistik yang ditunjukkan pada Persamaan 3.13-3.18 untuk mencari nilai rerata ( $\bar{x}$ ), simpangan baku (S), Koefisien asimetri (*Skewness*) ( $C_s$ ), koefisien variasi ( $C_v$ ), dan

Koefisien kurtosis (Ck). Berikut Perhitungan koefisien variasi (Cv) data curah hujan harian.

1. Nilai rerata ( $\bar{x}$ )

$$(\bar{x}) = \frac{\sum_{i=0}^n X_1}{n}$$

$$(\bar{x}) = \frac{52,61+48,68+86,13+61,14+44,45+44,94+50,65+57,67+60,60+50,66}{10}$$

$$(\bar{x}) = 55,759$$

2. Simpangan bakull

$$S = \frac{n \sum_{i=1}^n (X_i - \bar{x})^2}{(n-1)}$$

$$S = \sqrt{\frac{1335,6}{(10-1)}}$$

$$S = 11,513$$

3. Koefisien asimetri (*Skewness*) (CS)

$$CS = \frac{n \sum_{i=1}^n (X_i - \bar{x})^3}{(n-1)(n-2)S^3}$$

$$CS = \frac{7.(24954,1)^3}{(10-1)(10-2)12,831^3}$$

$$CS = 2,270$$

4. Koefisien variasi (Cv)

$$CV = \frac{S}{\bar{x}}$$

$$CV = \frac{11,513}{55,759}$$

$$CV = 0,206$$

5. Koefisien kurtosis (Ck)

$$CK = \frac{n}{(n-1)(n-2)S^4} \sum_{i=1}^n (X_i - \bar{x})^4$$

$$CK = \frac{10}{(10-1)(10-2)11,513^4} 887009,6$$

$$CK = 7,01$$

#### 5.4.4 Kesalahan Perataan dan Kesalahan Interpolasi

Berikut contoh perhitungan kesalahan perataan dan kesalahan interpolasi, yang dapat menghasilkan grafik pada Gambar 5.4 dan Gambar 5.5 dapat dihitung masing-masing kesalahan perataan ( $Z_1$ ) dan kesalahan interpolasi ( $Z_3$ ). Hasil dari perhitungan berikut dapat dilihat pada Lampiran 3.

1. Kesalahan Perataan ( $Z_1$ ) dan Kesalahan Interpolasi ( $Z_3$ ) untuk curah hujan harian.

Kesalahan perataan ( $Z_1$ )

$$Z_1 = CV \sqrt{\frac{1-r(0)+0,23\frac{\sqrt{A}}{d_0\sqrt{N}}}{N}}$$

$$Z_1 = 0,206 \sqrt{\frac{1-0,5596+0,23\frac{\sqrt{162,797}}{52,63\sqrt{2}}}{2}}$$

$$Z_1 = 0,1011 = 10,11\%$$

Kesalahan perataan ( $Z_3$ )

$$Z_3 = CV \sqrt{\frac{1}{3}} |1 - r(0)| + 0,52 \frac{r(0)}{d_0} \sqrt{\frac{A}{N}}$$

$$Z_3 = 0,226 \sqrt{\frac{1}{3}} |1 - 0,5596| + 0,52 \frac{0,5596}{52,63} \sqrt{\frac{162,797}{2}}$$

$$Z_3 = 0,10 = 10\%$$

2. Kesalahan Perataan ( $Z_1$ ) dan Kesalahan Interpolasi ( $Z_3$ ) untuk curah hujan bulanan.

Kesalahan perataan ( $Z_1$ )

$$Z_1 = CV \sqrt{\frac{1-r(0)+0,23\frac{\sqrt{A}}{d_0\sqrt{N}}}{N}}$$

$$Z_1 = 0,228 \sqrt{\frac{1-0,7979+0,23\frac{\sqrt{162,797}}{2500\sqrt{1}}}{1}}$$

$$Z_1 = 0,1081 = 10,8\%$$

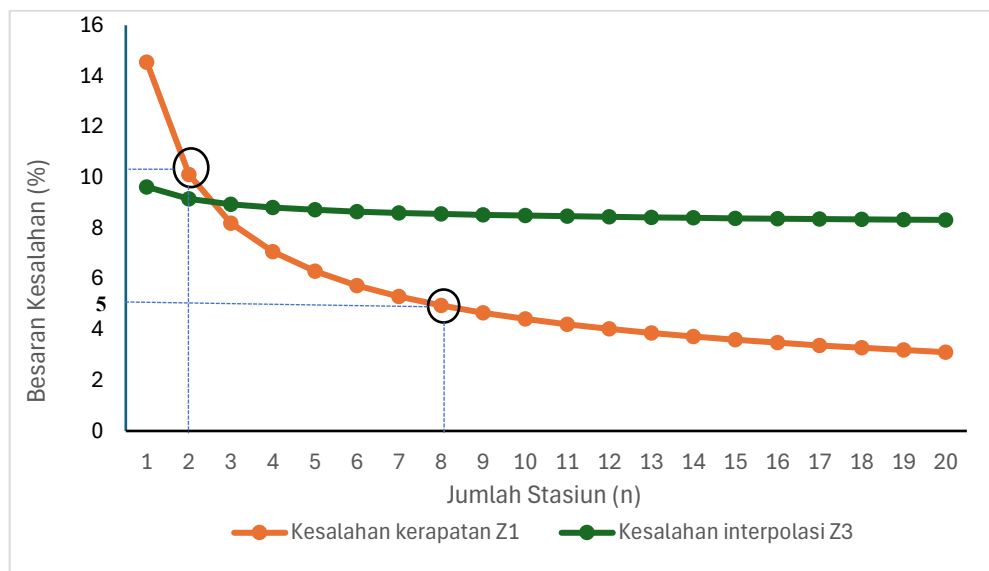
Kesalahan perataan ( $Z_3$ )

$$Z_3 = CV \sqrt{\frac{1}{3}} |1 - r(0)| + 0,52 \frac{r(0)}{d_0} \sqrt{\frac{A}{N}}$$

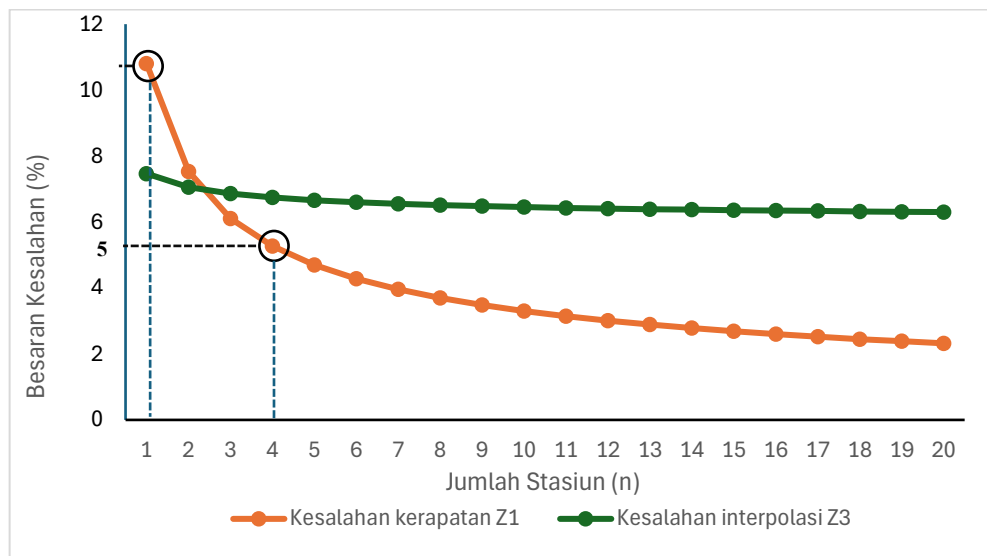
$$Z_3 = 0,228 \sqrt{\frac{1}{3}} |1 - 0,7979| + 0,52 \frac{0,7979}{2500} \sqrt{\frac{162,797}{1}}$$

$$Z^3 = 0,0747 = 7,47\%$$

Pada Gambar 5.4 dan Gambar 5.5 merupakan grafik hubungan antara jumlah stasiun hujan (n) dengan besaran kesalahan (%) pada dua jenis kesalahan, yaitu Kesalahan kerapatan (Z1) yang ditunjukkan dengan garis oranye, Kesalahan interpolasi (Z5) yang ditunjukkan dengan garis hijau. Sumbu X (horizontal) menunjukkan jumlah stasiun hujan (n), mulai dari 1 hingga 20 stasiun. Sumbu Y (vertikal) menunjukkan besaran kesalahan dalam persen (%), yang mencerminkan akurasi dari data curah hujan berdasarkan jumlah stasiun. Pengambilan data perhitungan diambil 20 sampel, karena pada kesalahan kerapatan berada di bawah 5%, dan kesalahan interpolasi tetap stabil. Dapat dilakukan perhitungan lanjutan jika membutuhkan data lebih dari 20 sampel. Grafik hubungan antara jumlah stasiun dan kesalahan diambil dengan sampel 20 stasiun untuk curah hujan harian dan bulanan dapat dilihat pada Gambar 5.4 dan Gambar 5.5.



**Gambar 5.4 Hubungan antara Jumlah Stasiun dan Besar Kesalahan Harian DAS Gandong**



**Gambar 5.5 Hubungan antara Jumlah Stasiun dan Besar Kesalahan Bulanan DAS Gandong**

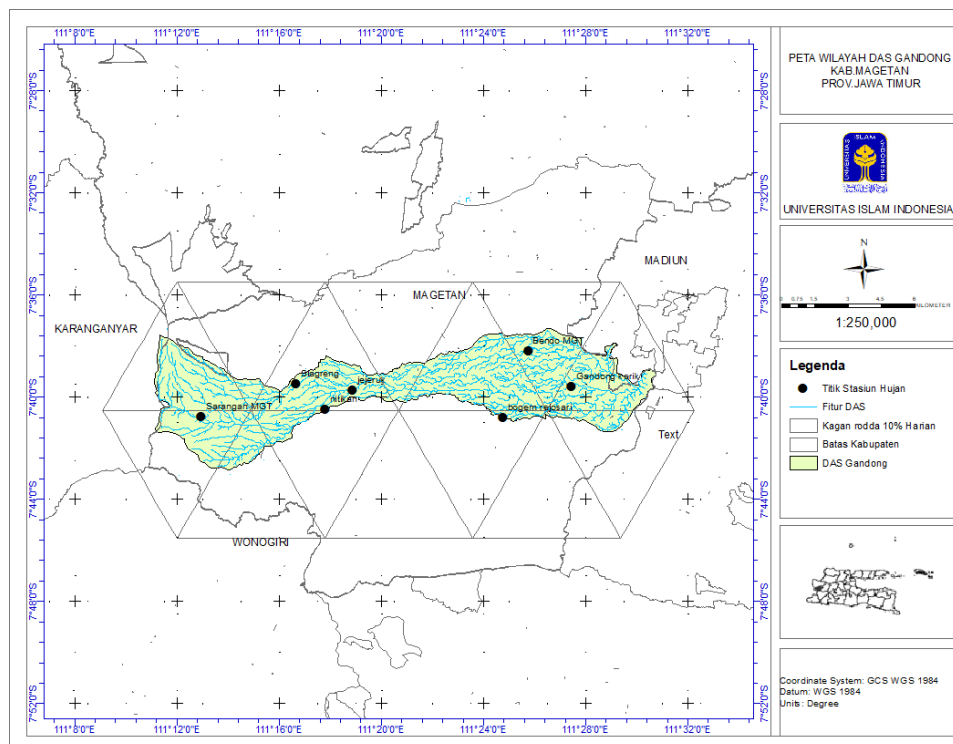
Grafik pada Gambar 5.4 dan Gambar 5.5 tersebut menunjukkan hubungan antara jumlah stasiun hujan dengan besaran kesalahan dalam estimasi curah hujan, yang dibagi menjadi dua jenis kesalahan: kesalahan interpolasi dan kesalahan akibat kerapatan jaringan. Dari grafik terlihat bahwa ketika jumlah stasiun hujan sedikit, besaran kesalahan akibat kerapatan jaringan sangat tinggi menyentuh 14%. Namun, seiring bertambahnya jumlah stasiun, kesalahan ini menurun tajam hingga mendekati nol, menunjukkan bahwa peningkatan jumlah dan kepadatan stasiun hujan secara signifikan meningkatkan akurasi estimasi rata-rata curah hujan wilayah. Sebaliknya, kesalahan interpolasi relatif konstan mendekati 9% meskipun jumlah stasiun bertambah.

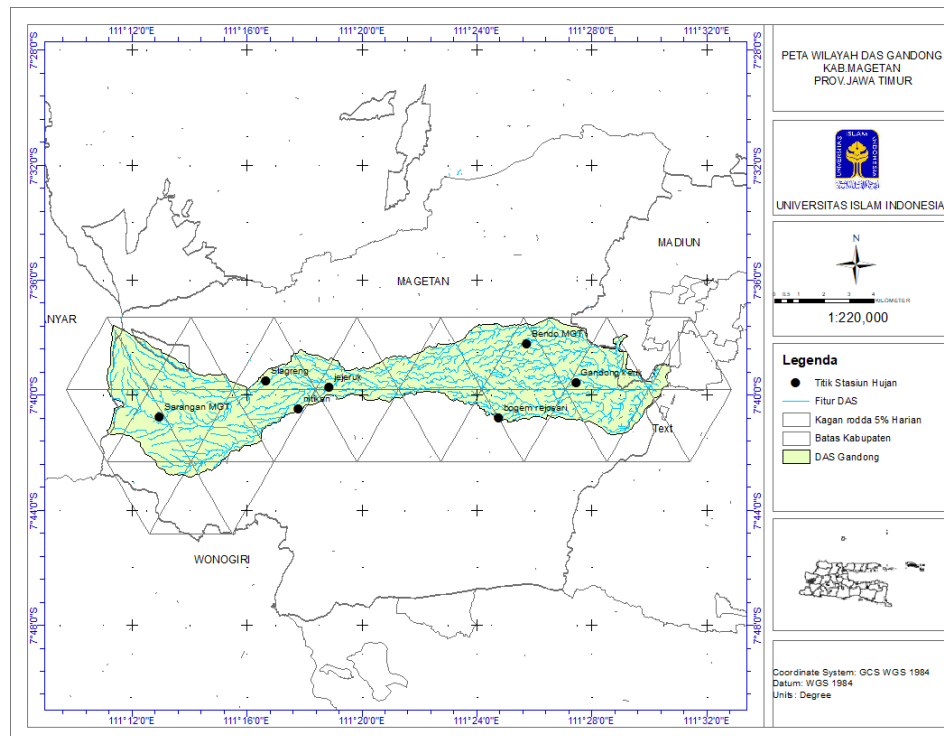
Dari hasil pada grafik nilai kesalahan kerapatan ( $Z_1$ ) dan kesalahan interpolasi ( $Z_3$ ) sesuai yang sudah ditandai, untuk curah hujan harian bahwa jika menggunakan data hujan harian maka pada kesalahan perataan sebesar 10% diperlukan 3 buah stasiun dan untuk kesalahan perataan sebesar 5% diperlukan 10 buah stasiun. Perhitungan menggunakan data hujan bulanan pada kesalahan perataan sebesar 10% diperlukan 1 buah stasiun dan kesalahan perataan 5% diperlukan 4 buah stasiun. Hasil dari pengambilan data yang dipakai yaitu kesalahan 5% dan 10% dapat dilihat pada Tabel 5.12.

Tabel 5.12 Jumlah Stasiun dan Panjang Sisi Jaringan Kagan

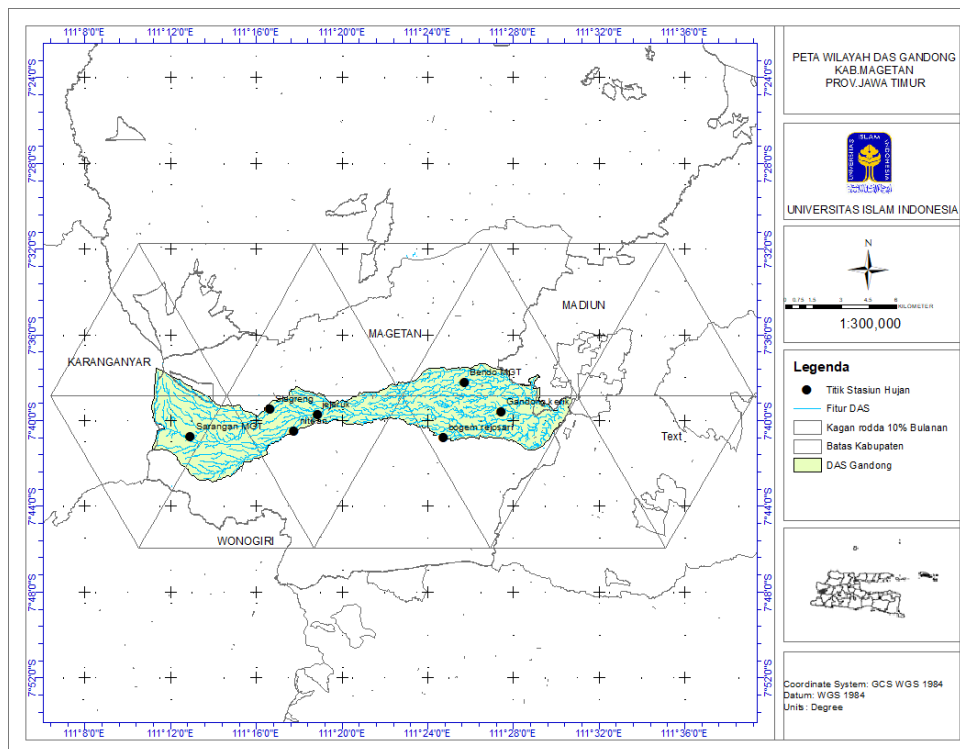
| Data Hujan | Jumlah Stasiun Hujan Eksisting | Jumlah Stasiun (n) |              | Panjang Sisi Jaringan 1 (km) |              |
|------------|--------------------------------|--------------------|--------------|------------------------------|--------------|
|            |                                | $Z_1 = 5\%$        | $Z_1 = 10\%$ | $Z_1 = 5\%$                  | $Z_1 = 10\%$ |
| Harian     | 7                              | 8                  | 2            | 4,826                        | 9,653        |
| Bulanan    |                                | 4                  | 1            | 6,826                        | 13,652       |

Panjang sisi jaringan Kagan-rodde dapat ditetapkan berdasarkan jumlah stasiun yang diperlukan. Jaringan yang dibentuk yaitu berupa jaringan segitiga sama sisi dengan panjang sisi jaringan berdasarkan hujan harian untuk kesalahan 5% sepanjang 4,826 km dan untuk kesalahan 10% sepanjang 9,653 km, sedangkan jika berdasarkan hujan bulanan untuk kesalahan 5% dengan panjang 6,826 km dan untuk kesalahan 10% sepanjang 13,652 km. Jaringan stasiun hujan berdasarkan metode Kagan-rodde ditunjukkan pada Gambar 5.6 sampai dengan Gambar 5.9.

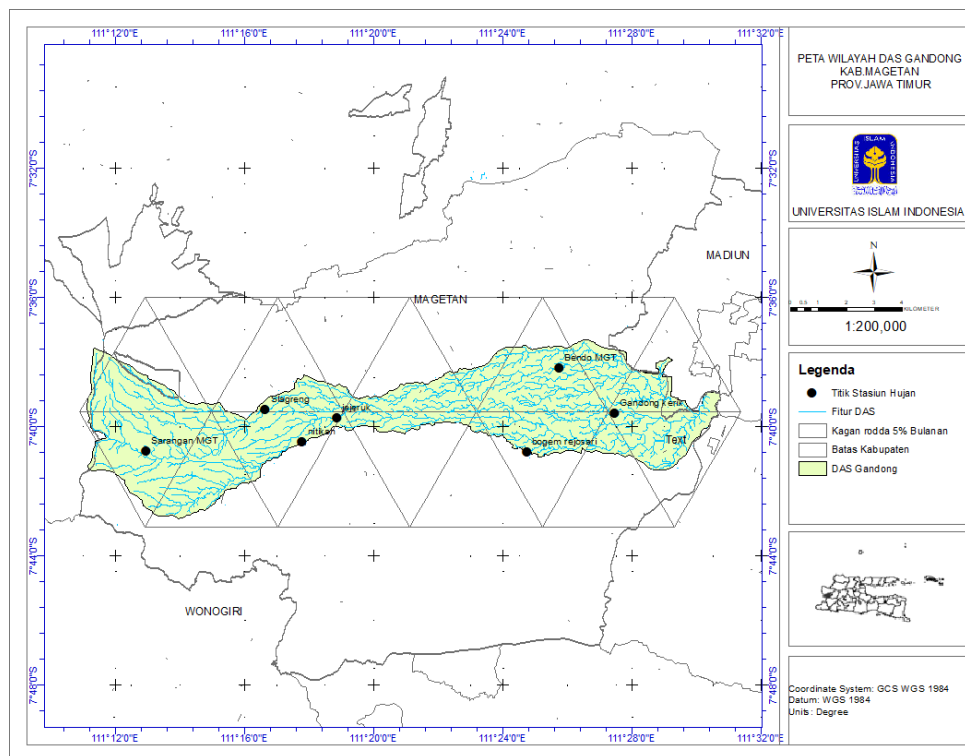
Gambar 5.6 Jaringan *Kagan-rodde* Untuk Data Hujan Harian dengan Kesalahan 10% pada DAS Gandong



**Gambar 5.7 Jaringan *Kagan-rodha* Untuk Data Hujan Harian dengan Kesalahan 5% pada DAS Gandong**



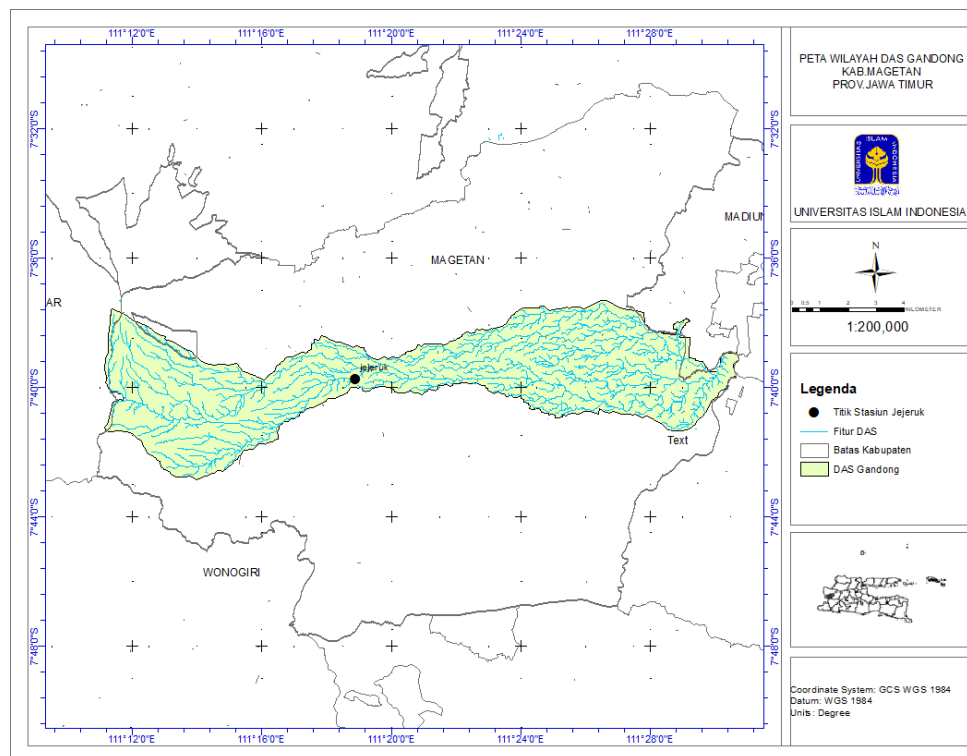
**Gambar 5.8 Jaringan *Kagan-rodha* Untuk Data Hujan Bulanan dengan Kesalahan 10% pada DAS Gandong**



**Gambar 5.9 Jaringan Kagan-rodha Untuk Data Hujan Bulanan dengan Kesalahan 5% pada DAS Gandong**

## 5.5 Pembahasan

Berdasarkan pedoman *WMO* (*World Meteorological Organization*) untuk daerah pegunungan seperti Kabupaten Magetan, diperlukan kerapatan jaringan stasiun hujan minimum sebesar 100-250 km<sup>2</sup> tiap stasiun dalam keadaan normal sesuai pedoman pada Tabel 3.2. Kerapatan eksisting DAS Gandong sudah sangat cukup baik memenuhi syarat bila ditinjau dengan pedoman *WMO* pada kondisi normal, maka rekomendasi agar lebih efisien Stasiun Gandong Kerik, Bendo MGT, Bogem Rejosari, Nitikan, Slagreng MGT, Sarangan MGT dapat dihilangkan, kemudian cukup memerlukan 1 stasiun hujan. Stasiun yang dapat digunakan adalah stasiun jejeruk agar sesuai dengan pedoman *WMO* yaitu 162,797 km<sup>2</sup> pada wilayah DAS Gandong. Titik stasiun rekomendasi dapat dilihat pada Gambar 5.10. Pemilihan Stasiun Jejeruk sebagai rekomendasi analisis menggunakan metode *WMO* yaitu, didukung oleh perhitungan Kagan rodha kesalahan 10% dengan data curah hujan bulanan cukup menggunakan 1 titik stasiun yang dapat diwakili oleh Stasiun Jejeruk. Titik lokasi Stasiun Jejeruk dapat dilihat pada Gambar 5.11.



**Gambar 5.10 Lokasi Stasiun Jejeruk pada DAS Gandong**



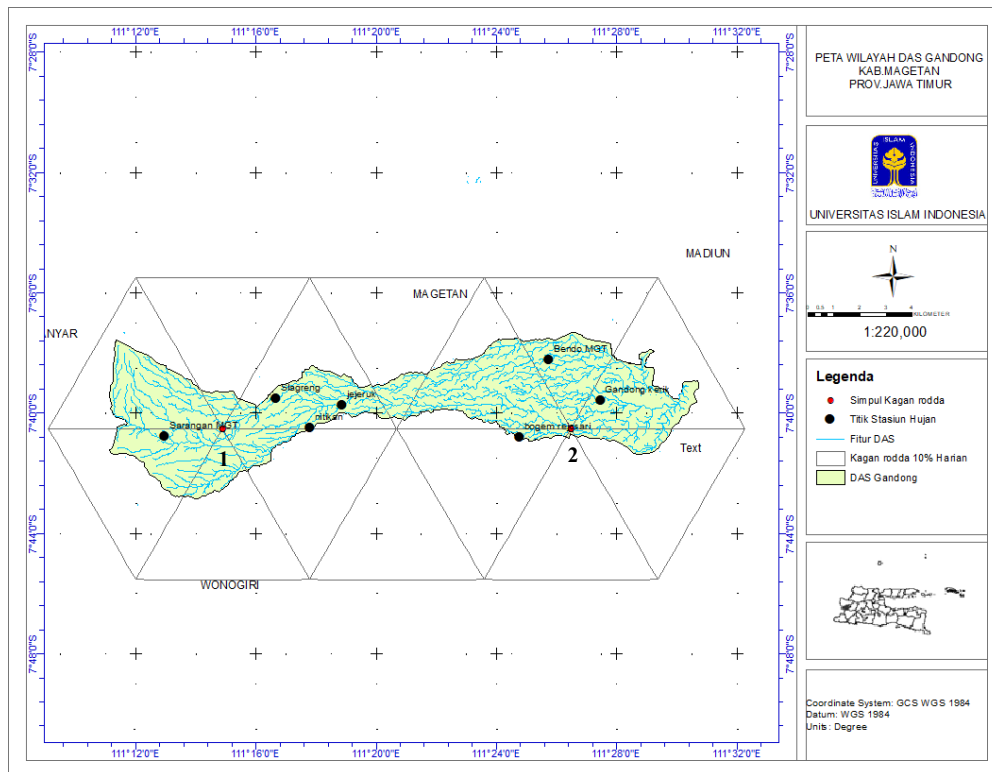
**Gambar 5.11 Stasiun Jejeruk pada DAS Gandong**

Analisis kerapatan jaringan stasiun hujan dengan metode *Kagan-rodde* menggunakan tingkat kesalahan 5% dan 10% memberikan fleksibilitas dalam analisis, tergantung pada kebutuhan akurasi dan ketersediaan sumber daya. Tingkat kesalahan ini juga menjadi pedoman dalam mengevaluasi, maka jaringan stasiun hujan sudah optimal. Penggunaan tingkat kesalahan ini membantu dalam menentukan apakah jumlah dan distribusi stasiun hujan dalam suatu daerah sudah

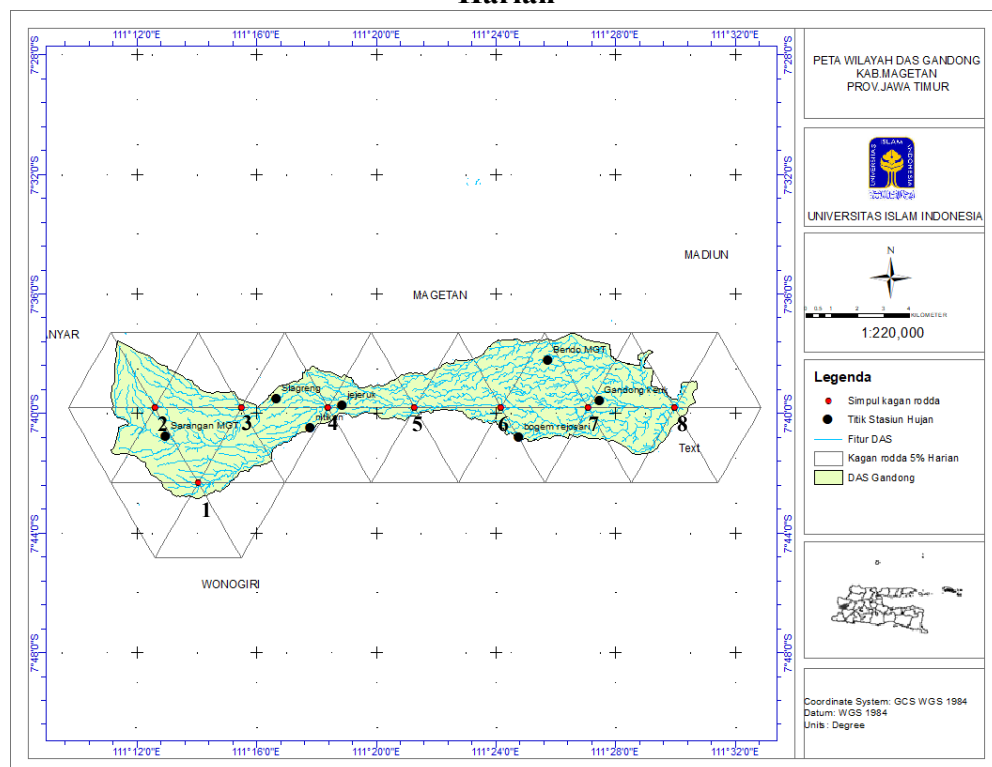
memenuhi sesuai dengan metode *Kagan-rodha*. Pada Kesalahan 5%, diperlukan kerapatan stasiun yang lebih tinggi untuk meningkatkan akurasi. Pada Kesalahan 10%, digunakan ketika ada kebutuhan untuk menyeimbangkan antara akurasi analisis dan efisiensi biaya atau sumber daya.

Data hujan harian untuk kesalahan perataan sebesar 5% pada data hujan harian diperlukan 13 buah stasiun hujan sedangkan untuk tingkat kesalahan 10%, jumlah stasiun yang didapat yaitu sebanyak 3 buah sehingga stasiun hujan eksisting dapat ditambah. Stasiun hujan yang didapat berdasarkan data hujan bulanan untuk kesalahan perataan 5% adalah sebanyak 3 buah stasiun hujan sehingga stasiun hujan eksisting dapat dikurang, dan pada kesalahan perataan 10% adalah sebanyak 4 buah stasiun hujan.

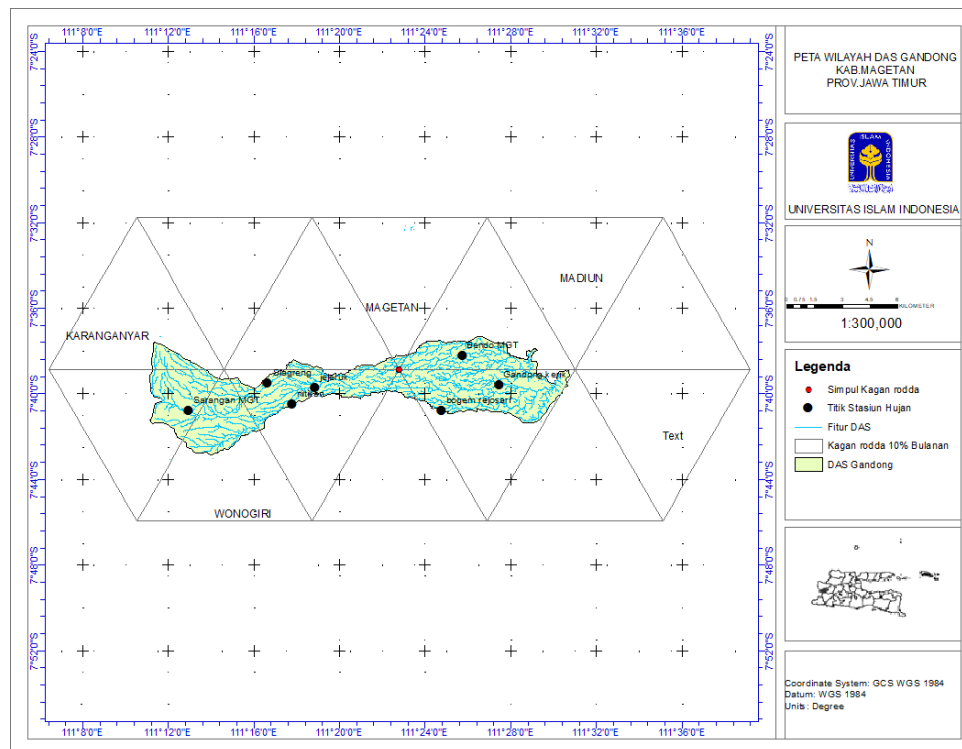
Pada DAS Gandong, pola distribusi stasiun hujan eksisting tidak merata. Berdasarkan hasil analisis, data curah hujan harian menunjukkan bahwa untuk tingkat kesalahan perataan sebesar 5%, kerapatan stasiun mencapai 20,349 km<sup>2</sup> per stasiun, sedangkan untuk tingkat kesalahan 10%, kerapatan meningkat menjadi 81,398 km<sup>2</sup> per stasiun. Sementara itu, pada data curah hujan bulanan, tingkat kesalahan perataan sebesar 5% menunjukkan kerapatan 40,698 km<sup>2</sup> per stasiun, dan pada tingkat kesalahan 10%, kerapatan mencapai 162,797 km<sup>2</sup> per stasiun. Lokasi stasiun hujan eksisting dan penempatan stasiun hujan yang direkomendasikan menurut metode *Kagan-rodha* ditunjukkan pada Gambar 5.12 sampai dengan Gambar 5.15.



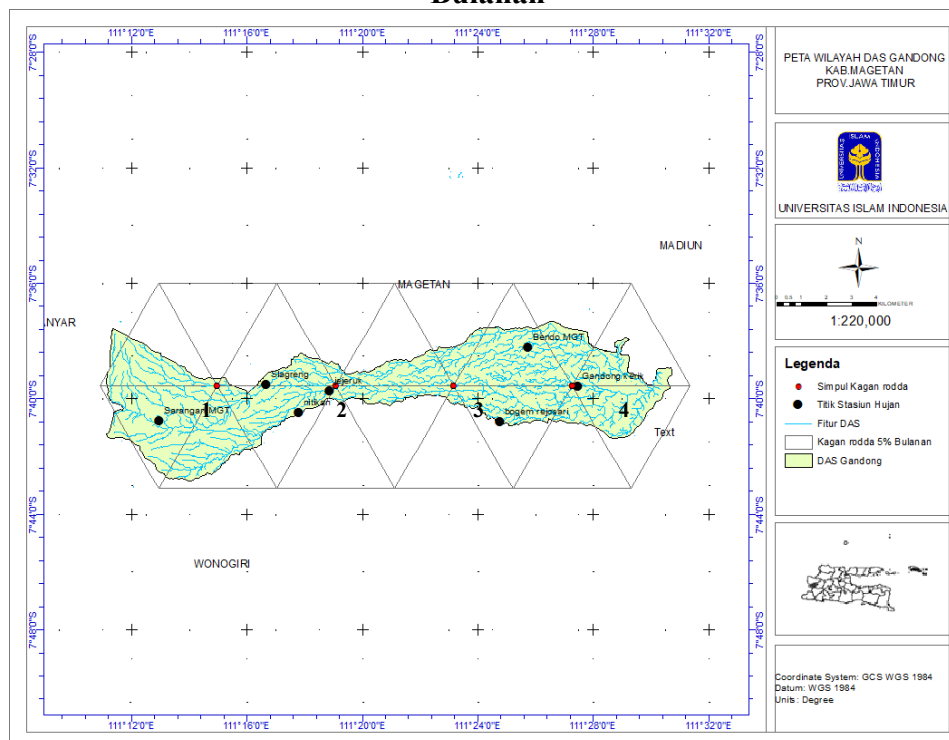
**Gambar 5.12 Lokasi Stasiun Hujan pada Kesalahan 10% Data Hujan Harian**



**Gambar 5.13 Lokasi Stasiun Hujan pada Kesalahan 5% Data Hujan Harian**



**Gambar 5.14 Lokasi Stasiun Hujan pada Kesalahan 10% Data Hujan Bulanan**



**Gambar 5.15 Lokasi Stasiun Hujan pada Kesalahan 5% Data Hujan Bulanan**

Kerapatan jaringan stasiun hujan menggunakan metode Kagan-rodde, pengeplotan letak stasiun hujan pada DAS Gandong ditentukan dengan rekomendasi titik koordinat stasiun hujan sesuai dengan simpul Kagan. Berdasarkan data hujan harian pada kesalahan 10%, diperlukan 2 buah stasiun hujan, maka stasiun yang dapat digunakan adalah stasiun Sarangan MGT dan Bogem Rejosari karena sudah mewakili simpul kagan sehingga stasiun lainnya dapat dihilangkan. Titik koordinat stasiun hujan rekomendasi pada kesalahan 10% data harian dapat dilihat pada Tabel 5.13. Kesalahan 5% data hujan harian memerlukan 8 stasiun hujan, dengan penambahan Stasiun A, Stasiun B, dan Stasiun C. Pemindahan 5 Stasiun yang dipindahkan sesuai titik rekomendasi agar sesuai daerah persebaran. Titik koordinat stasiun hujan rekomendasi pada kesalahan 5% data harian dapat dilihat pada Tabel 5.14.

**Tabel 5.13 Titik Koordinat Stasiun Hujan Rekomendasi pada Kesalahan 10% Data Harian**

| No. | Nama stasiun hujan | Koordinat eksisting |             | Titik Kagan rodde | Koordinat rekomendasi |             |
|-----|--------------------|---------------------|-------------|-------------------|-----------------------|-------------|
|     |                    | Lintang selatan     | Bujur timur |                   | Lintang selatan       | Bujur timur |
| 1   | Sarangan MGT       | -7,6796             | 111,2164    | 1                 | -7,6751               | 111,2483    |
| 2   | Bogem Rejosari     | -7,680028           | 111,413167  | 3                 | -7,6751               | 111,4413    |

**Tabel 5.14 Titik Koordinat Stasiun Hujan Rekomendasi pada Kesalahan 5% Data Harian**

| No. | Nama stasiun hujan | Koordinat eksisting |             | Titik Kagan-rodde | Koordinat rekomendasi |             |
|-----|--------------------|---------------------|-------------|-------------------|-----------------------|-------------|
|     |                    | Lintang selatan     | Bujur timur |                   | Lintang selatan       | Bujur timur |
| 1   | Stasiun A          | -                   | -           | 1                 | -7,7053               | 111,2342    |
| 2   | Sarangan MGT       | -7,6796             | 111,2164    | 2                 | -7,66251              | 111,20991   |
| 3   | Slag reng          | -7,658408           | 111,278161  | 3                 | -7,66251              | 111,25820   |
| 4   | Jejeruk            | -7,662361           | 111,315222  | 4                 | -7,66251              | 111,30661   |
| 5   | Stasiun B          | -                   | -           | 5                 | -7,66251              | 111,35482   |
| 6   | Bogem Rejosari     | -7,680028           | 111,413167  | 6                 | -7,66251              | 111,40298   |
| 7   | Gandong Kerik      | -7,659889           | 111,457806  | 7                 | -7,66251              | 111,45138   |
| 8   | Stasiun C          | -                   | -           | 8                 | -7,66251              | 111,49960   |

Berdasarkan data hujan bulanan pada kesalahan 10%, diperlukan 1 buah stasiun hujan. Stasiun hujan yang digunakan yaitu Bendo MGT dipindah sesuai dengan sumbu kagan, maka 6 stasiun lainnya hilangkan. Titik koordinat hujan rekomendasi pada kesalahan 10% data bulanan sesuai daerah persebaran dapat dilihat pada Tabel 5.15. Kesalahan 5% data hujan bulanan hanya memerlukan 4 stasiun hujan. Stasiun yang dapat digunakan adalah stasiun Sarangan MGT, Slagreng, Bogem Rejosari, dan Gandong Kerik dengan lokasi sesuai dengan sumbu kagan. Untuk 3 stasiun hujan lainnya dapat dihilangkan. Titik koordinat hujan rekomendasi pada kesalahan 5% data bulanan dapat dilihat pada Tabel 5.16.

**Tabel 5.15 Titik Koordinat Hujan Rekomendasi pada Kesalahan 10% Data Bulanan**

| No. | Nama stasiun hujan | Koordinat eksisting |             | Titik Kagan-rodha | Koordinat rekomendasi |             |
|-----|--------------------|---------------------|-------------|-------------------|-----------------------|-------------|
|     |                    | Lintang selatan     | Bujur timur |                   | Lintang selatan       | Bujur timur |
| 1   | Bendo MGT          | -7,63702            | 111,42957   | 1                 | -7,6474               | 111,38012   |

**Tabel 5.16 Titik Koordinat Hujan Rekomendasi pada Kesalahan 5% Data Bulanan**

| No. | Nama stasiun hujan | Koordinat eksisting |             | Titik Kagan-rodha | Koordinat rekomendasi |             |
|-----|--------------------|---------------------|-------------|-------------------|-----------------------|-------------|
|     |                    | Lintang selatan     | Bujur timur |                   | Lintang selatan       | Bujur timur |
| 1   | Sarangan MGT       | -7,6796             | 111,2164    | 1                 | -7,65923              | 111,24970   |
| 2   | Slagreng           | -7,658408           | 111,278161  | 3                 | -7,65923              | 111,31794   |
| 3   | Bogem Rejosari     | -7,680028           | 111,413167  | 3                 | -7,65923              | 111,38611   |
| 4   | Gandong Kerik      | -7,659889           | 111,457806  | 4                 | -7,65923              | 111,45435   |

## **BAB VI**

### **KESIMPULAN DAN SARAN**

#### **6.1 Kesimpulan**

Berdasarkan hasil analisis dan pembahasan kerapatan jaringan stasiun hujan pada DAS (Daerah Aliran Sungai) Gandong dapat diambil kesimpulan sebagai berikut

1. Metode *WMO* dengan kondisi eksisting stasiun hujan pada DAS Gandong adalah 7 stasiun dengan kerapatan 23,256 km<sup>2</sup>/stasiun dan sudah sangat cukup baik dari *WMO*.
2. Metode *Kagan-rodha* DAS Gandong saat ini memiliki 7 buah stasiun hujan. Untuk kesalahan perataan 10% pada data hujan harian dibutuhkan 2 buah stasiun hujan dan untuk kesalahan perataan 5% dibutuhkan 8 buah stasiun hujan. Nilai kesalahan perataan 10% pada data hujan bulanan membutuhkan 1 buah stasiun dan pada kesalahan perataan 5% membutuhkan 4 buah stasiun. Kebutuhan jumlah stasiun hujan yang didapat dari proses analisis metode Kagan lebih kecil daripada jumlah stasiun hujan eksisting sehingga stasiun hujan yang telah ada dapat dikurangi. Pemilihan dilakukan dengan memilih stasiun hujan dipindahkan sesuai dengan simpul Kagan atau bisa juga stasiun hujan yang berdekatan yang dianggap mewakili jaringan Kagan-rodha.
3. Kerapatan jaringan stasiun hujan optimal pada DAS Gandong Berdasarkan pedoman *WMO* (*World Meteorological Organization*) untuk daerah pegunungan, kerapatan jaringan stasiun hujan yang ada di DAS Gandong telah memenuhi standar kerapatan minimum sebesar 100-250 km<sup>2</sup> per stasiun dalam kondisi normal. Untuk meningkatkan efisiensi, disarankan penghapusan beberapa stasiun hujan, yaitu Stasiun Gandong Kerik, Bendo MGT, Bogem Rejosari, Nitikan, Slagreng MGT, dan Sarangan MGT. Sebagai gantinya, dapat digunakan Stasiun Jejeruk yang memiliki cakupan area 162,797 km<sup>2</sup>, sesuai pedoman *WMO*. Dari analisis menggunakan metode *kagan-rodha* berdasarkan data hujan harian untuk kesalahan 10% memiliki kerapatan 81,398 km<sup>2</sup>/stasiun,

untuk kesalahan 5% memiliki kerapatan 20,349 km<sup>2</sup>/stasiun. Berdasarkan data hujan bulanan untuk kesalahan perataan 10% memiliki kerapatan 162,797 km<sup>2</sup>/stasiun, kesalahan 5% memiliki kerapatan 40,698 km<sup>2</sup>/stasiun.

## **6.2 Saran**

Berdasarkan hasil analisis yang telah dilakukan terhadap jaringan stasiun hujan di wilayah penelitian, penulis menyadari masih terdapat ruang untuk perbaikan dan pengembangan, baik dalam hal penyebaran stasiun maupun kualitas data yang tersedia. Oleh karena itu, beberapa saran disampaikan guna memberikan masukan yang konstruktif bagi pihak-pihak terkait dan untuk penelitian selanjutnya.

1. Analisis kerapatan jaringan stasiun hujan dengan Metode Kagan sebaiknya digunakan untuk mengevaluasi wilayah DAS yang memiliki tingkat kerapatan tinggi sehingga DAS tersebut dapat segera diperbaharui dan berfungsi dengan maksimal.
2. Bisa dilakukan penelitian lanjutan terkait dengan menggunakan metode lainnya.

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# LAMPIRAN

## Lampiran 1 Data Hujan Stasiun Hujan di DAS Gandong

### 1. Data Curah Hujan Stasiun Gandong Kerik

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Hidrologi

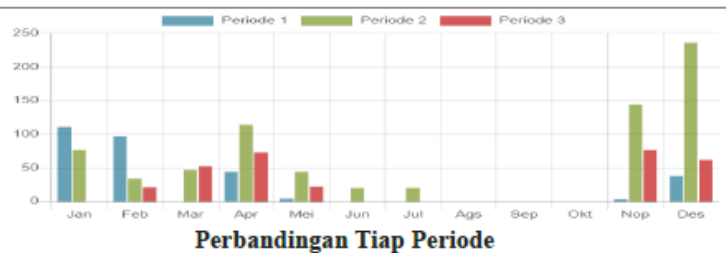
#### DATA CURAH HUJAN HARIAN

Tahun : 2014

|                     |                     |                       |                      |                      |                  |
|---------------------|---------------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620008</b> |
| Kode stasiun        | -7.659889           | Kelurahan/Desa        | Tanjung              | Tahun Pendirian      | 1980             |
| Lintang Selatan     | 111.457806          | Kecamatan             | Bendo                | Tipe Alat            | PHB              |
| Bujur Timur         | 88                  | Kota/Kab              | Magetan              | Pengelola            | UPT Madiun       |
| Elevasi             |                     |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 12         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 10         | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 9          | 67  | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 5          | 30         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 6          | 50         | 0   | 0   | 24  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 7          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 9          | 0          | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 11         | 0          | 0   | 0   | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 35         | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 33  | 38  |
| 13         | 5          | 0   | 0   | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 14         | 24         | 0   | 15  | 0   | 19  | 0   | 20  | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 0   | 0   | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 0   |
| 16         | 5          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 0   |
| 17         | 0          | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 68  |
| 18         | 0          | 0   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 19         | 0          | 13  | 0   | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 8   | 57  |
| 20         | 7          | 0   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 73  |
| 21         | 0          | 0   | 5   | 4   | 5   | 0   | 0   | 0   | 0   | 0   | 5   | 25  |
| 22         | 0          | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 23         | 0          | 0   | 0   | 25  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 0   |
| 25         | 0          | 0   | 0   | 17  | 16  | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 26         | 0          | 0   | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 42  | 0   |
| 27         | 0          | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 8   |
| 29         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 5          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 192        | 152 | 99  | 231 | 70  | 20  | 20  | 0   | 0   | 0   | 223 | 336 |
| Periode 1  | 111        | 97  | 0   | 44  | 4   | 0   | 0   | 0   | 0   | 0   | 3   | 38  |
| Periode 2  | 76         | 34  | 47  | 114 | 44  | 20  | 20  | 0   | 0   | 0   | 144 | 236 |
| Periode 3  | 0          | 21  | 52  | 73  | 22  | 0   | 0   | 0   | 0   | 0   | 76  | 62  |
| Maksimum   | 50         | 67  | 40  | 55  | 25  | 20  | 20  | 0   | 0   | 0   | 42  | 73  |
| Hari Hujan | 11         | 6   | 5   | 11  | 7   | 1   | 1   | 0   | 0   | 0   | 14  | 12  |

|            |      |
|------------|------|
| Tahunan    | 1343 |
| Hujan Maks | 73   |
| Hari Hujan | 68   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

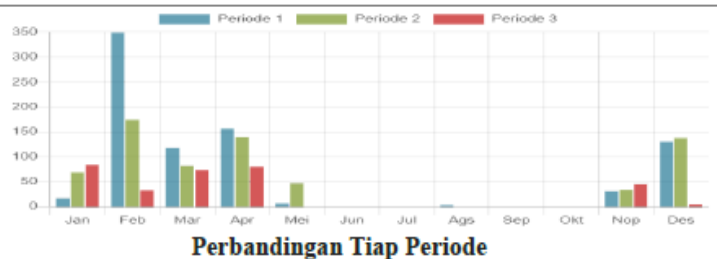
Tahun : 2015

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        |                     |
| Lintang Selatan     | -7.659889           |
| Bujur Timur         | 111.457806          |
| Elevasi             | 88                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kelurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 70  | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 0   | 49  | 16  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 22  |
| 3          | 0          | 57  | 27  | 5   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 66  |
| 4          | 5          | 35  | 2   | 18  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 5          | 12         | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 4   |
| 6          | 0          | 46  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 14  | 14  | 9   | 0   | 0   | 0   | 3   | 0   | 0   | 10  | 0   |
| 8          | 0          | 0   | 5   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 10  |
| 9          | 0          | 39  | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  |
| 10         | 0          | 49  | 0   | 82  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 2          | 17  | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 0   |
| 12         | 5          | 9   | 58  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 13         | 17         | 0   | 14  | 61  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 25  |
| 14         | 0          | 0   | 0   | 0   | 47  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 43  | 7   | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 58  |
| 16         | 0          | 39  | 3   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 18         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 19         | 0          | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 20         | 45         | 42  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 21         | 0          | 0   | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 22         | 0          | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 57         | 27  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 3          | 0   | 5   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 2          | 0   | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 17         | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 0   |
| 27         | 5          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 2   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 31         | 0          |     | 14  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 170        | 556 | 287 | 377 | 53  | 0   | 0   | 3   | 0   | 0   | 110 | 272 |
| Periode 1  | 17         | 349 | 118 | 157 | 6   | 0   | 0   | 3   | 0   | 0   | 31  | 130 |
| Periode 2  | 69         | 174 | 82  | 140 | 47  | 0   | 0   | 0   | 0   | 0   | 34  | 138 |
| Periode 3  | 84         | 33  | 73  | 80  | 0   | 0   | 0   | 0   | 0   | 0   | 45  | 4   |
| Maksimum   | 57         | 70  | 58  | 82  | 47  | 0   | 0   | 3   | 0   | 0   | 30  | 66  |
| Hari Hujan | 11         | 17  | 17  | 17  | 4   | 0   | 0   | 1   | 0   | 0   | 8   | 14  |

|            |      |
|------------|------|
| Tahunan    | 1828 |
| Hujan Maks | 82   |
| Hari Hujan | 89   |



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Hidrologi

## DATA CURAH HUJAN HARIAN

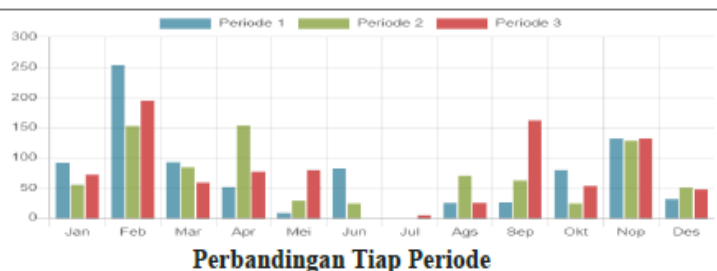
Tahun : 2016

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        | -7.659889           |
| Lintang Selatan     | 111.457806          |
| Bujur Timur         | 88                  |
| Elevasi             |                     |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kelurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 14         | 14  | 8   | 23  | 0   | 34  | 0   | 0   | 0   | 0   | 15  | 4   |
| 2          | 0          | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 9   |
| 3          | 77         | 21  | 28  | 9   | 0   | 0   | 0   | 0   | 0   | 22  | 0   | 0   |
| 4          | 0          | 85  | 7   | 0   | 0   | 48  | 0   | 0   | 18  | 0   | 0   | 0   |
| 5          | 0          | 0   | 33  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 6          | 0          | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 7          | 0          | 50  | 0   | 0   | 0   | 0   | 0   | 17  | 8   | 0   | 0   | 0   |
| 8          | 0          | 28  | 0   | 3   | 0   | 0   | 0   | 8   | 0   | 0   | 52  | 0   |
| 9          | 0          | 17  | 4   | 0   | 8   | 0   | 0   | 0   | 0   | 18  | 0   | 8   |
| 10         | 0          | 22  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 32  | 60  | 0   |
| 11         | 0          | 35  | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   | 0   |
| 12         | 0          | 75  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 0   |
| 13         | 25         | 0   | 8   | 21  | 0   | 0   | 0   | 53  | 0   | 0   | 13  | 10  |
| 14         | 5          | 0   | 7   | 37  | 0   | 12  | 0   | 17  | 0   | 16  | 36  | 0   |
| 15         | 17         | 0   | 2   | 14  | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 0          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 0   | 8   | 0   |
| 17         | 0          | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   | 13  | 3   |
| 18         | 0          | 0   | 27  | 8   | 0   | 0   | 0   | 0   | 34  | 0   | 15  | 14  |
| 19         | 0          | 7   | 23  | 0   | 17  | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 20         | 8          | 0   | 0   | 73  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 23  |
| 21         | 19         | 29  | 0   | 6   | 3   | 0   | 4   | 0   | 0   | 0   | 0   | 0   |
| 22         | 14         | 19  | 0   | 13  | 8   | 0   | 0   | 0   | 8   | 0   | 0   | 0   |
| 23         | 0          | 0   | 0   | 21  | 4   | 0   | 0   | 0   | 4   | 0   | 16  | 0   |
| 24         | 0          | 85  | 18  | 5   | 22  | 0   | 0   | 0   | 21  | 39  | 1   | 0   |
| 25         | 0          | 27  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 26  | 0   |
| 26         | 0          | 12  | 0   | 14  | 0   | 0   | 0   | 0   | 10  | 9   | 25  | 0   |
| 27         | 27         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 5   | 36  | 2   |
| 28         | 12         | 7   | 12  | 0   | 0   | 0   | 0   | 0   | 113 | 0   | 13  | 0   |
| 29         | 0          | 12  | 0   | 18  | 0   | 0   | 0   | 8   | 0   | 0   | 9   | 0   |
| 30         | 0          |     | 2   | 0   | 42  | 0   | 0   | 17  | 0   | 0   | 6   | 45  |
| 31         | 0          |     | 27  |     | 27  |     | 0   | 0   |     | 0   |     | 2   |
| Total      | 218        | 601 | 262 | 281 | 143 | 106 | 4   | 120 | 250 | 156 | 392 | 130 |
| Periode 1  | 91         | 254 | 92  | 51  | 8   | 82  | 0   | 25  | 26  | 79  | 132 | 31  |
| Periode 2  | 55         | 152 | 84  | 153 | 29  | 24  | 0   | 70  | 62  | 24  | 128 | 50  |
| Periode 3  | 72         | 195 | 59  | 77  | 79  | 0   | 4   | 25  | 162 | 53  | 132 | 47  |
| Maksimum   | 77         | 85  | 33  | 73  | 42  | 48  | 4   | 53  | 113 | 39  | 60  | 45  |
| Hari Hujan | 10         | 21  | 17  | 16  | 9   | 4   | 1   | 6   | 11  | 9   | 19  | 11  |

|            |      |
|------------|------|
| Tahunan    | 2663 |
| Hujan Maks | 113  |
| Hari Hujan | 134  |



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Hidrologi

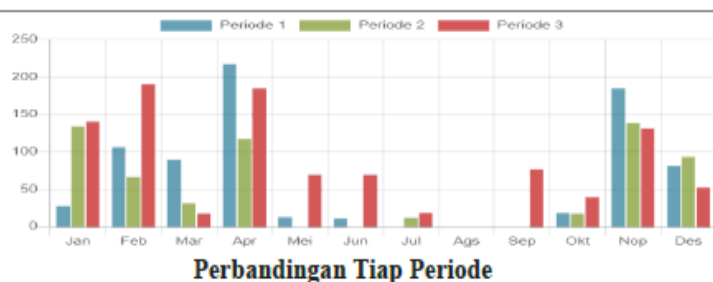
## DATA CURAH HUJAN HARIAN

Tahun : 2017

|                        |                     |                       |                      |                        |                   |
|------------------------|---------------------|-----------------------|----------------------|------------------------|-------------------|
| <b>NAMA STASIUN</b>    | <b>GANDONGKERIK</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b>   | <b>350620008</b>  |
| <b>Kode stasiun</b>    | <b>-7.659889</b>    | <b>Kelurahan/Desa</b> | <b>Tanjung</b>       | <b>Tahun Pendirian</b> | <b>1980</b>       |
| <b>Lintang Selatan</b> | <b>111.457806</b>   | <b>Kecamatan</b>      | <b>Bendo</b>         | <b>Tipe Alat</b>       | <b>PHB</b>        |
| <b>Bujur Timur</b>     | <b>88</b>           | <b>Kota/Kab</b>       | <b>Magetan</b>       | <b>Pengelola</b>       | <b>UPT Madiun</b> |
| <b>Elevasi</b>         |                     |                       |                      |                        |                   |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 10  | 8   | 53  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 55  | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 0          | 0   | 0   | 27  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 5   | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 8          | 7   | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 12  | 73  | 0   |
| 6          | 0          | 0   | 46  | 47  | 0   | 0   | 0   | 0   | 0   | 6   | 77  | 5   |
| 7          | 0          | 0   | 0   | 63  | 0   | 0   | 0   | 0   | 0   | 0   | 35  | 0   |
| 8          | 12         | 17  | 0   | 0   | 6   | 6   | 0   | 0   | 0   | 0   | 0   | 76  |
| 9          | 0          | 12  | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 7          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 12         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 12  |
| 13         | 10         | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 31  |
| 14         | 0          | 4   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 15         | 3          | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 16         | 23         | 6   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 24  |
| 17         | 32         | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 86  | 0   |
| 18         | 66         | 0   | 22  | 32  | 0   | 0   | 0   | 0   | 0   | 5   | 8   | 0   |
| 19         | 0          | 0   | 0   | 53  | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 5   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 21         | 2          | 0   | 5   | 0   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 21  |
| 22         | 3          | 22  | 0   | 15  | 0   | 57  | 0   | 0   | 0   | 0   | 8   | 0   |
| 23         | 80         | 5   | 0   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 0   | 0   | 95  | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 0   |
| 25         | 0          | 4   | 0   | 43  | 0   | 0   | 0   | 0   | 10  | 0   | 43  | 0   |
| 26         | 17         | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 18  | 0   | 0   |
| 27         | 14         | 12  | 12  | 6   | 0   | 12  | 0   | 0   | 2   | 15  | 0   | 25  |
| 28         | 12         | 112 | 0   | 0   | 0   | 0   | 8   | 0   | 54  | 0   | 40  | 6   |
| 29         | 12         |     | 0   | 0   | 51  | 0   | 0   | 0   | 6   | 0   | 40  | 0   |
| 30         | 0          |     | 0   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 9          |     | 0   |     | 12  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 310        | 362 | 137 | 519 | 94  | 80  | 30  | 0   | 76  | 74  | 454 | 226 |
| Periode 1  | 27         | 106 | 89  | 217 | 13  | 11  | 0   | 0   | 0   | 18  | 185 | 81  |
| Periode 2  | 134        | 66  | 31  | 117 | 0   | 0   | 12  | 0   | 0   | 17  | 138 | 93  |
| Periode 3  | 140        | 190 | 17  | 185 | 69  | 69  | 18  | 0   | 76  | 39  | 131 | 52  |
| Maksimum   | 80         | 112 | 46  | 95  | 51  | 57  | 12  | 0   | 54  | 18  | 86  | 76  |
| Hari Hujan | 16         | 17  | 8   | 15  | 5   | 4   | 3   | 0   | 5   | 8   | 13  | 10  |

|            |      |
|------------|------|
| Tahunan    | 2362 |
| Hujan Maks | 112  |
| Hari Hujan | 104  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

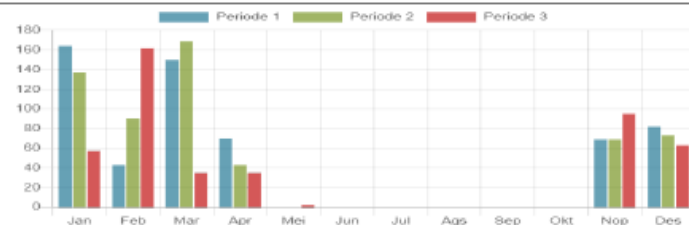
Tahun : 2018

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        |                     |
| Lintang Selatan     | -7.659889           |
| Bujur Timur         | 111.457806          |
| Elevasi             | 88                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kelurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 52         | 0   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 6   | 65  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 52  |
| 6          | 20         | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 7          | 10         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 19  |
| 8          | 50         | 12  | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 69  | 0   |
| 9          | 7          | 17  | 73  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 25         | 5   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 35         | 45  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 21  |
| 12         | 20         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 13         | 0          | 10  | 79  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  |
| 14         | 7          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 15         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 16         | 0          | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 17         | 8          | 15  | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 23         | 7   | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 19         | 35         | 0   | 10  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 52  | 0   |
| 20         | 9          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 6          | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 22         | 0          | 22  | 6   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 35  |
| 23         | 0          | 20  | 4   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 24         | 0          | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 25         | 32         | 35  | 25  | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 26         | 0          | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 6   |
| 27         | 19         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 35  | 0   |
| 29         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 30         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 45  | 0   |
| 31         | 0          | 0   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Total      | 358        | 295 | 389 | 148 | 2   | 0   | 0   | 0   | 0   | 0   | 233 | 218 |
| Periode 1  | 164        | 43  | 150 | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 69  | 82  |
| Periode 2  | 137        | 90  | 169 | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 69  | 73  |
| Periode 3  | 57         | 162 | 35  | 35  | 2   | 0   | 0   | 0   | 0   | 0   | 95  | 63  |
| Maksimum   | 52         | 55  | 79  | 40  | 2   | 0   | 0   | 0   | 0   | 0   | 69  | 52  |
| Hari Hujan | 16         | 15  | 12  | 7   | 1   | 0   | 0   | 0   | 0   | 0   | 8   | 14  |

|            |      |
|------------|------|
| Tahunan    | 1643 |
| Hujan Maks | 79   |
| Hari Hujan | 73   |



Perbandingan Tiap Periode



11/3/24, 3:24 PM

Hidrologi

## DATA CURAH HUJAN HARIAN

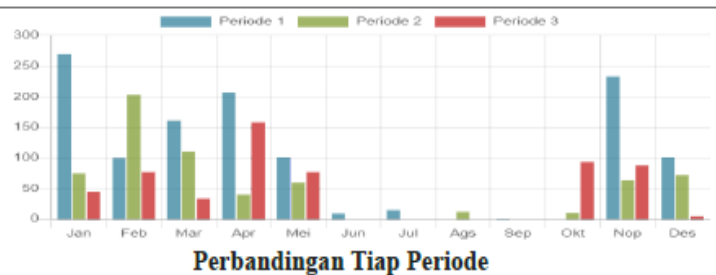
Tahun : 2020

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        | -7.659889           |
| Lintang Selatan     | 111.457806          |
| Bujur Timur         |                     |
| Elevasi             | 88                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kelurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 18         | 10  | 8   | 70  | 8   | 9   | 0   | 0   | 0   | 0   | 69  | 0   |
| 2          | 23         | 30  | 45  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 111 | 10  |
| 3          | 5          | 26  | 45  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 45  | 17  |
| 4          | 0          | 25  | 35  | 24  | 0   | 0   | 0   | 0   | 1   | 0   | 8   | 20  |
| 5          | 60         | 0   | 28  | 6   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 56         | 0   | 0   | 24  | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 35  |
| 7          | 6          | 0   | 0   | 25  | 0   | 0   | 15  | 0   | 0   | 0   | 0   | 4   |
| 8          | 48         | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 9          | 19         | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 10         | 35         | 0   | 0   | 15  | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 11         | 0          | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   | 0   |
| 12         | 0          | 66  | 0   | 0   | 0   | 0   | 0   | 12  | 0   | 0   | 0   | 8   |
| 13         | 0          | 45  | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 35  |
| 14         | 0          | 12  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 9   |
| 15         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 30         | 12  | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 17         | 45         | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 18         | 0          | 9   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 19         | 0          | 0   | 20  | 0   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 20         | 0          | 19  | 30  | 0   | 32  | 0   | 0   | 0   | 0   | 0   | 43  | 5   |
| 21         | 15         | 0   | 8   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 0          | 36  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 7   | 80  | 0   |
| 23         | 0          | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 0   | 0   |
| 24         | 0          | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 0   |
| 25         | 30         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 26         | 0          | 6   | 0   | 52  | 0   | 0   | 0   | 0   | 0   | 20  | 0   | 0   |
| 27         | 0          | 0   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 45  | 0   | 0   |
| 29         | 0          | 0   | 15  | 0   | 46  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          | 0   | 10  | 95  | 15  | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 31         | 0          | 0   | 0   | 0   | 17  | 0   | 0   | 0   | 0   | 6   | 0   | 0   |
| Total      | 390        | 380 | 304 | 405 | 255 | 9   | 15  | 12  | 1   | 109 | 384 | 177 |
| Periode 1  | 270        | 100 | 161 | 207 | 101 | 9   | 15  | 0   | 1   | 0   | 233 | 101 |
| Periode 2  | 75         | 203 | 110 | 40  | 60  | 0   | 0   | 12  | 0   | 10  | 63  | 72  |
| Periode 3  | 45         | 77  | 33  | 158 | 77  | 0   | 0   | 0   | 0   | 93  | 88  | 4   |
| Maksimum   | 60         | 66  | 45  | 95  | 70  | 9   | 15  | 12  | 1   | 45  | 111 | 35  |
| Hari Hujan | 13         | 17  | 12  | 15  | 11  | 1   | 1   | 1   | 1   | 7   | 9   | 16  |

|            |      |
|------------|------|
| Tabunan    | 2441 |
| Hujan Maks | 111  |
| Hari Hujan | 104  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

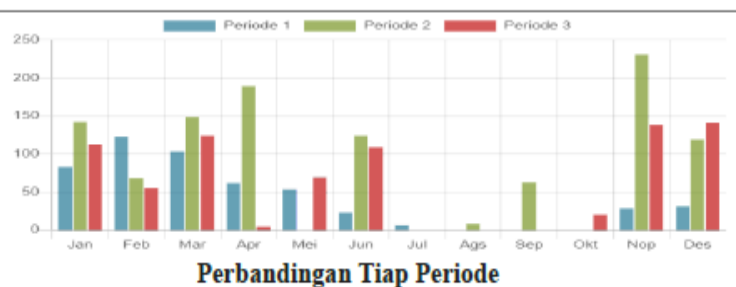
Tahun : 2021

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        | -7.659889           |
| Lintang Selatan     | 111.457806          |
| Bujur Timur         | 88                  |
| Elevasi             |                     |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kehurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 6   | 0   | 0   | 53  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 8   | 6   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 0          | 4   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 4          | 0          | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 5          | 0          | 78  | 7   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 8   |
| 6          | 23         | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 35         | 0   | 3   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 2   |
| 8          | 25         | 0   | 5   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 3   |
| 9          | 0          | 2   | 78  | 5   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 16  |
| 10         | 0          | 7   | 0   | 0   | 0   | 23  | 0   | 0   | 0   | 0   | 0   | 2   |
| 11         | 12         | 0   | 0   | 52  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 43  |
| 12         | 48         | 0   | 3   | 0   | 0   | 14  | 0   | 0   | 29  | 0   | 15  | 20  |
| 13         | 3          | 36  | 46  | 4   | 0   | 13  | 0   | 0   | 3   | 0   | 0   | 0   |
| 14         | 0          | 3   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 10  | 47  | 75  | 0   | 2   | 0   | 0   | 31  | 0   | 25  | 0   |
| 16         | 3          | 0   | 3   | 54  | 0   | 8   | 0   | 0   | 0   | 0   | 75  | 6   |
| 17         | 0          | 3   | 5   | 0   | 0   | 47  | 0   | 0   | 0   | 0   | 20  | 5   |
| 18         | 49         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 79  | 45  |
| 19         | 27         | 0   | 45  | 0   | 0   | 0   | 0   | 8   | 0   | 0   | 7   | 0   |
| 20         | 0          | 12  | 0   | 0   | 0   | 37  | 0   | 0   | 0   | 0   | 10  | 0   |
| 21         | 41         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 8          | 6   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  |
| 23         | 4          | 4   | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 2          | 0   | 0   | 0   | 0   | 15  | 0   | 0   | 0   | 0   | 35  | 74  |
| 25         | 0          | 12  | 15  | 0   | 13  | 32  | 0   | 0   | 0   | 0   | 12  | 0   |
| 26         | 12         | 0   | 2   | 4   | 3   | 6   | 0   | 0   | 0   | 0   | 15  | 0   |
| 27         | 3          | 21  | 3   | 0   | 0   | 52  | 0   | 0   | 0   | 17  | 10  | 0   |
| 28         | 13         | 12  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 66  | 40  |
| 29         | 28         |     | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 30         | 2          |     | 90  | 0   | 49  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 0          |     | 9   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 338        | 246 | 385 | 255 | 122 | 256 | 6   | 8   | 63  | 20  | 397 | 291 |
| Periode 1  | 83         | 123 | 103 | 62  | 53  | 23  | 6   | 0   | 0   | 0   | 28  | 31  |
| Periode 2  | 142        | 68  | 149 | 189 | 0   | 124 | 0   | 8   | 63  | 0   | 231 | 119 |
| Periode 3  | 113        | 55  | 124 | 4   | 69  | 109 | 0   | 0   | 0   | 20  | 138 | 141 |
| Maksimum   | 49         | 78  | 90  | 75  | 53  | 52  | 6   | 8   | 31  | 17  | 79  | 74  |
| Hari Hujan | 18         | 19  | 19  | 11  | 5   | 13  | 1   | 1   | 3   | 3   | 17  | 13  |

|            |      |
|------------|------|
| Tahunan    | 2387 |
| Hujan Maks | 90   |
| Hari Hujan | 123  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

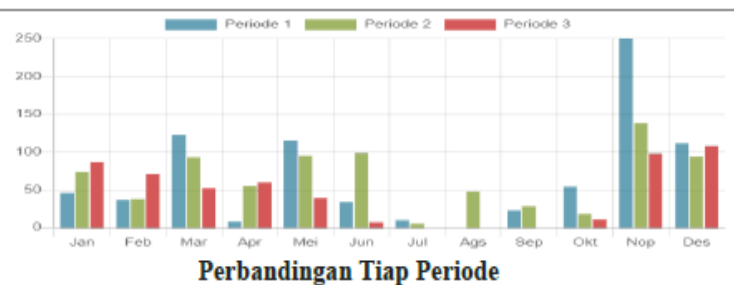
Tahun : 2022

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        |                     |
| Lintang Selatan     | -7.659889           |
| Bujur Timur         | 111.457806          |
| Elevasi             | 88                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kelurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHE        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 2   | 0   | 0   | 11  | 0   | 0   | 18  | 13  | 0   | 30  |
| 2          | 32         | 3   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 135 | 0   |
| 3          | 0          | 0   | 37  | 5   | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 40  |
| 4          | 0          | 0   | 5   | 0   | 10  | 0   | 0   | 0   | 0   | 8   | 0   | 0   |
| 5          | 0          | 5   | 14  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 45  | 0   |
| 6          | 0          | 0   | 12  | 3   | 50  | 0   | 10  | 0   | 0   | 24  | 20  | 0   |
| 7          | 2          | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 15  | 0   |
| 8          | 0          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 33  | 30  |
| 9          | 4          | 0   | 28  | 0   | 15  | 8   | 0   | 0   | 0   | 0   | 0   | 12  |
| 10         | 8          | 29  | 7   | 0   | 35  | 15  | 0   | 0   | 2   | 0   | 2   | 0   |
| 11         | 0          | 0   | 25  | 0   | 10  | 57  | 0   | 0   | 18  | 1   | 3   | 0   |
| 12         | 31         | 5   | 0   | 0   | 0   | 20  | 2   | 0   | 0   | 0   | 7   | 0   |
| 13         | 3          | 7   | 0   | 0   | 0   | 0   | 3   | 0   | 10  | 0   | 23  | 0   |
| 14         | 9          | 6   | 2   | 40  | 5   | 10  | 0   | 5   | 0   | 0   | 7   | 19  |
| 15         | 0          | 8   | 3   | 0   | 10  | 5   | 0   | 3   | 0   | 0   | 30  | 30  |
| 16         | 3          | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 2   | 15  |
| 17         | 10         | 12  | 23  | 0   | 0   | 0   | 0   | 40  | 0   | 6   | 0   | 0   |
| 18         | 0          | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 16  | 0   |
| 19         | 13         | 0   | 0   | 0   | 48  | 0   | 0   | 0   | 0   | 0   | 50  | 0   |
| 20         | 5          | 0   | 10  | 15  | 22  | 3   | 0   | 0   | 0   | 6   | 0   | 30  |
| 21         | 0          | 0   | 5   | 10  | 14  | 0   | 0   | 0   | 0   | 0   | 2   | 18  |
| 22         | 12         | 0   | 20  | 5   | 10  | 0   | 0   | 0   | 0   | 5   | 0   | 5   |
| 23         | 32         | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 24         | 0          | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 33  |
| 25         | 0          | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 28  | 3   |
| 26         | 8          | 48  | 0   | 35  | 2   | 0   | 0   | 0   | 0   | 1   | 8   | 5   |
| 27         | 12         | 23  | 25  | 0   | 10  | 5   | 0   | 0   | 0   | 5   | 60  | 2   |
| 28         | 0          | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 29         | 23         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 10         |     | 57  |     | 0   |     | 0   | 0   |     |     |     | 0   |
| Total      | 217        | 146 | 325 | 123 | 249 | 140 | 15  | 48  | 51  | 83  | 486 | 314 |
| Periode 1  | 46         | 37  | 123 | 8   | 115 | 34  | 10  | 0   | 23  | 54  | 250 | 112 |
| Periode 2  | 74         | 38  | 93  | 55  | 95  | 99  | 5   | 48  | 28  | 18  | 138 | 94  |
| Periode 3  | 87         | 71  | 52  | 60  | 39  | 7   | 0   | 0   | 0   | 11  | 98  | 108 |
| Maksimum   | 32         | 48  | 57  | 40  | 50  | 57  | 10  | 40  | 18  | 24  | 135 | 40  |
| Hari Hujan | 17         | 10  | 21  | 8   | 15  | 11  | 3   | 3   | 5   | 12  | 18  | 17  |

|            |      |
|------------|------|
| Tabunan    | 2197 |
| Hujan Maks | 135  |
| Hari Hujan | 140  |



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Hidrologi

## DATA CURAH HUJAN HARIAN

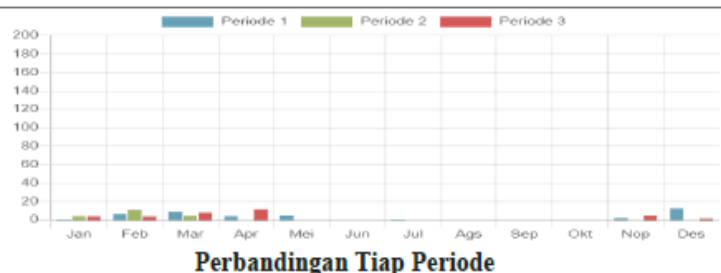
Tahun : 2023

|                     |                     |
|---------------------|---------------------|
| <b>NAMA STASIUN</b> | <b>GANDONGKERIK</b> |
| Kode stasiun        | -7.659889           |
| Lintang Selatan     | 111.457806          |
| Bujur Timur         | 88                  |
| Elevasi             |                     |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620008  |
| Kehurahan/Desa | Tanjung       | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 6          | 0   | 50  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 65  |
| 2          | 0          | 35  | 10  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 87  |
| 3          | 0          | 10  | 20  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 4          | 0          | 0   | 0   | 0   | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 35  |
| 5          | 0          | 1   | 23  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 29  | 1   |
| 6          | 2          | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 0   | 35  | 22  | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   |
| 10         | 2          | 23  | 0   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 6   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 13         | 0          | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 6          | 10  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 2          | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 25         | 27  | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 25         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 8          | 6   | 75  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 0   |
| 23         | 0          | 11  | 22  | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 25         | 3          | 2   | 1   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 3          | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 10         | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 28         | 20         | 0   | 19  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 37  | 1   |
| 29         | 5          |     | 5   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 21  |
| 30         | 6          |     | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   |
| 31         | 2          |     | 11  |     | 0   |     | 0   | 0   |     | 0   |     | 77  |
| Total      | 125        | 324 | 336 | 237 | 73  | 0   | 10  | 0   | 0   | 0   | 99  | 290 |
| Periode 1  | 10         | 99  | 138 | 58  | 70  | 0   | 10  | 0   | 0   | 0   | 29  | 190 |
| Periode 2  | 58         | 172 | 65  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| Periode 3  | 55         | 53  | 122 | 179 | 0   | 0   | 0   | 0   | 0   | 0   | 68  | 23  |
| Maksimum   | 25         | 52  | 75  | 70  | 55  | 0   | 10  | 0   | 0   | 0   | 37  | 87  |
| Hari Hujan | 15         | 20  | 14  | 9   | 5   | 0   | 1   | 0   | 0   | 0   | 7   | 9   |

|            |      |
|------------|------|
| Tahunan    | 1494 |
| Hujan Maks | 87   |
| Hari Hujan | 80   |





## DATA CURAH HUJAN HARIAN

Tahun : 2015

|                 |            |                |               |                 |            |
|-----------------|------------|----------------|---------------|-----------------|------------|
| NAMA STASIUN    | BENDO MGT  | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kode stasiun    |            | Kecamatan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Lintang Selatan | -7,637028  | Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Bujur Timur     | 111,429575 | Kota/Kab       | Magetan       | Pengelola       | UPT Madium |
| Elevasi         | 126        |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mai | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | -          | 13  | 12  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 2          | -          | 1   | 94  | 38  | 24  | -   | -   | -   | -   | -   | -   | 16  |
| 3          | -          | 5   | 50  | 6   | -   | -   | -   | -   | -   | -   | -   | 60  |
| 4          | 18         | 6   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 5          | 7          | 12  | 2   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 6          | -          | 26  | -   | 80  | -   | -   | -   | -   | -   | -   | -   | 3   |
| 7          | -          | -   | 15  | -   | -   | -   | -   | -   | -   | -   | 5   | -   |
| 8          | -          | 2   | 35  | 23  | -   | -   | -   | -   | -   | -   | 7   | -   |
| 9          | -          | 21  | -   | -   | -   | -   | -   | -   | -   | -   | 5   | 33  |
| 10         | -          | 40  | 3   | 69  | -   | -   | -   | -   | -   | -   | -   | -   |
| 11         | -          | 21  | -   | 17  | -   | -   | -   | -   | -   | -   | 22  | -   |
| 12         | -          | -   | 26  | -   | -   | -   | -   | -   | -   | -   | -   | 20  |
| 13         | 2          | -   | 10  | 81  | 56  | -   | -   | -   | -   | -   | -   | 3   |
| 14         | 9          | -   | -   | -   | 2   | -   | -   | -   | -   | -   | -   | -   |
| 15         | -          | 4   | 15  | 27  | -   | -   | -   | -   | -   | -   | -   | 93  |
| 16         | 3          | -   | 5   | 3   | -   | -   | -   | -   | -   | -   | -   | 6   |
| 17         | 5          | 8   | -   | 16  | -   | -   | -   | -   | -   | -   | -   | 4   |
| 18         | -          | -   | 15  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 19         | -          | -   | 98  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 20         | 32         | 7   | 5   | 30  | -   | -   | -   | -   | -   | -   | -   | 27  |
| 21         | -          | -   | 70  | 2   | -   | -   | -   | -   | -   | -   | -   | -   |
| 22         | 14         | -   | 16  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 23         | 25         | -   | -   | 64  | -   | -   | -   | -   | -   | -   | -   | -   |
| 24         | -          | -   | 16  | 32  | -   | -   | -   | -   | -   | -   | -   | -   |
| 25         | 4          | -   | -   | 12  | -   | -   | -   | -   | -   | -   | -   | -   |
| 26         | 5          | -   | -   | 2   | -   | -   | -   | -   | -   | -   | 111 | -   |
| 27         | -          | -   | 6   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 28         | -          | -   | 15  | 7   | 22  | -   | -   | -   | -   | -   | -   | -   |
| 29         | -          | -   | 36  | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 30         | -          | -   | -   | 1   | -   | -   | -   | -   | -   | -   | -   | -   |
| 31         | 64         | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| Total      | 188        | 166 | 544 | 510 | 104 | 0   | 0   | 0   | 0   | 0   | 150 | 265 |
| Periode 1  | 25         | 126 | 211 | 216 | 24  | 0   | 0   | 0   | 0   | 0   | 17  | 112 |
| Periode 2  | 51         | 40  | 174 | 174 | 58  | 0   | 0   | 0   | 0   | 0   | 22  | 153 |
| Periode 3  | 112        | 0   | 159 | 120 | 22  | 0   | 0   | 0   | 0   | 0   | 111 | 0   |
| Maksimum   | 64         | 40  | 98  | 81  | 56  | 0   | 0   | 0   | 0   | 0   | 111 | 93  |
| Hari Hujan | 12         | 13  | 20  | 18  | 4   | 0   | 0   | 0   | 0   | 0   | 5   | 10  |

|            |      |
|------------|------|
| Tahunan    | 1927 |
| Hujan Maks | 111  |
| Hari Hujan | 82   |



## DATA CURAH HUJAN HARIAN

Tahun : 2017

|                     |                  |                       |                      |                      |                  |
|---------------------|------------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620007</b> |
| Kode stasiun        |                  | Kelurahan/Desa        | Bendo                | Tahun Pendirian      | 1980             |
| Lintang Selatan     | -7,637028        | Kecamatan             | Bendo                | Tipe Alat            | PHB              |
| Bujur Timur         | 111,429575       | Kota/Kab              | Magetan              | Pengelola            | UPT Medium       |
| Elevasi             | 126              |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |      |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mai | Jun | Jul | Agst | Sep | Okt | Nop | Des |
| 1          | 5          | 17  | 47  | 35  | 30  | -   | -   | 0    | -   | -   | -   | -   |
| 2          | -          | 66  | 56  | -   | -   | -   | -   | 0    | -   | -   | -   | -   |
| 3          | -          | 16  | 7   | -   | -   | 27  | -   | 0    | -   | -   | -   | 21  |
| 4          | -          | -   | -   | -   | 20  | -   | -   | 0    | -   | -   | -   | -   |
| 5          | 3          | -   | 17  | 18  | -   | -   | -   | 0    | -   | 25  | 53  | -   |
| 6          | -          | 6   | -   | 20  | -   | -   | -   | 0    | -   | 3   | 40  | 9   |
| 7          | -          | 35  | 9   | 48  | -   | -   | -   | 0    | -   | -   | 15  | -   |
| 8          | -          | -   | -   | -   | 40  | -   | -   | 0    | -   | -   | -   | 7   |
| 9          | -          | 32  | 5   | -   | -   | -   | -   | 0    | -   | -   | -   | -   |
| 10         | -          | 4   | -   | 15  | -   | -   | -   | 0    | -   | -   | 30  | -   |
| 11         | 10         | -   | -   | -   | -   | 15  | -   | 0    | -   | -   | -   | -   |
| 12         | 35         | 10  | 40  | -   | -   | -   | -   | 0    | -   | -   | -   | 25  |
| 13         | 23         | 40  | -   | -   | -   | -   | -   | 0    | -   | -   | 20  | -   |
| 14         | -          | -   | 5   | -   | -   | -   | -   | 0    | -   | -   | 11  | 50  |
| 15         | -          | 23  | -   | -   | -   | -   | -   | 0    | -   | -   | -   | -   |
| 16         | 28         | -   | -   | 35  | -   | 7   | -   | 0    | -   | -   | 21  | -   |
| 17         | 42         | 10  | -   | -   | -   | -   | -   | 0    | -   | -   | 50  | 6   |
| 18         | 82         | 12  | 60  | 9   | -   | -   | -   | 0    | -   | 14  | 10  | -   |
| 19         | -          | -   | -   | 35  | -   | -   | 30  | 0    | -   | -   | -   | -   |
| 20         | 25         | 7   | -   | 65  | -   | -   | -   | 0    | -   | -   | 6   | 25  |
| 21         | -          | -   | 7   | -   | -   | -   | -   | 0    | -   | -   | 7   | 18  |
| 22         | -          | 5   | -   | -   | -   | 15  | -   | 0    | -   | -   | -   | -   |
| 23         | 3          | -   | -   | 38  | -   | -   | -   | 0    | -   | -   | -   | -   |
| 24         | -          | -   | -   | 40  | -   | -   | -   | 0    | -   | 15  | 10  | -   |
| 25         | 76         | -   | -   | 60  | -   | -   | -   | 0    | 10  | -   | 25  | -   |
| 26         | 8          | -   | 6   | -   | -   | -   | -   | 0    | -   | 20  | 20  | -   |
| 27         | -          | 47  | -   | 54  | -   | 0   | -   | 0    | -   | -   | 15  | 41  |
| 28         | 25         | 125 | 20  | -   | -   | 0   | -   | 0    | 30  | -   | 18  | -   |
| 29         | 30         | -   | -   | 8   | 107 | 0   | -   | 0    | 4   | 0   | 20  | -   |
| 30         | 45         | -   | 4   | -   | 5   | 0   | -   | 0    | -   | 0   | -   | 0   |
| 31         | 37         | -   | 25  | -   | -   | -   | -   | -    | -   | -   | -   | -   |
| Total      | 477        | 455 | 308 | 480 | 202 | 64  | 30  | 0    | 44  | 77  | 371 | 202 |
| Periode 1  | 8          | 176 | 141 | 136 | 90  | 27  | 0   | 0    | 0   | 28  | 138 | 37  |
| Periode 2  | 245        | 102 | 105 | 144 | 0   | 22  | 30  | 0    | 0   | 14  | 118 | 106 |
| Periode 3  | 224        | 177 | 62  | 200 | 112 | 15  | 0   | 0    | 44  | 35  | 115 | 59  |
| Maksimum   | 82         | 125 | 60  | 65  | 107 | 27  | 30  | 0    | 30  | 25  | 53  | 50  |
| Hari Hujan | 16         | 16  | 14  | 14  | 5   | 4   | 1   | 0    | 3   | 5   | 17  | 9   |

|            |      |
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| Tahunan    | 2710 |
| Hujan Maks | 125  |
| Hari Hujan | 104  |

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Hidrologi

## DATA CURAH HUJAN HARIAN

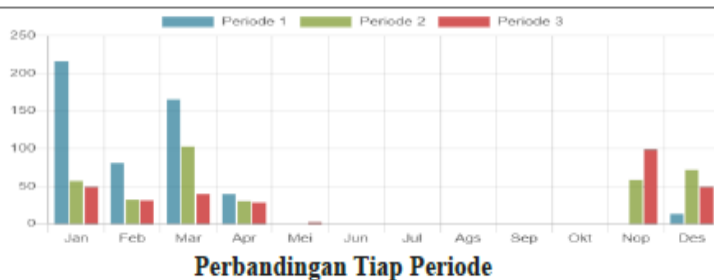
Tahun : 2018

|                     |                  |
|---------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> |
| Kode stasiun        | -7.637028        |
| Lintang Selatan     | 111.429575       |
| Bujur Timur         | 126              |
| Elevasi             |                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 16  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 0   | 10  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 30         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 66         | 21  | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 5          | 38         | 0   | 70  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 6          | 0          | 9   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 50         | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 17         | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 15         | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 13         | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 11  |
| 12         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13         | 0          | 0   | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 14         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 30  |
| 15         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 7   |
| 16         | 0          | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 17         | 0          | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 4          | 14  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 40         | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 22         | 0          | 11  | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 23         | 12         | 0   | 10  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 25         | 20         | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 0          | 15  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 18  |
| 27         | 5          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 12  |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 0   |
| 29         | 12         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 0   |
| 31         | 0          |     | 11  |     | 0   |     | 0   | 0   |     | 0   |     | 1   |
| Total      | 322        | 144 | 319 | 98  | 2   | 0   | 0   | 0   | 0   | 0   | 157 | 135 |
| Periode 1  | 216        | 81  | 165 | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| Periode 2  | 57         | 32  | 103 | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 58  | 72  |
| Periode 3  | 49         | 31  | 40  | 28  | 2   | 0   | 0   | 0   | 0   | 0   | 99  | 49  |
| Maksimum   | 66         | 25  | 70  | 20  | 2   | 0   | 0   | 0   | 0   | 0   | 30  | 30  |
| Hari Hujan | 13         | 11  | 13  | 8   | 1   | 0   | 0   | 0   | 0   | 0   | 7   | 13  |

|            |      |
|------------|------|
| Tahunan    | 1177 |
| Hujan Maks | 70   |
| Hari Hujan | 66   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

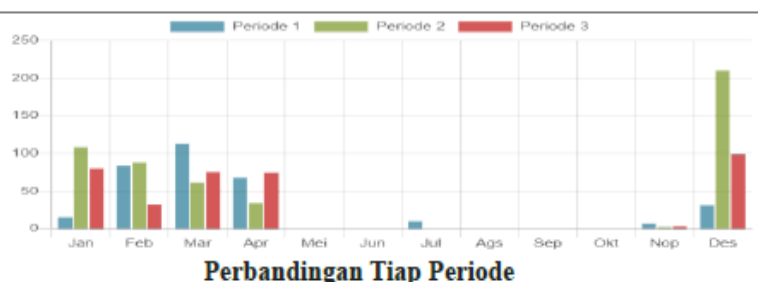
Tahun : 2019

|                     |                  |
|---------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> |
| Kode stasiun        | -7.637028        |
| Lintang Selatan     | 111.429575       |
| Bujur Timur         | 126              |
| Elevasi             |                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 1          | 31  | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 8          | 7   | 35  | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 3          | 1          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 4          | 0          | 16  | 2   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 5          | 0          | 8   | 13  | 0   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   |
| 6          | 0          | 0   | 31  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 7          | 5          | 3   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 8          | 0          | 0   | 2   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 3   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 11         | 0          | 0   | 11  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 7   |
| 12         | 0          | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  |
| 13         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 30         | 0   | 8   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 88  |
| 15         | 4          | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| 16         | 8          | 31  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  |
| 17         | 24         | 30  | 2   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 18         | 11         | 10  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 19         | 17         | 11  | 5   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 20         | 14         | 6   | 15  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 21         | 0          | 3   | 5   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 13         | 10  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 3          | 0   | 3   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 24         | 8          | 0   | 51  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 25         | 31         | 6   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 25  |
| 26         | 8          | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  |
| 27         | 6          | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 11         | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  |
| 29         | 0          |     | 0   | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  |
| 31         | 0          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 2   |
| Total      | 203        | 204 | 249 | 176 | 0   | 0   | 10  | 0   | 0   | 0   | 12  | 342 |
| Periode 1  | 15         | 84  | 113 | 68  | 0   | 0   | 10  | 0   | 0   | 0   | 7   | 31  |
| Periode 2  | 108        | 88  | 61  | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 210 |
| Periode 3  | 80         | 32  | 75  | 74  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 99  |
| Maksimum   | 31         | 31  | 51  | 37  | 0   | 0   | 10  | 0   | 0   | 0   | 7   | 88  |
| Hari Hujan | 18         | 17  | 20  | 18  | 0   | 0   | 1   | 0   | 0   | 0   | 3   | 21  |

|            |      |
|------------|------|
| Tabunan    | 1196 |
| Hujan Maks | 88   |
| Hari Hujan | 98   |



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Hidrologi

## DATA CURAH HUJAN HARIAN

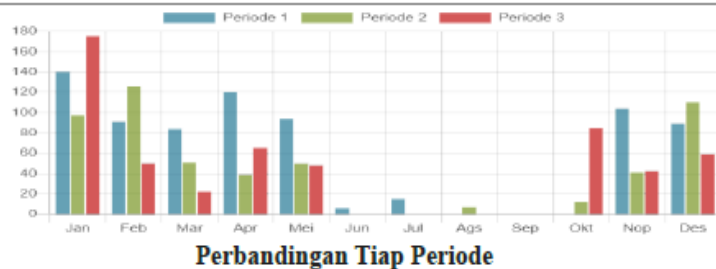
Tahun : 2020

|                     |                  |
|---------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> |
| Kode stasiun        | -7.637028        |
| Lintang Selatan     | 111.429575       |
| Bujur Timur         | 126              |
| Elevasi             |                  |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 3          | 6   | 20  | 30  | 0   | 6   | 0   | 0   | 0   | 0   | 30  | 0   |
| 2          | 15         | 30  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 13  |
| 3          | 14         | 24  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 15  |
| 4          | 0          | 25  | 0   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 9   |
| 5          | 8          | 0   | 30  | 15  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 6          | 55         | 0   | 0   | 20  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 28  |
| 7          | 15         | 0   | 1   | 8   | 4   | 0   | 15  | 0   | 0   | 0   | 0   | 2   |
| 8          | 1          | 6   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 9          | 23         | 0   | 2   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 10         | 6          | 0   | 0   | 6   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 11         | 18         | 37  | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 12  | 0   | 0   |
| 12         | 13         | 18  | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 6   |
| 13         | 0          | 13  | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 31  |
| 14         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 18  |
| 15         | 0          | 4   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 16         | 49         | 5   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 17         | 17         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 18         | 0          | 5   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  |
| 19         | 0          | 6   | 9   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 20         | 0          | 30  | 20  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 30  | 7   |
| 21         | 61         | 3   | 6   | 2   | 3   | 0   | 0   | 0   | 0   | 2   | 0   | 0   |
| 22         | 0          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| 23         | 0          | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 2   | 0   |
| 24         | 21         | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 17  | 5   | 0   |
| 25         | 25         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 68         | 1   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 19  | 0   | 22  |
| 27         | 0          | 2   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 28         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 0   | 2   |
| 29         | 0          | 0   | 6   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 10  | 30  | 12  | 0   | 0   | 0   | 0   | 0   | 4   | 31  |
| 31         | 16         |     | 0   |     | 3   |     | 0   | 0   |     | 17  |     | 19  |
| Total      | 428        | 267 | 157 | 224 | 195 | 6   | 15  | 7   | 0   | 114 | 187 | 277 |
| Periode 1  | 140        | 91  | 84  | 120 | 94  | 6   | 15  | 0   | 0   | 0   | 104 | 89  |
| Periode 2  | 97         | 126 | 51  | 39  | 50  | 0   | 0   | 7   | 0   | 12  | 41  | 110 |
| Periode 3  | 175        | 50  | 22  | 65  | 48  | 0   | 0   | 0   | 0   | 85  | 42  | 59  |
| Maksimum   | 68         | 37  | 30  | 30  | 30  | 6   | 15  | 7   | 0   | 30  | 31  | 31  |
| Hari Hujan | 18         | 21  | 14  | 14  | 11  | 1   | 1   | 1   | 0   | 7   | 11  | 23  |

|            |      |
|------------|------|
| Tahunan    | 1877 |
| Hujan Maks | 68   |
| Hari Hujan | 122  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

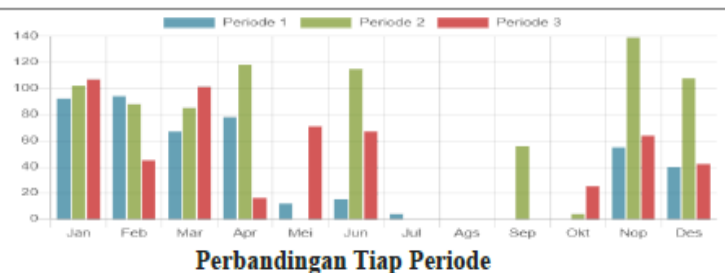
Tahun : 2021

|                     |                  |
|---------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> |
| Kode stasiun        |                  |
| Lintang Selatan     | -7.637028        |
| Bujur Timur         | 111.429575       |
| Elevasi             | 126              |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 2          | 4   | 0   | 2   | 9   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 2          | 10         | 6   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 24         | 11  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 5          | 0          | 31  | 3   | 30  | 2   | 0   | 0   | 0   | 0   | 0   | 22  | 0   |
| 6          | 13         | 7   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 7          | 18         | 1   | 14  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 8          | 5          | 6   | 6   | 16  | 1   | 0   | 0   | 0   | 0   | 0   | 14  | 0   |
| 9          | 20         | 1   | 31  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 25  |
| 10         | 0          | 2   | 0   | 0   | 0   | 15  | 4   | 0   | 0   | 0   | 2   | 0   |
| 11         | 6          | 0   | 0   | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  |
| 12         | 31         | 0   | 5   | 0   | 0   | 31  | 0   | 0   | 20  | 0   | 7   | 23  |
| 13         | 2          | 31  | 25  | 6   | 0   | 17  | 0   | 0   | 6   | 0   | 0   | 0   |
| 14         | 0          | 0   | 1   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 15         | 0          | 30  | 15  | 30  | 0   | 0   | 0   | 0   | 30  | 0   | 30  | 0   |
| 16         | 1          | 0   | 0   | 31  | 0   | 17  | 0   | 0   | 0   | 0   | 22  | 11  |
| 17         | 2          | 3   | 2   | 0   | 0   | 30  | 0   | 0   | 0   | 0   | 25  | 4   |
| 18         | 30         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 20  |
| 19         | 30         | 22  | 31  | 0   | 0   | 8   | 0   | 0   | 0   | 4   | 6   | 0   |
| 20         | 0          | 0   | 6   | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 17  | 20  |
| 21         | 7          | 0   | 0   | 0   | 1   | 13  | 0   | 0   | 0   | 0   | 0   | 6   |
| 22         | 26         | 5   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 23         | 16         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 2          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 30  |
| 25         | 3          | 7   | 15  | 0   | 16  | 23  | 0   | 0   | 0   | 0   | 2   | 0   |
| 26         | 0          | 2   | 19  | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 27         | 19         | 16  | 5   | 0   | 0   | 31  | 0   | 0   | 0   | 23  | 4   | 0   |
| 28         | 24         | 9   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 26  | 0   |
| 29         | 7          |     | 0   | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 3          |     | 31  | 16  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 0          |     | 2   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 301        | 227 | 255 | 212 | 83  | 197 | 4   | 0   | 56  | 29  | 258 | 190 |
| Periode 1  | 92         | 94  | 67  | 78  | 12  | 15  | 4   | 0   | 0   | 0   | 55  | 40  |
| Periode 2  | 102        | 88  | 85  | 118 | 0   | 115 | 0   | 0   | 56  | 4   | 139 | 108 |
| Periode 3  | 107        | 45  | 101 | 16  | 71  | 67  | 0   | 0   | 0   | 25  | 64  | 42  |
| Maksimum   | 31         | 31  | 31  | 31  | 27  | 31  | 4   | 0   | 30  | 23  | 30  | 30  |
| Hari Hujan | 23         | 22  | 20  | 12  | 8   | 10  | 1   | 0   | 3   | 3   | 20  | 11  |

|            |      |
|------------|------|
| Tahunan    | 1812 |
| Hujan Maks | 31   |
| Hari Hujan | 133  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

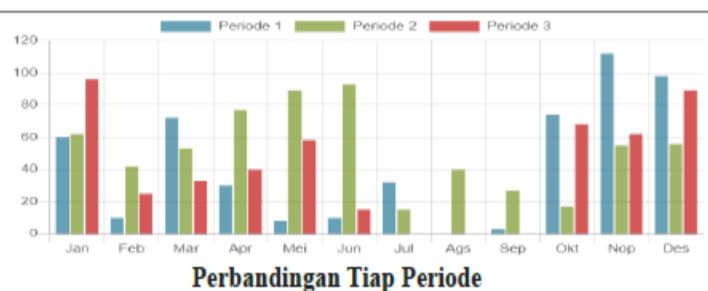
Tahun : 2022

|                     |                  |
|---------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BENDO MGT</b> |
| Kode stasiun        | -7.637028        |
| Lintang Selatan     | 111.429575       |
| Bujur Timur         |                  |
| Elevasi             | 126              |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 2          | 3   | 5   | 0   | 0   | 2   | 0   | 0   | 0   | 31  | 0   | 20  |
| 2          | 4          | 7   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 30  | 0   |
| 3          | 7          | 0   | 15  | 7   | 0   | 0   | 2   | 0   | 0   | 3   | 0   | 44  |
| 4          | 0          | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 0   |
| 5          | 6          | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 10  | 0   |
| 6          | 0          | 0   | 3   | 17  | 4   | 0   | 30  | 0   | 0   | 29  | 23  | 0   |
| 7          | 10         | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 0   |
| 8          | 0          | 0   | 9   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 22  | 11  |
| 9          | 1          | 0   | 12  | 0   | 0   | 5   | 0   | 0   | 0   | 3   | 2   | 23  |
| 10         | 30         | 0   | 10  | 0   | 2   | 2   | 0   | 0   | 3   | 0   | 3   | 0   |
| 11         | 0          | 2   | 3   | 25  | 21  | 27  | 0   | 0   | 20  | 0   | 3   | 0   |
| 12         | 21         | 4   | 4   | 0   | 0   | 35  | 6   | 0   | 2   | 0   | 2   | 0   |
| 13         | 1          | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 5   | 2   | 3   | 4   |
| 14         | 11         | 19  | 5   | 31  | 28  | 6   | 3   | 8   | 0   | 0   | 2   | 7   |
| 15         | 0          | 4   | 0   | 6   | 0   | 2   | 6   | 2   | 0   | 0   | 0   | 30  |
| 16         | 12         | 0   | 10  | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 7   |
| 17         | 0          | 2   | 10  | 3   | 0   | 0   | 0   | 30  | 0   | 6   | 0   | 0   |
| 18         | 0          | 2   | 11  | 0   | 0   | 18  | 0   | 0   | 0   | 3   | 14  | 0   |
| 19         | 12         | 6   | 3   | 3   | 30  | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| 20         | 5          | 3   | 4   | 9   | 10  | 0   | 0   | 0   | 0   | 6   | 0   | 8   |
| 21         | 31         | 0   | 0   | 9   | 15  | 0   | 0   | 0   | 0   | 0   | 15  | 8   |
| 22         | 13         | 0   | 10  | 5   | 30  | 0   | 0   | 0   | 0   | 27  | 0   | 0   |
| 23         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  |
| 24         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   | 31  |
| 25         | 0          | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 4   |
| 26         | 17         | 5   | 0   | 25  | 3   | 0   | 0   | 0   | 0   | 4   | 8   | 3   |
| 27         | 14         | 14  | 13  | 0   | 10  | 15  | 0   | 0   | 0   | 6   | 6   | 7   |
| 28         | 6          | 6   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 29         | 13         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 30         | 2          |     | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 4          |     | 23  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 222        | 77  | 181 | 147 | 155 | 118 | 47  | 40  | 30  | 159 | 229 | 243 |
| Periode 1  | 60         | 10  | 72  | 30  | 8   | 10  | 32  | 0   | 3   | 74  | 112 | 98  |
| Periode 2  | 62         | 42  | 53  | 77  | 89  | 93  | 15  | 40  | 27  | 17  | 55  | 56  |
| Periode 3  | 96         | 25  | 33  | 40  | 58  | 15  | 0   | 0   | 0   | 68  | 62  | 89  |
| Maksimum   | 31         | 19  | 23  | 31  | 30  | 35  | 30  | 30  | 20  | 31  | 31  | 44  |
| Hari Hujan | 21         | 13  | 22  | 13  | 11  | 11  | 5   | 3   | 4   | 14  | 18  | 16  |

|            |      |
|------------|------|
| Tahunan    | 1648 |
| Hujan Maks | 44   |
| Hari Hujan | 151  |



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Hidrologi

## DATA CURAH HUJAN HARIAN

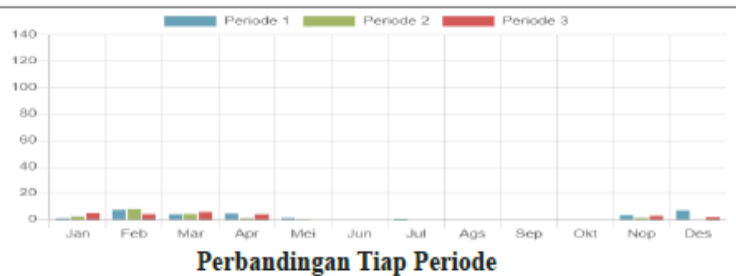
Tahun : 2023

| NAMA STASIUN    | BENDO MGT  |
|-----------------|------------|
| Kode stasiun    | -7.637028  |
| Lintang Selatan | 111.429575 |
| Bujur Timur     | 126        |
| Elevasi         |            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620007  |
| Kelurahan/Desa | Bendo         | Tahun Pendirian | 1980       |
| Kecamatan      | Bendo         | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 5          | 1   | 28  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  |
| 2          | 3          | 32  | 9   | 7   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 30  |
| 3          | 2          | 18  | 16  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 4          | 0          | 0   | 0   | 7   | 5   | 0   | 0   | 0   | 0   | 0   | 3   | 28  |
| 5          | 0          | 3   | 7   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 50  | 13  |
| 6          | 2          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 28  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 18  | 3   | 6   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   |
| 10         | 3          | 13  | 1   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 4          | 15  | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 9   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 13         | 0          | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 6          | 5   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| 15         | 0          | 26  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 0          | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 30  | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 8          | 4   | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 3   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 19         | 6   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 8          | 22  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 10         | 8   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 23         | 5          | 10  | 6   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 6          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 25         | 3          | 6   | 10  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 2          | 7   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 15         | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 10         | 3   | 23  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 0   |
| 29         | 5          |     | 5   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 30  |
| 30         | 16         |     | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 2          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 31  |
| Total      | 134        | 302 | 222 | 153 | 26  | 0   | 10  | 0   | 0   | 0   | 120 | 166 |
| Periode 1  | 15         | 113 | 64  | 74  | 20  | 0   | 10  | 0   | 0   | 0   | 53  | 105 |
| Periode 2  | 37         | 122 | 69  | 16  | 6   | 0   | 0   | 0   | 0   | 0   | 21  | 0   |
| Periode 3  | 80         | 67  | 89  | 63  | 0   | 0   | 0   | 0   | 0   | 0   | 46  | 30  |
| Maksimum   | 19         | 32  | 28  | 30  | 10  | 0   | 10  | 0   | 0   | 0   | 50  | 31  |
| Hari Hujan | 20         | 25  | 18  | 15  | 4   | 0   | 1   | 0   | 0   | 0   | 8   | 7   |

|            |      |
|------------|------|
| Tahunan    | 1133 |
| Hujan Maks | 50   |
| Hari Hujan | 98   |



## 3. Data Curah Hujan Stasiun Nitikan

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2014

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         | 520            |
| Elevasi             |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 32         | 14  | 18  | 0   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 21         | 7   | 36  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 17         | 6   | 0   | 32  | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 23         | 10  | 20  | 0   | 0   | 19  | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 28         | 8   | 19  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 63         | 0   | 0   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 29         | 58  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 26  | 27  | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 9   | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 7   | 58  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 41  | 41  |
| 11         | 47         | 8   | 34  | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 38  | 38  |
| 12         | 18         | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 27  |
| 13         | 30         | 3   | 27  | 18  | 17  | 0   | 39  | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 0   | 19  | 4   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 0   | 42  | 21  | 49  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 24         | 0   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 16         | 4   | 37  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 32  | 32  |
| 18         | 9          | 3   | 79  | 15  | 0   | 43  | 0   | 0   | 0   | 0   | 12  | 12  |
| 19         | 12         | 0   | 0   | 0   | 0   | 27  | 0   | 0   | 0   | 0   | 12  | 12  |
| 20         | 10         | 18  | 0   | 5   | 0   | 14  | 0   | 0   | 0   | 0   | 24  | 24  |
| 21         | 11         | 8   | 0   | 20  | 12  | 0   | 4   | 0   | 0   | 0   | 39  | 12  |
| 22         | 9          | 0   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 0   |
| 23         | 0          | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 19  |
| 24         | 17         | 38  | 0   | 27  | 0   | 28  | 0   | 0   | 0   | 0   | 35  | 4   |
| 25         | 10         | 3   | 0   | 32  | 28  | 3   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 24         | 0   | 0   | 25  | 40  | 4   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 0          | 0   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 0   |
| 28         | 0          | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 20  |
| 29         | 18         |     | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 14  |
| 30         | 12         |     | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 31         | 16         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 496        | 273 | 548 | 339 | 284 | 138 | 43  | 0   | 0   | 0   | 322 | 266 |
| Periode 1  | 213        | 145 | 207 | 94  | 108 | 19  | 0   | 0   | 0   | 0   | 41  | 41  |
| Periode 2  | 166        | 36  | 285 | 105 | 96  | 84  | 39  | 0   | 0   | 0   | 145 | 145 |
| Periode 3  | 101        | 92  | 56  | 140 | 80  | 35  | 4   | 0   | 0   | 0   | 136 | 80  |
| Maksimum   | 63         | 58  | 79  | 35  | 49  | 43  | 39  | 0   | 0   | 0   | 41  | 41  |
| Hari Hujan | 23         | 19  | 17  | 16  | 10  | 7   | 2   | 0   | 0   | 0   | 13  | 13  |

|            |      |
|------------|------|
| Tahunan    | 2709 |
| Hujan Maks | 79   |
| Hari Hujan | 120  |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2015

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         | 520            |
| Elevasi             |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 16  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 2          | 0          | 10  | 20  | 57  | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 24         | 0   | 32  | 39  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 14  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 0   |
| 5          | 5          | 12  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 6          | 0          | 29  | 45  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 7   |
| 7          | 0          | 46  | 28  | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 3          | 35  | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  | 0   |
| 9          | 0          | 57  | 0   | 38  | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 40  |
| 10         | 0          | 42  | 0   | 46  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 14         | 58  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 28  |
| 12         | 8          | 47  | 31  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13         | 10         | 17  | 27  | 41  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 19  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 15         | 4          | 10  | 0   | 35  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 16         | 0          | 7   | 23  | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 27  |
| 17         | 3          | 45  | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 18         | 4          | 24  | 0   | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 38  | 29  | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  |
| 20         | 9          | 49  | 0   | 59  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 38  |
| 21         | 18         | 27  | 20  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 22         | 15         | 20  | 16  | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 0          | 35  | 10  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 7          | 0   | 0   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 9          | 0   | 0   | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  |
| 26         | 0          | 48  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  | 0   |
| 27         | 0          | 27  | 0   | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 27         | 68  | 0   | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 49  | 59  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 55         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 215        | 800 | 465 | 869 | 71  | 0   | 0   | 0   | 0   | 0   | 103 | 278 |
| Periode 1  | 32         | 261 | 194 | 279 | 55  | 0   | 0   | 0   | 0   | 0   | 72  | 91  |
| Periode 2  | 52         | 314 | 157 | 289 | 16  | 0   | 0   | 0   | 0   | 0   | 13  | 156 |
| Periode 3  | 76         | 225 | 114 | 301 | 0   | 0   | 0   | 0   | 0   | 0   | 18  | 31  |
| Maksimum   | 55         | 68  | 49  | 59  | 28  | 0   | 0   | 0   | 0   | 0   | 27  | 40  |
| Hari Hujan | 16         | 25  | 18  | 23  | 5   | 0   | 0   | 0   | 0   | 0   | 7   | 13  |

|            |      |
|------------|------|
| Tahunan    | 2801 |
| Hujan Maks | 68   |
| Hari Hujan | 107  |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2016

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         | 520            |
| Elevasi             |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 19         | 27  | 32  | 18  | 12  | 19  | 58  | 0   | 0   | 34  | 0   | 27  |
| 2          | 11         | 30  | 27  | 0   | 0   | 24  | 0   | 0   | 0   | 27  | 0   | 40  |
| 3          | 18         | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 18  | 14  | 0   | 28  |
| 4          | 14         | 48  | 19  | 0   | 0   | 0   | 0   | 0   | 21  | 0   | 0   | 35  |
| 5          | 0          | 7   | 40  | 16  | 0   | 0   | 0   | 18  | 0   | 0   | 4   | 4   |
| 6          | 0          | 23  | 12  | 20  | 0   | 10  | 0   | 0   | 0   | 16  | 0   | 48  |
| 7          | 0          | 4   | 17  | 0   | 0   | 16  | 0   | 24  | 0   | 0   | 0   | 26  |
| 8          | 0          | 19  | 38  | 14  | 0   | 0   | 0   | 20  | 0   | 0   | 0   | 18  |
| 9          | 0          | 5   | 46  | 0   | 16  | 0   | 0   | 0   | 0   | 39  | 40  | 53  |
| 10         | 0          | 53  | 0   | 23  | 9   | 0   | 0   | 0   | 0   | 58  | 37  | 24  |
| 11         | 24         | 38  | 19  | 28  | 20  | 0   | 0   | 0   | 0   | 38  | 43  | 30  |
| 12         | 17         | 40  | 35  | 24  | 0   | 0   | 49  | 0   | 0   | 0   | 31  | 48  |
| 13         | 0          | 18  | 42  | 36  | 0   | 0   | 0   | 68  | 0   | 29  | 18  | 23  |
| 14         | 35         | 37  | 0   | 0   | 43  | 0   | 0   | 57  | 0   | 35  | 4   | 0   |
| 15         | 0          | 52  | 0   | 17  | 18  | 0   | 0   | 0   | 0   | 20  | 27  | 41  |
| 16         | 0          | 60  | 0   | 20  | 0   | 0   | 18  | 4   | 35  | 0   | 6   | 16  |
| 17         | 0          | 5   | 0   | 14  | 0   | 12  | 0   | 0   | 25  | 0   | 16  | 0   |
| 18         | 0          | 0   | 4   | 47  | 0   | 14  | 27  | 0   | 42  | 0   | 0   | 0   |
| 19         | 0          | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 18         | 45  | 0   | 19  | 4   | 7   | 20  | 0   | 0   | 0   | 0   | 19  |
| 21         | 18         | 40  | 27  | 0   | 20  | 0   | 0   | 0   | 16  | 31  | 43  | 0   |
| 22         | 9          | 29  | 4   | 0   | 8   | 0   | 0   | 0   | 0   | 27  | 21  | 36  |
| 23         | 16         | 38  | 0   | 0   | 14  | 27  | 25  | 0   | 0   | 34  | 14  | 28  |
| 24         | 20         | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   | 0   | 0   |
| 25         | 6          | 26  | 5   | 0   | 0   | 0   | 0   | 0   | 34  | 0   | 34  | 0   |
| 26         | 4          | 47  | 21  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 0          | 39  | 38  | 0   | 0   | 0   | 17  | 25  | 44  | 0   | 20  | 20  |
| 28         | 0          | 38  | 7   | 0   | 10  | 25  | 0   | 25  | 0   | 0   | 85  | 0   |
| 29         | 0          | 45  | 0   | 8   | 28  | 4   | 0   | 14  | 25  | 0   | 36  | 0   |
| 30         | 0          |     | 0   | 10  | 9   | 20  | 0   | 0   | 20  | 0   | 39  | 4   |
| 31         | 3          |     | 19  |     | 43  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 232        | 836 | 457 | 325 | 254 | 178 | 214 | 255 | 288 | 402 | 518 | 568 |
| Periode 1  | 62         | 216 | 231 | 95  | 37  | 69  | 58  | 62  | 39  | 188 | 81  | 303 |
| Periode 2  | 94         | 295 | 105 | 205 | 85  | 33  | 114 | 129 | 102 | 122 | 145 | 177 |
| Periode 3  | 73         | 325 | 102 | 25  | 89  | 76  | 42  | 64  | 147 | 92  | 292 | 88  |
| Maksimum   | 35         | 60  | 46  | 47  | 43  | 27  | 58  | 68  | 44  | 58  | 85  | 53  |
| Hari Hujan | 15         | 26  | 20  | 17  | 14  | 11  | 7   | 9   | 11  | 13  | 18  | 20  |

|            |      |
|------------|------|
| Tahunan    | 4527 |
| Hujan Maks | 85   |
| Hari Hujan | 181  |

**Perbandingan Tiap Periode**

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2017

|                     |                |                 |               |
|---------------------|----------------|-----------------|---------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |                 |               |
| Kode stasiun        | -7.675010      | Wilayah Sungai  | Bengawan Solo |
| Lintang Selatan     | 111.29662      | Kelurahan/Desa  | Nitikan       |
| Bujur Timur         | 520            | Kecamatan       | Plaosan       |
| Elevasi             |                | Kota/Kab        | Magetan       |
|                     |                | Kode Database   | 350620012     |
|                     |                | Tahun Pendirian | 1980          |
|                     |                | Tipe Alat       | PHB           |
|                     |                | Pengelola       | UPT Madiun    |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 34  | 41  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 29  | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 14         | 40  | 0   | 0   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 21  | 42  | 24  | 0   | 0   | 0   | 0   | 0   | 17  | 54  | 0   |
| 5          | 0          | 0   | 64  | 0   | 27  | 20  | 0   | 0   | 0   | 13  | 16  | 9   |
| 6          | 0          | 0   | 25  | 29  | 0   | 4   | 0   | 0   | 0   | 0   | 49  | 0   |
| 7          | 5          | 18  | 37  | 36  | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 8          | 28         | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 25  |
| 9          | 0          | 43  | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 27  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  |
| 11         | 0          | 27  | 34  | 0   | 0   | 28  | 0   | 0   | 0   | 23  | 0   | 21  |
| 12         | 24         | 38  | 21  | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 7   |
| 13         | 0          | 20  | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 19         | 41  | 49  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 51  | 20  |
| 15         | 0          | 0   | 38  | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 32  | 15  |
| 16         | 26         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 54  | 0   |
| 17         | 48         | 49  | 40  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 83  | 0   |
| 18         | 16         | 18  | 0   | 7   | 0   | 0   | 35  | 0   | 0   | 48  | 37  | 6   |
| 19         | 11         | 24  | 0   | 65  | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 25  |
| 20         | 3          | 37  | 15  | 89  | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 26  |
| 21         | 18         | 37  | 39  | 0   | 0   | 26  | 0   | 0   | 0   | 0   | 13  | 11  |
| 22         | 24         | 26  | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 35  | 16  |
| 23         | 12         | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 24         | 39         | 0   | 20  | 48  | 0   | 15  | 0   | 0   | 3   | 0   | 6   | 0   |
| 25         | 20         | 24  | 0   | 20  | 0   | 0   | 0   | 0   | 7   | 24  | 56  | 0   |
| 26         | 7          | 35  | 6   | 56  | 0   | 39  | 0   | 0   | 22  | 27  | 14  | 0   |
| 27         | 14         | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 51  | 0   | 27  | 25  |
| 28         | 41         | 64  | 0   | 32  | 18  | 0   | 14  | 0   | 0   | 0   | 22  | 27  |
| 29         | 26         |     | 27  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 49  | 0   |
| 30         | 19         |     | 21  | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 16         |     | 48  |     | 10  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 430        | 763 | 606 | 530 | 174 | 150 | 49  | 0   | 83  | 152 | 638 | 258 |
| Periode 1  | 47         | 251 | 248 | 130 | 102 | 24  | 0   | 0   | 0   | 30  | 119 | 59  |
| Periode 2  | 147        | 254 | 197 | 220 | 0   | 46  | 35  | 0   | 0   | 71  | 294 | 120 |
| Periode 3  | 220        | 258 | 113 | 180 | 62  | 80  | 14  | 0   | 83  | 51  | 225 | 79  |
| Maksimum   | 48         | 64  | 64  | 89  | 40  | 39  | 35  | 0   | 51  | 48  | 83  | 27  |
| Hari Hujan | 21         | 23  | 18  | 17  | 7   | 8   | 2   | 0   | 4   | 6   | 19  | 15  |

|            |      |
|------------|------|
| Tahunan    | 3833 |
| Hujan Maks | 89   |
| Hari Hujan | 140  |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2018

|                     |                |                |               |                 |            |
|---------------------|----------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kode stasiun        | -7.675010      | Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Lintang Selatan     | 111.29662      | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur         | 520            | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi             |                |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |    |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ag | Sep | Okt | Nop | Des |
| 1          | 0          | 43  | 24  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 3   |
| 2          | 0          | 28  | 16  | 20  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 3          | 0          | 24  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 4          | 67         | 11  | 23  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 5          | 85         | 17  | 19  | 29  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 5   |
| 6          | 5          | 36  | 6   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 37  | 38  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 8          | 4          | 12  | 12  | 35  | 0   | 0   | 0   | 0  | 0   | 0   | 59  | 10  |
| 9          | 33         | 7   | 47  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 6   | 0   |
| 10         | 37         | 4   | 32  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 19  | 0   |
| 11         | 0          | 18  | 45  | 19  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 38  |
| 12         | 0          | 0   | 21  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 13         | 0          | 0   | 37  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 28  |
| 14         | 67         | 24  | 23  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 52  |
| 15         | 85         | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 49  |
| 16         | 5          | 16  | 39  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 17         | 0          | 7   | 44  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 18         | 4          | 4   | 0   | 37  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 19         | 33         | 32  | 0   | 12  | 0   | 0   | 0   | 0  | 0   | 0   | 39  | 0   |
| 20         | 37         | 25  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 21  |
| 21         | 43         | 40  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 18  |
| 22         | 38         | 31  | 19  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 29  |
| 23         | 27         | 16  | 14  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 24         | 26         | 12  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 4   |
| 25         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 10  |
| 26         | 0          | 0   | 28  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 5   | 59  |
| 27         | 0          | 19  | 7   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 17  | 0   |
| 28         | 56         | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 38  | 0   |
| 29         | 34         |     | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 7   | 0   |
| 30         | 29         |     | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 54  | 0   |
| 31         | 17         |     | 34  |     | 0   |     | 0   | 0  |     | 0   |     | 0   |
| Total      | 732        | 434 | 527 | 190 | 0   | 0   | 0   | 0  | 0   | 0   | 244 | 326 |
| Periode 1  | 231        | 182 | 216 | 122 | 0   | 0   | 0   | 0  | 0   | 0   | 84  | 18  |
| Periode 2  | 231        | 126 | 209 | 68  | 0   | 0   | 0   | 0  | 0   | 0   | 39  | 188 |
| Periode 3  | 253        | 126 | 68  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 121 | 120 |
| Maksimum   | 85         | 43  | 47  | 38  | 0   | 0   | 0   | 0  | 0   | 0   | 59  | 59  |
| Hari Hujan | 20         | 22  | 20  | 7   | 0   | 0   | 0   | 0  | 0   | 0   | 9   | 13  |

|            |      |
|------------|------|
| Tahunan    | 2453 |
| Hujan Maks | 85   |
| Hari Hujan | 91   |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2019

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         | 520            |
| Elevasi             |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 23  | 24  | 47  | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 0   |
| 2          | 0          | 40  | 0   | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 4   |
| 3          | 0          | 18  | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 35  | 86  | 56  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 17         | 27  | 67  | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 97  |
| 6          | 10         | 21  | 35  | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  |
| 7          | 26         | 19  | 27  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 32  | 18  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 19  | 0   | 38  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 28         | 25  | 24  | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 11         | 0          | 18  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 13         | 0          | 0   | 0   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 14         | 18         | 24  | 0   | 44  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 15         | 24         | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 16         | 12         | 16  | 19  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 29         | 7   | 37  | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 18         | 4          | 4   | 18  | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 5          | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 20         | 37         | 25  | 46  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 27         | 36  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 25         | 29  | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 23         | 38         | 0   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 17         | 47  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 25         | 20         | 40  | 57  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 18         | 29  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 28         | 0          | 12  | 29  | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 29         | 0          |     | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 30         | 24         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 45         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 424        | 578 | 747 | 659 | 0   | 0   | 0   | 0   | 0   | 0   | 59  | 212 |
| Periode 1  | 81         | 259 | 312 | 344 | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 118 |
| Periode 2  | 129        | 126 | 160 | 260 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 65  |
| Periode 3  | 169        | 193 | 275 | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 29  |
| Maksimum   | 45         | 47  | 86  | 56  | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 97  |
| Hari Hujan | 19         | 23  | 21  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 12  |

|            |      |
|------------|------|
| Tahunan    | 2679 |
| Hujan Maks | 97   |
| Hari Hujan | 98   |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2020

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         |                |
| Elevasi             | 520            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |    |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ag | Sep | Okt | Nop | Des |
| 1          | 8          | 23  | 3   | 47  | 22  | 0   | 0   | 0  | 0   | 0   | 30  | 0   |
| 2          | 6          | 30  | 44  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 89  | 19  |
| 3          | 0          | 5   | 12  | 5   | 0   | 0   | 0   | 0  | 0   | 0   | 7   | 97  |
| 4          | 9          | 21  | 4   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 7   | 13  |
| 5          | 15         | 16  | 28  | 9   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 15  |
| 6          | 11         | 9   | 4   | 48  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 25  |
| 7          | 0          | 21  | 11  | 6   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 3   |
| 8          | 8          | 8   | 3   | 92  | 10  | 0   | 0   | 0  | 0   | 0   | 0   | 14  |
| 9          | 29         | 12  | 5   | 26  | 13  | 0   | 0   | 0  | 0   | 0   | 0   | 6   |
| 10         | 0          | 0   | 0   | 0   | 57  | 0   | 0   | 0  | 0   | 3   | 0   | 9   |
| 11         | 0          | 15  | 0   | 0   | 3   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 12         | 0          | 0   | 0   | 0   | 4   | 0   | 0   | 58 | 0   | 0   | 4   | 32  |
| 13         | 0          | 3   | 23  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 24  |
| 14         | 0          | 7   | 15  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 78  |
| 15         | 0          | 4   | 6   | 7   | 6   | 0   | 0   | 0  | 0   | 0   | 4   | 4   |
| 16         | 0          | 17  | 0   | 26  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 17         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 3   | 5   |
| 18         | 0          | 3   | 13  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 28  |
| 19         | 0          | 29  | 4   | 0   | 46  | 0   | 0   | 0  | 0   | 0   | 28  | 0   |
| 20         | 0          | 3   | 7   | 0   | 15  | 0   | 0   | 0  | 0   | 0   | 97  | 0   |
| 21         | 20         | 0   | 0   | 11  | 16  | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 22         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 23         | 7          | 5   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 4   | 0   | 5   |
| 24         | 0          | 0   | 34  | 18  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 25         | 0          | 0   | 5   | 25  | 0   | 0   | 0   | 0  | 0   | 7   | 0   | 0   |
| 26         | 0          | 7   | 11  | 0   | 19  | 0   | 0   | 0  | 0   | 6   | 0   | 7   |
| 27         | 0          | 21  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 12  |
| 28         | 0          | 5   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 5   | 0   | 8   |
| 29         | 0          | 28  | 17  | 0   | 33  | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 9   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 10  | 22  |
| 31         | 0          |     | 3   |     | 20  |     | 0   | 0  |     | 0   |     | 14  |
| Total      | 113        | 308 | 261 | 320 | 264 | 0   | 0   | 58 | 0   | 25  | 279 | 440 |
| Periode 1  | 86         | 145 | 114 | 233 | 102 | 0   | 0   | 0  | 0   | 3   | 133 | 201 |
| Periode 2  | 0          | 89  | 68  | 33  | 74  | 0   | 0   | 58 | 0   | 0   | 136 | 171 |
| Periode 3  | 27         | 74  | 76  | 54  | 68  | 0   | 0   | 0  | 0   | 22  | 10  | 54  |
| Maksimum   | 29         | 30  | 44  | 92  | 57  | 0   | 0   | 58 | 0   | 7   | 97  | 97  |
| Hari Hujan | 9          | 24  | 21  | 12  | 13  | 0   | 0   | 1  | 0   | 5   | 10  | 21  |

|            |      |
|------------|------|
| Tahunan    | 2068 |
| Hujan Maks | 97   |
| Hari Hujan | 116  |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2021

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         |                |
| Elevasi             | 520            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 23         | 2   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 29  | 0   |
| 2          | 34         | 4   | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 6          | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 4          | 5          | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 0   |
| 5          | 0          | 32  | 11  | 10  | 8   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 6          | 29         | 2   | 0   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 12         | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 8   |
| 8          | 2          | 2   | 16  | 4   | 0   | 0   | 0   | 58  | 0   | 0   | 0   | 11  |
| 9          | 56         | 0   | 53  | 2   | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 24  |
| 10         | 6          | 1   | 0   | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 33  | 29  |
| 11         | 0          | 12  | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 41  |
| 12         | 2          | 2   | 25  | 0   | 0   | 6   | 0   | 0   | 4   | 0   | 3   | 6   |
| 13         | 0          | 37  | 65  | 0   | 0   | 5   | 0   | 0   | 6   | 0   | 0   | 0   |
| 14         | 0          | 0   | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 2   | 8   | 23  | 0   | 0   | 0   | 0   | 18  | 0   | 38  | 0   |
| 16         | 0          | 0   | 0   | 95  | 0   | 2   | 0   | 0   | 0   | 0   | 11  | 33  |
| 17         | 13         | 0   | 94  | 0   | 0   | 16  | 0   | 0   | 0   | 0   | 4   | 7   |
| 18         | 26         | 44  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 22  | 4   |
| 19         | 3          | 6   | 55  | 0   | 0   | 91  | 0   | 0   | 0   | 0   | 21  | 21  |
| 20         | 0          | 0   | 0   | 0   | 7   | 7   | 0   | 0   | 0   | 7   | 4   | 6   |
| 21         | 8          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 5   |
| 22         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   | 0   | 3   |
| 23         | 2          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 6   | 0   | 0   | 5   | 3   | 0   | 0   | 0   | 0   | 76  | 55  |
| 25         | 7          | 2   | 4   | 0   | 7   | 3   | 0   | 0   | 0   | 11  | 2   | 0   |
| 26         | 0          | 9   | 36  | 1   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 6   |
| 27         | 35         | 4   | 26  | 0   | 0   | 7   | 0   | 0   | 13  | 15  | 0   | 15  |
| 28         | 29         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 59  | 0   |
| 29         | 11         |     | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   |
| 30         | 2          |     | 0   | 46  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 0          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 311        | 232 | 459 | 250 | 49  | 140 | 12  | 58  | 52  | 45  | 354 | 274 |
| Periode 1  | 173        | 105 | 80  | 49  | 30  | 0   | 12  | 58  | 0   | 0   | 100 | 72  |
| Periode 2  | 44         | 103 | 272 | 154 | 7   | 127 | 0   | 0   | 28  | 12  | 108 | 118 |
| Periode 3  | 94         | 24  | 107 | 47  | 12  | 13  | 0   | 0   | 24  | 33  | 146 | 84  |
| Maksimum   | 56         | 44  | 94  | 95  | 18  | 91  | 7   | 58  | 18  | 15  | 76  | 55  |
| Hari Hujan | 20         | 19  | 13  | 11  | 6   | 9   | 2   | 1   | 5   | 6   | 18  | 16  |

|            |      |
|------------|------|
| Tahunan    | 2236 |
| Hujan Maks | 95   |
| Hari Hujan | 126  |

Perbandingan Tiap Periode

11/3/24, 5:18 PM

Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2022

|                     |                |                 |               |
|---------------------|----------------|-----------------|---------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |                 |               |
| Kode stasiun        | -7.675010      | Wilayah Sungai  | Bengawan Solo |
| Lintang Selatan     | 111.29662      | Kelurahan/Desa  | Nitikan       |
| Bujur Timur         | 520            | Kecamatan       | Plaosan       |
| Elevasi             |                | Kota/Kab        | Magetan       |
|                     |                | Kode Database   | 350620012     |
|                     |                | Tahun Pendirian | 1980          |
|                     |                | Tipe Alat       | PHB           |
|                     |                | Pengelola       | UPT Madiun    |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 7          | 8   | 10  | 2   | 0   | 7   | 0   | 0   | 43  | 4   | 0   | 27  |
| 2          | 0          | 9   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 24  | 2   |
| 3          | 0          | 0   | 24  | 23  | 0   | 0   | 0   | 0   | 0   | 6   | 2   | 4   |
| 4          | 0          | 0   | 5   | 34  | 0   | 0   | 0   | 0   | 0   |     | 0   | 0   |
| 5          | 0          | 0   | 0   | 26  | 0   | 42  | 0   | 0   | 0   | 0   | 7   | 0   |
| 6          | 0          | 0   | 4   | 6   | 0   | 0   | 32  | 0   | 0   | 8   | 34  | 0   |
| 7          | 0          | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| 8          | 0          | 0   | 10  | 0   | 33  | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 9          | 8          | 0   | 23  | 0   | 14  | 0   | 0   | 0   | 0   | 11  | 2   | 7   |
| 10         | 41         | 13  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 0   |
| 11         | 5          | 0   | 45  | 6   | 34  | 0   | 0   | 0   | 24  | 0   | 14  | 0   |
| 12         | 31         | 0   | 6   | 0   | 0   | 14  | 0   | 0   | 0   | 0   | 17  | 0   |
| 13         | 14         | 0   | 23  | 0   | 0   | 1   | 0   | 0   | 2   | 6   | 0   | 12  |
| 14         | 3          | 45  | 2   | 0   | 32  | 51  | 13  | 26  | 0   | 0   | 0   | 91  |
| 15         | 0          | 2   | 0   | 0   | 0   | 0   | 5   | 5   | 0   | 0   | 4   | 22  |
| 16         | 8          | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 25  |
| 17         | 2          | 9   | 20  | 3   | 0   | 1   | 0   | 25  | 0   | 2   | 13  | 0   |
| 18         | 16         | 8   | 0   | 38  | 0   | 0   | 0   | 0   | 0   | 12  | 62  | 0   |
| 19         | 6          | 0   | 0   | 0   | 32  | 0   | 0   | 0   | 0   | 4   | 72  | 0   |
| 20         | 17         | 2   | 0   | 3   | 5   | 0   | 0   | 0   | 0   | 5   | 0   | 29  |
| 21         | 58         | 0   | 0   | 22  | 39  | 0   | 0   | 0   | 0   | 8   | 0   | 0   |
| 22         | 7          | 0   | 27  | 14  | 2   | 0   | 0   | 0   | 0   | 9   | 0   | 3   |
| 23         | 22         | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 6   | 6   | 7   |
| 24         | 0          | 0   | 6   | 65  | 8   | 0   | 0   | 0   | 0   | 24  | 0   | 15  |
| 25         | 0          | 0   | 0   | 9   | 3   | 0   | 0   | 0   | 0   | 0   | 41  | 4   |
| 26         | 13         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 13  | 6   |
| 27         | 3          | 24  | 33  | 0   | 20  | 0   | 0   | 0   | 0   | 21  | 6   | 7   |
| 28         | 0          | 4   | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 29  | 0   |
| 29         | 33         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 15  |
| 30         | 18         |     | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 2   |
| 31         | 4          |     | 4   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 316        | 128 | 315 | 251 | 225 | 116 | 50  | 56  | 69  | 143 | 416 | 278 |
| Periode 1  | 56         | 32  | 92  | 91  | 47  | 49  | 32  | 0   | 43  | 31  | 98  | 40  |
| Periode 2  | 102        | 66  | 108 | 50  | 103 | 67  | 18  | 56  | 26  | 29  | 198 | 179 |
| Periode 3  | 154        | 30  | 111 | 110 | 75  | 0   | 0   | 0   | 0   | 83  | 120 | 59  |
| Maksimum   | 58         | 45  | 45  | 65  | 39  | 51  | 32  | 26  | 43  | 24  | 72  | 91  |
| Hari Hujan | 20         | 12  | 21  | 13  | 12  | 6   | 3   | 3   | 3   | 16  | 22  | 17  |

|            |      |
|------------|------|
| Tahunan    | 2363 |
| Hujan Maks | 91   |
| Hari Hujan | 148  |

Perbandingan Tiap Periode

11/3/24, 5:18 PM

Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2023

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>NITIKAN</b> |
| Kode stasiun        | -7.675010      |
| Lintang Selatan     | 111.29662      |
| Bujur Timur         |                |
| Elevasi             | 520            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620012  |
| Kelurahan/Desa | Nitikan       | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 2          | 0   | 7   | 2   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 25  |
| 2          | 0          | 7   | 11  | 7   | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 56  |
| 3          | 0          | 8   | 15  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 0   | 0   | 0   | 51  | 0   | 0   | 0   | 0   | 0   | 6   | 3   |
| 5          | 0          | 4   | 0   | 0   | 19  | 0   | 0   | 0   | 0   | 0   | 7   | 30  |
| 6          | 2          | 0   | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 12  | 1   | 0   | 7   | 0   | 0   | 0   | 0   | 16  |
| 8          | 0          | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 59  |
| 9          | 0          | 5   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 10         | 7          | 11  | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 56  | 0   |
| 11         | 0          | 49  | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 78  | 0   |
| 12         | 0          | 26  | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 17  | 0   |
| 13         | 0          | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 4   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 2   |
| 15         | 0          | 33  | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 16         | 2          | 16  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 10  | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 8          | 4   | 8   | 0   | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 4          | 1   | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 47         | 4   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 23         | 0          | 8   | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 0          | 5   | 15  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 2          | 6   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 27         | 6          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 28         | 0          | 2   | 28  | 53  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 20         |     | 2   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 47  | 11  |
| 30         | 20         |     | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 31         | 0          |     | 2   |     | 0   |     | 0   | 0   |     | 0   |     | 100 |
| Total      | 120        | 241 | 294 | 133 | 128 | 27  | 7   | 0   | 0   | 0   | 233 | 315 |
| Periode 1  | 11         | 48  | 58  | 43  | 122 | 0   | 7   | 0   | 0   | 0   | 69  | 192 |
| Periode 2  | 10         | 155 | 66  | 8   | 6   | 27  | 0   | 0   | 0   | 0   | 102 | 2   |
| Periode 3  | 99         | 38  | 168 | 82  | 0   | 0   | 0   | 0   | 0   | 0   | 62  | 21  |
| Maksimum   | 47         | 49  | 70  | 53  | 51  | 27  | 7   | 0   | 0   | 0   | 78  | 100 |
| Hari Hujan | 11         | 23  | 16  | 11  | 7   | 1   | 1   | 0   | 0   | 0   | 11  | 11  |

|            |      |
|------------|------|
| Tahunan    | 1498 |
| Hujan Maks | 100  |
| Hari Hujan | 92   |

Perbandingan Tiap Periode

## 4. Data Curah Hujan Stasiun Bogem Rejosari

11/3/24, 4:50 PM

Hidrologi

**DATA CURAH HUJAN HARIAN**

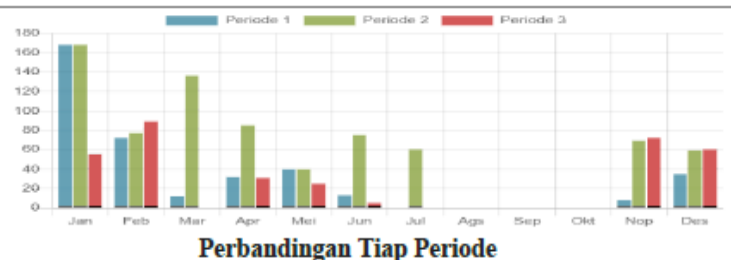
Tahun : 2014

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        | -7.680028                 |
| Lintang Selatan     | 111.413167                |
| Bujur Timur         | 145                       |
| Elevasi             |                           |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 24         | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 0          | 20  | 0   | 7   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 20         | 43  | 0   | 0   | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 33         | 4   | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 59         | 5   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 7          | 32         | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 8          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 9          | 0          | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 11         | 24         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 10  |
| 13         | 0          | 0   | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 20         | 0   | 9   | 0   | 20  | 0   | 60  | 0   | 0   | 0   | 0   | 0   |
| 15         | 33         | 5   | 6   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 29  | 0   |
| 16         | 59         | 20  | 55  | 46  | 5   | 0   | 0   | 0   | 0   | 0   | 20  | 0   |
| 17         | 32         | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 49  |
| 18         | 0          | 3   | 63  | 0   | 0   | 64  | 0   | 0   | 0   | 0   | 5   | 0   |
| 19         | 0          | 13  | 3   | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 11  | 0   | 39  | 0   | 4   | 0   | 0   | 0   | 0   | 3   | 0   |
| 21         | 0          | 0   | 0   | 7   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 0          | 89  | 0   | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 33  |
| 23         | 0          | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 24         | 14         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 3          | 0   | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 26         | 8          | 0   | 0   | 3   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 35  | 0   |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  | 9   |
| 29         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 30         | 30         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 35         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 426        | 238 | 148 | 148 | 105 | 93  | 60  | 0   | 0   | 0   | 149 | 154 |
| Periode 1  | 168        | 72  | 12  | 32  | 40  | 13  | 0   | 0   | 0   | 0   | 8   | 35  |
| Periode 2  | 168        | 77  | 136 | 85  | 40  | 75  | 60  | 0   | 0   | 0   | 69  | 59  |
| Periode 3  | 55         | 89  | 0   | 31  | 25  | 5   | 0   | 0   | 0   | 0   | 72  | 60  |
| Maksimum   | 59         | 89  | 63  | 46  | 25  | 64  | 60  | 0   | 0   | 0   | 36  | 49  |
| Hari Hujan | 15         | 11  | 6   | 10  | 9   | 5   | 1   | 0   | 0   | 0   | 10  | 9   |

|            |      |
|------------|------|
| Tahunan    | 1521 |
| Hujan Maks | 89   |
| Hari Hujan | 76   |



## DATA CURAH HUJAN HARIAN

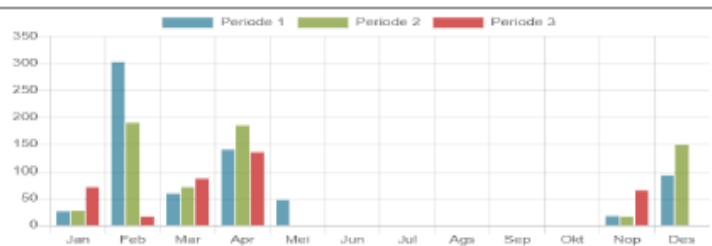
Tahun : 2015

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |    |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ag | Sep | Okt | Nop | Des |
| 1          | 0          | 76  | 21  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 2          | 0          | 13  | 26  | 8   | 19  | 0   | 0   | 0  | 0   | 0   | 0   | 15  |
| 3          | 0          | 0   | 4   | 0   | 28  | 0   | 0   | 0  | 0   | 0   | 0   | 38  |
| 4          | 8          | 75  | 3   | 23  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 4   |
| 5          | 18         | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 6          | 0          | 38  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 3   | 3   |
| 7          | 0          | 0   | 5   | 28  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 8          | 0          | 4   | 0   | 46  | 0   | 0   | 0   | 0  | 0   | 0   | 11  | 0   |
| 9          | 0          | 44  | 0   | 2   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 33  |
| 10         | 0          | 52  | 0   | 33  | 0   | 0   | 0   | 0  | 0   | 0   | 3   | 0   |
| 11         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 16  | 28  |
| 12         | 4          | 7   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 16  |
| 13         | 12         | 0   | 34  | 86  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 35  |
| 14         | 2          | 10  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 15         | 0          | 60  | 11  | 4   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 44  |
| 16         | 0          | 0   | 0   | 10  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 17         | 0          | 16  | 0   | 23  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 5   |
| 18         | 9          | 16  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 9   |
| 19         | 0          | 0   | 26  | 19  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 12  |
| 20         | 0          | 75  | 0   | 43  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 8   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 22         | 0          | 0   | 12  | 5   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 23         | 37         | 0   | 0   | 20  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 24         | 0          | 0   | 13  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 25         | 0          | 0   | 30  | 60  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 26         | 12         | 0   | 0   | 8   | 0   | 0   | 0   | 0  | 0   | 0   | 65  | 0   |
| 27         | 0          | 0   | 0   | 7   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 28         | 22         | 16  | 0   | 35  | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 24  | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   |
| 31         | 31         |     | 0   |     | 0   |     | 0   | 0  |     | 0   |     | 0   |
| Total      | 155        | 508 | 217 | 460 | 47  | 0   | 0   | 0  | 0   | 0   | 98  | 242 |
| Periode 1  | 26         | 302 | 59  | 140 | 47  | 0   | 0   | 0  | 0   | 0   | 17  | 93  |
| Periode 2  | 27         | 190 | 71  | 185 | 0   | 0   | 0   | 0  | 0   | 0   | 16  | 149 |
| Periode 3  | 71         | 16  | 87  | 135 | 0   | 0   | 0   | 0  | 0   | 0   | 65  | 0   |
| Maksimum   | 37         | 76  | 34  | 86  | 28  | 0   | 0   | 0  | 0   | 0   | 65  | 44  |
| Hari Hujan | 10         | 15  | 13  | 18  | 2   | 0   | 0   | 0  | 0   | 0   | 5   | 12  |

|            |      |
|------------|------|
| Tahunan    | 1727 |
| Hujan Maks | 86   |
| Hari Hujan | 75   |



Perbandingan Tiap Periode

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Hidrologi

## DATA CURAH HUJAN HARIAN

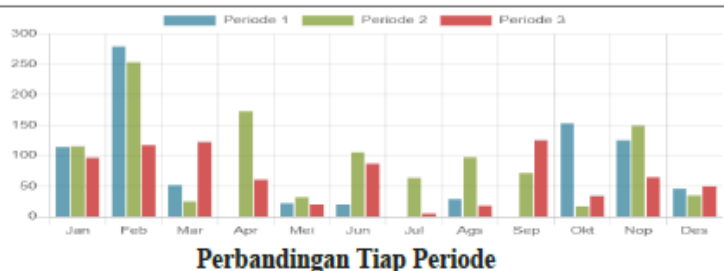
Tahun : 2016

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 25         | 9   | 41  | 0   | 4   | 0   | 0   | 0   | 0   | 28  | 19  | 10  |
| 2          | 89         | 5   | 0   | 0   | 0   | 20  | 0   | 0   | 0   | 37  | 0   | 18  |
| 3          | 0          | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 0   | 0   | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 5          | 0          | 0   | 0   | 0   | 3   | 0   | 0   | 22  | 0   | 0   | 0   | 0   |
| 6          | 0          | 91  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 7          | 0          | 76  | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   |
| 8          | 0          | 62  | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 46  | 0   |
| 9          | 0          | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 68  | 0   | 0   |
| 10         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 60  | 6   |
| 11         | 21         | 96  | 5   | 0   | 10  | 0   | 0   | 0   | 0   | 8   | 0   | 0   |
| 12         | 0          | 90  | 15  | 43  | 0   | 0   | 43  | 0   | 0   | 0   | 0   | 0   |
| 13         | 0          | 3   | 5   | 16  | 5   | 0   | 0   | 55  | 0   | 0   | 35  | 3   |
| 14         | 49         | 5   | 0   | 5   | 10  | 0   | 2   | 42  | 0   | 9   | 8   | 6   |
| 15         | 26         | 0   | 0   | 4   | 7   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 16         | 0          | 27  | 0   | 0   | 0   | 24  | 0   | 0   | 22  | 0   | 3   | 10  |
| 17         | 0          | 22  | 0   | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 38  | 0   |
| 18         | 9          | 0   | 0   | 5   | 0   | 0   | 14  | 0   | 12  | 0   | 4   | 0   |
| 19         | 0          | 10  | 0   | 9   | 0   | 35  | 0   | 0   | 0   | 0   | 52  | 0   |
| 20         | 10         | 0   | 0   | 91  | 0   | 26  | 5   | 0   | 38  | 0   | 0   | 16  |
| 21         | 7          | 0   | 0   | 0   | 0   | 0   | 5   | 0   | 5   | 0   | 0   | 0   |
| 22         | 8          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 37         | 0   | 0   | 0   | 10  | 87  | 0   | 0   | 42  | 0   | 0   | 0   |
| 24         | 0          | 50  | 67  | 0   | 4   | 0   | 0   | 0   | 0   | 23  | 0   | 0   |
| 25         | 0          | 9   | 21  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 4          | 25  | 12  | 0   | 0   | 0   | 0   | 0   | 14  | 4   | 65  | 0   |
| 27         | 0          | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 42  |
| 28         | 40         | 9   | 10  | 0   | 0   | 0   | 0   | 0   | 60  | 0   | 0   | 0   |
| 29         | 0          | 6   | 4   | 54  | 0   | 0   | 0   | 12  | 0   | 7   | 0   | 0   |
| 30         | 0          |     | 8   | 0   | 6   | 0   | 0   | 6   | 0   | 0   | 0   | 8   |
| 31         | 8          |     | 8   |     | 50  |     | 0   | 0   |     | 0   |     | 5   |
| Total      | 333        | 649 | 207 | 234 | 124 | 212 | 69  | 144 | 197 | 204 | 339 | 136 |
| Periode 1  | 114        | 279 | 52  | 0   | 22  | 20  | 0   | 29  | 0   | 153 | 125 | 46  |
| Periode 2  | 115        | 253 | 25  | 173 | 32  | 105 | 64  | 97  | 72  | 17  | 149 | 35  |
| Periode 3  | 96         | 117 | 122 | 61  | 20  | 87  | 5   | 18  | 125 | 34  | 65  | 50  |
| Maksimum   | 89         | 96  | 67  | 91  | 50  | 87  | 43  | 55  | 60  | 68  | 65  | 42  |
| Hari Hujan | 13         | 20  | 12  | 9   | 11  | 6   | 5   | 7   | 8   | 9   | 11  | 12  |

|            |      |
|------------|------|
| Tahunan    | 2848 |
| Hujan Maks | 96   |
| Hari Hujan | 123  |



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Hidrologi

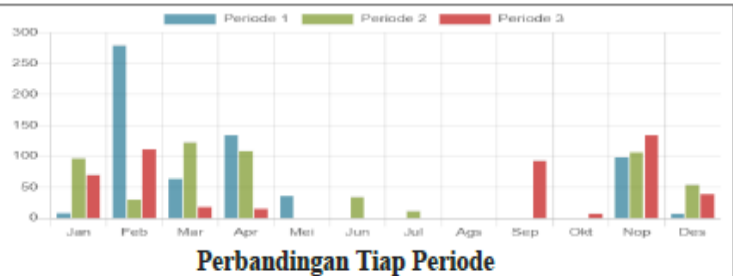
**DATA CURAH HUJAN HARIAN**

Tahun : 2017

|                     |                           |                       |                      |                      |                  |
|---------------------|---------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620016</b> |
| Kode stasiun        | -7.680028                 | Kelurahan/Desa        | Rejosari             | Tahun Pendirian      | 1980             |
| Lintang Selatan     | 111.413167                | Kecamatan             | Kawedanan            | Tipe Alat            | PHB              |
| Bujur Timur         | 145                       | Kota/Kab              | Magetan              | Pengelola            | UPT Madiun       |
| Elevasi             |                           |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |      |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Agst | Sep | Okt | Nop | Des |
| 1          | 0          | 9   | 33  | 61  | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 7   |
| 2          | 0          | 5   | 22  | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 3          | 0          | 30  | 4   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 4          | 0          | 0   | 0   | 16  | 19  | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 5          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 27  | 0   |
| 6          | 0          | 91  | 0   | 13  | 6   | 0   | 0   | 0    | 0   | 0   | 62  | 0   |
| 7          | 0          | 76  | 0   | 28  | 0   | 0   | 0   | 0    | 0   | 0   | 9   | 0   |
| 8          | 8          | 62  | 0   | 16  | 11  | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 9          | 0          | 0   | 5   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 10         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 11         | 0          | 0   | 0   | 22  | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 20  |
| 12         | 17         | 0   | 41  | 5   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 8   |
| 13         | 0          | 12  | 9   | 0   | 0   | 29  | 0   | 0    | 0   | 0   | 0   | 0   |
| 14         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 13  | 19  |
| 15         | 4          | 9   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 16         | 10         | 3   | 0   | 0   | 0   | 5   | 0   | 0    | 0   | 0   | 56  | 0   |
| 17         | 5          | 0   | 22  | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 27  | 0   |
| 18         | 60         | 0   | 21  | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 10  | 0   |
| 19         | 0          | 0   | 29  | 75  | 0   | 0   | 11  | 0    | 0   | 0   | 0   | 7   |
| 20         | 0          | 0   | 0   | 6   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 6   | 4   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 29  |
| 22         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 6   | 0   |
| 23         | 38         | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 24         | 0          | 50  | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 25         | 8          | 9   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 32  | 0   |
| 26         | 5          | 25  | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 7   | 11  | 0   |
| 27         | 0          | 18  | 12  | 11  | 0   | 0   | 0   | 0    | 0   | 0   | 85  | 5   |
| 28         | 3          | 9   | 0   | 0   | 0   | 0   | 0   | 0    | 55  | 0   | 0   | 5   |
| 29         | 4          |     | 0   | 0   | 0   | 0   | 0   | 0    | 37  | 0   | 0   | 0   |
| 30         | 12         |     | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 31         | 0          |     | 0   |     | 0   |     | 0   | 0    |     | 0   |     | 0   |
| Total      | 174        | 420 | 204 | 257 | 36  | 34  | 11  | 0    | 92  | 7   | 338 | 100 |
| Periode 1  | 8          | 279 | 64  | 134 | 36  | 0   | 0   | 0    | 0   | 0   | 98  | 7   |
| Periode 2  | 96         | 30  | 122 | 108 | 0   | 34  | 11  | 0    | 0   | 0   | 106 | 54  |
| Periode 3  | 70         | 111 | 18  | 15  | 0   | 0   | 0   | 0    | 92  | 7   | 134 | 39  |
| Maksimum   | 60         | 91  | 41  | 75  | 19  | 29  | 11  | 0    | 55  | 7   | 85  | 29  |
| Hari Hujan | 12         | 16  | 11  | 11  | 3   | 2   | 1   | 0    | 2   | 1   | 11  | 8   |

|            |      |
|------------|------|
| Tahunan    | 1673 |
| Hujan Maks | 91   |
| Hari Hujan | 78   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

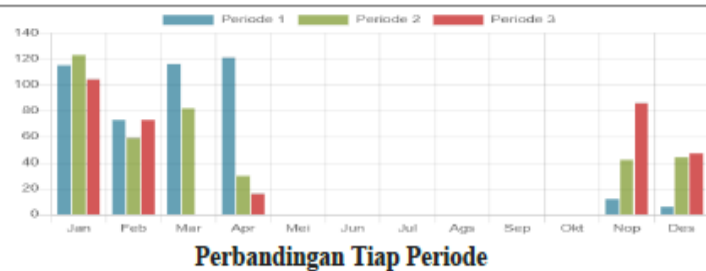
Tahun : 2018

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 5   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 28  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 20         | 2   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 14         | 3   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 28         | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 6          | 0          | 0   | 63  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 7          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 49         | 23  | 23  | 106 | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 0   |
| 9          | 4          | 5   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 6          | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 2   |
| 12         | 28         | 4   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13         | 0          | 0   | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 14         | 7          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 15         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 16         | 0          | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 16         | 10  | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 34         | 5   | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 32         | 0   | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 0   |
| 20         | 0          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 21         | 28         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 22         | 6          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 23         | 30         | 6   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 25         | 16         | 10  | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 8          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 15  |
| 27         | 9          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 10  |
| 28         | 4          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 0   |
| 29         | 3          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 33  | 0   |
| 31         | 5          |     | 55  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 347        | 205 | 253 | 167 | 0   | 0   | 0   | 0   | 0   | 0   | 140 | 97  |
| Periode 1  | 115        | 73  | 116 | 121 | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 6   |
| Periode 2  | 123        | 59  | 82  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 42  | 44  |
| Periode 3  | 104        | 73  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 86  | 47  |
| Maksimum   | 49         | 37  | 63  | 106 | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 32  |
| Hari Hujan | 20         | 18  | 8   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 12  |

|            |      |
|------------|------|
| Tahunan    | 1209 |
| Hujan Maks | 106  |
| Hari Hujan | 73   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

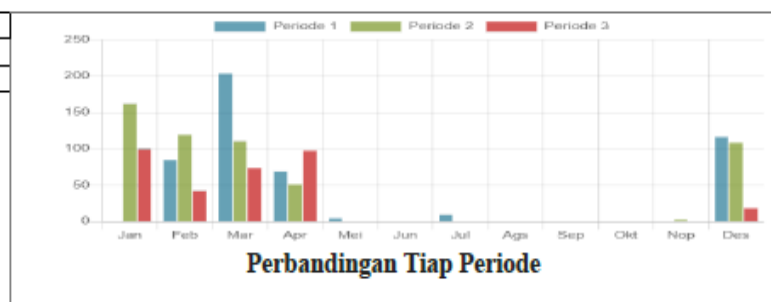
Tahun : 2019

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 11  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 0          | 2   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 5          | 0          | 5   | 21  | 6   | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   |
| 6          | 0          | 0   | 57  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 47  |
| 7          | 0          | 8   | 69  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 58  |
| 8          | 0          | 0   | 8   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 11         | 34         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 0   | 0   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 26  |
| 13         | 19         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 2          | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 45  |
| 15         | 3          | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 15  |
| 16         | 36         | 20  | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 17         | 3          | 39  | 2   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 61         | 27  | 23  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 19         | 0          | 4   | 22  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 4          | 3   | 58  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 23         | 5   | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 15         | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 0          | 0   | 14  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 14         | 6   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 17         | 3   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 26         | 25         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 27         | 0          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 5          | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 29         | 0          |     | 0   | 61  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 31         | 0          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 261        | 245 | 386 | 217 | 4   | 0   | 9   | 0   | 0   | 0   | 2   | 242 |
| Periode 1  | 0          | 84  | 203 | 69  | 4   | 0   | 9   | 0   | 0   | 0   | 0   | 116 |
| Periode 2  | 162        | 119 | 110 | 51  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 108 |
| Periode 3  | 99         | 42  | 73  | 97  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  |
| Maksimum   | 61         | 39  | 69  | 61  | 4   | 0   | 9   | 0   | 0   | 0   | 2   | 58  |
| Hari Hujan | 14         | 17  | 15  | 12  | 1   | 0   | 1   | 0   | 0   | 0   | 1   | 13  |

|            |      |
|------------|------|
| Tahunan    | 1366 |
| Hujan Maks | 69   |
| Hari Hujan | 74   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

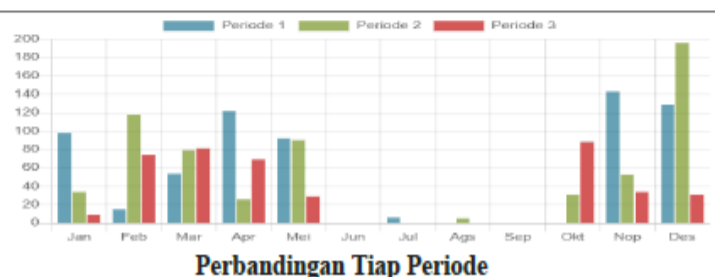
Tahun : 2020

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 25  | 84  | 0   | 0   | 0   | 0   | 0   | 0   | 47  | 0   |
| 2          | 9          | 2   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 84  | 11  |
| 3          | 10         | 9   | 3   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 27  |
| 4          | 2          | 2   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 38  |
| 5          | 0          | 0   | 0   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 16         | 0   | 0   | 8   | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 46  |
| 7          | 14         | 0   | 0   | 4   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 2   |
| 8          | 3          | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 9          | 7          | 0   | 4   | 3   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 37         | 0   | 0   | 2   | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 11         | 4          | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   | 18  |
| 12         | 14         | 1   | 5   | 0   | 0   | 0   | 0   | 5   | 0   | 0   | 0   | 0   |
| 13         | 0          | 19  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 14         | 0          | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 79  |
| 15         | 0          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  |
| 16         | 3          | 0   | 33  | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 0   |
| 17         | 13         | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 0          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 26  |
| 19         | 0          | 30  | 4   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 35  | 22  |
| 20         | 0          | 10  | 12  | 0   | 76  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 2   | 3   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 0          | 12  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 26  | 29  | 0   |
| 23         | 0          | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 0   |
| 24         | 7          | 0   | 15  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 25         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   | 0   |
| 26         | 2          | 7   | 3   | 22  | 0   | 0   | 0   | 0   | 0   | 28  | 0   | 25  |
| 27         | 0          | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 0   | 6   |
| 29         | 0          | 5   | 36  | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 25  | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 31         | 0          |     | 3   |     | 0   |     | 0   | 0   |     | 13  |     | 48  |
| Total      | 141        | 207 | 217 | 217 | 211 | 0   | 6   | 5   | 0   | 132 | 230 | 404 |
| Periode 1  | 98         | 15  | 54  | 122 | 92  | 0   | 6   | 0   | 0   | 0   | 143 | 129 |
| Periode 2  | 34         | 118 | 79  | 26  | 90  | 0   | 0   | 5   | 0   | 31  | 53  | 196 |
| Periode 3  | 9          | 74  | 81  | 69  | 29  | 0   | 0   | 0   | 0   | 88  | 34  | 31  |
| Maksimum   | 37         | 40  | 36  | 84  | 76  | 0   | 6   | 5   | 0   | 31  | 84  | 79  |
| Hari Hujan | 14         | 19  | 16  | 13  | 8   | 0   | 1   | 1   | 0   | 7   | 10  | 16  |

|            |      |
|------------|------|
| Tahunan    | 1770 |
| Hujan Maks | 84   |
| Hari Hujan | 105  |



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Hidrologi

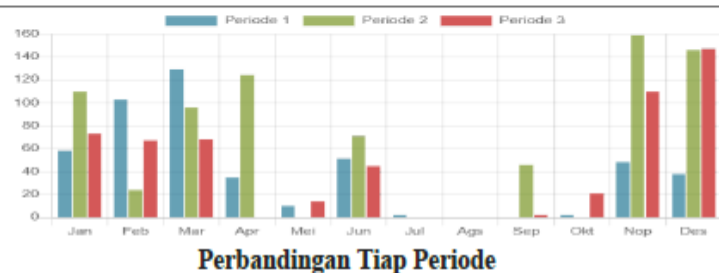
**DATA CURAH HUJAN HARIAN**

Tahun : 2021

|                     |                           |                       |                      |                      |                  |
|---------------------|---------------------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620016</b> |
| Kode stasiun        | -7.680028                 | Kelurahan/Desa        | Rejosari             | Tahun Pendirian      | 1980             |
| Lintang Selatan     | 111.413167                | Kecamatan             | Kawedanan            | Tipe Alat            | PHB              |
| Bujur Timur         |                           | Kota/Kab              | Magetan              | Pengelola            | UPT Madiun       |
| Elevasi             | 145                       |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 2          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 2          | 22         | 3   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   |
| 3          | 0          | 5   | 38  | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 0   |
| 5          | 0          | 54  | 24  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 9   |
| 6          | 0          | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 14         | 2   | 3   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 8   |
| 8          | 7          | 4   | 9   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 1   |
| 9          | 13         | 0   | 54  | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 10         | 0          | 3   | 1   | 0   | 0   | 51  | 2   | 0   | 0   | 0   | 2   | 0   |
| 11         | 5          | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 41  |
| 12         | 24         | 0   | 8   | 0   | 0   | 4   | 0   | 0   | 9   | 0   | 16  | 3   |
| 13         | 0          | 7   | 9   | 9   | 0   | 16  | 0   | 0   | 12  | 0   | 0   | 0   |
| 14         | 0          | 0   | 0   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   |
| 15         | 0          | 0   | 20  | 68  | 0   | 0   | 0   | 0   | 25  | 0   | 19  | 0   |
| 16         | 26         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 23  | 77  |
| 17         | 0          | 4   | 0   | 0   | 0   | 36  | 0   | 0   | 0   | 0   | 24  | 7   |
| 18         | 16         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 56  | 0   |
| 19         | 39         | 0   | 55  | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 13  | 4   | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 15  | 18  |
| 21         | 22         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 22         | 0          | 4   | 0   | 0   | 0   | 2   | 0   | 0   | 2   | 0   | 0   | 3   |
| 23         | 12         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 24         | 0          | 0   | 0   | 0   | 0   | 23  | 0   | 0   | 0   | 0   | 65  | 112 |
| 25         | 0          | 9   | 13  | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 6   | 0   |
| 26         | 0          | 8   | 3   | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 4   | 0   |
| 27         | 10         | 21  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 0   | 0   |
| 28         | 12         | 25  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 31  | 18  |
| 29         | 17         |     | 2   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 2   | 2   |
| 30         | 0          |     | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 0          |     | 2   |     | 0   |     | 0   | 0   |     | 0   |     | 10  |
| Total      | 241        | 194 | 295 | 159 | 24  | 167 | 2   | 0   | 48  | 23  | 317 | 341 |
| Periode 1  | 58         | 103 | 129 | 35  | 10  | 51  | 2   | 0   | 0   | 2   | 48  | 38  |
| Periode 2  | 110        | 24  | 96  | 124 | 0   | 71  | 0   | 0   | 46  | 0   | 159 | 146 |
| Periode 3  | 73         | 67  | 68  | 0   | 14  | 45  | 0   | 0   | 2   | 21  | 110 | 147 |
| Maksimum   | 39         | 54  | 55  | 68  | 11  | 51  | 2   | 0   | 25  | 19  | 65  | 112 |
| Hari Hujan | 15         | 16  | 18  | 9   | 3   | 9   | 1   | 0   | 4   | 3   | 19  | 15  |

|            |      |
|------------|------|
| Tahunan    | 1811 |
| Hujan Maks | 112  |
| Hari Hujan | 112  |



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**DATA CURAH HUJAN HARIAN**

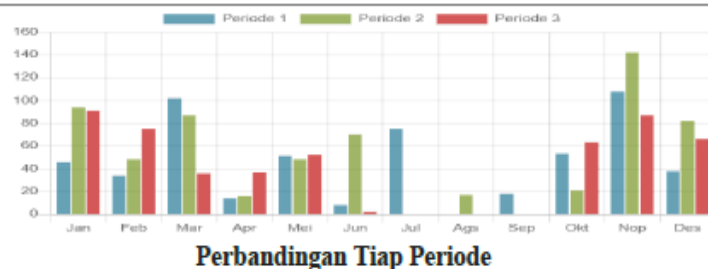
Tahun : 2022

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        |                           |
| Lintang Selatan     | -7.680028                 |
| Bujur Timur         | 111.413167                |
| Elevasi             | 145                       |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |      |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Agst | Sep | Okt | Nop | Des |
| 1          | 8          | 4   | 2   | 0   | 0   | 4   | 0   | 0    | 14  | 22  | 0   | 20  |
| 2          | 25         | 10  | 06  | 0   | 0   | 0   | 0   | 0    | 0   | 7   | 34  | 0   |
| 3          | 0          | 0   | 16  | 1   | 2   | 0   | 0   | 0    | 0   | 0   | 0   | 2   |
| 4          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 7   | 0   | 0   |
| 5          | 2          | 0   | 1   | 0   | 0   | 0   | 0   | 0    | 0   | 12  | 29  | 0   |
| 6          | 0          | 0   | 1   | 13  | 6   | 0   | 75  | 0    | 0   | 4   | 0   | 0   |
| 7          | 5          | 0   | 1   | 0   | 1   | 0   | 0   | 0    | 0   | 0   | 8   | 0   |
| 8          | 0          | 0   | 10  | 0   | 0   | 1   | 0   | 0    | 0   | 0   | 29  | 12  |
| 9          | 0          | 0   | 36  | 0   | 25  | 0   | 0   | 0    | 0   | 1   | 0   | 4   |
| 10         | 6          | 20  | 29  | 0   | 17  | 3   | 0   | 0    | 4   | 0   | 8   | 0   |
| 11         | 1          | 0   | 14  | 4   | 2   | 0   | 0   | 0    | 0   | 0   | 5   | 0   |
| 12         | 35         | 0   | 0   | 0   | 6   | 8   | 0   | 0    | 0   | 0   | 19  | 0   |
| 13         | 10         | 6   | 0   | 0   | 0   | 31  | 0   | 0    | 0   | 0   | 6   | 0   |
| 14         | 3          | 5   | 0   | 3   | 0   | 25  | 0   | 13   | 0   | 0   | 0   | 47  |
| 15         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 1    | 0   | 1   | 48  | 19  |
| 16         | 25         | 0   | 16  | 1   | 0   | 4   | 0   | 2    | 0   | 0   | 1   | 0   |
| 17         | 2          | 25  | 37  | 0   | 0   | 0   | 0   | 0    | 0   | 6   | 1   | 0   |
| 18         | 0          | 0   | 20  | 0   | 0   | 0   | 0   | 1    | 0   | 10  | 10  | 0   |
| 19         | 3          | 9   | 0   | 0   | 25  | 2   | 0   | 0    | 0   | 0   | 50  | 0   |
| 20         | 15         | 0   | 0   | 8   | 15  | 0   | 0   | 0    | 0   | 4   | 2   | 16  |
| 21         | 27         | 0   | 0   | 15  | 42  | 0   | 0   | 0    | 0   |     | 15  | 0   |
| 22         | 8          | 0   | 19  | 0   | 0   | 0   | 0   | 0    | 0   | 23  | 1   | 0   |
| 23         | 30         | 0   | 3   | 4   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| 24         | 0          | 0   | 0   | 8   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 15  |
| 25         | 0          | 0   | 0   | 3   | 0   | 0   | 0   | 0    | 0   | 0   | 19  | 17  |
| 26         | 3          | 4   | 8   | 7   | 2   | 0   | 0   | 0    | 0   | 34  | 3   | 6   |
| 27         | 0          | 68  | 6   | 0   | 8   | 2   | 0   | 0    | 0   | 6   | 27  | 0   |
| 28         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 22  | 3   |
| 29         | 15         |     | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 24  |
| 30         | 8          |     | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 1   |
| 31         | 25         |     | 27  |     | 0   |     | 0   | 0    |     | 0   |     | 0   |
| Total      | 256        | 157 | 252 | 67  | 151 | 80  | 75  | 17   | 18  | 137 | 337 | 186 |
| Periode 1  | 46         | 34  | 102 | 14  | 51  | 8   | 75  | 0    | 18  | 53  | 108 | 38  |
| Periode 2  | 94         | 48  | 87  | 16  | 48  | 70  | 0   | 17   | 0   | 21  | 142 | 82  |
| Periode 3  | 91         | 75  | 36  | 37  | 52  | 2   | 0   | 0    | 0   | 63  | 87  | 66  |
| Maksimum   | 35         | 68  | 37  | 15  | 42  | 31  | 75  | 13   | 14  | 34  | 50  | 47  |
| Hari Hujan | 20         | 11  | 18  | 11  | 12  | 9   | 1   | 4    | 2   | 13  | 20  | 13  |

|            |      |
|------------|------|
| Tahunan    | 1733 |
| Hujan Maks | 75   |
| Hari Hujan | 134  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2023

|                     |                           |
|---------------------|---------------------------|
| <b>NAMA STASIUN</b> | <b>BOGEM<br/>REJOSARI</b> |
| Kode stasiun        | -7.680028                 |
| Lintang Selatan     | 111.413167                |
| Bujur Timur         | 145                       |
| Elevasi             |                           |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620016  |
| Kelurahan/Desa | Rejosari      | Tahun Pendirian | 1980       |
| Kecamatan      | Kawedanan     | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 13  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 2          | 2          | 0   | 4   | 12  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 33  |
| 3          | 0          | 14  | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 4          | 0          | 20  | 4   | 1   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 45  |
| 5          | 0          | 7   | 1   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 18  | 2   |
| 6          | 0          | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 12  | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 2   | 2   | 5   | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 0   |
| 10         | 17         | 25  | 0   | 75  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 34  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 12         | 0          | 4   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 13         | 0          | 27  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 2   |
| 15         | 1          | 9   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 19         | 35  | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 9          | 12  | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 14         | 0   | 38  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 1          | 18  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 21         | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 3   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 0          | 0   | 2   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| 23         | 3          | 9   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 22         | 2   | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   |
| 25         | 0          | 8   | 9   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 2          | 12  | 5   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 20         | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 0   | 1   | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 0   |
| 29         | 20         |     | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 5   |
| 30         | 12         |     | 1   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 31         | 15         |     | 5   |     | 0   |     | 0   | 0   |     | 0   |     | 50  |
| Total      | 178        | 274 | 122 | 227 | 29  | 0   | 8   | 0   | 0   | 0   | 59  | 153 |
| Periode 1  | 19         | 96  | 24  | 104 | 27  | 0   | 8   | 0   | 0   | 0   | 18  | 96  |
| Periode 2  | 65         | 142 | 51  | 18  | 2   | 0   | 0   | 0   | 0   | 0   | 9   | 2   |
| Periode 3  | 79         | 36  | 42  | 105 | 0   | 0   | 0   | 0   | 0   | 0   | 32  | 5   |
| Maksimum   | 22         | 35  | 38  | 75  | 14  | 0   | 8   | 0   | 0   | 0   | 18  | 50  |
| Hari Hujan | 15         | 21  | 19  | 18  | 5   | 0   | 1   | 0   | 0   | 0   | 8   | 8   |

|            |      |
|------------|------|
| Tahunan    | 1050 |
| Hujan Maks | 75   |
| Hari Hujan | 95   |

Perbandingan Tiap Periode

## 5. Data Curah Hujan Stasiun Jejeruk

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Hidrologi

### DATA CURAH HUJAN HARIAN

Tahun : 2014

|                    |                |
|--------------------|----------------|
| <b>NAMASTASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun       | -7.662361      |
| Lintang Selatan    | 111.315222     |
| Bujur Timur        | 397            |
| Elevasi            |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 8          | 5   | 0   | 0   | 22  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 2   | 30  | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 22         | 5   | 13  | 4   | 68  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 17         | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 5          | 25         | 0   | 27  | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 6          | 18         | 0   | 0   | 37  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 37  |
| 7          | 63         | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 7   |
| 8          | 0          | 8   | 83  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 7   |
| 9          | 0          | 0   | 0   | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 6   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 34  | 0   |
| 11         | 0          | 0   | 6   | 22  | 0   | 48  | 0   | 0   | 0   | 0   | 5   | 0   |
| 12         | 9          | 34  | 38  | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 14  |
| 13         | 102        | 0   | 9   | 4   | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 0   | 25  | 2   | 23  | 0   | 54  | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 2   | 0   | 18  | 22  | 0   | 0   | 0   | 0   | 0   | 27  | 0   |
| 16         | 7          | 0   | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 50  | 0   |
| 17         | 0          | 16  | 35  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 56  |
| 18         | 0          | 12  | 115 | 0   | 0   | 52  | 0   | 0   | 0   | 0   | 38  | 25  |
| 19         | 9          | 42  | 0   | 0   | 0   | 11  | 0   | 0   | 0   | 0   | 6   | 4   |
| 20         | 2          | 0   | 0   | 8   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 5   |
| 21         | 2          | 0   | 2   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 22  | 14  |
| 22         | 2          | 16  | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 21  | 0   |
| 23         | 2          | 74  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 24         | 0          | 33  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 9   |
| 25         | 17         | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 26         | 12         | 0   | 0   | 0   | 22  | 3   | 0   | 0   | 0   | 0   | 17  | 0   |
| 27         | 0          | 0   | 0   | 14  | 43  | 2   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 2   | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 0   |
| 29         | 16         |     | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 30         | 0          |     | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 31         | 2          |     | 15  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 335        | 282 | 469 | 171 | 278 | 127 | 54  | 0   | 0   | 0   | 271 | 213 |
| Periode 1  | 153        | 51  | 177 | 58  | 127 | 0   | 0   | 0   | 0   | 0   | 45  | 64  |
| Periode 2  | 129        | 106 | 255 | 72  | 76  | 119 | 54  | 0   | 0   | 0   | 130 | 104 |
| Periode 3  | 51         | 125 | 22  | 41  | 75  | 8   | 0   | 0   | 0   | 0   | 96  | 45  |
| Maksimum   | 102        | 74  | 115 | 37  | 68  | 52  | 54  | 0   | 0   | 0   | 50  | 56  |
| Hari Hujan | 18         | 15  | 17  | 14  | 11  | 7   | 1   | 0   | 0   | 0   | 15  | 15  |

|            |      |
|------------|------|
| Tahunan    | 2200 |
| Hujan Maks | 115  |
| Hari Hujan | 113  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

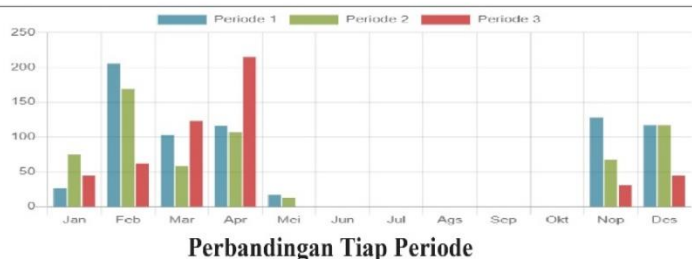
Tahun : 2015

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        | -7.662361      |
| Lintang Selatan     | 111.315222     |
| Bujur Timur         |                |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mai | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 69  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 2          | 20  | 30  | 15  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 21  |
| 3          | 0          | 4   | 38  | 9   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 22  |
| 4          | 14         | 15  | 6   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 5          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 83  | 0   |
| 6          | 0          | 12  | 4   | 45  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 7          | 0          | 25  | 3   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 4   |
| 8          | 5          | 2   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 9          | 0          | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 34  | 63  |
| 10         | 0          | 10  | 6   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  |
| 12         | 8          | 33  | 9   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 13         | 15         | 8   | 14  | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 15         | 3   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 9   | 21  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 32  | 27  |
| 16         | 0          | 14  | 0   | 63  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 21  |
| 17         | 0          | 7   | 1   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| 18         | 12         | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 29  | 25  |
| 19         | 0          | 4   | 13  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 25         | 30  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 1   |
| 21         | 0          | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 22         | 1          | 0   | 12  | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 23         | 8          | 0   | 1   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 2          | 4   | 6   | 66  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 1          | 8   | 0   | 76  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 9          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| 27         | 19         | 28  | 7   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 22  | 90  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 29  |
| 30         | 5          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 13         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 13  |
| Total      | 159        | 436 | 284 | 438 | 30  | 0   | 0   | 0   | 0   | 0   | 226 | 292 |
| Periode 1  | 26         | 205 | 103 | 116 | 17  | 0   | 0   | 0   | 0   | 0   | 128 | 117 |
| Periode 2  | 75         | 169 | 58  | 107 | 13  | 0   | 0   | 0   | 0   | 0   | 67  | 117 |
| Periode 3  | 45         | 62  | 123 | 215 | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 45  |
| Maksimum   | 25         | 69  | 90  | 76  | 12  | 0   | 0   | 0   | 0   | 0   | 83  | 63  |
| Hari Hujan | 17         | 24  | 19  | 19  | 4   | 0   | 0   | 0   | 0   | 0   | 8   | 16  |

|            |      |
|------------|------|
| Tahunan    | 1865 |
| Hujan Maks | 90   |
| Hari Hujan | 107  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2016

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        | -7.662361      |
| Lintang Selatan     | 111.315222     |
| Bujur Timur         |                |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 7          | 24  | 46  | 1   | 34  | 35  | 3   | 0   | 0   | 0   | 8   | 73  |
| 2          | 19         | 11  | 0   | 0   | 7   | 10  | 0   | 0   | 0   | 17  | 0   | 50  |
| 3          | 32         | 55  | 2   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 9          | 0   | 18  | 19  | 4   | 0   | 0   | 0   | 10  | 0   | 0   | 0   |
| 5          | 0          | 5   | 0   | 42  | 0   | 0   | 0   | 0   | 5   | 0   | 0   | 6   |
| 6          | 0          | 40  | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 10  | 0   | 12  |
| 7          | 0          | 6   | 2   | 26  | 0   | 3   | 0   | 35  | 3   | 0   | 0   | 19  |
| 8          | 0          | 26  | 41  | 0   | 0   | 5   | 0   | 49  | 0   | 0   | 16  | 0   |
| 9          | 0          | 0   | 18  | 0   | 5   | 0   | 0   | 0   | 0   | 33  | 5   | 3   |
| 10         | 0          | 18  | 0   | 2   | 0   | 0   | 0   | 0   | 4   | 37  | 76  | 0   |
| 11         | 34         | 7   | 36  | 18  | 42  | 0   | 0   | 0   | 5   | 12  | 0   | 0   |
| 12         | 14         | 30  | 43  | 30  | 0   | 0   | 30  | 0   | 0   | 13  | 0   | 0   |
| 13         | 36         | 7   | 0   | 13  | 1   | 0   | 0   | 92  | 0   | 6   | 23  | 4   |
| 14         | 31         | 0   | 0   | 19  | 1   | 0   | 0   | 60  | 0   | 15  | 9   | 43  |
| 15         | 0          | 0   | 0   | 0   | 23  | 2   | 0   | 0   | 0   | 16  | 1   | 0   |
| 16         | 0          | 51  | 0   | 8   | 0   | 3   | 17  | 0   | 35  | 0   | 26  | 0   |
| 17         | 0          | 32  | 0   | 10  | 0   | 0   | 10  | 0   | 10  | 0   | 0   | 2   |
| 18         | 0          | 0   | 2   | 23  | 0   | 0   | 9   | 0   | 39  | 0   | 0   | 15  |
| 19         | 1          | 0   | 0   | 0   | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 13         | 0   | 7   | 83  | 15  | 4   | 15  | 0   | 0   | 0   | 0   | 46  |
| 21         | 20         | 15  | 0   | 0   | 14  | 0   | 10  | 0   | 0   | 0   | 0   | 3   |
| 22         | 25         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 3   | 22  | 0   |
| 23         | 33         | 0   | 0   | 1   | 6   | 19  | 0   | 0   | 39  | 0   | 0   | 0   |
| 24         | 1          | 30  | 19  | 0   | 5   | 0   | 0   | 0   | 36  | 58  | 8   | 0   |
| 25         | 0          | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 54  | 0   |
| 26         | 3          | 42  | 10  | 0   | 0   | 0   | 0   | 0   | 2   | 34  | 18  | 0   |
| 27         | 0          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 0   | 6   | 16  |
| 28         | 4          | 8   | 49  | 0   | 3   | 3   | 0   | 0   | 41  | 0   | 60  | 0   |
| 29         | 0          | 13  | 10  | 4   | 13  | 12  | 0   | 22  | 3   | 0   | 18  | 0   |
| 30         | 0          |     | 0   | 12  | 5   | 3   | 0   | 5   | 0   | 0   | 45  | 12  |
| 31         | 6          |     | 27  |     | 30  |     | 0   | 0   |     | 0   |     | 3   |
| Total      | 288        | 446 | 331 | 313 | 208 | 115 | 94  | 263 | 261 | 254 | 395 | 307 |
| Periode 1  | 67         | 185 | 128 | 92  | 50  | 54  | 3   | 84  | 22  | 97  | 105 | 163 |
| Periode 2  | 129        | 127 | 88  | 204 | 82  | 24  | 81  | 152 | 89  | 62  | 59  | 110 |
| Periode 3  | 86         | 134 | 88  | 17  | 46  | 37  | 10  | 27  | 150 | 95  | 231 | 31  |
| Maksimum   | 36         | 55  | 49  | 83  | 42  | 35  | 30  | 92  | 41  | 58  | 76  | 73  |
| Hari Hujan | 17         | 20  | 16  | 17  | 16  | 13  | 7   | 6   | 15  | 12  | 16  | 15  |

|            |      |
|------------|------|
| Tahunan    | 3275 |
| Hujan Maks | 92   |
| Hari Hujan | 170  |

**Perbandingan Tiap Periode**

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Hidrologi

**DATA CURAH HUJAN HARIAN**

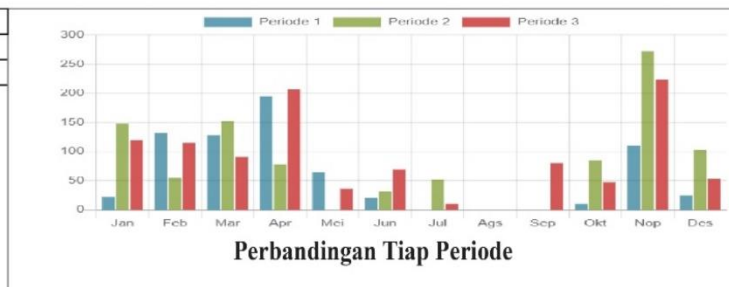
Tahun : 2017

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        |                |
| Lintang Selatan     | -7.662361      |
| Bujur Timur         | 111.315222     |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mai | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 3   | 14  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 2          | 0          | 15  | 85  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 3          | 0          | 35  | 5   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 20  | 0   | 24  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 3          | 0   | 5   | 7   | 0   | 0   | 0   | 0   | 0   | 8   | 31  | 0   |
| 6          | 10         | 0   | 0   | 53  | 34  | 0   | 0   | 0   | 0   | 2   | 44  | 0   |
| 7          | 2          | 0   | 19  | 83  | 0   | 16  | 0   | 0   | 0   | 0   | 35  | 0   |
| 8          | 7          | 16  | 0   | 2   | 3   | 2   | 0   | 0   | 0   | 0   | 0   | 7   |
| 9          | 0          | 35  | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 10         | 0          | 8   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 11         | 2          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 12         | 22         | 0   | 14  | 2   | 0   | 21  | 0   | 0   | 0   | 40  | 0   | 4   |
| 13         | 15         | 29  | 0   | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 2   |
| 14         | 2          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 60  | 14  |
| 15         | 1          | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 4   |
| 16         | 10         | 8   | 0   | 2   | 0   | 2   | 0   | 0   | 0   | 0   | 23  | 0   |
| 17         | 7          | 0   | 0   | 50  | 0   | 0   | 0   | 0   | 0   | 15  | 152 | 16  |
| 18         | 89         | 7   | 86  | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 8   | 0   |
| 19         | 0          | 0   | 52  | 24  | 0   | 0   | 52  | 0   | 0   | 0   | 0   | 2   |
| 20         | 0          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  | 55  |
| 21         | 2          | 24  | 13  | 0   | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 22  |
| 22         | 16         | 4   | 0   | 5   | 0   | 4   | 0   | 0   | 0   | 0   | 29  | 6   |
| 23         | 0          | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 24         | 10         | 0   | 0   | 78  | 0   | 0   | 0   | 0   | 0   | 9   | 1   | 0   |
| 25         | 18         | 7   | 20  | 73  | 0   | 45  | 0   | 0   | 8   | 0   | 40  | 0   |
| 26         | 8          | 0   | 18  | 8   | 0   | 0   | 0   | 0   | 4   | 6   | 23  | 0   |
| 27         | 0          | 21  | 8   | 15  | 0   | 0   | 0   | 0   | 2   | 32  | 46  | 13  |
| 28         | 45         | 59  | 32  | 0   | 0   | 20  | 2   | 0   | 49  | 0   | 43  | 12  |
| 29         | 6          |     | 0   | 8   | 33  | 0   | 0   | 0   | 17  | 0   | 35  | 0   |
| 30         | 15         |     | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 8          |     | 0   |     | 24  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 298        | 302 | 371 | 480 | 124 | 122 | 62  | 0   | 80  | 142 | 606 | 181 |
| Periode 1  | 22         | 132 | 128 | 195 | 64  | 21  | 0   | 0   | 0   | 10  | 110 | 25  |
| Periode 2  | 148        | 55  | 152 | 78  | 0   | 32  | 52  | 0   | 0   | 85  | 272 | 103 |
| Periode 3  | 120        | 115 | 91  | 207 | 36  | 69  | 10  | 0   | 80  | 47  | 224 | 53  |
| Maksimum   | 89         | 59  | 86  | 83  | 34  | 45  | 52  | 0   | 49  | 40  | 152 | 55  |
| Hari Hujan | 21         | 17  | 13  | 19  | 6   | 9   | 3   | 0   | 5   | 8   | 17  | 17  |

|            |      |
|------------|------|
| Tahunan    | 2768 |
| Hujan Maks | 152  |
| Hari Hujan | 135  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

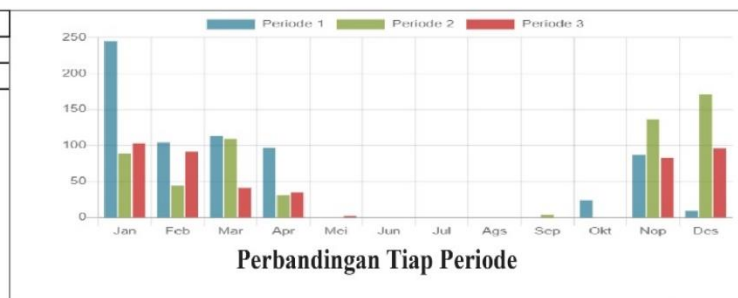
Tahun : 2018

|                    |                |
|--------------------|----------------|
| <b>NAMASTASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun       | -7.662361      |
| Lintang Selatan    | 111.315222     |
| Bujur Timur        | 397            |
| Elevasi            |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 10  | 20  | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 57         | 15  | 2   | 20  | 0   | 0   | 0   | 0   | 0   | 24  | 0   | 0   |
| 4          | 70         | 3   | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 4          | 10  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 6          | 46         | 20  | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 8          | 26         | 24  | 5   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 76  | 5   |
| 9          | 17         | 14  | 55  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 10         | 25         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 8          | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 42  | 33  |
| 12         | 7          | 0   | 57  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 0   |
| 13         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 14         | 11         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 39  | 28  |
| 15         | 1          | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 72  |
| 16         | 0          | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  |
| 17         | 16         | 16  | 37  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 15         | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 25         | 0   | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 29  | 0   |
| 20         | 6          | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 5   | 17  |
| 21         | 3          | 8   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 22         | 53         | 19  | 2   | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 23         | 5          | 29  | 5   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 3          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 17         | 9   | 15  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 3   |
| 26         | 3          | 24  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 5   |
| 27         | 16         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 53  |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  | 0   |
| 29         | 3          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 0   |
| 31         | 9          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 3   |
| Total      | 446        | 239 | 263 | 163 | 2   | 0   | 0   | 0   | 4   | 24  | 306 | 279 |
| Periode 1  | 245        | 104 | 113 | 97  | 0   | 0   | 0   | 0   | 0   | 24  | 87  | 9   |
| Periode 2  | 89         | 44  | 109 | 31  | 0   | 0   | 0   | 0   | 4   | 0   | 136 | 171 |
| Periode 3  | 103        | 91  | 41  | 35  | 2   | 0   | 0   | 0   | 0   | 0   | 83  | 96  |
| Maksimum   | 70         | 29  | 57  | 30  | 2   | 0   | 0   | 0   | 4   | 24  | 76  | 72  |
| Hari Hujan | 24         | 18  | 16  | 11  | 1   | 0   | 0   | 0   | 1   | 1   | 12  | 15  |

|            |      |
|------------|------|
| Tahunan    | 1726 |
| Hujan Maks | 76   |
| Hari Hujan | 99   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

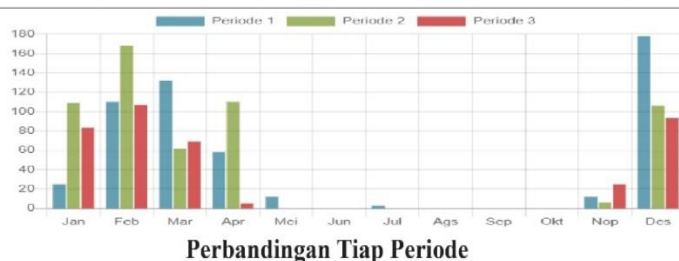
Tahun : 2019

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        |                |
| Lintang Selatan     | -7.662361      |
| Bujur Timur         | 111.315222     |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 4          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 2          | 15         | 6   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 3          | 1          | 4   | 3   | 11  | 12  | 0   | 0   | 0   | 0   | 0   | 1   | 3   |
| 4          | 1          | 35  | 8   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 5          | 3          | 7   | 32  | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   |
| 6          | 0          | 3   | 34  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 137 |
| 7          | 1          | 6   | 38  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 30  |
| 8          | 0          | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 9          | 0          | 15  | 0   | 22  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 22  | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 3          | 1   | 4   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   |
| 12         | 17         | 5   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 55  |
| 13         | 20         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 8          | 25  | 19  | 46  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 15         | 0          | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 16         | 15         | 52  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| 17         | 0          | 32  | 2   | 60  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 18         | 45         | 5   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 19         | 0          | 38  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 1          | 9   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  |
| 21         | 22         | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 0          | 22  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 17         | 15  | 6   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 8   |
| 24         | 4          | 13  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 25         | 23         | 38  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 24  |
| 26         | 13         | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 27         | 0          | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 4          | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 29         | 0          |     | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 32  |
| 31         | 13         |     | 19  |     | 0   |     | 0   | 0   |     | 0   |     | 1   |
| Total      | 230        | 385 | 282 | 173 | 12  | 0   | 3   | 0   | 0   | 0   | 43  | 378 |
| Periode 1  | 25         | 110 | 132 | 58  | 12  | 0   | 3   | 0   | 0   | 0   | 12  | 178 |
| Periode 2  | 109        | 168 | 62  | 110 | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 106 |
| Periode 3  | 83         | 107 | 69  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 93  |
| Maksimum   | 45         | 52  | 38  | 60  | 12  | 0   | 3   | 0   | 0   | 0   | 13  | 137 |
| Hari Hujan | 20         | 25  | 21  | 12  | 1   | 0   | 1   | 0   | 0   | 0   | 5   | 20  |

|            |      |
|------------|------|
| Tahunan    | 1506 |
| Hujan Maks | 137  |
| Hari Hujan | 105  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

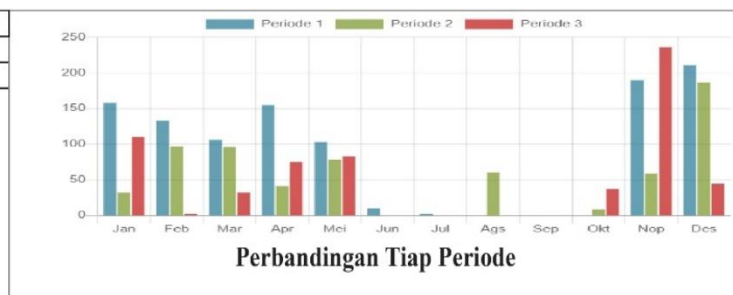
Tahun : 2020

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        | -7.662361      |
| Lintang Selatan     | 111.315222     |
| Bujur Timur         |                |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 8          | 12  | 1   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 33  | 0   |
| 2          | 54         | 42  | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 124 | 23  |
| 3          | 21         | 8   | 19  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 99  |
| 4          | 5          | 8   | 5   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 3   |
| 5          | 0          | 8   | 41  | 2   | 3   | 10  | 0   | 0   | 0   | 0   | 3   | 20  |
| 6          | 27         | 28  | 0   | 22  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  |
| 7          | 11         | 14  | 3   | 28  | 20  | 0   | 2   | 0   | 0   | 0   | 0   | 2   |
| 8          | 0          | 8   | 4   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| 9          | 9          | 5   | 2   | 3   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 10         | 23         | 0   | 0   | 9   | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 11         | 29         | 49  | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 7   | 0   | 0   |
| 12         | 0          | 2   | 1   | 0   | 3   | 0   | 0   | 59  | 0   | 0   | 0   | 19  |
| 13         | 0          | 3   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 83  |
| 14         | 0          | 0   | 27  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 28  |
| 15         | 0          | 7   | 22  | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   |
| 16         | 3          | 2   | 2   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 14  | 0   |
| 17         | 0          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 28  |
| 18         | 0          | 3   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 22  |
| 19         | 0          | 3   | 6   | 0   | 65  | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 20         | 0          | 17  | 5   | 0   | 3   | 0   | 0   | 0   | 0   | 1   | 29  | 0   |
| 21         | 87         | 2   | 0   | 1   | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 1          | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 123 | 0   |
| 23         | 2          | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 9   | 9   | 0   |
| 24         | 0          | 0   | 1   | 15  | 0   | 0   | 0   | 0   | 0   | 3   | 49  | 0   |
| 25         | 20         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 0          | 0   | 0   | 22  | 10  | 0   | 0   | 0   | 0   | 17  | 0   | 8   |
| 27         | 0          | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 18  |
| 28         | 0          | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 2   | 46  | 4   |
| 29         | 0          | 0   | 8   | 0   | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 30         | 0          |     | 10  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 11  |
| 31         | 5          |     | 4   |     | 7   |     | 0   | 0   |     | 6   |     | 18  |
| Total      | 305        | 232 | 238 | 271 | 271 | 10  | 2   | 60  | 0   | 51  | 485 | 461 |
| Periode 1  | 158        | 133 | 106 | 155 | 103 | 10  | 2   | 0   | 0   | 0   | 190 | 211 |
| Periode 2  | 32         | 97  | 96  | 41  | 78  | 0   | 0   | 60  | 0   | 8   | 59  | 187 |
| Periode 3  | 110        | 2   | 32  | 75  | 83  | 0   | 0   | 0   | 0   | 37  | 236 | 45  |
| Maksimum   | 87         | 49  | 41  | 40  | 65  | 10  | 2   | 59  | 0   | 17  | 124 | 99  |
| Hari Hujan | 15         | 19  | 22  | 16  | 14  | 1   | 1   | 2   | 0   | 8   | 15  | 22  |

|            |      |
|------------|------|
| Tahunan    | 2386 |
| Hujan Maks | 124  |
| Hari Hujan | 135  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

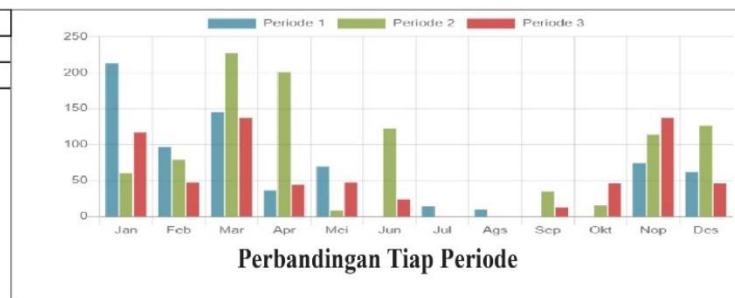
Tahun : 2021

|                    |                |
|--------------------|----------------|
| <b>NAMASTASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun       | -7.662361      |
| Lintang Selatan    | 111.315222     |
| Bujur Timur        | 397            |
| Elevasi            |                |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 16         | 0   | 2   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 18  | 0   |
| 2          | 10         | 2   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 3          | 13  | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 4          | 26         | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 5          | 0          | 43  | 4   | 11  | 34  | 0   | 0   | 0   | 0   | 0   | 11  | 1   |
| 6          | 80         | 4   | 0   | 0   | 23  | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 7          | 14         | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 3   |
| 8          | 3          | 7   | 66  | 3   | 5   | 0   | 0   | 10  | 0   | 0   | 0   | 4   |
| 9          | 61         | 0   | 73  | 2   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 21  |
| 10         | 0          | 3   | 0   | 0   | 0   | 0   | 12  | 0   | 0   | 0   | 32  | 28  |
| 11         | 4          | 8   | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 30  |
| 12         | 2          | 3   | 16  | 0   | 0   | 33  | 0   | 0   | 3   | 0   | 3   | 7   |
| 13         | 0          | 0   | 84  | 0   | 0   | 3   | 0   | 0   | 8   | 0   | 0   | 0   |
| 14         | 0          | 0   | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 3   | 11  | 31  | 0   | 0   | 0   | 0   | 24  | 0   | 45  | 1   |
| 16         | 0          | 0   | 0   | 136 | 0   | 3   | 0   | 0   | 0   | 0   | 8   | 45  |
| 17         | 21         | 0   | 59  | 0   | 0   | 23  | 0   | 0   | 0   | 0   | 7   | 7   |
| 18         | 29         | 48  | 12  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 7   |
| 19         | 4          | 17  | 45  | 0   | 0   | 52  | 0   | 0   | 0   | 1   | 30  | 16  |
| 20         | 0          | 0   | 0   | 0   | 8   | 8   | 0   | 0   | 0   | 14  | 5   | 13  |
| 21         | 14         | 2   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 22         | 0          | 4   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 23         | 4          | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 7   | 0   | 0   | 3   | 2   | 0   | 0   | 0   | 0   | 88  | 23  |
| 25         | 12         | 5   | 5   | 3   | 11  | 5   | 0   | 0   | 0   | 21  | 0   | 0   |
| 26         | 0          | 4   | 70  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 2   | 3   |
| 27         | 35         | 12  | 32  | 0   | 0   | 17  | 0   | 0   | 12  | 22  | 0   | 8   |
| 28         | 29         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 46  | 0   |
| 29         | 17         |     | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 6          |     | 24  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 31         | 0          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 390        | 223 | 509 | 281 | 125 | 146 | 14  | 10  | 47  | 61  | 325 | 234 |
| Periode 1  | 213        | 97  | 145 | 36  | 70  | 0   | 14  | 10  | 0   | 0   | 74  | 62  |
| Periode 2  | 60         | 79  | 227 | 201 | 8   | 122 | 0   | 0   | 35  | 15  | 114 | 126 |
| Periode 3  | 117        | 47  | 137 | 44  | 47  | 24  | 0   | 0   | 12  | 46  | 137 | 46  |
| Maksimum   | 80         | 48  | 84  | 136 | 34  | 52  | 12  | 10  | 24  | 22  | 88  | 45  |
| Hari Hujan | 20         | 19  | 15  | 12  | 11  | 9   | 2   | 1   | 4   | 5   | 18  | 19  |

|            |      |
|------------|------|
| Tahunan    | 2365 |
| Hujan Maks | 136  |
| Hari Hujan | 135  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2022

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        |                |
| Lintang Selatan     | -7.662361      |
| Bujur Timur         | 111.315222     |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 4          | 5   | 5   | 0   | 10  | 14  | 0   | 0   | 47  | 9   | 0   | 32  |
| 2          | 1          | 4   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 28  | 0   |
| 3          | 0          | 0   | 24  | 8   | 0   | 0   | 0   | 0   | 0   | 3   | 2   | 11  |
| 4          | 0          | 0   | 7   | 50  | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 0   |
| 5          | 0          | 0   | 0   | 17  | 0   | 57  | 0   | 0   | 0   | 0   | 6   | 0   |
| 6          | 0          | 0   | 18  | 21  | 0   | 0   | 46  | 0   | 0   | 7   | 26  | 0   |
| 7          | 9          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 0   |
| 8          | 2          | 0   | 17  | 0   | 35  | 0   | 0   | 0   | 0   | 0   | 5   | 1   |
| 9          | 3          | 0   | 49  | 0   | 29  | 0   | 0   | 0   | 0   | 10  | 2   | 21  |
| 10         | 36         | 10  | 11  | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 21  | 0   |
| 11         | 17         | 0   | 32  | 14  | 50  | 1   | 0   | 0   | 21  | 0   | 27  | 0   |
| 12         | 44         | 1   | 4   | 0   | 0   | 26  | 1   | 0   | 0   | 0   | 1   | 0   |
| 13         | 3          | 8   | 43  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 15  |
| 14         | 5          | 80  | 2   | 5   | 15  | 50  | 14  | 16  | 0   | 0   | 0   | 76  |
| 15         | 1          | 2   | 1   | 0   | 0   | 0   | 14  | 0   | 0   | 0   | 6   | 10  |
| 16         | 6          | 0   | 15  | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 23  | 1   |
| 17         | 17         | 9   | 41  | 2   | 0   | 6   | 0   | 43  | 0   | 2   | 16  | 0   |
| 18         | 5          | 21  | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 22  | 14  | 0   |
| 19         | 11         | 4   | 0   | 0   | 14  | 4   | 0   | 0   | 0   | 4   | 62  | 0   |
| 20         | 14         | 82  | 0   | 3   | 11  | 0   | 0   | 0   | 0   | 6   | 0   | 20  |
| 21         | 45         | 0   | 0   | 16  | 50  | 0   | 0   | 0   | 0   | 30  | 0   | 0   |
| 22         | 9          | 0   | 38  | 12  | 5   | 0   | 0   | 0   | 0   | 17  | 0   | 3   |
| 23         | 47         | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 22  | 2   | 7   |
| 24         | 0          | 0   | 24  | 32  | 4   | 0   | 0   | 0   | 0   | 17  | 0   | 26  |
| 25         | 0          | 0   | 0   | 4   | 1   | 0   | 0   | 0   | 0   | 3   | 44  | 3   |
| 26         | 16         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 26  | 9   |
| 27         | 2          | 18  | 58  | 0   | 24  | 13  | 0   | 0   | 0   | 20  | 13  | 13  |
| 28         | 1          | 3   | 10  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 0   |
| 29         | 23         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 19  |
| 30         | 10         |     | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 31         | 24         |     | 10  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 355        | 249 | 449 | 208 | 250 | 172 | 75  | 59  | 75  | 189 | 367 | 268 |
| Periode 1  | 55         | 19  | 150 | 96  | 74  | 71  | 46  | 0   | 54  | 36  | 103 | 65  |
| Periode 2  | 123        | 207 | 138 | 42  | 90  | 88  | 29  | 59  | 21  | 37  | 149 | 122 |
| Periode 3  | 153        | 23  | 151 | 70  | 86  | 13  | 0   | 0   | 0   | 116 | 115 | 81  |
| Maksimum   | 47         | 82  | 58  | 50  | 50  | 57  | 46  | 43  | 47  | 30  | 62  | 76  |
| Hari Hujan | 25         | 14  | 22  | 14  | 13  | 9   | 4   | 2   | 3   | 17  | 21  | 17  |

|            |      |
|------------|------|
| Tahunan    | 2716 |
| Hujan Maks | 82   |
| Hari Hujan | 161  |

Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2023

|                     |                |
|---------------------|----------------|
| <b>NAMA STASIUN</b> | <b>JEJERUK</b> |
| Kode stasiun        | -7.662361      |
| Lintang Selatan     | 111.315222     |
| Bujur Timur         |                |
| Elevasi             | 397            |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620009  |
| Kelurahan/Desa | Ringinagung   | Tahun Pendirian | 1980       |
| Kecamatan      | Magetan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Scp | Okt | Nop | Des |
| 1          | 3          | 0   | 10  | 3   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 57  |
| 2          | 0          | 12  | 16  | 4   | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 39  |
| 3          | 1          | 13  | 24  | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 0   | 0   | 0   | 59  | 0   | 0   | 0   | 0   | 0   | 9   | 3   |
| 5          | 0          | 4   | 1   | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 15  | 18  |
| 6          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 20  | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 11  |
| 8          | 5          | 13  | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 53  |
| 9          | 0          | 6   | 7   | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 1   |
| 10         | 1          | 15  | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 0   |
| 11         | 0          | 28  | 0   | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 0   |
| 12         | 0          | 31  | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| 13         | 0          | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 2          | 3   | 31  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 6   |
| 15         | 0          | 33  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 1          | 11  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 23  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 1          | 8   | 28  | 0   | 0   | 34  | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 2          | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 3          | 8   | 57  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 44         | 2   | 15  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 23         | 0          | 30  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 4   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 12         | 6   | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 2          | 16  | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 21  | 0   |
| 27         | 13         | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 65  |
| 28         | 22         | 2   | 40  | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 1   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 38  | 15  |
| 30         | 19         |     | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 31         | 0          |     | 5   |     | 0   |     | 0   | 0   |     | 0   |     | 102 |
| Total      | 131        | 301 | 291 | 181 | 138 | 34  | 12  | 0   | 0   | 0   | 161 | 371 |
| Periode 1  | 10         | 63  | 58  | 66  | 130 | 0   | 12  | 0   | 0   | 0   | 43  | 182 |
| Periode 2  | 6          | 159 | 91  | 15  | 8   | 34  | 0   | 0   | 0   | 0   | 58  | 6   |
| Periode 3  | 115        | 79  | 137 | 100 | 0   | 0   | 0   | 0   | 0   | 0   | 60  | 81  |
| Maksimum   | 44         | 33  | 57  | 55  | 59  | 34  | 6   | 0   | 0   | 0   | 38  | 102 |
| Hari Hujan | 15         | 24  | 19  | 12  | 5   | 1   | 3   | 0   | 0   | 0   | 9   | 12  |

|            |      |
|------------|------|
| Tahunan    | 1620 |
| Hujan Maks | 102  |
| Hari Hujan | 100  |

Perbandingan Tiap Periode

## 6. Data Curah Hujan Stasiun Sarangan MGT

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Hidrologi

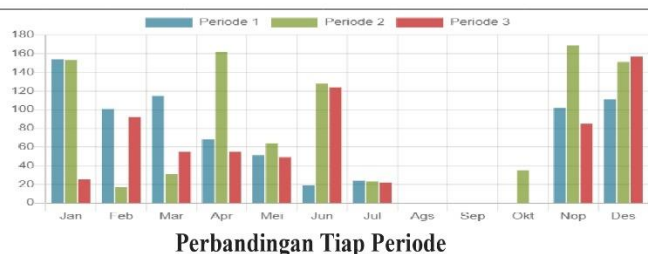
### DATA CURAH HUJAN HARIAN

Tahun : 2014

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> |                |               |                 |            |
| Kode stasiun        |                     | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Lintang Selatan     | -7.679600           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Bujur Timur         | 111.21640           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Elevasi             | 1293                | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 5          | 39  | 11  | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 6          | 6   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 3          | 10  | 0   | 11  | 9   | 0   | 12  | 0   | 0   | 0   | 0   | 0   |
| 4          | 12         | 30  | 0   | 0   | 0   | 19  | 5   | 0   | 0   | 0   | 0   | 0   |
| 5          | 10         | 3   | 42  | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 42  |
| 6          | 52         | 5   | 56  | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 40         | 0   | 0   | 32  | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   |
| 8          | 26         | 0   | 6   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 23  | 69  |
| 9          | 0          | 8   | 0   | 7   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 79  | 0   |
| 11         | 39         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 55  | 0   |
| 12         | 0          | 4   | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 33  |
| 13         | 10         | 0   | 6   | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 14         | 18         | 0   | 0   | 19  | 35  | 0   | 19  | 0   | 0   | 0   | 19  | 0   |
| 15         | 16         | 0   | 14  | 0   | 16  | 0   | 4   | 0   | 0   | 0   | 0   | 0   |
| 16         | 50         | 0   | 4   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 66  | 9   |
| 17         | 0          | 4   | 7   | 29  | 0   | 0   | 0   | 0   | 0   | 35  | 0   | 21  |
| 18         | 0          | 0   | 0   | 43  | 0   | 55  | 0   | 0   | 0   | 0   | 12  | 25  |
| 19         | 9          | 0   | 0   | 20  | 0   | 65  | 0   | 0   | 0   | 0   | 9   | 20  |
| 20         | 11         | 9   | 0   | 0   | 0   | 8   | 0   | 0   | 0   | 0   | 8   | 33  |
| 21         | 4          | 0   | 0   | 0   | 22  | 0   | 0   | 0   | 0   | 0   | 37  | 80  |
| 22         | 4          | 0   | 4   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 5   |
| 23         | 0          | 29  | 4   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 24         | 0          | 63  | 21  | 21  | 0   | 0   | 9   | 0   | 0   | 0   | 20  | 0   |
| 25         | 0          | 0   | 0   | 0   | 0   | 83  | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 8          | 0   | 19  | 19  | 27  | 28  | 0   | 0   | 0   | 0   | 13  | 0   |
| 27         | 3          | 0   | 7   | 7   | 0   | 13  | 13  | 0   | 0   | 0   | 0   | 0   |
| 28         | 6          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  |
| 29         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 36  |
| 30         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 10         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 342        | 210 | 201 | 285 | 164 | 271 | 69  | 0   | 0   | 35  | 356 | 419 |
| Periode 1  | 154        | 101 | 115 | 68  | 51  | 19  | 24  | 0   | 0   | 0   | 102 | 111 |
| Periode 2  | 153        | 17  | 31  | 162 | 64  | 128 | 23  | 0   | 0   | 35  | 169 | 151 |
| Periode 3  | 25         | 92  | 55  | 55  | 49  | 124 | 22  | 0   | 0   | 0   | 85  | 157 |
| Maksimum   | 52         | 63  | 56  | 43  | 35  | 83  | 19  | 0   | 0   | 35  | 79  | 80  |
| Hari Hujan | 21         | 12  | 13  | 16  | 9   | 7   | 8   | 0   | 0   | 1   | 12  | 14  |

|            |      |
|------------|------|
| Tahunan    | 2352 |
| Hujan Maks | 83   |
| Hari Hujan | 113  |



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Hidrologi

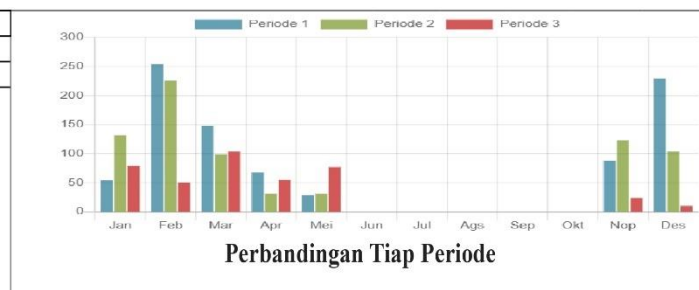
**DATA CURAH HUJAN HARIAN**

Tahun : 2015

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> |                |               |                 |            |
| Kode stasiun        |                     | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Lintang Selatan     | -7.679600           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Bujur Timur         | 111.21640           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Elevasi             | 1293                | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 50  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 26  | 44  | 10  | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 47  |
| 3          | 19         | 11  | 17  | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 4          | 25         | 10  | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 0          | 29  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 6          | 0          | 10  | 7   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  |
| 7          | 0          | 51  | 33  | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 7   |
| 8          | 10         | 21  | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 44  | 29  |
| 9          | 0          | 31  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 106 |
| 10         | 0          | 15  | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 44  | 0   |
| 12         | 29         | 18  | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 9   | 10  |
| 13         | 18         | 0   | 47  | 6   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 14         | 38         | 16  | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 15         | 0          | 30  | 0   | 14  | 10  | 0   | 0   | 0   | 0   | 0   | 41  | 42  |
| 16         | 0          | 30  | 9   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 17         | 0          | 17  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 18         | 17         | 58  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 0   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 20  |
| 20         | 30         | 37  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 22         | 23         | 0   | 26  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 20         | 0   | 30  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 10         | 15  | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 0          | 6   | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 13         | 0   | 0   | 19  | 45  | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 27         | 5          | 0   | 0   | 7   | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 5          | 29  | 0   | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 3          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 8          |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 273        | 530 | 351 | 154 | 137 | 0   | 0   | 0   | 0   | 0   | 235 | 343 |
| Periode 1  | 54         | 254 | 148 | 68  | 29  | 0   | 0   | 0   | 0   | 0   | 88  | 229 |
| Periode 2  | 132        | 226 | 99  | 31  | 31  | 0   | 0   | 0   | 0   | 0   | 123 | 104 |
| Periode 3  | 79         | 50  | 104 | 55  | 77  | 0   | 0   | 0   | 0   | 0   | 24  | 10  |
| Maksimum   | 38         | 58  | 47  | 32  | 45  | 0   | 0   | 0   | 0   | 0   | 44  | 106 |
| Hari Hujan | 16         | 21  | 15  | 14  | 9   | 0   | 0   | 0   | 0   | 0   | 10  | 13  |

|            |      |
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| Tahunan    | 2023 |
| Hujan Maks | 106  |
| Hari Hujan | 98   |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

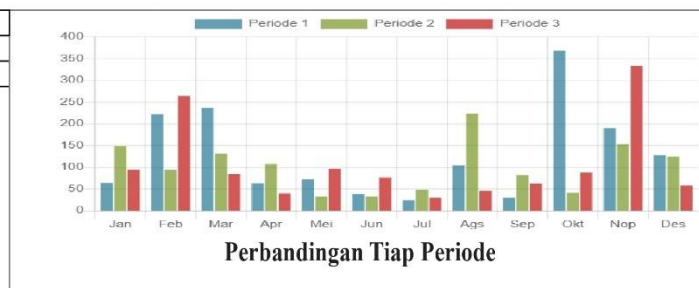
Tahun : 2016

| NAMA STASIUN    | SARANGAN_MGT |
|-----------------|--------------|
| Kode stasiun    |              |
| Lintang Selatan | -7.679600    |
| Bujur Timur     | 111.21640    |
| Elevasi         | 1293         |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 3          | 2   | 50  | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 24  | 19  |
| 2          | 0          | 20  | 0   | 0   | 0   | 20  | 16  | 0   | 0   | 58  | 8   | 60  |
| 3          | 35         | 44  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 107 | 10  | 31  |
| 4          | 16         | 0   | 41  | 16  | 0   | 0   | 7   | 0   | 30  | 0   | 0   | 0   |
| 5          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 26  | 0   | 3   | 0   | 0   |
| 6          | 5          | 34  | 70  | 29  | 8   | 0   | 0   | 10  | 0   | 0   | 0   | 0   |
| 7          | 0          | 67  | 60  | 0   | 17  | 5   | 0   | 39  | 0   | 0   | 0   | 0   |
| 8          | 0          | 2   | 4   | 18  | 6   | 9   | 0   | 29  | 0   | 0   | 18  | 3   |
| 9          | 0          | 3   | 4   | 0   | 22  | 0   | 0   | 0   | 0   | 13  | 20  | 15  |
| 10         | 5          | 50  | 0   | 0   | 19  | 0   | 1   | 0   | 0   | 187 | 110 | 0   |
| 11         | 21         | 20  | 49  | 8   | 16  | 0   | 0   | 0   | 0   | 28  | 41  | 0   |
| 12         | 10         | 36  | 0   | 20  | 7   | 0   | 0   | 0   | 0   | 0   | 49  | 0   |
| 13         | 19         | 6   | 24  | 26  | 0   | 0   | 0   | 135 | 0   | 0   | 8   | 21  |
| 14         | 19         | 0   | 0   | 0   | 10  | 0   | 0   | 89  | 5   | 0   | 20  | 18  |
| 15         | 0          | 8   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 25  | 0   |
| 16         | 0          | 0   | 0   | 8   | 0   | 24  | 14  | 0   | 4   | 0   | 10  | 0   |
| 17         | 0          | 24  | 0   | 14  | 0   | 0   | 2   | 0   | 10  | 13  | 0   | 5   |
| 18         | 0          | 0   | 27  | 0   | 0   | 3   | 0   | 0   | 63  | 0   | 0   | 22  |
| 19         | 4          | 0   | 31  | 24  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 76         | 0   | 0   | 8   | 0   | 3   | 31  | 0   | 0   | 0   | 0   | 58  |
| 21         | 18         | 14  | 0   | 0   | 28  | 0   | 0   | 0   | 42  | 0   | 37  | 38  |
| 22         | 57         | 15  | 0   | 25  | 9   | 0   | 0   | 0   | 0   | 0   | 17  | 0   |
| 23         | 2          | 21  | 0   | 0   | 35  | 0   | 0   | 0   | 7   | 0   | 0   | 0   |
| 24         | 5          | 104 | 32  | 0   | 10  | 6   | 26  | 0   | 10  | 15  | 63  | 0   |
| 25         | 0          | 23  | 4   | 0   | 10  | 0   | 0   | 0   | 0   | 10  | 12  | 0   |
| 26         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 15  | 26  | 0   |
| 27         | 0          | 7   | 0   | 3   | 0   | 0   | 4   | 0   | 0   | 0   | 37  | 0   |
| 28         | 12         | 30  | 14  | 0   | 0   | 38  | 0   | 34  | 0   | 0   | 78  | 0   |
| 29         | 0          | 50  | 20  | 12  | 2   | 2   | 0   | 11  | 0   | 0   | 53  | 18  |
| 30         | 0          |     | 14  | 0   | 3   | 30  | 0   | 0   | 0   | 48  | 10  | 2   |
| 31         | 5          |     | 71  |     | 84  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 312        | 580 | 522 | 211 | 286 | 148 | 102 | 373 | 174 | 497 | 676 | 310 |
| Periode 1  | 64         | 222 | 236 | 63  | 72  | 39  | 24  | 104 | 30  | 368 | 190 | 128 |
| Periode 2  | 149        | 94  | 131 | 108 | 33  | 33  | 48  | 224 | 82  | 41  | 153 | 124 |
| Periode 3  | 94         | 264 | 84  | 40  | 97  | 76  | 30  | 45  | 62  | 88  | 333 | 58  |
| Maksimum   | 76         | 104 | 71  | 29  | 84  | 38  | 31  | 135 | 63  | 187 | 110 | 60  |
| Hari Hujan | 17         | 21  | 17  | 13  | 16  | 12  | 9   | 8   | 9   | 11  | 21  | 13  |

|            |      |
|------------|------|
| Tahunan    | 4191 |
| Hujan Maks | 187  |
| Hari Hujan | 167  |



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Hidrologi

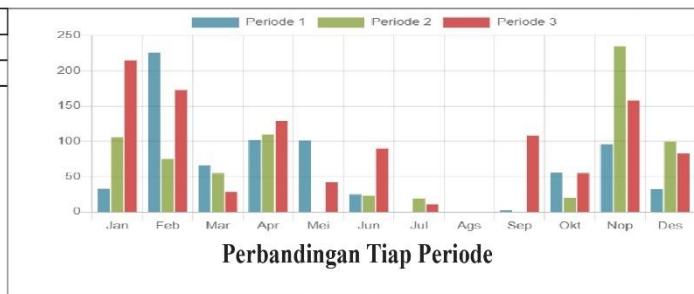
**DATA CURAH HUJAN HARIAN**

Tahun : 2017

|                    |                     |                |               |                 |            |
|--------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMASTASIUN</b> | <b>SARANGAN_MGT</b> |                |               |                 |            |
| Kode stasiun       | -7.679600           | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Lintang Selatan    | 111.21640           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Bujur Timur        | 1293                | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Elevasi            |                     | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 8   | 12  | 67  | 5   | 5   | 0   | 0   | 0   | 0   | 0   | 4   |
| 2          | 0          | 65  | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 3          | 0          | 45  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 9          | 17  | 0   | 19  | 77  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 8          | 2   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 19  | 0   |
| 6          | 0          | 0   | 7   | 13  | 3   | 0   | 0   | 0   | 0   | 0   | 26  | 5   |
| 7          | 0          | 18  | 3   | 3   | 3   | 17  | 0   | 0   | 0   | 0   | 43  | 15  |
| 8          | 0          | 56  | 0   | 0   | 13  | 3   | 0   | 0   | 0   | 0   | 0   | 3   |
| 9          | 16         | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 42  | 8   | 0   |
| 10         | 0          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 14  | 0   | 0   |
| 11         | 0          | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 12         | 0          | 0   | 9   | 10  | 0   | 4   | 0   | 0   | 0   | 0   | 8   | 8   |
| 13         | 15         | 0   | 6   | 30  | 0   | 13  | 0   | 0   | 0   | 0   | 76  | 2   |
| 14         | 18         | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 17  | 4   |
| 15         | 24         | 20  | 0   | 34  | 0   | 6   | 0   | 0   | 0   | 0   | 14  | 0   |
| 16         | 8          | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 21  | 5   |
| 17         | 33         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 20  |
| 18         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 17  | 11  |
| 19         | 0          | 0   | 28  | 20  | 0   | 0   | 19  | 0   | 0   | 0   | 0   | 5   |
| 20         | 8          | 14  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 37  | 45  |
| 21         | 8          | 50  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 29  | 30  |
| 22         | 0          | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 23         | 42         | 9   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 24         | 33         | 10  | 0   | 56  | 0   | 0   | 0   | 0   | 0   | 9   | 5   | 0   |
| 25         | 24         | 16  | 0   | 7   | 0   | 30  | 0   | 0   | 7   | 0   | 5   | 0   |
| 26         | 0          | 2   | 16  | 16  | 0   | 20  | 0   | 0   | 4   | 29  | 14  | 0   |
| 27         | 4          | 39  | 0   | 0   | 0   | 40  | 0   | 0   | 53  | 5   | 37  | 25  |
| 28         | 38         | 35  | 12  | 0   | 10  | 0   | 11  | 0   | 31  | 0   | 35  | 18  |
| 29         | 24         |     | 0   | 23  | 10  | 0   | 0   | 0   | 13  | 12  | 24  | 0   |
| 30         | 42         |     | 0   | 13  | 22  | 0   | 0   | 0   | 0   | 0   | 4   | 2   |
| 31         | 8          |     | 1   |     | 15  |     | 0   | 0   |     | 0   |     | 4   |
| Total      | 362        | 474 | 150 | 341 | 158 | 138 | 30  | 0   | 110 | 131 | 489 | 219 |
| Periode 1  | 33         | 226 | 66  | 102 | 101 | 25  | 0   | 0   | 2   | 56  | 96  | 32  |
| Periode 2  | 106        | 75  | 55  | 110 | 0   | 23  | 19  | 0   | 0   | 20  | 235 | 100 |
| Periode 3  | 215        | 173 | 28  | 129 | 42  | 90  | 11  | 0   | 108 | 55  | 158 | 83  |
| Maksimum   | 42         | 65  | 37  | 67  | 77  | 40  | 19  | 0   | 53  | 42  | 76  | 45  |
| Hari Hujan | 18         | 20  | 14  | 15  | 9   | 9   | 2   | 0   | 6   | 7   | 22  | 19  |

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| Tahunan    | 2602 |
| Hujan Maks | 77   |
| Hari Hujan | 141  |



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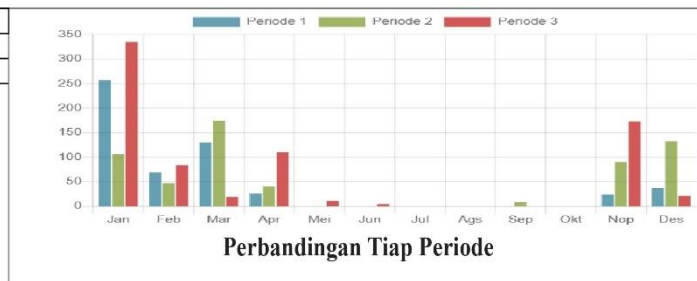
## DATA CURAH HUJAN HARIAN

Tahun : 2018

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> |                |               |                 |            |
| Kode stasiun        |                     | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Lintang Selatan     | -7.679600           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Bujur Timur         | 111.21640           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Elevasi             | 1293                | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 25  | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 29         | 5   | 5   | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 42         | 3   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 5          | 25         | 6   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 6          | 75         | 5   | 49  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 7          | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 8          | 25         | 5   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 10  |
| 9          | 16         | 20  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 10         | 38         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 11         | 5          | 0   | 23  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 46  | 29  |
| 12         | 0          | 6   | 90  | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 23  |
| 13         | 0          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 13         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 21  |
| 15         | 4          | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 21  |
| 16         | 0          | 6   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 27  |
| 17         | 6          | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 18         | 0          | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 28         | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 8   | 0   | 30  | 0   |
| 20         | 50         | 7   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 21         | 75         | 4   | 0   | 69  | 6   | 4   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 59         | 15  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 35         | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 16         | 38  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 25         | 24         | 13  | 6   | 37  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 33         | 0   | 10  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 10  | 16  |
| 27         | 23         | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 48  | 0   |
| 28         | 0          | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 71  | 0   |
| 29         | 39         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 30         | 31         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 37  | 0   |
| 31         | 6          |     | 13  |     | 0   |     | 0   | 0   |     | 0   |     | 36  |
| Total      | 704        | 200 | 336 | 176 | 11  | 4   | 0   | 0   | 8   | 0   | 287 | 226 |
| Periode 1  | 257        | 69  | 130 | 26  | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 37  |
| Periode 2  | 106        | 47  | 174 | 40  | 0   | 0   | 0   | 0   | 8   | 0   | 90  | 132 |
| Periode 3  | 335        | 84  | 19  | 110 | 11  | 4   | 0   | 0   | 0   | 0   | 173 | 21  |
| Maksimum   | 75         | 38  | 90  | 69  | 6   | 4   | 0   | 0   | 8   | 0   | 71  | 36  |
| Hari Hujan | 24         | 21  | 18  | 7   | 2   | 1   | 0   | 0   | 1   | 0   | 14  | 13  |

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| Tahunan    | 1952 |
| Hujan Maks | 90   |
| Hari Hujan | 101  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2019

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Kode stasiun        |                     | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Lintang Selatan     | -7.679600           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur         | 111.21640           | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi             | 1293                |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 19         | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 9          | 7   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 47  | 0   |
| 3          | 3          | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 18  |
| 4          | 5          | 16  | 0   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 70  |
| 5          | 0          | 25  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 0          | 4   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 3   | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 37  |
| 8          | 14         | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 5   |
| 12         | 0          | 6   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 13         | 0          | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 5          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 8          | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 52  |
| 17         | 39         | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 52         | 25  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 38  |
| 19         | 4          | 7   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 3          | 20  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 8   |
| 21         | 7          | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 0   |
| 22         | 0          | 43  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 23         | 13         | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 13  | 14  |
| 24         | 13         | 60  | 20  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 42         | 50  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 26         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 27         | 0          | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 43         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 23  |
| 29         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          |     | 0   | 49  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 14         |     | 0   |     | 0   |     | 0   | 0   |     | 4   |     | 0   |
| Total      | 293        | 369 | 203 | 73  | 12  | 0   | 0   | 0   | 0   | 4   | 121 | 287 |
| Periode 1  | 50         | 83  | 122 | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 63  | 125 |
| Periode 2  | 111        | 103 | 30  | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 18  | 115 |
| Periode 3  | 118        | 183 | 51  | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 47  |
| Maksimum   | 52         | 60  | 41  | 49  | 12  | 0   | 0   | 0   | 0   | 4   | 47  | 70  |
| Hari Hujan | 17         | 19  | 14  | 3   | 1   | 0   | 0   | 0   | 0   | 1   | 7   | 12  |

|            |      |
|------------|------|
| Tahunan    | 1362 |
| Hujan Maks | 70   |
| Hari Hujan | 74   |

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2020

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> |                |               |                 |            |
| Kode stasiun        | -7.679600           | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Lintang Selatan     | 111.21640           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Bujur Timur         | 1293                | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Elevasi             |                     | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 82  | 25  |
| 2          | 37         | 0   | 27  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 25  |
| 3          | 13         | 24  | 2   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 6   |
| 4          | 41         | 57  | 28  | 10  | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 15  |
| 5          | 16         | 3   | 20  | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 90  |
| 6          | 41         | 0   | 0   | 5   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 2   |
| 7          | 0          | 27  | 10  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 1          | 20  | 25  | 1   | 14  | 0   | 0   | 0   | 0   | 10  | 0   | 10  |
| 9          | 16         | 0   | 15  | 0   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 16  |
| 10         | 0          | 0   | 0   | 0   | 5   | 3   | 0   | 0   | 0   | 0   | 0   | 5   |
| 11         | 11         | 1   | 3   | 0   | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 12         | 0          | 2   | 0   | 0   | 0   | 0   | 0   | 103 | 0   | 0   | 5   | 15  |
| 13         | 0          | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 21  | 46  |
| 14         | 0          | 40  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 15         | 0          | 45  | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 9   | 0   |
| 16         | 0          | 48  | 0   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   |
| 17         | 0          | 0   | 101 | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 39  |
| 18         | 0          | 2   | 4   | 38  | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 23  |
| 19         | 0          | 2   | 2   | 29  | 13  | 0   | 0   | 0   | 0   | 0   | 21  | 4   |
| 20         | 0          | 34  | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 44  | 0   |
| 21         | 0          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 39  | 91  | 0   |
| 22         | 0          | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 0   | 24  |
| 23         | 26         | 2   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 3   | 0   |
| 24         | 0          | 2   | 0   | 19  | 0   | 0   | 0   | 0   | 0   | 10  | 1   | 0   |
| 25         | 13         | 1   | 5   | 4   | 0   | 0   | 0   | 0   | 0   | 2   | 20  | 4   |
| 26         | 0          | 0   | 0   | 0   | 21  | 0   | 0   | 0   | 0   | 11  | 0   | 0   |
| 27         | 0          | 14  | 0   | 2   | 76  | 0   | 0   | 0   | 0   | 22  | 23  | 5   |
| 28         | 8          | 26  | 20  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 13  | 0   |
| 29         | 0          | 0   | 10  | 31  | 2   | 0   | 0   | 0   | 0   | 0   | 32  | 13  |
| 30         | 87         |     | 0   | 1   | 40  | 0   | 0   | 0   | 0   | 10  | 0   | 27  |
| 31         | 8          |     | 18  |     | 0   |     | 0   | 0   |     | 39  |     | 0   |
| Total      | 318        | 361 | 315 | 263 | 254 | 3   | 6   | 103 | 0   | 170 | 384 | 411 |
| Periode 1  | 165        | 142 | 127 | 99  | 47  | 3   | 4   | 0   | 0   | 11  | 98  | 194 |
| Periode 2  | 11         | 174 | 116 | 107 | 64  | 0   | 2   | 103 | 0   | 0   | 103 | 144 |
| Periode 3  | 134        | 45  | 54  | 57  | 143 | 0   | 0   | 0   | 0   | 120 | 183 | 73  |
| Maksimum   | 87         | 57  | 101 | 41  | 76  | 3   | 4   | 103 | 0   | 39  | 91  | 90  |
| Hari Hujan | 13         | 19  | 20  | 16  | 12  | 1   | 2   | 1   | 0   | 11  | 16  | 22  |

|            |      |
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| Tahunan    | 2588 |
| Hujan Maks | 103  |
| Hari Hujan | 133  |

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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2021

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Kode stasiun        | -7.679600           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Lintang Selatan     | 111.21640           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur         | 1293                | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi             |                     |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 20         | 3   | 0   | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 31         | 9   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 47  | 3   |
| 3          | 0          | 53  | 0   | 0   | 2   | 0   | 0   | 4   | 0   | 0   | 10  | 0   |
| 4          | 1          | 37  | 0   | 22  | 6   | 0   | 0   | 0   | 0   | 0   | 8   | 9   |
| 5          | 23         | 6   | 0   | 1   | 4   | 0   | 0   | 0   | 0   | 0   | 3   | 5   |
| 6          | 11         | 2   | 12  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 45  | 2   |
| 7          | 11         | 18  | 17  | 0   | 0   | 0   | 0   | 85  | 0   | 0   | 0   | 18  |
| 8          | 54         | 2   | 20  | 3   | 21  | 0   | 4   | 2   | 0   | 0   | 0   | 44  |
| 9          | 9          | 4   | 8   | 1   | 0   | 2   | 46  | 0   | 0   | 0   | 45  | 15  |
| 10         | 0          | 0   | 0   | 15  | 0   | 0   | 4   | 0   | 0   | 0   | 2   | 9   |
| 11         | 22         | 0   | 42  | 7   | 0   | 91  | 0   | 0   | 0   | 0   | 8   | 2   |
| 12         | 23         | 5   | 0   | 1   | 0   | 6   | 0   | 0   | 26  | 0   | 14  | 0   |
| 13         | 2          | 1   | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 41  | 0   |
| 14         | 0          | 8   | 15  | 17  | 0   | 0   | 0   | 0   | 13  | 0   | 29  | 0   |
| 15         | 0          | 0   | 1   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 12  |
| 16         | 0          | 0   | 63  | 0   | 0   | 43  | 0   | 0   | 0   | 0   | 25  | 50  |
| 17         | 28         | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 2   |
| 18         | 3          | 0   | 70  | 5   | 0   | 6   | 0   | 5   | 0   | 6   | 25  | 5   |
| 19         | 1          | 0   | 1   | 0   | 46  | 11  | 0   | 0   | 0   | 32  | 13  | 11  |
| 20         | 25         | 0   | 0   | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 21         | 14         | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 4   | 0   | 4   | 0   |
| 22         | 0          | 0   | 0   | 0   | 2   | 3   | 0   | 0   | 37  | 8   | 5   | 0   |
| 23         | 9          | 31  | 0   | 0   | 3   | 4   | 0   | 0   | 0   | 0   | 38  | 32  |
| 24         | 0          | 7   | 2   | 0   | 12  | 0   | 0   | 0   | 0   | 0   | 47  | 0   |
| 25         | 3          | 16  | 25  | 0   | 0   | 0   | 0   | 0   | 18  | 18  | 3   | 17  |
| 26         | 40         | 5   | 10  | 0   | 0   | 0   | 0   | 0   | 10  | 39  | 0   | 0   |
| 27         | 58         | 4   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 25  |
| 28         | 11         | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 29         | 3          |     | 37  | 41  | 0   | 0   | 0   | 0   | 0   | 0   | 56  | 0   |
| 30         | 4          |     | 8   | 23  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 4          |     | 11  |     | 0   |     | 0   | 0   |     | 0   |     | 17  |
| Total      | 410        | 224 | 350 | 248 | 106 | 174 | 54  | 96  | 108 | 103 | 530 | 292 |
| Periode 1  | 160        | 134 | 63  | 109 | 33  | 2   | 54  | 91  | 0   | 0   | 160 | 105 |
| Periode 2  | 104        | 22  | 192 | 75  | 56  | 157 | 0   | 5   | 39  | 38  | 217 | 89  |
| Periode 3  | 142        | 68  | 84  | 64  | 17  | 15  | 0   | 0   | 69  | 65  | 153 | 81  |
| Maksimum   | 58         | 53  | 70  | 41  | 46  | 91  | 46  | 85  | 37  | 39  | 56  | 50  |
| Hari Hujan | 24         | 19  | 18  | 15  | 9   | 10  | 3   | 4   | 6   | 5   | 22  | 20  |

|            |      |
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| Tahunan    | 2695 |
| Hujan Maks | 91   |
| Hari Hujan | 155  |

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Tahun : 2022

|                    |                     |                |               |                 |            |
|--------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMASTASIUN</b> | <b>SARANGAN_MGT</b> | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Kode stasiun       | -7.679600           | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Lintang Selatan    | 111.21640           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur        | 1293                | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi            |                     |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mai | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 6          | 0   | 3   | 0   | 0   | 1   | 0   | 0   | 32  | 0   | 0   | 44  |
| 2          | 0          | 0   | 18  | 6   | 10  | 0   | 0   | 0   | 1   | 69  | 17  | 0   |
| 3          | 0          | 14  | 12  | 7   | 0   | 0   | 0   | 0   | 0   | 16  | 4   | 13  |
| 4          | 0          | 16  | 5   | 20  | 0   | 0   | 0   | 0   | 0   | 68  | 0   | 14  |
| 5          | 0          | 2   | 0   | 11  | 0   | 13  | 0   | 0   | 0   | 0   | 19  | 0   |
| 6          | 2          | 3   | 2   | 0   | 0   | 0   | 43  | 0   | 0   | 9   | 0   | 0   |
| 7          | 0          | 94  | 4   | 0   | 0   | 0   | 0   | 2   | 4   | 0   | 50  | 2   |
| 8          | 21         | 2   | 22  | 0   | 24  | 0   | 3   | 0   | 2   | 0   | 21  | 0   |
| 9          | 5          | 4   | 4   | 0   | 39  | 0   | 0   | 0   | 0   | 10  | 10  | 4   |
| 10         | 0          | 10  | 2   | 15  | 2   | 0   | 0   | 0   | 3   | 0   | 27  | 17  |
| 11         | 7          | 6   | 61  | 5   | 32  | 38  | 0   | 2   | 21  | 0   | 34  | 0   |
| 12         | 30         | 0   | 13  | 0   | 0   | 22  | 3   | 0   | 0   | 0   | 27  | 0   |
| 13         | 0          | 10  | 0   | 0   | 0   | 6   | 0   | 11  | 0   | 4   | 0   | 16  |
| 14         | 2          | 31  | 4   | 0   | 13  | 14  | 48  | 32  | 0   | 0   | 27  | 31  |
| 15         | 0          | 6   | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 0   | 7   | 6   |
| 16         | 5          | 0   | 4   | 0   | 0   | 0   | 0   | 28  | 0   | 0   | 10  | 33  |
| 17         | 10         | 9   | 32  | 15  | 3   | 5   | 0   | 3   | 0   | 6   | 1   | 0   |
| 18         | 2          | 7   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 25  | 10  | 0   |
| 19         | 28         | 4   | 0   | 20  | 77  | 2   | 0   | 0   | 0   | 4   | 74  | 0   |
| 20         | 15         | 0   | 2   | 31  | 8   | 16  | 0   | 3   | 0   | 49  | 0   | 3   |
| 21         | 23         | 0   | 3   | 24  | 27  | 0   | 0   | 0   | 0   | 4   | 4   | 20  |
| 22         | 3          | 3   | 20  | 19  | 2   | 0   | 0   | 0   | 0   | 34  | 0   | 11  |
| 23         | 15         | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 2   | 11  |
| 24         | 7          | 0   | 2   | 0   | 0   | 2   | 0   | 0   | 11  | 35  | 32  | 36  |
| 25         | 0          | 0   | 0   | 5   | 4   | 0   | 0   | 0   | 0   | 2   | 32  | 13  |
| 26         | 14         | 10  | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 41  | 22  | 18  |
| 27         | 10         | 44  | 45  | 17  | 32  | 32  | 0   | 0   | 0   | 6   | 61  | 22  |
| 28         | 4          | 3   | 0   | 2   | 2   | 3   | 0   | 0   | 0   | 0   | 13  | 15  |
| 29         | 0          |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  |
| 30         | 0          |     | 2   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 10  | 6   |
| 31         | 18         |     | 11  |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 227        | 278 | 273 | 197 | 279 | 154 | 97  | 88  | 76  | 382 | 514 | 346 |
| Periode 1  | 34         | 145 | 72  | 59  | 75  | 14  | 46  | 2   | 42  | 172 | 148 | 94  |
| Periode 2  | 99         | 73  | 118 | 71  | 133 | 103 | 51  | 86  | 21  | 88  | 190 | 89  |
| Periode 3  | 76         | 60  | 72  | 67  | 71  | 37  | 0   | 0   | 13  | 122 | 176 | 163 |
| Maksimum   | 30         | 94  | 61  | 31  | 77  | 38  | 48  | 32  | 32  | 69  | 74  | 44  |
| Hari Hujan | 20         | 19  | 22  | 14  | 16  | 12  | 4   | 8   | 8   | 16  | 23  | 21  |

|            |      |
|------------|------|
| Tahunan    | 2911 |
| Hujan Maks | 94   |
| Hari Hujan | 183  |

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Tahun : 2023

|                     |                     |                |               |                 |            |
|---------------------|---------------------|----------------|---------------|-----------------|------------|
| <b>NAMA STASIUN</b> | <b>SARANGAN_MGT</b> | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620011  |
| Kode stasiun        |                     | Kelurahan/Desa | Sarangan      | Tahun Pendirian | 1980       |
| Lintang Selatan     | -7.679600           | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur         | 111.21640           | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi             | 1293                |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 6          | 8   | 35  | 0   | 12  | 0   | 12  | 0   | 0   | 0   | 3   | 12  |
| 2          | 2          | 0   | 49  | 6   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 56  |
| 3          | 7          | 0   | 16  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 4          | 5          | 0   | 0   | 3   | 19  | 0   | 0   | 0   | 0   | 5   | 8   | 6   |
| 5          | 6          | 21  | 4   | 0   | 50  | 0   | 0   | 0   | 0   | 0   | 10  | 52  |
| 6          | 7          | 0   | 12  | 0   | 50  | 2   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 15  | 0   | 2   | 18  | 0   | 0   | 0   | 0   | 61  |
| 8          | 0          | 23  | 0   | 0   | 0   | 0   | 37  | 0   | 0   | 0   | 0   | 8   |
| 9          | 0          | 13  | 6   | 18  | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   |
| 10         | 2          | 11  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 63  |
| 11         | 0          | 54  | 0   | 10  | 5   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| 12         | 0          | 16  | 0   | 0   | 29  | 0   | 0   | 0   | 0   | 0   | 15  | 0   |
| 13         | 0          | 27  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 14         | 0          | 50  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 11  |
| 15         | 0          | 91  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 16         | 11         | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 17         | 2          | 13  | 10  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 5          | 13  | 46  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 10         | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 4          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 5          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 23         | 0          | 5   | 30  | 6   | 0   | 0   | 0   | 0   | 0   | 28  | 0   | 0   |
| 24         | 0          | 4   | 78  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 0          | 17  | 92  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 20         | 17  | 57  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 27         | 15         | 10  | 27  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 28         | 0          | 5   | 52  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 2   | 56  | 0   | 0   | 0   | 0   | 0   | 0   | 61  | 13  |
| 30         | 7          |     | 1   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 3   |
| 31         | 8          |     | 6   |     | 0   |     | 0   | 0   |     | 0   |     | 49  |
| Total      | 122        | 477 | 539 | 165 | 170 | 4   | 69  | 0   | 0   | 33  | 150 | 356 |
| Periode 1  | 35         | 76  | 126 | 44  | 136 | 4   | 69  | 0   | 0   | 5   | 31  | 259 |
| Periode 2  | 28         | 339 | 68  | 17  | 34  | 0   | 0   | 0   | 0   | 0   | 40  | 11  |
| Periode 3  | 51         | 62  | 339 | 104 | 0   | 0   | 0   | 0   | 0   | 28  | 79  | 37  |
| Maksimum   | 20         | 91  | 92  | 56  | 50  | 2   | 37  | 0   | 0   | 28  | 61  | 63  |
| Hari Hujan | 17         | 21  | 19  | 13  | 7   | 2   | 4   | 0   | 0   | 2   | 13  | 14  |

|            |      |
|------------|------|
| Tahunan    | 2085 |
| Hujan Maks | 92   |
| Hari Hujan | 112  |

Perbandingan Tiap Periode

## 7. Data Curah Hujan Stasiun Slagreng MGT

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Hidrologi

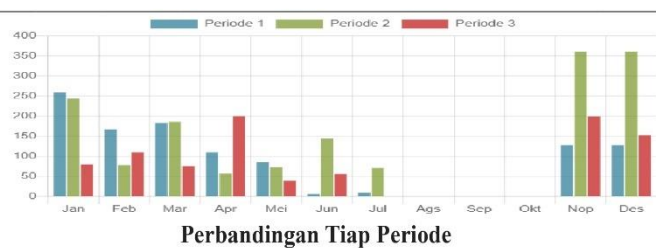
### DATA CURAH HUJAN HARIAN

Tahun : 2014

|                     |                 |                       |                      |                      |                  |
|---------------------|-----------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620013</b> |
| Kode stasiun        | -7.658408       | Kelurahan/Desa        | Sidorejo             | Tahun Pendirian      | 1980             |
| Lintang Selatan     | 111.278161      | Kecamatan             | Plaosan              | Tipe Alat            | PHB              |
| Bujur Timur         |                 | Kota/Kab              | Magetan              | Pengelola            | UPT Madiun       |
| Elevasi             | 615             |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 9          | 22  | 0   | 47  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 36         | 36  | 4   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 22         | 28  | 24  | 5   | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 80         | 30  | 12  | 0   | 0   | 0   | 6   | 0   | 0   | 0   | 0   | 0   |
| 5          | 39         | 0   | 0   | 6   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 65         | 23  | 40  | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 8          | 0   | 68  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 70  | 70  |
| 9          | 0          | 7   | 5   | 4   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 9   | 30  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 58  | 58  |
| 11         | 45         | 10  | 42  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 90  | 90  |
| 12         | 40         | 0   | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13         | 22         | 16  | 30  | 22  | 20  | 0   | 7   | 0   | 0   | 0   | 0   | 0   |
| 14         | 75         | 18  | 8   | 16  | 39  | 0   | 64  | 0   | 0   | 0   | 0   | 0   |
| 15         | 24         | 0   | 6   | 8   | 14  | 0   | 0   | 0   | 0   | 0   | 8   | 8   |
| 16         | 20         | 0   | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 89  | 89  |
| 17         | 0          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 93  | 93  |
| 18         | 0          | 0   | 44  | 0   | 0   | 115 | 0   | 0   | 0   | 0   | 49  | 49  |
| 19         | 18         | 25  | 0   | 0   | 0   | 19  | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 0   | 0   | 5   | 0   | 10  | 0   | 0   | 0   | 0   | 32  | 32  |
| 21         | 21         | 6   | 16  | 42  | 0   | 0   | 0   | 0   | 0   | 0   | 82  | 90  |
| 22         | 0          | 18  | 25  | 11  | 32  | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 23         | 10         | 26  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 78  | 0   |
| 24         | 16         | 5   | 0   | 60  | 7   | 16  | 0   | 0   | 0   | 0   | 30  | 17  |
| 25         | 0          | 22  | 6   | 7   | 0   | 29  | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 0          | 0   | 0   | 58  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 35  |
| 27         | 14         | 0   | 0   | 22  | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 19         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 30         | 0          |     | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 31         | 20         |     | 17  |     | 0   |     | 0   |     |     | 0   |     | 0   |
| Total      | 603        | 355 | 462 | 367 | 198 | 206 | 81  | 0   | 0   | 0   | 688 | 642 |
| Periode 1  | 259        | 167 | 183 | 110 | 86  | 6   | 10  | 0   | 0   | 0   | 128 | 128 |
| Periode 2  | 244        | 78  | 186 | 57  | 73  | 144 | 71  | 0   | 0   | 0   | 361 | 361 |
| Periode 3  | 80         | 110 | 76  | 200 | 39  | 56  | 0   | 0   | 0   | 0   | 199 | 153 |
| Maksimum   | 80         | 36  | 68  | 60  | 39  | 115 | 64  | 0   | 0   | 0   | 93  | 93  |
| Hari Hujan | 20         | 19  | 20  | 16  | 9   | 8   | 4   | 0   | 0   | 0   | 12  | 13  |

|            |      |
|------------|------|
| Tahunan    | 3602 |
| Hujan Maks | 115  |
| Hari Hujan | 121  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

Tahun : 2015

|                     |                 |                       |                      |                      |                  |
|---------------------|-----------------|-----------------------|----------------------|----------------------|------------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> | <b>Wilayah Sungai</b> | <b>Bengawan Solo</b> | <b>Kode Database</b> | <b>350620013</b> |
| Kode stasiun        | -7.658408       | Kelurahan/Desa        | Sidorejo             | Tahun Pendirian      | 1980             |
| Lintang Selatan     | 111.278161      | Kecamatan             | Plaosan              | Tipe Alat            | PHB              |
| Bujur Timur         | 615             | Kota/Kab              | Magetan              | Pengelola            | UPT Madiun       |
| Elevasi             |                 |                       |                      |                      |                  |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 8          | 7   | 65  | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 2          | 7          | 90  | 20  | 12  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 22  |
| 3          | 8          | 15  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 0          | 0   | 35  | 68  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 5          | 0          | 20  | 5   | 8   | 4   | 0   | 0   | 0   | 0   | 0   | 48  | 0   |
| 6          | 34         | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 5   | 59  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 8          | 0          | 32  | 13  | 95  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 6   |
| 9          | 0          | 64  | 0   | 38  | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 85  |
| 10         | 0          | 22  | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 8   | 0   |
| 11         | 0          | 29  | 6   | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 45  |
| 12         | 0          | 36  | 10  | 28  | 5   | 0   | 0   | 0   | 0   | 0   | 9   | 3   |
| 13         | 0          | 30  | 0   | 0   | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 48  |
| 14         | 9          | 19  | 7   | 50  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 60  |
| 15         | 40         | 40  | 59  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 55  | 0   |
| 16         | 60         | 12  | 0   | 95  | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 14  |
| 17         | 8          | 7   | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 70  |
| 18         | 37         | 0   | 7   | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 58  |
| 19         | 60         | 5   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 20         | 0          | 65  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 21         | 0          | 0   | 0   | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 58  |
| 22         | 8          | 0   | 6   | 40  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 0          | 0   | 0   | 50  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 55         | 9   | 0   | 42  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   |
| 25         | 7          | 18  | 40  | 80  | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 46  |
| 26         | 0          | 0   | 7   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 30  |
| 27         | 9          | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 28         | 17         | 0   | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 18  |
| 29         | 31         |     | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 10         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 85         |     | 0   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 493        | 596 | 422 | 795 | 75  | 0   | 0   | 0   | 0   | 0   | 214 | 591 |
| Periode 1  | 57         | 271 | 204 | 226 | 38  | 0   | 0   | 0   | 0   | 0   | 90  | 122 |
| Periode 2  | 214        | 243 | 113 | 283 | 29  | 0   | 0   | 0   | 0   | 0   | 92  | 308 |
| Periode 3  | 137        | 82  | 105 | 286 | 8   | 0   | 0   | 0   | 0   | 0   | 32  | 161 |
| Maksimum   | 85         | 90  | 65  | 95  | 25  | 0   | 0   | 0   | 0   | 0   | 55  | 85  |
| Hari Hujan | 18         | 21  | 17  | 21  | 7   | 0   | 0   | 0   | 0   | 0   | 12  | 18  |

|            |      |
|------------|------|
| Tahunan    | 3186 |
| Hujan Maks | 95   |
| Hari Hujan | 114  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

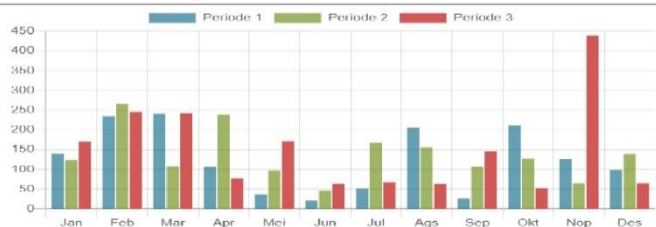
Tahun : 2016

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        | -7.658408       |
| Lintang Selatan     | 111.278161      |
| Bujur Timur         | 615             |
| Elevasi             |                 |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 40         | 0   | 4   | 0   | 12  | 16  | 41  | 0   | 0   | 0   | 16  | 50  |
| 2          | 4          | 0   | 29  | 3   | 0   | 0   | 5   | 0   | 0   | 28  | 0   | 18  |
| 3          | 30         | 75  | 15  | 0   | 0   | 5   | 0   | 0   | 0   | 60  | 0   | 12  |
| 4          | 22         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 0          | 30  | 30  | 55  | 0   | 0   | 5   | 65  | 0   | 0   | 0   | 10  |
| 6          | 0          | 9   | 58  | 4   | 0   | 0   | 0   | 0   | 4   | 5   | 0   | 0   |
| 7          | 0          | 6   | 60  | 18  | 0   | 0   | 0   | 50  | 22  | 0   | 0   | 0   |
| 8          | 0          | 60  | 0   | 0   | 0   | 0   | 0   | 90  | 0   | 0   | 18  | 5   |
| 9          | 6          | 0   | 45  | 20  | 16  | 0   | 0   | 0   | 0   | 26  | 5   | 4   |
| 10         | 38         | 50  | 0   | 6   | 9   | 0   | 0   | 0   | 0   | 92  | 88  | 0   |
| 11         | 46         | 45  | 55  | 4   | 0   | 0   | 0   | 0   | 0   | 52  | 15  | 48  |
| 12         | 32         | 6   | 28  | 0   | 31  | 0   | 0   | 0   | 0   | 38  | 0   | 33  |
| 13         | 10         | 60  | 5   | 52  | 30  | 0   | 0   | 85  | 0   | 0   | 0   | 14  |
| 14         | 0          | 8   | 0   | 37  | 9   | 0   | 50  | 60  | 0   | 25  | 0   | 0   |
| 15         | 14         | 58  | 0   | 19  | 0   | 0   | 0   | 10  | 45  | 0   | 22  | 0   |
| 16         | 0          | 42  | 0   | 18  | 0   | 36  | 15  | 0   | 5   | 8   | 12  | 0   |
| 17         | 0          | 4   | 0   | 85  | 0   | 0   | 15  | 0   | 50  | 5   | 5   | 14  |
| 18         | 0          | 0   | 3   | 3   | 0   | 0   | 52  | 0   | 0   | 0   | 0   | 3   |
| 19         | 4          | 0   | 17  | 21  | 0   | 10  | 0   | 0   | 7   | 0   | 4   | 0   |
| 20         | 18         | 43  | 0   | 0   | 28  | 0   | 35  | 0   | 0   | 0   | 7   | 27  |
| 21         | 20         | 41  | 0   | 0   | 0   | 0   | 10  | 0   | 0   | 4   | 13  | 9   |
| 22         | 55         | 8   | 0   | 0   | 48  | 0   | 7   | 0   | 48  | 0   | 6   | 14  |
| 23         | 9          | 55  | 60  | 0   | 0   | 0   | 0   | 0   | 16  | 18  | 0   | 24  |
| 24         | 22         | 45  | 32  | 0   | 15  | 40  | 44  | 0   | 17  | 19  | 22  | 0   |
| 25         | 52         | 4   | 5   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 20  | 10  |
| 26         | 4          | 0   | 0   | 0   | 0   | 5   | 0   | 0   | 5   | 12  | 40  | 0   |
| 27         | 0          | 40  | 55  | 0   | 0   | 0   | 6   | 0   | 18  | 0   | 80  | 0   |
| 28         | 0          | 48  | 5   | 29  | 48  | 0   | 0   | 55  | 0   | 0   | 112 | 0   |
| 29         | 0          | 5   | 20  | 42  | 0   | 18  | 0   | 8   | 42  | 0   | 85  | 3   |
| 30         | 9          |     | 65  | 7   | 56  | 0   | 0   | 0   | 0   | 0   | 60  | 5   |
| 31         | 6          |     | 4   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 441        | 746 | 595 | 423 | 307 | 130 | 285 | 423 | 279 | 392 | 630 | 303 |
| Periode 1  | 140        | 234 | 241 | 106 | 37  | 21  | 51  | 205 | 26  | 211 | 127 | 99  |
| Periode 2  | 124        | 266 | 108 | 239 | 98  | 46  | 167 | 155 | 107 | 128 | 65  | 139 |
| Periode 3  | 171        | 246 | 242 | 78  | 172 | 63  | 67  | 63  | 146 | 53  | 438 | 65  |
| Maksimum   | 55         | 75  | 65  | 85  | 56  | 40  | 52  | 90  | 50  | 92  | 112 | 50  |
| Hari Hujan | 20         | 23  | 20  | 17  | 12  | 7   | 12  | 8   | 12  | 14  | 19  | 18  |

|            |      |
|------------|------|
| Tahunan    | 4954 |
| Hujan Maks | 112  |
| Hari Hujan | 182  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

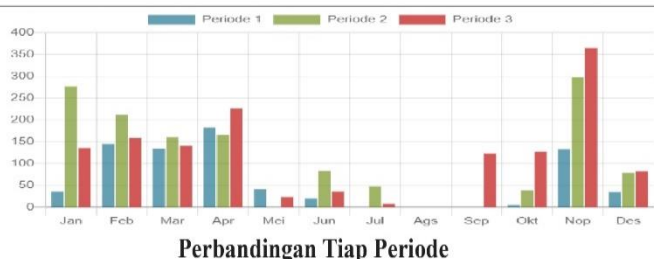
Tahun : 2017

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        |                 |
| Lintang Selatan     | -7.658408       |
| Bujur Timur         | 111.278161      |
| Elevasi             | 615             |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 14         | 15  | 85  | 48  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 16  |
| 2          | 0          | 28  | 5   | 60  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 3          | 0          | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 4          | 0   | 0   | 4   | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 0          | 0   | 34  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 30  | 0   |
| 6          | 13         | 0   | 5   | 5   | 5   | 5   | 0   | 0   | 0   | 0   | 43  | 0   |
| 7          | 0          | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 60  | 0   |
| 8          | 0          | 50  | 0   | 4   | 4   | 0   | 0   | 0   | 0   | 5   | 0   | 0   |
| 9          | 5          | 18  | 0   | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 10         | 0          | 16  | 5   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 0   | 48  | 0   | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 7   |
| 12         | 80         | 28  | 14  | 13  | 0   | 60  | 0   | 0   | 0   | 8   | 0   | 0   |
| 13         | 76         | 57  | 0   | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 14         | 0          | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 118 | 0   |
| 15         | 16         | 30  | 24  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 42  | 0   |
| 16         | 9          | 29  | 0   | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 20  |
| 17         | 0          | 0   | 6   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 20  | 18  |
| 18         | 75         | 0   | 52  | 12  | 0   | 0   | 0   | 0   | 0   | 26  | 58  | 0   |
| 19         | 15         | 5   | 16  | 107 | 0   | 0   | 48  | 0   | 0   | 0   | 0   | 5   |
| 20         | 6          | 54  | 0   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 60  | 25  |
| 21         | 16         | 44  | 25  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 37  | 28  |
| 22         | 0          | 23  | 6   | 4   | 0   | 3   | 0   | 0   | 0   | 0   | 30  | 5   |
| 23         | 15         | 0   | 0   | 55  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 28         | 5   | 0   | 85  | 0   | 0   | 0   | 0   | 0   | 14  | 15  | 0   |
| 25         | 7          | 0   | 0   | 23  | 0   | 8   | 0   | 0   | 8   | 0   | 80  | 0   |
| 26         | 30         | 45  | 49  | 42  | 0   | 0   | 0   | 0   | 5   | 28  | 45  | 0   |
| 27         | 0          | 36  | 10  | 0   | 0   | 25  | 0   | 0   | 28  | 60  | 47  | 20  |
| 28         | 12         | 6   | 0   | 0   | 0   | 0   | 8   | 0   | 75  | 0   | 38  | 7   |
| 29         | 4          |     | 0   | 0   | 10  | 0   | 0   | 0   | 7   | 25  | 65  | 0   |
| 30         | 24         |     | 51  | 17  | 13  | 0   | 0   | 0   | 0   | 0   | 8   | 22  |
| 31         | 6          |     | 38  |     | 61  |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 455        | 516 | 473 | 574 | 126 | 140 | 56  | 0   | 123 | 170 | 796 | 196 |
| Periode 1  | 36         | 145 | 134 | 182 | 42  | 21  | 0   | 0   | 0   | 5   | 133 | 35  |
| Periode 2  | 277        | 212 | 160 | 166 | 0   | 83  | 48  | 0   | 0   | 38  | 298 | 79  |
| Periode 3  | 136        | 159 | 141 | 226 | 23  | 36  | 8   | 0   | 123 | 127 | 365 | 82  |
| Maksimum   | 80         | 57  | 85  | 107 | 61  | 60  | 48  | 0   | 75  | 60  | 118 | 28  |
| Hari Hujan | 20         | 20  | 17  | 20  | 6   | 8   | 2   | 0   | 5   | 8   | 17  | 14  |

|            |      |
|------------|------|
| Tahunan    | 3625 |
| Hujan Maks | 118  |
| Hari Hujan | 137  |



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Hidrologi

**DATA CURAH HUJAN HARIAN**

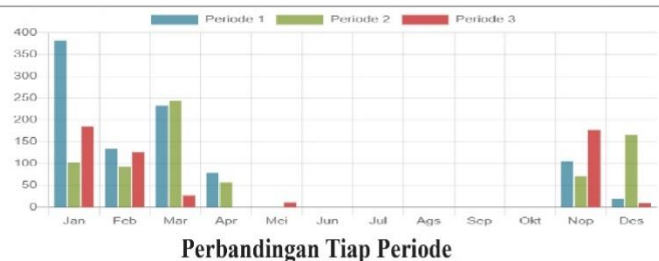
Tahun : 2018

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        |                 |
| Lintang Selatan     | -7.658408       |
| Bujur Timur         | 111.278161      |
| Elevasi             | 615             |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 10  | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 35  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 85         | 5   | 14  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 4          | 45         | 0   | 52  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 5          | 15  | 15  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 15  |
| 6          | 120        | 28  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 10         | 0   | 0   | 54  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 8          | 62         | 5   | 30  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 87  | 0   |
| 9          | 47         | 36  | 46  | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 11  | 0   |
| 10         | 8          | 0   | 18  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   |
| 11         | 5          | 30  | 62  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 93  |
| 12         | 15         | 5   | 44  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   |
| 13         | 0          | 7   | 0   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 4          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 57  |
| 15         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 0   |
| 16         | 16         | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 10         | 10  | 110 | 34  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 0          | 0   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 35         | 3   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 21  | 0   |
| 20         | 18         | 10  | 0   | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  |
| 21         | 22         | 9   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 8          | 0   | 4   | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 61         | 30  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 0          | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 21         | 28  | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 40  | 0   |
| 26         | 0          | 39  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  |
| 27         | 15         | 10  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 10         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 23  | 0   |
| 29         | 38         |     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 46  | 0   |
| 30         | 10         |     | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 68  | 0   |
| 31         | 20         |     | 27  |     | 0   |     | 0   | 0   |     | 0   |     | 6   |
| Total      | 690        | 353 | 531 | 136 | 11  | 0   | 0   | 0   | 0   | 0   | 353 | 201 |
| Periode 1  | 382        | 134 | 233 | 79  | 0   | 0   | 0   | 0   | 0   | 0   | 105 | 19  |
| Periode 2  | 103        | 93  | 244 | 57  | 0   | 0   | 0   | 0   | 0   | 0   | 71  | 166 |
| Periode 3  | 185        | 126 | 27  | 0   | 11  | 0   | 0   | 0   | 0   | 0   | 177 | 10  |
| Maksimum   | 120        | 39  | 110 | 54  | 11  | 0   | 0   | 0   | 0   | 0   | 87  | 93  |
| Hari Hujan | 24         | 20  | 17  | 8   | 1   | 0   | 0   | 0   | 0   | 0   | 11  | 7   |

|            |      |
|------------|------|
| Tahunan    | 2275 |
| Hujan Maks | 120  |
| Hari Hujan | 88   |



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Hidrologi

## DATA CURAH HUJAN HARIAN

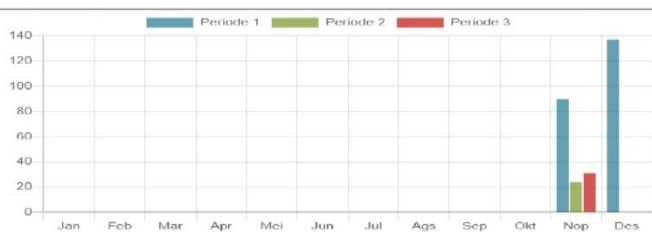
Tahun : 2019

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        | -7.658408       |
| Lintang Selatan     | 111.278161      |
| Bujur Timur         |                 |
| Elevasi             | 615             |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 2          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 66  | 0   |
| 3          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 4          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 5          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 6          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 137 |
| 7          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 8          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 9          | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 10         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 11         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 12         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 13         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 15         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 16         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 17         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| 22         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 24         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 26         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 27         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 28         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 30         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 31         | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Total      | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 145 | 137 |
| Periode 1  | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 90  | 137 |
| Periode 2  | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 24  | 0   |
| Periode 3  | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| Maksimum   | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 66  | 137 |
| Hari Hujan | 0          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6   | 1   |

|            |     |
|------------|-----|
| Tahunan    | 282 |
| Hujan Maks | 137 |
| Hari Hujan | 7   |



Perbandingan Tiap Periode

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Hidrologi

**DATA CURAH HUJAN HARIAN**

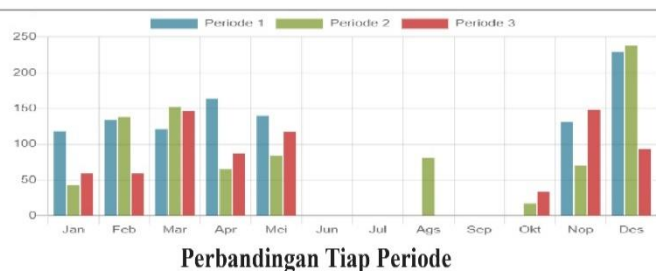
Tahun : 2020

|                    |                 |
|--------------------|-----------------|
| <b>NAMASTASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun       | -7.658408       |
| Lintang Selatan    | 111.278161      |
| Bujur Timur        | 615             |
| Elevasi            |                 |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 0          | 12  | 13  | 54  | 0   | 0   | 0   | 0   | 0   | 0   | 43  | 0   |
| 2          | 23         | 44  | 45  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 84  | 27  |
| 3          | 22         | 5   | 25  | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 54  |
| 4          | 16         | 22  | 4   | 16  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 19  |
| 5          | 0          | 19  | 5   | 7   | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 28  |
| 6          | 26         | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 53  |
| 7          | 19         | 0   | 11  | 15  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 6   |
| 8          | 0          | 12  | 10  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 9          | 12         | 20  | 8   | 11  | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 22  |
| 10         | 0          | 0   | 0   | 0   | 83  | 0   | 0   | 0   | 0   | 0   | 0   | 13  |
| 11         | 33         | 45  | 5   | 0   | 19  | 0   | 0   | 0   | 0   | 17  | 0   | 2   |
| 12         | 0          | 3   | 6   | 0   | 13  | 0   | 0   | 81  | 0   | 0   | 0   | 39  |
| 13         | 0          | 0   | 9   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 9   | 73  |
| 14         | 0          | 0   | 70  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 66  |
| 15         | 0          | 24  | 7   | 19  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 8   |
| 16         | 10         | 9   | 17  | 32  | 0   | 0   | 0   | 0   | 0   | 0   | 15  | 0   |
| 17         | 0          | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |
| 18         | 0          | 16  | 21  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 39  |
| 19         | 0          | 5   | 14  | 0   | 33  | 0   | 0   | 0   | 0   | 0   | 0   | 7   |
| 20         | 0          | 22  | 3   | 14  | 14  | 0   | 0   | 0   | 0   | 0   | 36  | 0   |
| 21         | 8          | 0   | 0   | 0   | 48  | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 22         | 14         | 6   | 0   | 5   | 0   | 0   | 0   | 0   | 0   | 2   | 92  | 3   |
| 23         | 13         | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   |
| 24         | 0          | 13  | 4   | 33  | 3   | 0   | 0   | 0   | 0   | 17  | 23  | 0   |
| 25         | 0          | 8   | 8   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 18         | 9   | 25  | 7   | 24  | 0   | 0   | 0   | 0   | 8   | 0   | 6   |
| 27         | 6          | 0   | 14  | 0   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 41  |
| 28         | 0          | 16  | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 10  | 17  |
| 29         | 0          | 7   | 48  | 0   | 31  | 0   | 0   | 0   | 0   | 0   | 4   | 0   |
| 30         | 0          |     | 42  | 38  | 2   | 0   | 0   | 0   | 0   | 0   | 18  | 26  |
| 31         | 0          |     | 23  |     | 39  |     | 0   | 0   |     | 8   |     | 23  |
| Total      | 220        | 331 | 443 | 316 | 380 | 0   | 0   | 81  | 0   | 59  | 349 | 583 |
| Periode 1  | 118        | 134 | 121 | 164 | 140 | 0   | 0   | 0   | 0   | 0   | 131 | 229 |
| Periode 2  | 43         | 138 | 152 | 65  | 84  | 0   | 0   | 81  | 0   | 17  | 70  | 238 |
| Periode 3  | 59         | 59  | 147 | 87  | 117 | 0   | 0   | 0   | 0   | 34  | 148 | 93  |
| Maksimum   | 33         | 45  | 70  | 54  | 83  | 0   | 0   | 81  | 0   | 17  | 92  | 73  |
| Hari Hujan | 13         | 21  | 25  | 15  | 17  | 0   | 0   | 1   | 0   | 7   | 14  | 23  |

|            |      |
|------------|------|
| Tahunan    | 2762 |
| Hujan Maks | 92   |
| Hari Hujan | 136  |



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Hidrologi

## DATA CURAH HUJAN HARIAN

Tahun : 2021

|                 |            |                |               |                 |            |
|-----------------|------------|----------------|---------------|-----------------|------------|
| NAMA STASIUN    | SLAGRENG   | Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kode stasiun    |            | Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Lintang Selatan | -7.658408  | Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Bujur Timur     | 111.278161 | Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |
| Elevasi         | 615        |                |               |                 |            |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 19         | 2   | 0   | 3   | 9   | 9   | 0   | 0   | 0   | 0   | 46  | 0   |
| 2          | 22         | 0   | 0   | 36  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 3          | 0          | 8   | 4   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 19  | 0   |
| 4          | 13         | 31  | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 5          | 4          | 46  | 3   | 13  | 8   | 0   | 0   | 0   | 0   | 0   | 28  | 7   |
| 6          | 12         | 2   | 0   | 0   | 22  | 0   | 0   | 0   | 0   | 0   | 0   | 5   |
| 7          | 20         | 0   | 38  | 14  | 0   | 0   | 0   | 0   | 0   | 0   | 52  | 0   |
| 8          | 5          | 12  | 17  | 7   | 0   | 0   | 0   | 76  | 0   | 0   | 0   | 8   |
| 9          | 77         | 1   | 72  | 3   | 0   | 0   | 4   | 0   | 0   | 0   | 2   | 42  |
| 10         | 0          | 6   | 1   | 5   | 0   | 2   | 14  | 0   | 0   | 0   | 86  | 9   |
| 11         | 0          | 33  | 0   | 44  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 60  |
| 12         | 3          | 12  | 37  | 2   | 0   | 47  | 0   | 0   | 12  | 0   | 6   | 13  |
| 13         | 0          | 56  | 92  | 0   | 0   | 4   | 0   | 0   | 8   | 0   | 0   | 0   |
| 14         | 0          | 0   | 0   | 62  | 1   | 0   | 0   | 1   | 0   | 0   | 15  | 0   |
| 15         | 0          | 3   | 11  | 38  | 0   | 0   | 0   | 0   | 23  | 0   | 11  | 0   |
| 16         | 5          | 2   | 0   | 104 | 0   | 3   | 0   | 0   | 0   | 0   | 23  | 44  |
| 17         | 15         | 0   | 27  | 0   | 0   | 24  | 0   | 0   | 0   | 0   | 9   | 32  |
| 18         | 42         | 12  | 37  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 63  | 8   |
| 19         | 6          | 4   | 43  | 4   | 0   | 88  | 0   | 2   | 0   | 9   | 47  | 37  |
| 20         | 1          | 15  | 0   | 0   | 47  | 12  | 0   | 0   | 0   | 5   | 9   | 16  |
| 21         | 11         | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 8   |
| 22         | 8          | 11  | 1   | 0   | 0   | 2   | 0   | 0   | 9   | 0   | 0   | 5   |
| 23         | 6          | 5   | 6   | 0   | 0   | 5   | 0   | 0   | 11  | 3   | 0   | 0   |
| 24         | 0          | 6   | 0   | 0   | 9   | 3   | 0   | 0   | 0   | 1   | 127 | 73  |
| 25         | 20         | 8   | 2   | 0   | 14  | 6   | 0   | 0   | 0   | 4   | 0   | 0   |
| 26         | 0          | 18  | 67  | 6   | 2   | 0   | 0   | 0   | 0   | 14  | 2   | 14  |
| 27         | 47         | 5   | 9   | 0   | 4   | 18  | 0   | 0   | 16  | 40  | 0   | 2   |
| 28         | 53         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 23  | 76  | 0   |
| 29         | 23         |     | 0   | 0   | 5   | 0   | 0   | 0   | 0   | 10  | 0   | 0   |
| 30         | 10         |     | 43  | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 31  | 0   |
| 31         | 31         |     | 2   |     | 0   |     | 0   | 0   |     | 0   |     | 2   |
| Total      | 453        | 302 | 514 | 396 | 124 | 223 | 18  | 79  | 79  | 109 | 656 | 385 |
| Periode 1  | 172        | 108 | 137 | 83  | 42  | 11  | 18  | 76  | 0   | 0   | 235 | 71  |
| Periode 2  | 72         | 137 | 247 | 259 | 48  | 178 | 0   | 3   | 43  | 14  | 183 | 210 |
| Periode 3  | 178        | 57  | 128 | 54  | 34  | 34  | 0   | 0   | 36  | 95  | 238 | 102 |
| Maksimum   | 77         | 56  | 92  | 104 | 47  | 88  | 14  | 76  | 23  | 40  | 127 | 73  |
| Hari Hujan | 23         | 23  | 20  | 17  | 12  | 13  | 2   | 3   | 6   | 9   | 20  | 18  |

|            |      |
|------------|------|
| Tahunan    | 3338 |
| Hujan Maks | 127  |
| Hari Hujan | 166  |



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**DATA CURAH HUJAN HARIAN**

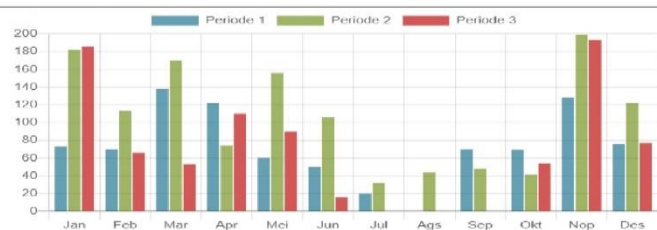
Tahun : 2022

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        | -7.658408       |
| Lintang Selatan     | 111.278161      |
| Bujur Timur         |                 |
| Elevasi             | 615             |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 4          | 12  | 18  | 5   | 0   | 12  | 0   | 0   | 60  | 22  | 0   | 52  |
| 2          | 7          | 8   | 14  | 7   | 2   | 4   | 0   | 0   | 2   | 2   | 29  | 3   |
| 3          | 10         | 0   | 36  | 34  | 5   | 0   | 0   | 0   | 0   | 15  | 0   | 15  |
| 4          | 0          | 2   | 15  | 28  | 0   | 0   | 0   | 0   | 0   | 14  | 0   | 0   |
| 5          | 6          | 5   | 3   | 46  | 0   | 34  | 0   | 0   | 0   | 2   | 10  | 0   |
| 6          | 0          | 0   | 0   | 0   | 0   | 0   | 20  | 0   | 0   | 1   | 29  | 0   |
| 7          | 5          | 17  | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 0   | 21  | 0   |
| 8          | 18         | 6   | 22  | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 9   | 1   |
| 9          | 9          | 14  | 17  | 0   | 37  | 0   | 0   | 0   | 0   | 13  | 2   | 5   |
| 10         | 14         | 6   | 13  | 2   | 0   | 0   | 0   | 0   | 3   | 0   | 28  | 0   |
| 11         | 28         | 0   | 54  | 20  | 28  | 7   | 0   | 0   | 48  | 0   | 23  | 0   |
| 12         | 70         | 5   | 15  | 0   | 1   | 17  | 1   | 0   | 0   | 0   | 32  | 0   |
| 13         | 17         | 16  | 46  | 0   | 15  | 4   | 0   | 2   | 0   | 8   | 0   | 5   |
| 14         | 6          | 63  | 3   | 16  | 11  | 67  | 31  | 22  | 0   | 0   | 0   | 84  |
| 15         | 0          | 0   | 6   | 0   | 8   | 0   | 0   | 10  | 0   | 0   | 5   | 18  |
| 16         | 6          | 0   | 7   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 12  | 7   |
| 17         | 18         | 5   | 36  | 2   | 0   | 6   | 0   | 10  | 0   | 2   | 6   | 2   |
| 18         | 8          | 12  | 3   | 32  | 0   | 0   | 0   | 0   | 0   | 23  | 29  | 0   |
| 19         | 17         | 9   | 0   | 0   | 62  | 2   | 0   | 0   | 0   | 2   | 92  | 0   |
| 20         | 12         | 3   | 0   | 4   | 31  | 2   | 0   | 0   | 0   | 6   | 0   | 6   |
| 21         | 42         | 0   | 0   | 37  | 14  | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 22         | 14         | 0   | 7   | 26  | 6   | 0   | 0   | 0   | 0   | 8   | 3   | 4   |
| 23         | 28         | 0   | 0   | 0   | 4   | 0   | 0   | 0   | 0   | 4   | 56  | 10  |
| 24         | 0          | 0   | 8   | 3   | 0   | 0   | 0   | 0   | 0   | 11  | 0   | 23  |
| 25         | 0          | 0   | 0   | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 48  | 5   |
| 26         | 4          | 16  | 3   | 1   | 0   | 0   | 0   | 0   | 0   | 15  | 19  | 8   |
| 27         | 0          | 47  | 6   | 0   | 66  | 16  | 0   | 0   | 0   | 15  | 4   | 7   |
| 28         | 3          | 3   | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 0   |
| 29         | 38         |     | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 34  | 18  |
| 30         | 57         |     | 27  | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 2   |
| 31         | 3          |     | 4   |     | 0   |     | 0   | 0   |     | 0   |     | 0   |
| Total      | 444        | 249 | 365 | 306 | 306 | 172 | 52  | 44  | 118 | 164 | 520 | 275 |
| Periode 1  | 73         | 70  | 138 | 122 | 60  | 50  | 20  | 0   | 70  | 69  | 128 | 76  |
| Periode 2  | 182        | 113 | 170 | 74  | 156 | 106 | 32  | 44  | 48  | 41  | 199 | 122 |
| Periode 3  | 186        | 66  | 53  | 110 | 90  | 16  | 0   | 0   | 0   | 54  | 193 | 77  |
| Maksimum   | 70         | 63  | 54  | 46  | 66  | 67  | 31  | 22  | 60  | 23  | 92  | 84  |
| Hari Hujan | 25         | 18  | 23  | 19  | 15  | 12  | 3   | 4   | 5   | 18  | 22  | 19  |

|            |      |
|------------|------|
| Tahunan    | 3015 |
| Hujan Maks | 92   |
| Hari Hujan | 183  |

**Perbandingan Tiap Periode**

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## DATA CURAH HUJAN HARIAN

Tahun : 2023

|                     |                 |
|---------------------|-----------------|
| <b>NAMA STASIUN</b> | <b>SLAGRENG</b> |
| Kode stasiun        |                 |
| Lintang Selatan     | -7.658408       |
| Bujur Timur         | 111.278161      |
| Elevasi             | 615             |

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Wilayah Sungai | Bengawan Solo | Kode Database   | 350620013  |
| Kelurahan/Desa | Sidorejo      | Tahun Pendirian | 1980       |
| Kecamatan      | Plaosan       | Tipe Alat       | PHB        |
| Kota/Kab       | Magetan       | Pengelola       | UPT Madiun |

| Tanggal    | Bulan (mm) |     |     |     |     |     |     |     |     |     |     |     |
|------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | Jan        | Feb | Mar | Apr | Mei | Jun | Jul | Ags | Sep | Okt | Nop | Des |
| 1          | 3          | 1   | 12  | 3   | 13  | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 2          | 0          | 11  | 18  | 6   | 20  | 0   | 0   | 0   | 0   | 0   | 0   | 29  |
| 3          | 2          | 8   | 16  | 4   | 0   | 0   | 0   | 14  | 0   | 0   | 0   | 0   |
| 4          | 2          | 0   | 0   | 2   | 64  | 0   | 0   | 0   | 0   | 0   | 12  | 4   |
| 5          | 2          | 6   | 0   | 0   | 20  | 0   | 0   | 0   | 0   | 0   | 25  | 31  |
| 6          | 1          | 0   | 0   | 0   | 2   | 8   | 0   | 0   | 0   | 0   | 0   | 0   |
| 7          | 0          | 0   | 0   | 36  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  |
| 8          | 0          | 13  | 0   | 0   | 0   | 0   | 19  | 0   | 0   | 0   | 0   | 61  |
| 9          | 0          | 6   | 18  | 2   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 3   |
| 10         | 9          | 7   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 49  | 0   |
| 11         | 6          | 30  | 0   | 3   | 5   | 0   | 0   | 0   | 0   | 0   | 79  | 0   |
| 12         | 0          | 32  | 0   | 0   | 25  | 0   | 0   | 0   | 0   | 0   | 17  | 0   |
| 13         | 0          | 31  | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 14         | 12         | 5   | 28  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 35  | 0   |
| 15         | 0          | 39  | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 9   | 0   |
| 16         | 7          | 20  | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 14  | 0   |
| 17         | 0          | 9   | 8   | 6   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 18         | 13         | 7   | 10  | 0   | 0   | 16  | 0   | 0   | 0   | 0   | 0   | 0   |
| 19         | 0          | 2   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 20         | 3          | 8   | 1   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   |
| 21         | 5          | 2   | 48  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 22         | 8          | 2   | 85  | 29  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 23         | 0          | 8   | 1   | 23  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 24         | 10         | 6   | 20  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 25         | 3          | 7   | 16  | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 26         | 2          | 9   | 9   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   |
| 27         | 8          | 11  | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 18  |
| 28         | 26         | 3   | 78  | 42  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 29         | 0          |     | 3   | 12  | 0   | 0   | 0   | 0   | 0   | 0   | 22  | 23  |
| 30         | 44         |     | 6   | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 1   |
| 31         | 4          |     | 5   |     | 0   |     | 0   | 0   |     | 0   |     | 85  |
| Total      | 170        | 283 | 402 | 195 | 149 | 26  | 22  | 14  | 0   | 0   | 267 | 279 |
| Periode 1  | 19         | 52  | 64  | 54  | 119 | 8   | 22  | 14  | 0   | 0   | 86  | 152 |
| Periode 2  | 41         | 183 | 67  | 16  | 30  | 18  | 0   | 0   | 0   | 0   | 154 | 0   |
| Periode 3  | 106        | 48  | 266 | 125 | 0   | 0   | 0   | 0   | 0   | 0   | 27  | 42  |
| Maksimum   | 44         | 39  | 85  | 42  | 64  | 16  | 19  | 14  | 0   | 0   | 79  | 85  |
| Hari Hujan | 20         | 25  | 21  | 18  | 7   | 3   | 2   | 1   | 0   | 0   | 11  | 11  |

|            |      |
|------------|------|
| Tahunan    | 1807 |
| Hujan Maks | 85   |
| Hari Hujan | 119  |



## Lampiran 2 Hasil Analisis Uji Kepanggahan dengan Metode RAPS

### Pengujian Stasiun Gandong kerik dengan RAPS

| No                                   | Tahun | P (mm)   | (P-P rata-rata)<br>(mm) | Sk'    | Dy <sup>2</sup> | Sk''    | Sk''   |
|--------------------------------------|-------|----------|-------------------------|--------|-----------------|---------|--------|
| 1                                    | 2014  | 1343     | -681,1                  | -681,1 | 46389,7         | -1,5359 | 1,5359 |
| 2                                    | 2015  | 1828     | -196,1                  | -877,2 | 76948,0         | -1,9781 | 1,9781 |
| 3                                    | 2016  | 2663     | 638,9                   | -238,3 | 5678,7          | -0,5374 | 0,5374 |
| 4                                    | 2017  | 2362     | 337,9                   | 99,6   | 992,0           | 0,2246  | 0,2246 |
| 5                                    | 2018  | 1643     | -381,1                  | -281,5 | 7924,2          | -0,6348 | 0,6348 |
| 6                                    | 2019  | 1883     | -141,1                  | -422,6 | 17859,1         | -0,9530 | 0,9530 |
| 7                                    | 2020  | 2441     | 416,9                   | -5,7   | 3,2             | -0,0129 | 0,0129 |
| 8                                    | 2021  | 2387     | 362,9                   | 357,2  | 12759,2         | 0,8055  | 0,8055 |
| 9                                    | 2022  | 2197     | 172,9                   | 530,1  | 28100,6         | 1,1954  | 1,1954 |
| 10                                   | 2023  | 1494     | -530,1                  | 0,0    | 0,0             | 0,0000  | 0,0000 |
| Jumlah                               |       | 20241    |                         |        | 196654,7        |         |        |
| P rata-rata                          |       | 2024,1   |                         |        |                 |         |        |
| Banyak data (n)                      |       | 10       |                         |        |                 |         |        |
| Dy                                   |       | 443,4577 |                         |        |                 |         |        |
| Q <sub>hitung</sub>                  |       | 1,9781   |                         |        |                 |         |        |
| R <sub>hitung</sub>                  |       | 3,1735   |                         |        |                 |         |        |
| Q/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,6255   |                         |        |                 |         |        |
| R/n <sup>0.5</sup> <sub>hitung</sub> |       | 1,0035   |                         |        |                 |         |        |

#### kesimpulan

| $\alpha$ | Q/n <sup>0.5</sup> | R/n <sup>0.5</sup> | Keterangan |
|----------|--------------------|--------------------|------------|
| 1%       | 1,29               | 1,38               | PANGGAH    |
| 5%       | 1,14               | 1,28               | PANGGAH    |

### Pengujian Stasiun Jejeruk dengan RAPS

| No                                   | Tahun | P (mm)   | (P-P rata-rata)<br>(mm) | Sk'    | Dy <sup>2</sup> | Sk''    | Sk''   |
|--------------------------------------|-------|----------|-------------------------|--------|-----------------|---------|--------|
| 1                                    | 2014  | 2200     | -42,7                   | -42,7  | 182,3           | -0,0829 | 0,0829 |
| 2                                    | 2015  | 1865     | -377,7                  | -420,4 | 17673,6         | -0,8158 | 0,8158 |
| 3                                    | 2016  | 3275     | 1032,3                  | 611,9  | 37442,2         | 1,1874  | 1,1874 |
| 4                                    | 2017  | 2768     | 525,3                   | 1137,2 | 129322,4        | 2,2068  | 2,2068 |
| 5                                    | 2018  | 1726     | -516,7                  | 620,5  | 38502,0         | 1,2041  | 1,2041 |
| 6                                    | 2019  | 1506     | -736,7                  | -116,2 | 1350,2          | -0,2255 | 0,2255 |
| 7                                    | 2020  | 2386     | 143,3                   | 27,1   | 73,4            | 0,0526  | 0,0526 |
| 8                                    | 2021  | 2365     | 122,3                   | 149,4  | 2232,0          | 0,2899  | 0,2899 |
| 9                                    | 2022  | 2716     | 473,3                   | 622,7  | 38775,5         | 1,2084  | 1,2084 |
| 10                                   | 2023  | 1620     | -622,7                  | 0,0    | 0,0             | 0,0000  | 0,0000 |
| Jumlah                               |       | 22427    |                         |        | 265553,8        |         |        |
| P rata-rata                          |       | 2242,7   |                         |        |                 |         |        |
| Banyak data (n)                      |       | 10       |                         |        |                 |         |        |
| Dy                                   |       | 515,3191 |                         |        |                 |         |        |
| Q <sub>hitung</sub>                  |       | 2,2068   |                         |        |                 |         |        |
| R <sub>hitung</sub>                  |       | 3,0226   |                         |        |                 |         |        |
| Q/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,6978   |                         |        |                 |         |        |
| R/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,9558   |                         |        |                 |         |        |

#### kesimpulan

| $\alpha$ | Q/n <sup>0.5</sup> | R/n <sup>0.5</sup> | Keterangan |
|----------|--------------------|--------------------|------------|
| 1%       | 1,29               | 1,38               | PANGGAH    |
| 5%       | 1,14               | 1,28               | PANGGAH    |

## Pengujian Stasiun Bendo MGT dengan RAPS

| No                                   | Tahun | P (mm)    | (P-P rata-rata)<br>(mm) | Sk'    | Dy <sup>2</sup> | Sk''   | Sk''   |
|--------------------------------------|-------|-----------|-------------------------|--------|-----------------|--------|--------|
| 1                                    | 2014  | 2046      | 72,9                    | 72,9   | 531,4           | 0,0463 | 0,0463 |
| 2                                    | 2015  | 1927      | -46,1                   | 26,8   | 71,8            | 0,0170 | 0,0170 |
| 3                                    | 2016  | 4205      | 2231,9                  | 2258,7 | 510172,6        | 1,4353 | 1,4353 |
| 4                                    | 2017  | 2710      | 736,9                   | 2995,6 | 897361,9        | 1,9036 | 1,9036 |
| 5                                    | 2018  | 1177      | -796,1                  | 2199,5 | 483780,0        | 1,3977 | 1,3977 |
| 6                                    | 2019  | 1196      | -777,1                  | 1422,4 | 202322,2        | 0,9039 | 0,9039 |
| 7                                    | 2020  | 1877      | -96,1                   | 1326,3 | 175907,2        | 0,8428 | 0,8428 |
| 8                                    | 2021  | 1812      | -161,1                  | 1165,2 | 135769,1        | 0,7404 | 0,7404 |
| 9                                    | 2022  | 1648      | -325,1                  | 840,1  | 70576,8         | 0,5338 | 0,5338 |
| 10                                   | 2023  | 1133      | -840,1                  | 0,0    | 0,0             | 0,0000 | 0,0000 |
| Jumlah                               |       | 19731     |                         |        | 2476493,0       |        |        |
| P rata-rata                          |       | 1973,1    |                         |        |                 |        |        |
| Banyak data (n)                      |       | 10        |                         |        |                 |        |        |
| Dy                                   |       | 1573,6877 |                         |        |                 |        |        |
| Q <sub>hitung</sub>                  |       | 1,9036    |                         |        |                 |        |        |
| R <sub>hitung</sub>                  |       | 1,9036    |                         |        |                 |        |        |
| Q/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,6020    |                         |        |                 |        |        |
| R/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,6020    |                         |        |                 |        |        |

## kesimpulan

| $\alpha$ | Q/n <sup>0.5</sup> | R/n <sup>0.5</sup> | Keterangan |
|----------|--------------------|--------------------|------------|
| 1%       | 1,29               | 1,38               | PANGGAH    |
| 5%       | 1,14               | 1,28               | PANGGAH    |

## Pengujian Stasiun Bogem Rejosari dengan RAPS

| No                                   | Tahun | P (mm)   | (P-P rata-rata)<br>(mm) | Sk'    | Dy <sup>2</sup> | Sk''    | Sk''   |
|--------------------------------------|-------|----------|-------------------------|--------|-----------------|---------|--------|
| 1                                    | 2014  | 1521     | -149,8                  | -149,8 | 2244,0          | -0,2447 | 0,2447 |
| 2                                    | 2015  | 1727     | 56,2                    | -93,6  | 876,1           | -0,1529 | 0,1529 |
| 3                                    | 2016  | 2848     | 1177,2                  | 1083,6 | 117418,9        | 1,7700  | 1,7700 |
| 4                                    | 2017  | 1673     | 2,2                     | 1085,8 | 117896,2        | 1,7736  | 1,7736 |
| 5                                    | 2018  | 1209     | -461,8                  | 624,0  | 38937,6         | 1,0192  | 1,0192 |
| 6                                    | 2019  | 1366     | -304,8                  | 319,2  | 10188,9         | 0,5214  | 0,5214 |
| 7                                    | 2020  | 1770     | 99,2                    | 418,4  | 17505,9         | 0,6834  | 0,6834 |
| 8                                    | 2021  | 1811     | 140,2                   | 558,6  | 31203,4         | 0,9124  | 0,9124 |
| 9                                    | 2022  | 1733     | 62,2                    | 620,8  | 38539,3         | 1,0140  | 1,0140 |
| 10                                   | 2023  | 1050     | -620,8                  | 0,0    | 0,0             | 0,0000  | 0,0000 |
| Jumlah                               |       | 16708    |                         |        | 374810,1        |         |        |
| P rata-rata                          |       | 1670,8   |                         |        |                 |         |        |
| Banyak data (n)                      |       | 10       |                         |        |                 |         |        |
| Dy                                   |       | 612,2174 |                         |        |                 |         |        |
| Q <sub>hitung</sub>                  |       | 1,7736   |                         |        |                 |         |        |
| R <sub>hitung</sub>                  |       | 2,0182   |                         |        |                 |         |        |
| Q/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,5608   |                         |        |                 |         |        |
| R/n <sup>0.5</sup> <sub>hitung</sub> |       | 0,6382   |                         |        |                 |         |        |

## kesimpulan

| $\alpha$ | Q/n <sup>0.5</sup> | R/n <sup>0.5</sup> | Keterangan |
|----------|--------------------|--------------------|------------|
| 1%       | 1,29               | 1,38               | PANGGAH    |
| 5%       | 1,14               | 1,28               | PANGGAH    |

**Pengujian Stasiun Nitikan dengan RAPS**

| No                   | Tahun | P (mm)    | (P-P rata-rata)<br>(mm) | Sk'               | Dy <sup>2</sup> | Sk''        | Sk''       |
|----------------------|-------|-----------|-------------------------|-------------------|-----------------|-------------|------------|
| 1                    | 2014  | 2709      | -7,7                    | -7,7              | 5,9             | -0,0041     | 0,0041     |
| 2                    | 2015  | 2801      | 84,3                    | 76,6              | 586,8           | 0,0406      | 0,0406     |
| 3                    | 2016  | 4527      | 1810,3                  | 1886,9            | 356039,2        | 1,0006      | 1,0006     |
| 4                    | 2017  | 3833      | 1116,3                  | 3003,2            | 901921,0        | 1,5925      | 1,5925     |
| 5                    | 2018  | 2453      | -263,7                  | 2739,5            | 750486,0        | 1,4527      | 1,4527     |
| 6                    | 2019  | 2679      | -37,7                   | 2701,8            | 729972,3        | 1,4327      | 1,4327     |
| 7                    | 2020  | 2068      | -648,7                  | 2053,1            | 421522,0        | 1,0887      | 1,0887     |
| 8                    | 2021  | 2236      | -480,7                  | 1572,4            | 247244,2        | 0,8338      | 0,8338     |
| 9                    | 2022  | 2363      | -353,7                  | 1218,7            | 148523,0        | 0,6462      | 0,6462     |
| 10                   | 2023  | 1498      | -1218,7                 | 0,0               | 0,0             | 0,0000      | 0,0000     |
| Jumlah               |       | 27167     |                         | Jumlah            | 3556300,3       |             |            |
| P rata-rata          |       | 2716,7    |                         | <b>kesimpulan</b> |                 |             |            |
| Banyak data (n)      |       | 10        |                         | $\alpha$          | $Q'n^{0.5}$     | $R'n^{0.5}$ | Keterangan |
| Dy                   |       | 1885,8156 |                         | 1%                | 1,29            | 1,38        | PANGGAH    |
| $Q_{hitung}$         |       | 1,5925    |                         | 5%                | 1,14            | 1,28        | PANGGAH    |
| $R_{hitung}$         |       | 1,5966    |                         |                   |                 |             |            |
| $Q'n^{0.5}_{hitung}$ |       | 0,5036    |                         |                   |                 |             |            |
| $R'n^{0.5}_{hitung}$ |       | 0,5049    |                         |                   |                 |             |            |

**Pengujian Stasiun Sarang MGT dengan RAPS**

| No                   | Tahun | P (mm)   | (P-P rata-rata)<br>(mm) | Sk'               | Dy <sup>2</sup> | Sk''        | Sk''       |
|----------------------|-------|----------|-------------------------|-------------------|-----------------|-------------|------------|
| 1                    | 2014  | 2352     | -124,1                  | -124,1            | 1540,1          | -0,1926     | 0,1926     |
| 2                    | 2015  | 2023     | -453,1                  | -577,2            | 33316,0         | -0,3061     | 0,3061     |
| 3                    | 2016  | 4191     | 1714,9                  | 1137,7            | 129436,1        | 0,6033      | 0,6033     |
| 4                    | 2017  | 2602     | 125,9                   | 1263,6            | 159668,5        | 0,6701      | 0,6701     |
| 5                    | 2018  | 1952     | -524,1                  | 739,5             | 54686,0         | 0,3921      | 0,3921     |
| 6                    | 2019  | 1362     | -1114,1                 | -374,6            | 14032,5         | -0,1986     | 0,1986     |
| 7                    | 2020  | 2588     | 111,9                   | -262,7            | 6901,1          | -0,1393     | 0,1393     |
| 8                    | 2021  | 2695     | 218,9                   | -43,8             | 191,8           | -0,0232     | 0,0232     |
| 9                    | 2022  | 2911     | 434,9                   | 391,1             | 15295,9         | 0,2074      | 0,2074     |
| 10                   | 2023  | 2085     | -391,1                  | 0,0               | 0,0             | 0,0000      | 0,0000     |
| Jumlah               |       | 24761    |                         | Jumlah            | 415068,1        |             |            |
| P rata-rata          |       | 2476,1   |                         | <b>kesimpulan</b> |                 |             |            |
| Banyak data (n)      |       | 10       |                         | $\alpha$          | $Q'n^{0.5}$     | $R'n^{0.5}$ | Keterangan |
| Dy                   |       | 644,2578 |                         | 1%                | 1,29            | 1,38        | PANGGAH    |
| $Q_{hitung}$         |       | 0,6701   |                         | 5%                | 1,14            | 1,28        | PANGGAH    |
| $R_{hitung}$         |       | 0,9761   |                         |                   |                 |             |            |
| $Q'n^{0.5}_{hitung}$ |       | 0,2119   |                         |                   |                 |             |            |
| $R'n^{0.5}_{hitung}$ |       | 0,3087   |                         |                   |                 |             |            |

**Pengujian Stasiun Slagreg dengan RAPS**

| No                  | Tahun | P (mm)    | (P-P rata-rata)<br>(mm) | Sk'               | Dy <sup>2</sup> | Sk''        | Sk''       |
|---------------------|-------|-----------|-------------------------|-------------------|-----------------|-------------|------------|
| 1                   | 2014  | 3602      | 717,4                   | 717,4             | 51466,3         | 0,3642      | 0,3642     |
| 2                   | 2015  | 3186      | 301,4                   | 1018,8            | 103795,3        | 0,5173      | 0,5173     |
| 3                   | 2016  | 4954      | 2069,4                  | 3088,2            | 953697,9        | 1,5680      | 1,5680     |
| 4                   | 2017  | 3625      | 740,4                   | 3828,6            | 1465817,8       | 1,9439      | 1,9439     |
| 5                   | 2018  | 2275      | -609,6                  | 3219,0            | 1036196,1       | 1,6344      | 1,6344     |
| 6                   | 2019  | 282       | -2602,6                 | 616,4             | 37994,9         | 0,3130      | 0,3130     |
| 7                   | 2020  | 2762      | -122,6                  | 493,8             | 24383,8         | 0,2507      | 0,2507     |
| 8                   | 2021  | 3338      | 453,4                   | 947,2             | 89718,8         | 0,4809      | 0,4809     |
| 9                   | 2022  | 3015      | 130,4                   | 1077,6            | 116122,2        | 0,5471      | 0,5471     |
| 10                  | 2023  | 1807      | -1077,6                 | 0,0               | 0,0             | 0           | 0          |
| Jumlah              |       | 28846     |                         | Jumlah            | 3879193,1       |             |            |
| P rata-rata         |       | 2884,6    |                         | <b>kesimpulan</b> |                 |             |            |
| Banyak data (n)     |       | 10        |                         | $\alpha$          | $Q/n^{0.5}$     | $R/n^{0.5}$ | Keterangan |
| Dy                  |       | 1969,5667 |                         | 1%                | 1,29            | 1,38        | PANGGAH    |
| $Q_{\frac{1-n}{n}}$ |       | 1,9439    |                         | 5%                | 1,14            | 1,28        | PANGGAH    |
| $R_{\frac{n}{n}}$   |       | 1,9439    |                         |                   |                 |             |            |
| $Q/n^{0.5}$         |       | 0,6147    |                         |                   |                 |             |            |
| $R/n^{0.5}$         |       | 0,6147    |                         |                   |                 |             |            |

### Lampiran 3 Kesalahan Kerapatan dan Kesalahan Interpolasi Data Curah Hujan Harian dan Bulanan

#### Kesalahan Interpolasi dan Kesalahan Perataan Data Curah Hujan Harian

|    | $\sqrt{A/n}$ | L (km)  | $Z_1$  | $Z_1$ (%) | $Z_3$  | $Z_3$ (%) |
|----|--------------|---------|--------|-----------|--------|-----------|
| 1  | 12,7592      | 13,6523 | 0,1454 | 14,5447   | 0,0963 | 9,6265    |
| 2  | 9,0221       | 9,6537  | 0,1011 | 10,1140   | 0,0916 | 9,1575    |
| 3  | 7,3665       | 7,8822  | 0,0820 | 8,1955    | 0,0894 | 8,9419    |
| 4  | 6,3796       | 6,8262  | 0,0707 | 7,0651    | 0,0881 | 8,8108    |
| 5  | 5,7061       | 6,1055  | 0,0630 | 6,2993    | 0,0872 | 8,7202    |
| 6  | 5,2089       | 5,5735  | 0,0574 | 5,7370    | 0,0865 | 8,6528    |
| 7  | 4,8225       | 5,1601  | 0,0530 | 5,3017    | 0,0860 | 8,6000    |
| 8  | 4,5111       | 4,8268  | 0,0495 | 4,9520    | 0,0856 | 8,5572    |
| 9  | 4,2531       | 4,5508  | 0,0466 | 4,6631    | 0,0852 | 8,5216    |
| 10 | 4,0348       | 4,3172  | 0,0442 | 4,4192    | 0,0849 | 8,4913    |
| 11 | 3,8470       | 4,1163  | 0,0421 | 4,2098    | 0,0847 | 8,4652    |
| 12 | 3,6833       | 3,9411  | 0,0403 | 4,0274    | 0,0844 | 8,4424    |
| 13 | 3,5388       | 3,7865  | 0,0387 | 3,8667    | 0,0842 | 8,4222    |
| 14 | 3,4100       | 3,6487  | 0,0372 | 3,7237    | 0,0840 | 8,4042    |
| 15 | 3,2944       | 3,5250  | 0,0360 | 3,5955    | 0,0839 | 8,3879    |
| 16 | 3,1898       | 3,4131  | 0,0348 | 3,4796    | 0,0837 | 8,3732    |
| 17 | 3,0946       | 3,3112  | 0,0337 | 3,3741    | 0,0836 | 8,3598    |
| 18 | 3,0074       | 3,2179  | 0,0328 | 3,2777    | 0,0835 | 8,3475    |
| 19 | 2,9272       | 3,1321  | 0,0319 | 3,1890    | 0,0834 | 8,3362    |
| 20 | 2,8530       | 3,0528  | 0,0311 | 3,1072    | 0,0833 | 8,3257    |

## Kesalahan Interpolasi dan kesalahan Kerapatan Data Curah Hujan Bulanan

| n  | $\sqrt{A/n}$ | L (km)  | $Z_1$  | $Z_1$ (%) | $Z_3$  | $Z_3$ (%) |
|----|--------------|---------|--------|-----------|--------|-----------|
| 1  | 12,7592      | 13,6523 | 0,1081 | 10,8063   | 0,0747 | 7,4693    |
| 2  | 9,0221       | 9,6537  | 0,0753 | 7,5305    | 0,0705 | 7,0521    |
| 3  | 7,3665       | 7,8822  | 0,0611 | 6,1082    | 0,0686 | 6,8591    |
| 4  | 6,3796       | 6,8262  | 0,0527 | 5,2688    | 0,0674 | 6,7414    |
| 5  | 5,7061       | 6,1055  | 0,0470 | 4,6997    | 0,0666 | 6,6599    |
| 6  | 5,2089       | 5,5735  | 0,0428 | 4,2815    | 0,0660 | 6,5991    |
| 7  | 4,8225       | 5,1601  | 0,0396 | 3,9577    | 0,0655 | 6,5515    |
| 8  | 4,5111       | 4,8268  | 0,0370 | 3,6973    | 0,0651 | 6,5128    |
| 9  | 4,2531       | 4,5508  | 0,0348 | 3,4822    | 0,0648 | 6,4806    |
| 10 | 4,0348       | 4,3172  | 0,0330 | 3,3005    | 0,0645 | 6,4533    |
| 11 | 3,8470       | 4,1163  | 0,0314 | 3,1445    | 0,0643 | 6,4297    |
| 12 | 3,6833       | 3,9411  | 0,0301 | 3,0086    | 0,0641 | 6,4090    |
| 13 | 3,5388       | 3,7865  | 0,0289 | 2,8888    | 0,0639 | 6,3907    |
| 14 | 3,4100       | 3,6487  | 0,0278 | 2,7823    | 0,0637 | 6,3743    |
| 15 | 3,2944       | 3,5250  | 0,0269 | 2,6866    | 0,0636 | 6,3596    |
| 16 | 3,1898       | 3,4131  | 0,0260 | 2,6002    | 0,0635 | 6,3462    |
| 17 | 3,0946       | 3,3112  | 0,0252 | 2,5215    | 0,0633 | 6,3341    |
| 18 | 3,0074       | 3,2179  | 0,0245 | 2,4496    | 0,0632 | 6,3229    |
| 19 | 2,9272       | 3,1321  | 0,0238 | 2,3835    | 0,0631 | 6,3126    |
| 20 | 2,8530       | 3,0528  | 0,0232 | 2,3224    | 0,0630 | 6,3031    |