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Lampiran 1 Data curah hujan

| CURAH HUJAN MAKSIMUM HARIAN (mm) | | | | | |
|---|------|------|------|------|---------------|
| | 2019 | 2020 | 2021 | 2022 | JUMLAH |
| Januari | 72 | 52 | 67 | 25 | 216 |
| Februari | 83 | 37 | 23 | 48 | 191 |
| Maret | 26 | 52 | 52 | 32 | 162 |
| April | 88 | 49 | 38 | 22 | 197 |
| Mei | 63 | 104 | 38 | 154 | 359 |
| Juni | 78 | 24.9 | 37 | 49 | 188.9 |
| Juli | 41 | 37.5 | 50 | 59 | 187.5 |
| Agustus | 90 | 19.5 | 73.9 | 36.5 | 219.9 |
| September | 7.5 | 68.5 | 49 | 44 | 169 |
| Oktober | 42.5 | 48.5 | 88 | 25 | 204 |
| November | 6.5 | 37.5 | 43.4 | 0 | 87.4 |
| Desember | 35 | 65 | 26 | 0 | 126 |
| MAX. CH | 90 | 104 | 88 | 154 | |
| TOTAL | | | | | 2307.7 |

| HARI HUJAN | | | | | |
|-------------------|------|------|------|------|------------|
| | 2019 | 2020 | 2021 | 2022 | JUMLAH |
| Januari | 14 | 14 | 24 | 16 | 68 |
| Februari | 14 | 11 | 17 | 12 | 54 |
| Maret | 15 | 13 | 18 | 18 | 64 |
| April | 16 | 13 | 8 | 11 | 48 |
| Mei | 15 | 19 | 18 | 18 | 70 |
| Juni | 15 | 23 | 16 | 12 | 66 |
| Juli | 5 | 21 | 17 | 13 | 56 |
| Agustus | 4 | 7 | 22 | 17 | 50 |
| September | 6 | 14 | 21 | 13 | 54 |
| Oktober | 10 | 8 | 16 | 6 | 40 |
| November | 4 | 15 | 25 | 0 | 44 |
| Desember | 15 | 21 | 15 | 0 | 51 |
| TOTAL | | | | | 665 |

| DURASI HUJAN (MENIT) | | | | | |
|-----------------------------|--------|------|------|-------|---------|
| | 2019 | 2020 | 2021 | 2022 | JUMLAH |
| Januari | 856 | 840 | 3956 | 1952 | 7604 |
| Februari | 1040 | 441 | 1920 | 2263 | 5664 |
| Maret | 2157 | 1290 | 2933 | 2915 | 9295 |
| April | 4656.4 | 1820 | 781 | 1400 | 8657.4 |
| Mei | 3212.4 | 2318 | 2604 | 2860 | 10994.4 |
| Juni | 2763.6 | 2733 | 1968 | 2148 | 9612.6 |
| Juli | 403.8 | 3010 | 2598 | 2195 | 8206.8 |
| Agustus | 285.2 | 1129 | 4013 | 2710 | 8137.2 |
| September | 295 | 2094 | 3239 | 1722 | 7350 |
| Oktober | 486 | 1540 | 1792 | 575.4 | 4393.4 |
| November | 117 | 1619 | 3458 | 0 | 5194 |
| Desember | 735 | 2748 | 1117 | 0 | 4600 |
| TOTAL | | | | | 89708.8 |
| TOTAL (JAM) | | | | | 1495.13 |

Lampiran 2 Perhitungan jam hujan rata-rata

Jam hujan rata-rata dihasilkan dari pembagian total jam hujan dengan total hari hujan dalam periode empat tahun.

| | |
|---------------------|---------|
| JAM HUJAN | 1495.13 |
| HARI HUJAN | 665 |
| RATA-RATA JAM HUJAN | 2.248 |

$$\begin{aligned} \text{Total Durasi Hujan} &= 89708.8 \text{ menit} \\ &= 1495.13 \text{ jam} \end{aligned}$$

$$\text{Total Hari Hujan} = 665 \text{ hari}$$

$$\begin{aligned} \text{Rata-Rata Jam Hujan} &= \frac{\text{Total Durasi Hujan}}{\text{Total Hari Hujan}} \\ &= \frac{1495.13 \text{ jam}}{665 \text{ hari}} \\ &= 2.25 \text{ jam} \end{aligned}$$

Lampiran 3 Elevasi *catchment area*

| FID | Id | POINT_X | POINT_Y | Z |
|------------|-----------|----------------|----------------|----------|
| 0.000 | 0.000 | 312422.102 | 9574598.938 | 52.524 |
| 1.000 | 0.000 | 312395.277 | 9574572.112 | 51.987 |
| 2.000 | 0.000 | 312350.694 | 9574527.530 | 51.326 |
| 3.000 | 0.000 | 312277.254 | 9574454.090 | 49.931 |
| 4.000 | 0.000 | 312393.719 | 9574577.442 | 52.102 |
| 5.000 | 0.000 | 312338.930 | 9574577.442 | 51.310 |
| 6.000 | 0.000 | 312308.092 | 9574608.280 | 52.442 |
| 7.000 | 0.000 | 312123.064 | 9574608.280 | 53.124 |
| 8.000 | 0.000 | 312092.226 | 9574577.442 | 55.011 |
| 9.000 | 0.000 | 311999.712 | 9574577.442 | 68.255 |
| 10.000 | 0.000 | 311876.359 | 9574454.090 | 84.793 |
| 11.000 | 0.000 | 311845.521 | 9574392.414 | 87.152 |
| 12.000 | 0.000 | 311845.521 | 9574361.576 | 86.155 |
| 13.000 | 0.000 | 311783.845 | 9574299.899 | 93.154 |
| 14.000 | 0.000 | 311783.845 | 9574269.061 | 92.151 |
| 15.000 | 0.000 | 311814.683 | 9574238.223 | 93.059 |
| 16.000 | 0.000 | 311814.683 | 9574207.385 | 95.719 |
| 17.000 | 0.000 | 311753.007 | 9574238.223 | 93.250 |
| 18.000 | 0.000 | 311691.331 | 9574238.223 | 97.914 |
| 19.000 | 0.000 | 311660.493 | 9574207.385 | 102.687 |
| 20.000 | 0.000 | 312400.607 | 9574490.193 | 47.814 |
| 21.000 | 0.000 | 312400.607 | 9574330.738 | 53.044 |
| 22.000 | 0.000 | 312431.445 | 9574299.899 | 53.063 |
| 23.000 | 0.000 | 312431.445 | 9574238.223 | 52.084 |
| 24.000 | 0.000 | 312462.283 | 9574238.223 | 53.886 |
| 25.000 | 0.000 | 312462.283 | 9574114.871 | 63.917 |
| 26.000 | 0.000 | 312338.930 | 9573991.519 | 78.194 |
| 27.000 | 0.000 | 312308.092 | 9573960.681 | 80.209 |
| 28.000 | 0.000 | 312184.740 | 9573960.681 | 87.997 |
| 29.000 | 0.000 | 312153.902 | 9573929.843 | 87.047 |
| 30.000 | 0.000 | 312153.902 | 9573868.166 | 91.061 |
| 31.000 | 0.000 | 312338.930 | 9573837.328 | 83.054 |
| 32.000 | 0.000 | 312308.092 | 9573806.490 | 85.211 |
| 33.000 | 0.000 | 312308.092 | 9573775.652 | 87.103 |
| 34.000 | 0.000 | 312158.768 | 9573626.328 | 113.923 |
| 35.000 | 0.000 | 312061.388 | 9573590.624 | 123.067 |

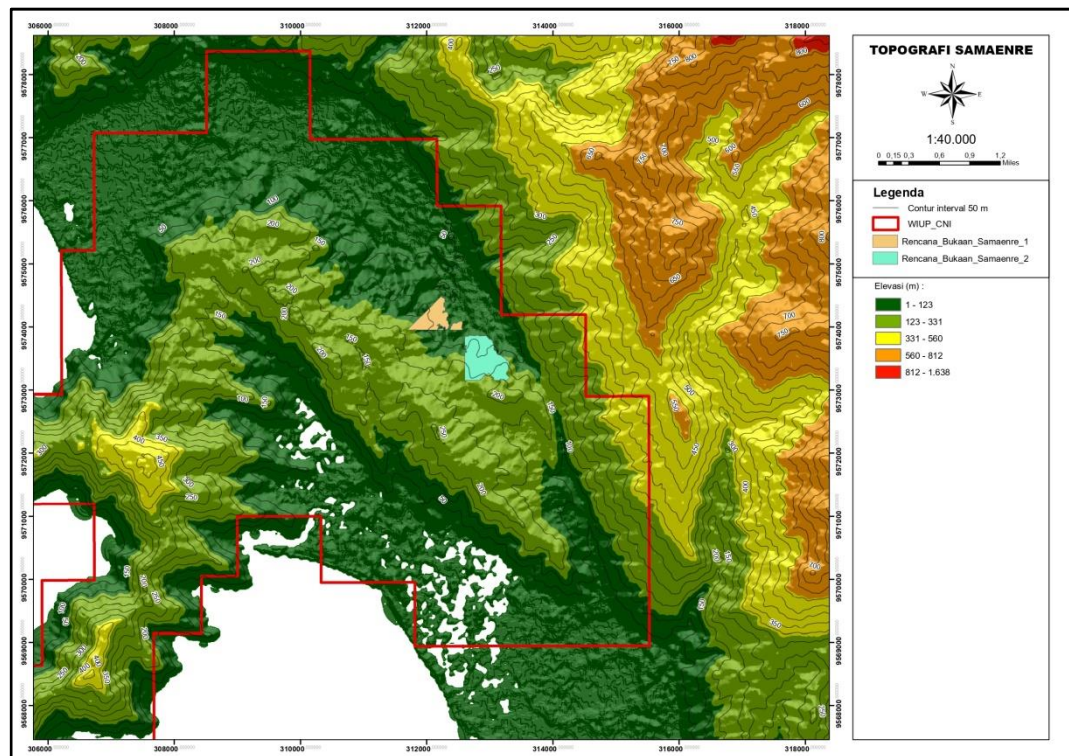
| FID | Id | POINT_X | POINT_Y | Z |
|------------|-----------|----------------|----------------|----------|
| 36.000 | 0.000 | 311938.036 | 9573590.624 | 128.269 |
| 37.000 | 0.000 | 311876.359 | 9573528.948 | 134.000 |
| 38.000 | 0.000 | 311691.331 | 9573528.948 | 134.356 |
| 39.000 | 0.000 | 311629.655 | 9573528.948 | 142.561 |
| 40.000 | 0.000 | 311567.979 | 9573559.786 | 151.968 |
| 41.000 | 0.000 | 311537.141 | 9573590.624 | 152.190 |
| 42.000 | 0.000 | 311537.141 | 9573652.300 | 149.478 |
| 43.000 | 0.000 | 311506.303 | 9573652.300 | 153.380 |
| 44.000 | 0.000 | 311506.303 | 9573683.138 | 156.411 |
| 45.000 | 0.000 | 311475.465 | 9573713.976 | 157.897 |
| 46.000 | 0.000 | 312462.283 | 9574269.061 | 53.005 |
| 47.000 | 0.000 | 312523.959 | 9574269.061 | 56.000 |
| 48.000 | 0.000 | 312554.797 | 9574238.223 | 55.983 |
| 49.000 | 0.000 | 312585.635 | 9574238.223 | 55.999 |
| 50.000 | 0.000 | 312612.358 | 9574184.777 | 58.874 |
| 51.000 | 0.000 | 312647.311 | 9574145.709 | 59.074 |
| 52.000 | 0.000 | 312647.311 | 9574053.195 | 61.181 |
| 53.000 | 0.000 | 312585.635 | 9573991.519 | 66.534 |
| 54.000 | 0.000 | 312616.473 | 9573929.843 | 65.373 |
| 55.000 | 0.000 | 312616.473 | 9573899.005 | 68.319 |
| 56.000 | 0.000 | 312585.635 | 9573899.005 | 74.527 |
| 57.000 | 0.000 | 312493.121 | 9573806.490 | 86.014 |
| 58.000 | 0.000 | 312462.283 | 9573806.490 | 86.230 |
| 59.000 | 0.000 | 312369.769 | 9573683.138 | 96.386 |
| 60.000 | 0.000 | 312338.930 | 9573652.300 | 103.321 |
| 61.000 | 0.000 | 312338.930 | 9573590.624 | 116.292 |
| 62.000 | 0.000 | 312277.254 | 9573528.948 | 123.053 |
| 63.000 | 0.000 | 312277.254 | 9573467.272 | 124.377 |
| 64.000 | 0.000 | 312215.578 | 9573405.595 | 132.381 |
| 65.000 | 0.000 | 312215.578 | 9573313.081 | 133.482 |
| 66.000 | 0.000 | 312246.416 | 9573313.081 | 131.499 |
| 67.000 | 0.000 | 312277.254 | 9573220.567 | 160.114 |
| 68.000 | 0.000 | 312277.254 | 9573128.053 | 181.811 |
| 69.000 | 0.000 | 312246.416 | 9573097.215 | 187.367 |
| 70.000 | 0.000 | 312246.416 | 9573035.539 | 190.527 |
| 71.000 | 0.000 | 312215.578 | 9573004.701 | 194.565 |
| 72.000 | 0.000 | 312184.740 | 9572943.024 | 196.205 |
| 73.000 | 0.000 | 312215.578 | 9572912.186 | 198.120 |

| FID | Id | POINT_X | POINT_Y | Z |
|------------|-----------|----------------|----------------|----------|
| 74.000 | 0.000 | 312708.987 | 9574022.357 | 66.904 |
| 75.000 | 0.000 | 312770.663 | 9573960.681 | 66.897 |
| 76.000 | 0.000 | 312801.501 | 9573960.681 | 70.793 |
| 77.000 | 0.000 | 312832.340 | 9573929.843 | 73.035 |
| 78.000 | 0.000 | 312863.178 | 9573929.843 | 71.144 |
| 79.000 | 0.000 | 312894.016 | 9573899.005 | 73.126 |
| 80.000 | 0.000 | 312924.854 | 9573899.005 | 73.963 |
| 81.000 | 0.000 | 312955.692 | 9573868.166 | 74.086 |
| 82.000 | 0.000 | 312955.692 | 9573837.328 | 75.118 |
| 83.000 | 0.000 | 312924.854 | 9573806.490 | 77.260 |
| 84.000 | 0.000 | 312924.854 | 9573744.814 | 79.318 |
| 85.000 | 0.000 | 312894.016 | 9573713.976 | 82.371 |
| 86.000 | 0.000 | 312894.016 | 9573683.138 | 86.465 |
| 87.000 | 0.000 | 312863.178 | 9573652.300 | 91.126 |
| 88.000 | 0.000 | 312863.178 | 9573590.624 | 94.629 |
| 89.000 | 0.000 | 312801.501 | 9573528.948 | 103.929 |
| 90.000 | 0.000 | 312801.501 | 9573374.757 | 116.985 |
| 91.000 | 0.000 | 312770.663 | 9573343.919 | 124.437 |
| 92.000 | 0.000 | 312770.663 | 9573282.243 | 134.690 |
| 93.000 | 0.000 | 312708.987 | 9573220.567 | 146.948 |
| 94.000 | 0.000 | 312678.149 | 9573220.567 | 152.750 |
| 95.000 | 0.000 | 312585.635 | 9573128.053 | 166.424 |
| 96.000 | 0.000 | 312894.016 | 9573590.624 | 92.594 |
| 97.000 | 0.000 | 312924.854 | 9573590.624 | 100.540 |
| 98.000 | 0.000 | 312986.530 | 9573528.948 | 110.226 |
| 99.000 | 0.000 | 312986.530 | 9573282.243 | 146.391 |
| 100.000 | 0.000 | 312955.692 | 9573251.405 | 149.713 |
| 101.000 | 0.000 | 312955.692 | 9573220.567 | 152.861 |
| | | | | |
| Max. | | | | 198.120 |
| Min. | | | | 47.814 |
| Rata-Rata | | | | 99.378 |

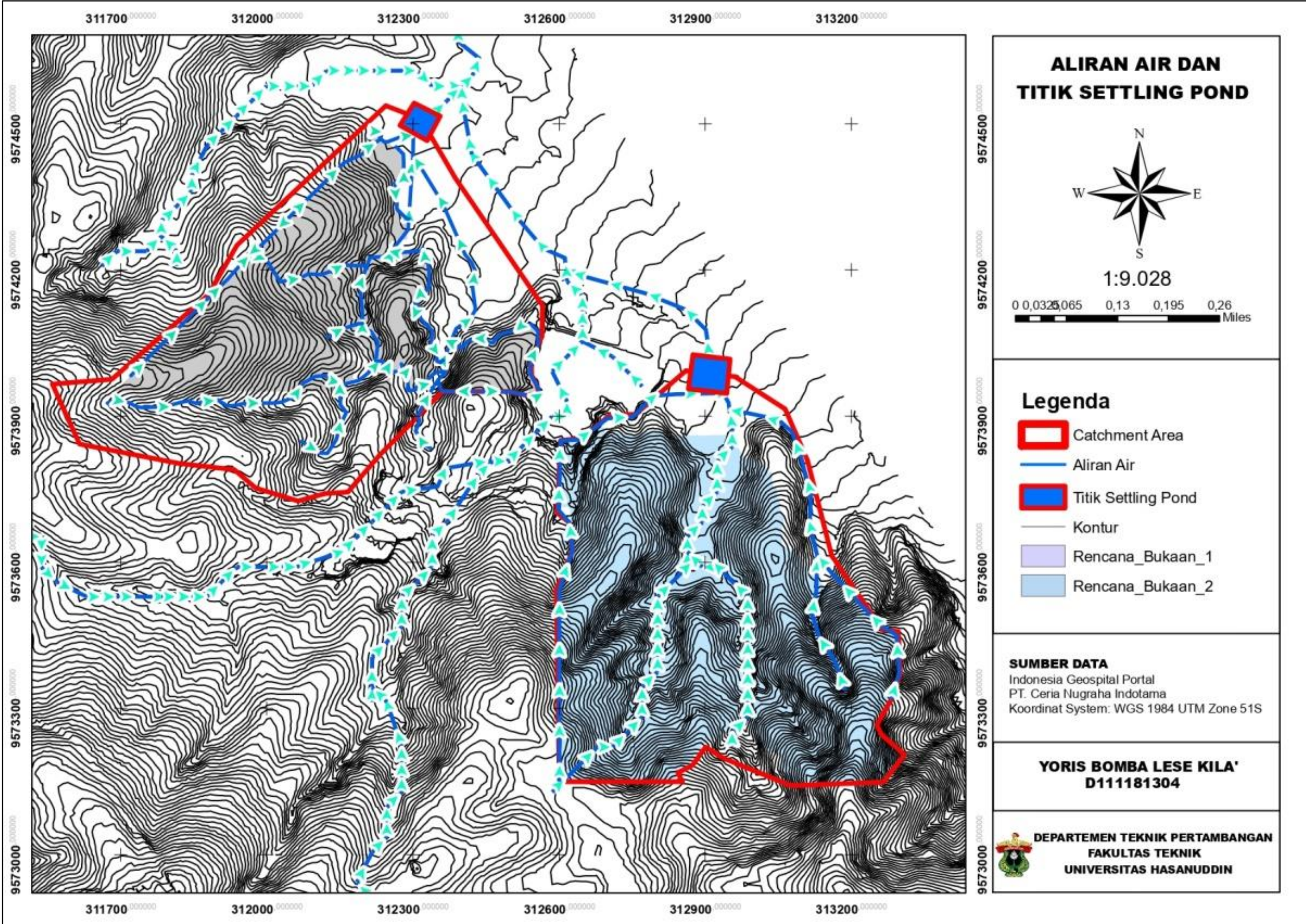
Lampiran 4 Data TSS harian *site* samaenre

| TSS HARIAN SAMAENRE (gr/liter) | | | | | | | | | | | | |
|--------------------------------|---------|-------|-------|-------|--------|-------|-------|---------|------|-------|-------|-------|
| | Januari | Feb. | Maret | April | Mei | Juni | Juli | Agustus | Sep. | Okt. | Nov. | Des. |
| 1 | 20.00 | 12.00 | 2.25 | 1.21 | 2.00 | 5.45 | 3.71 | 3.78 | 4.34 | 3.29 | 9.23 | 6.05 |
| 2 | 20.00 | 12.00 | 1.37 | 1.48 | 2.09 | 4.79 | 4.56 | 4.57 | 3.99 | 3.40 | 7.10 | 10.01 |
| 3 | 20.00 | 12.00 | 1.13 | 1.16 | 2.18 | 14,05 | 5.55 | 4.37 | 4.00 | 3.83 | 6.58 | 7.56 |
| 4 | 20.00 | 12.00 | 2.76 | 1.14 | 2.15 | 5.32 | 3.08 | 3.84 | 4.19 | 4.23 | 8.26 | 9.18 |
| 5 | 20.00 | 12.00 | 2.39 | 1.15 | 2.29 | 4.38 | 1.85 | 4.50 | 3.78 | 4.29 | 7.43 | 9.57 |
| 6 | 18.00 | 14.00 | 1.53 | 1.16 | 2,45 | 8.9 | 1.51 | 4.39 | 3.74 | 5.15 | 10.53 | 14.83 |
| 7 | 18.00 | 14.00 | 1.72 | 1.14 | 2.61 | 12.23 | 1.68 | 4.25 | 3.61 | 4.83 | 10.49 | 8.98 |
| 8 | 18.00 | 14.00 | 2.70 | 23.78 | 9.65 | 3.98 | 3.54 | 3.55 | 5.43 | 6.11 | 6.98 | 8.23 |
| 9 | 18.00 | 14.00 | 1.70 | 32.08 | 35.74 | 4.66 | 2.7 | 5.33 | 4.89 | 6.23 | 6.49 | 7.65 |
| 10 | 18.00 | 14.00 | 1.62 | 1.17 | 6.90 | 3.95 | 1.9 | 4.27 | 4.19 | 5.18 | 7.93 | 2.99 |
| 11 | 16.00 | 18.00 | 1.78 | 1.22 | 2.89 | 10.87 | 1.6 | 3.75 | 3.29 | 10.75 | 8.20 | 6.93 |
| 12 | 16.00 | 18.00 | 1.41 | 1.27 | 1.78 | 28.63 | 5.1 | 3.96 | 4.71 | 5.74 | 7.24 | 8.05 |
| 13 | 16.00 | 18.00 | 1.61 | 1.28 | 1.45 | 6.26 | 3.96 | 3.74 | 5.12 | 6.37 | 6.33 | 6.97 |
| 14 | 16.00 | 18.00 | 1.69 | 1.25 | 1.30 | 2.84 | 4.16 | 3.60 | 4.66 | 7.20 | 5.28 | 6.46 |
| 15 | 16.00 | 18.00 | 2.44 | 1.33 | 1.46 | 3.33 | 10.58 | 3.71 | 4.39 | 7.82 | 6.77 | 6.38 |
| 16 | 12.00 | 12.00 | 3.07 | 1.35 | 7.05 | 2.72 | 4.56 | 3.42 | 4.14 | 4.90 | 20.41 | 7.29 |
| 17 | 12.00 | 12.00 | 1.52 | 1.29 | 6.27 | 7.39 | 4.14 | 3.44 | 3.36 | 6.93 | 26.37 | 6.63 |
| 18 | 12.00 | 12.00 | 1.34 | 1.23 | 3.93 | 10.27 | 4.47 | 5.95 | 3.51 | 8.05 | 5.82 | 7.65 |
| 19 | 12.00 | 12.00 | 1.22 | 1.31 | 3.60 | 7.17 | 4.64 | 4.32 | 3.71 | 6.97 | 5.85 | 7.45 |
| 20 | 12.00 | 12.00 | 0.98 | 1.38 | 5.15 | 3.32 | 3.85 | 3.66 | 3.83 | 6.46 | 4.73 | 12.23 |
| 21 | 14.00 | 16.00 | 0.94 | 1.42 | 5.55 | 2.87 | 4.01 | 3.59 | 3.31 | 6.38 | 4.85 | 3.98 |
| 22 | 14.00 | 16.00 | 1.03 | 1.43 | 2.36 | 2.25 | 4.9 | 3.91 | 3.65 | 7.29 | 6.48 | 4.66 |
| 23 | 14.00 | 16.00 | 1.03 | 1.47 | 1.66 | 1.87 | 4.01 | 3.58 | 3.34 | 6.63 | 18.46 | 3.95 |
| 24 | 14.00 | 16.00 | 1.04 | 1.52 | 1.49 | 5.25 | 3.56 | 3.55 | 3.53 | 7.65 | 5.36 | 10.87 |
| 25 | 14.00 | 16.00 | 1.03 | 1.66 | 4.47 | 4.07 | 4.07 | 3.74 | 3.63 | 7.45 | 9.45 | 5.85 |
| 26 | 18.00 | 20.00 | 1.11 | 1.45 | 12.58 | 6,09 | 4.2 | 3.28 | 3.59 | 7.95 | 8.86 | 5.82 |
| 27 | 18.00 | 20.00 | 1.10 | 1.59 | 100,00 | 21.11 | 4.25 | 3.41 | 3.45 | 7.66 | 6.07 | 26.37 |
| 28 | 18.00 | 20.00 | 1.11 | 1.64 | 9.19 | 8,03 | 3.8 | 4.22 | 3.47 | 28.02 | 5.60 | 20.41 |
| 29 | 18.00 | | 1.08 | 1.70 | 8.43 | 8.74 | 4.05 | 3.93 | 3.47 | 10.23 | 4.27 | 6.77 |
| 30 | 18.00 | | 1.56 | 1.87 | 6.58 | 3.46 | 4.39 | 4.19 | 3.29 | 9.99 | 8.26 | 5.28 |
| 31 | 18.00 | | 1.26 | | 6.39 | | 3.93 | 4.90 | | 9.84 | | 6.15 |
| MAX. | 20.00 | 20.00 | 3.07 | 32.08 | 35.74 | 28.63 | 10.58 | 5.95 | 5.43 | 28.02 | 26.37 | 26.37 |
| AVEG. | 16.39 | 15.00 | 1.57 | 3.14 | 5.49 | 6.89 | 3.95 | 4.02 | 3.92 | 7.32 | 8.52 | 8.43 |

Lampiran 5
Topografi Samaenre



Lampiran 6
Aliran Air dan Titik Settling Pond









**ALIRAN AIR DAN
TITIK SETTLING POND**



1:9.028



Legenda

-  Catchment Area
-  Aliran Air
-  Titik Settling Pond
-  Kontur
-  Rencana_Bukaan_1
-  Rencana_Bukaan_2

SUMBER DATA

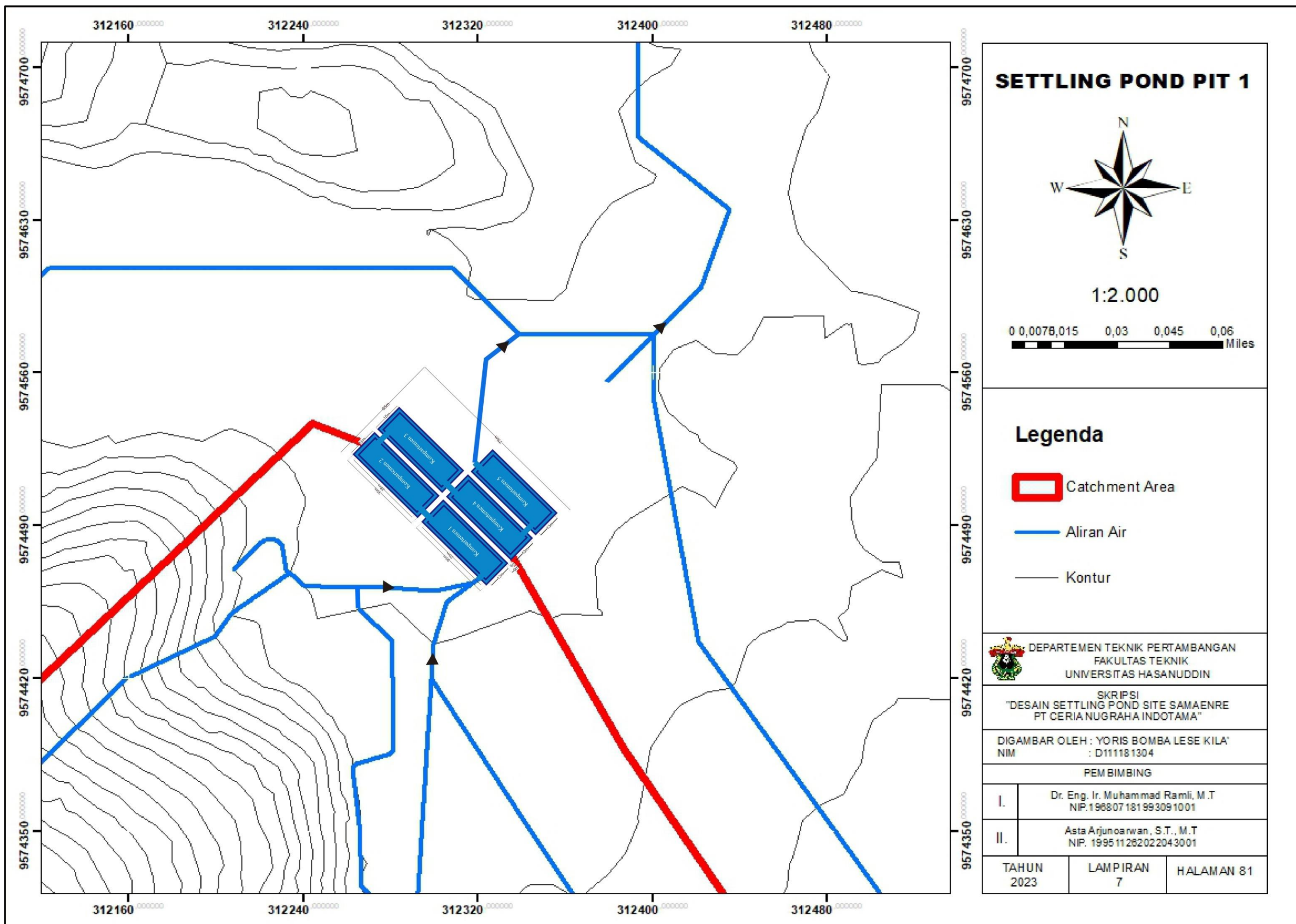
Indonesia Geospital Portal
PT. Ceria Nugraha Indotama
Koordinat System: WGS 1984 UTM Zone 51S

**YORIS BOMBA LESE KILA'
D111181304**

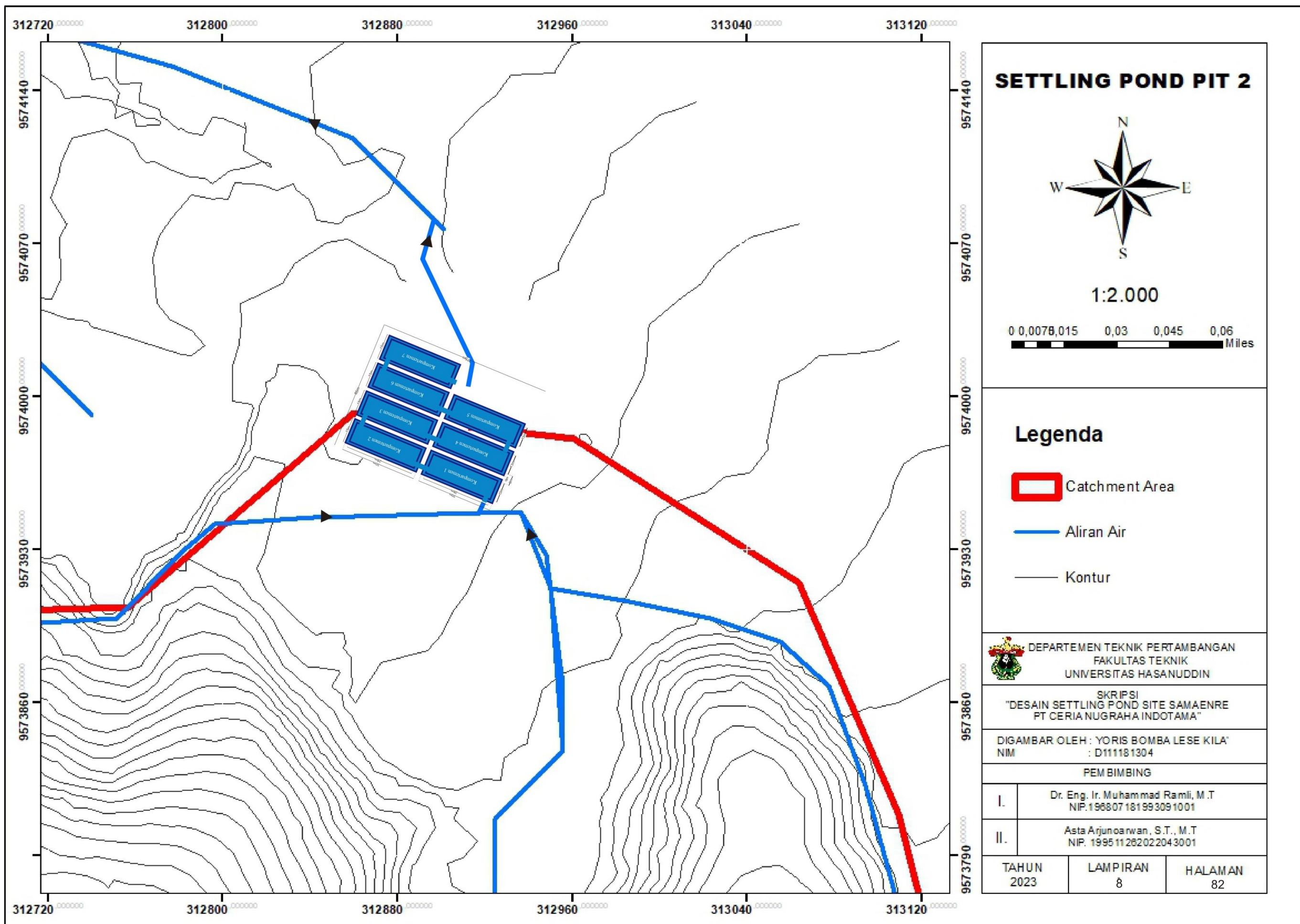


**DEPARTEMEN TEKNIK PERTAMBANGAN
FAKULTAS TEKNIK
UNIVERSITAS HASANUDDIN**

Lampiran 7
Peta settling pond pit 1



Lampiran 8
Peta settling pond pit 2









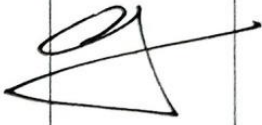




Lampiran B 10

Kartu Konsultasi Tugas Akhir

JUDUL: DESAIN SETTLING POND SITE SAMAEHIRE
PT CERIA NUGRAHA INDOYAMA, KABUPATEN
KOLAKA, SULAWESI TENGGARA

(Konsultasi minimal 8 kali)

| TANGGAL | MATERI KONSULTASI | PARAF DOSEN |
|----------|--|---|
| 22/09/23 | <ul style="list-style-type: none">- Susunan Laporan Penelitian- Penambahan Referensi- Lengkapi BAB IV |  |
| 29/09/23 | <ul style="list-style-type: none">- Perubahan BAB I Pendahuluan- Rumusan Masalah- Tujuan Penelitian |  |
| 06/10/23 | <ul style="list-style-type: none">- Perubahan BAB II Tinjauan Pustaka- Metode Analisis- Penambahan Referensi |  |
| 09/10/23 | <ul style="list-style-type: none">- Perubahan BAB III- Perubahan Diagram Alir- Peta Lokasi Penelitian |  |
| 13/10/23 | <ul style="list-style-type: none">- Metode Penelitian- Perhitungan Hasil Penelitian- Analisis Cara Kerja Rencana |  |

| TANGGAL | MATERI KONSULTASI | PARAF DOSEN |
|----------|--|---|
| 16/10/23 | <ul style="list-style-type: none"> - Daerah tangkapan hujan - Perhitungan Debit Limpasan - Kriteria Pengaliran |  |
| 18/10/23 | <ul style="list-style-type: none"> - Perbaikan Peta topografi - Dimensi dan Desain kolam Pengaliran |  |
| 19/10/23 | <ul style="list-style-type: none"> - Perbaikan Perencanaan - Perbaikan Gambar dan Tabel - Melampirkan Lampiran |  |
| 20/10/23 | <ul style="list-style-type: none"> - Perhitungan Waktu maintenance - Perbaikan Perencanaan - Melampirkan Daftar Isi, Gambar, Lampiran, Singkatan. |  |
| 11/11/23 | <ul style="list-style-type: none"> - Perbaiki Diagram Alir - Perbaikan BAB 2 dan 3 - Perambatkan BAB 4 |  |
| 15/01/24 | <ul style="list-style-type: none"> - Perbaikan Perencanaan Abstract - Perbaikan Data curah hujan - Perbaikan Dimensi kolam |  |