

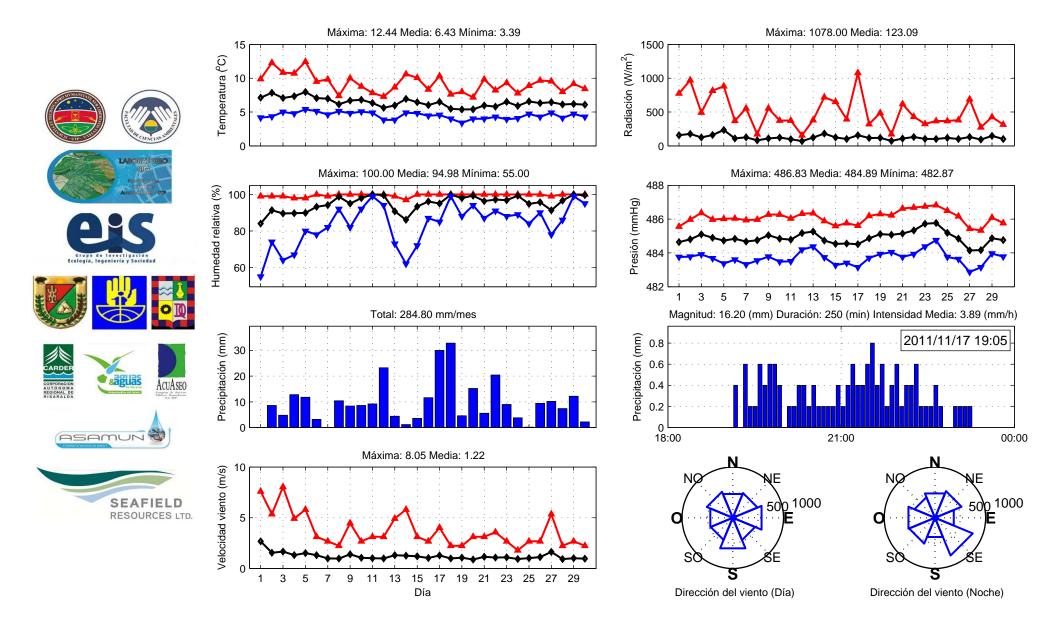
Estación: Cortaderal Fecha: Noviembre de 2011 Registros: 30 de 30

Red Hidroclimatológica del Departamento de Risaralda Revisó: Adm. Ambiental Victor Manuel Bermúdez Marín. Operador REDH

Aprobó: Ing Ph.D. Juan Mauricio Castaño Rojas. Director REDH.

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Reporte climatológico mensual



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|       | Temperatura |       |       | Vel. Viento |        | Presión | Humedad | Precipitación | Evap      | Radiació |        |
|-------|-------------|-------|-------|-------------|--------|---------|---------|---------------|-----------|----------|--------|
| Día   | (°C)        |       | (m/s) |             | (mmHg) | (%)     | (mm)    | (mm)          | (mm) (W/m |          |        |
|       | Máx         | Media | Mín   | Máx         | Media  | Media   | Media   | Total         | Total     | Máx      | Media  |
| 1     | 9.89        | 7.12  | 4.17  | 7.60        | 2.68   | 484.64  | 84.08   | 0.00          | 1.12      | 775.00   | 157.16 |
| 2     | 12.28       | 7.85  | 4.33  | 5.36        | 1.55   | 484.80  | 91.34   | 8.60          | 1.06      | 970.00   | 177.06 |
| 3     | 10.83       | 7.08  | 5.00  | 8.05        | 1.67   | 485.10  | 89.59   | 4.80          | 0.74      | 492.00   | 123.98 |
| 4     | 10.72       | 7.33  | 4.78  | 4.92        | 1.32   | 484.90  | 89.73   | 12.80         | 0.94      | 816.00   | 160.40 |
| 5     | 12.44       | 7.96  | 5.39  | 5.81        | 1.52   | 484.73  | 89.90   | 11.80         | 1.30      | 881.00   | 233.40 |
| 6     | 9.50        | 7.06  | 5.11  | 3.13        | 1.31   | 484.83  | 93.24   | 3.20          | 0.58      | 371.00   | 109.47 |
| 7     | 9.83        | 6.97  | 4.61  | 2.68        | 0.99   | 484.67  | 94.15   | 0.00          | 0.61      | 554.00   | 126.04 |
| 8     | 7.39        | 6.14  | 5.11  | 2.24        | 0.98   | 484.75  | 98.77   | 10.40         | 0.36      | 172.00   | 80.91  |
| 9     | 10.00       | 6.70  | 4.83  | 4.47        | 1.39   | 485.05  | 94.98   | 8.40          | 0.56      | 555.00   | 109.41 |
| 10    | 8.78        | 6.82  | 5.06  | 2.68        | 1.05   | 484.84  | 97.96   | 8.60          | 0.61      | 373.00   | 122.30 |
| 11    | 7.83        | 6.34  | 4.89  | 3.13        | 1.01   | 484.78  | 100.00  | 9.20          | 0.43      | 374.00   | 98.27  |
| 12    | 7.28        | 5.62  | 3.83  | 3.13        | 0.99   | 485.17  | 99.60   | 23.20         | 0.33      | 156.00   | 70.30  |
| 13    | 8.67        | 5.97  | 3.83  | 4.92        | 1.31   | 485.26  | 90.74   | 4.40          | 0.76      | 381.00   | 122.53 |
| 14    | 10.61       | 6.95  | 4.89  | 5.81        | 1.27   | 484.73  | 86.10   | 1.20          | 1.02      | 719.00   | 181.02 |
| 15    | 10.06       | 6.46  | 4.83  | 3.13        | 1.20   | 484.53  | 93.38   | 3.60          | 0.64      | 652.00   | 123.79 |
| 16    | 8.33        | 6.02  | 4.44  | 2.68        | 1.04   | 484.56  | 96.17   | 11.60         | 0.53      | 394.00   | 101.66 |
| 17    | 10.33       | 6.50  | 4.56  | 4.02        | 1.28   | 484.51  | 95.00   | 30.00         | 0.84      | 1078.00  | 156.74 |
| 18    | 7.61        | 5.48  | 4.00  | 2.24        | 0.99   | 484.86  | 99.87   | 32.80         | 0.51      | 322.00   | 115.95 |
| 19    | 8.00        | 5.38  | 3.39  | 2.24        | 1.07   | 485.11  | 97.96   | 4.60          | 0.53      | 487.00   | 118.29 |
| 20    | 7.17        | 5.40  | 4.00  | 3.13        | 0.89   | 485.07  | 99.30   | 15.20         | 0.30      | 172.00   | 73.13  |
| 21    | 9.83        | 5.97  | 4.00  | 3.13        | 1.15   | 485.14  | 96.34   | 5.60          | 0.53      | 619.00   | 108.14 |
| 22    | 8.22        | 5.79  | 4.28  | 3.58        | 1.08   | 485.33  | 97.22   | 20.40         | 0.53      | 429.00   | 130.96 |
| 23    | 9.33        | 6.50  | 3.94  | 2.68        | 1.10   | 485.72  | 96.81   | 9.00          | 0.51      | 325.00   | 102.02 |
| 24    | 7.78        | 5.91  | 4.06  | 1.79        | 0.93   | 485.77  | 99.30   | 3.80          | 0.46      | 367.00   | 101.28 |
| 25    | 8.89        | 6.57  | 4.72  | 2.68        | 1.02   | 485.18  | 94.80   | 0.20          | 0.53      | 367.00   | 117.81 |
| 26    | 9.67        | 6.31  | 4.28  | 2.68        | 1.12   | 484.84  | 95.70   | 9.40          | 0.48      | 380.00   | 100.98 |
| 27    | 9.56        | 6.45  | 4.89  | 5.36        | 1.63   | 484.14  | 91.31   | 10.20         | 0.43      | 689.00   | 129.82 |
| 28    | 8.00        | 6.12  | 4.11  | 2.24        | 0.92   | 484.16  | 96.62   | 7.40          | 0.51      | 274.00   | 92.11  |
| 29    | 9.17        | 6.19  | 4.72  | 2.68        | 1.02   | 484.87  | 99.94   | 12.20         | 0.69      | 427.00   | 146.75 |
| 30    | 8.44        | 6.09  | 4.28  | 2.24        | 0.97   | 484.76  | 99.62   | 2.20          | 0.46      | 315.00   | 101.08 |
| TOTAL |             |       |       |             |        |         |         | 284.80        | 18.90     |          |        |
| PROM  | 9.21        | 6.43  | 4.48  | 3.68        | 1.22   | 484.89  | 94.98   |               |           | 496.20   | 123.09 |
|       | 1           |       |       |             | 1      | 1       |         |               |           |          |        |

Cuadro 1: Resúmen de análisis climatológico

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| Día   | Lluvias por intensidad |    |     |    | Lluvias por<br>jornada |            |          | CLI | PT  | DP     |       | DM    | MM     | IMM   | IM5    |        |
|-------|------------------------|----|-----|----|------------------------|------------|----------|-----|-----|--------|-------|-------|--------|-------|--------|--------|
| Dia   | F                      | M  | L   | LL | Md                     | Jorn<br>Mñ | ada<br>T | N   | CLL | (mm)   | (h)   | (%)   | (min)  | (mm)  | (mm/h) | (mm/h) |
| 1     | 0                      | 0  | 0   | 0  | 0                      | 0          | 0        | 0   | 0   | 0.00   | 0.00  | 0.00  | 0.00   | 0.00  | 0.00   | 0.00   |
| 2     | 0                      | 1  | 3   | 0  | 0                      | 0          | 2        | 2   | 4   | 8.60   | 1.42  | 5.90  | 55.00  | 6.60  | 6.60   | 26.40  |
| 3     | 0                      | 0  | 3   | 0  | 1                      | 0          | 2        | 0   | 3   | 4.80   | 1.50  | 6.25  | 120.00 | 4.40  | 2.11   | 4.80   |
| 4     | 1                      | 0  | 1   | 0  | 0                      | 0          | 1        | 1   | 2   | 12.80  | 1.83  | 7.64  | 75.00  | 10.80 | 8.10   | 24.00  |
| 5     | 0                      | 2  | 0   | 0  | 1                      | 0          | 1        | 0   | 2   | 11.80  | 2.33  | 9.72  | 115.00 | 7.20  | 3.60   | 7.20   |
| 6     | 0                      | 1  | 3   | 1  | 0                      | 0          | 5        | 0   | 5   | 3.20   | 0.92  | 3.82  | 35.00  | 1.40  | 2.10   | 7.20   |
| 7     | 0                      | 0  | 0   | 0  | 0                      | 0          | 0        | 0   | 0   | 0.00   | 0.00  | 0.00  | 0.00   | 0.00  | 0.00   | 0.00   |
| 8     | 0                      | 0  | 8   | 3  | 1                      | 5          | 4        | 1   | 11  | 10.40  | 3.83  | 15.97 | 90.00  | 3.00  | 1.89   | 4.80   |
| 9     | 0                      | 1  | 5   | 2  | 2                      | 2          | 3        | 1   | 8   | 8.40   | 2.58  | 10.76 | 60.00  | 4.00  | 3.69   | 12.00  |
| 10    | 0                      | 2  | 6   | 0  | 0                      | 2          | 4        | 2   | 8   | 8.60   | 2.50  | 10.42 | 85.00  | 3.60  | 2.40   | 4.80   |
| 11    | 0                      | 0  | 9   | 2  | 2                      | 3          | 5        | 1   | 11  | 9.20   | 3.67  | 15.28 | 185.00 | 4.60  | 1.45   | 4.80   |
| 12    | 0                      | 0  | 5   | 1  | 0                      | 1          | 2        | 3   | 6   | 23.20  | 7.58  | 31.60 | 440.00 | 14.00 | 1.89   | 7.20   |
| 13    | 0                      | 0  | 3   | 0  | 2                      | 0          | 1        | 0   | 3   | 4.40   | 1.58  | 6.60  | 120.00 | 4.00  | 1.92   | 4.80   |
| 14    | 0                      | 0  | 1   | 0  | 0                      | 0          | 1        | 0   | 1   | 1.20   | 0.42  | 1.74  | 40.00  | 1.20  | 1.60   | 4.80   |
| 15    | 0                      | 0  | 4   | 0  | 1                      | 1          | 2        | 0   | 4   | 3.60   | 1.08  | 4.51  | 85.00  | 3.00  | 2.00   | 9.60   |
| 16    | 0                      | 2  | 2   | 1  | 0                      | 0          | 2        | 3   | 5   | 11.60  | 2.83  | 11.81 | 80.00  | 4.80  | 3.39   | 9.60   |
| 17    | 0                      | 2  | 2   | 0  | 0                      | 0          | 2        | 2   | 4   | 30.00  | 6.25  | 26.04 | 250.00 | 16.20 | 3.81   | 9.60   |
| 18    | 0                      | 1  | 9   | 0  | 3                      | 1          | 3        | 3   | 10  | 32.80  | 8.75  | 36.46 | 230.00 | 14.40 | 3.68   | 12.00  |
| 19    | 0                      | 0  | 5   | 0  | 2                      | 0          | 3        | 0   | 5   | 4.60   | 1.83  | 7.64  | 65.00  | 2.20  | 1.89   | 4.80   |
| 20    | 0                      | 1  | 3   | 1  | 0                      | 3          | 1        | 1   | 5   | 15.20  | 3.17  | 13.19 | 240.00 | 14.00 | 3.43   | 19.20  |
| 21    | 0                      | 1  | 3   | 0  | 1                      | 1          | 2        | 0   | 4   | 5.60   | 1.58  | 6.60  | 60.00  | 2.80  | 2.58   | 7.20   |
| 22    | 0                      | 1  | 5   | 0  | 2                      | 1          | 2        | 1   | 6   | 20.40  | 5.92  | 24.65 | 270.00 | 10.40 | 2.27   | 4.80   |
| 23    | 1                      | 0  | 1   | 0  | 0                      | 0          | 1        | 1   | 2   | 9.00   | 0.83  | 3.47  | 65.00  | 8.80  | 7.54   | 21.60  |
| 24    | 0                      | 0  | 5   | 1  | 0                      | 2          | 3        | 1   | 6   | 3.80   | 1.50  | 6.25  | 105.00 | 2.20  | 1.20   | 4.80   |
| 25    | 0                      | 0  | 1   | 0  | 0                      | 0          | 1        | 0   | 1   | 0.20   | 0.08  | 0.35  | 10.00  | 0.20  | 0.80   | 2.40   |
| 26    | 1                      | 0  | 2   | 0  | 0                      | 0          | 3        | 0   | 3   | 9.40   | 0.83  | 3.47  | 55.00  | 9.00  | 9.00   | 28.80  |
| 27    | 0                      | 0  | 2   | 0  | 1                      | 0          | 1        | 0   | 2   | 10.20  | 3.25  | 13.54 | 305.00 | 10.00 | 1.94   | 4.80   |
| 28    | 0                      | 1  | 8   | 1  | 0                      | 3          | 1        | 6   | 10  | 7.40   | 2.25  | 9.38  | 45.00  | 2.80  | 3.36   | 9.60   |
| 29    | 0                      | 0  | 9   | 1  | 1                      | 3          | 4        | 2   | 10  | 12.20  | 4.42  | 18.40 | 215.00 | 6.60  | 1.80   | 7.20   |
| 30    | 0                      | 0  | 9   | 0  | 0                      | 0          | 4        | 5   | 9   | 2.20   | 0.92  | 3.82  | 15.00  | 0.40  | 1.20   | 2.40   |
| MAX   | 1                      | 2  | 9   | 3  | 3                      | 5          | 5        | 6   | 11  | 32.80  | 8.75  | 36.46 | 440.00 | 16.20 | 9.00   | 28.80  |
| TOTAL | 3                      | 16 | 117 | 14 | 20                     | 28         | 66       | 36  | 150 | 284.80 | 75.67 | 10.51 |        |       |        |        |

Cuadro 1: Análisis mensual de lluvias

| F  | Fuerte   | $7.6 \text{ (mm/h)} \leq \text{intensidad}$                     |
|----|----------|---|
| M  | Moderada | $2.5 \text{ (mm/h)} < \text{intensidad} \le 7.6 \text{ (mm/h)}$ |
| L  | Ligera   | $1.0 \text{ (mm/h)} < \text{intensidad} \le 2.5 \text{ (mm/h)}$ |
| LL | Llovizna | $1.0 \text{ (mm/h)} \ge \text{intensidad}$                      |

| Md | Madrugada | 00:00 - 05:59 |
|----|-----------|---------------|
| Mñ | Mañana    | 06:00 - 11:59 |
| T  | Tarde     | 12:00 - 17:59 |
| N  | Noche     | 18:00 - 23:59 |

| CLL | Cantidad de Lluvias                  |
|-----|--------------------------------------|
| PT  | Precipitación total (mm)             |
| DP  | Duración precipitacion diaria        |
| DM  | Duración máxima lluvia aislada (min) |
| MM  | Magnitud máx. lluvia aislada (mm)    |
| IMM | Intensidad media máxima (mm/h)       |
| IM5 | Intensidad máx. en 5 minutos (mm/h)  |

Cuadro 2: Convenciones y Unidades