



# UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MANIZALES

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES



## ESTACIÓN METEOROLÓGICA CHEC URIBE

CÓDIGO: EMM-14

SEPTIEMBRE DE 2011

### RESUMEN DIARIO Y MENSUAL DE VARIABLES METEOROLÓGICAS

Variables Día	Temperatura del Aire (°C)			V.V. (m/s)		P.B. (HPa)	Humedad Relativa (%)			LI. (mm)	Radiación Solar (W/m <sup>2</sup> )		ET. (mm)
	Máxima	Media	Mínima	Máxima	Media	Media	Máxima	Media	Mínima	Suma	Máxima	Media	Suma
1	25.8	20.8	17.0	4.0	1.5	815.7	83.0	65.8	40.0	0.0	1023.0	439.2	4.0
2	24.4	19.4	15.2	4.0	1.6	817.1	82.0	71.7	47.0	0.0	1241.0	397.0	3.6
3	21.8	18.4	15.6	5.4	1.3	818.2	89.0	81.5	72.0	0.0	849.0	242.3	2.1
4	23.3	18.6	15.0	4.0	1.6	818.0	86.0	76.7	59.0	0.0	1162.0	270.5	2.3
5	26.0	19.7	14.6	5.4	1.8	817.0	83.0	71.3	49.0	0.0	1202.0	518.8	4.5
6	24.4	19.5	15.7	4.0	1.6	816.3	84.0	76.9	63.0	0.0	1299.0	375.1	3.2
7	24.1	19.0	16.6	4.5	1.1	816.9	93.0	82.3	66.0	2.0	1113.0	264.9	2.2
8	21.8	17.5	15.6	4.0	0.8	819.0	98.0	91.2	74.0	70.4	1238.0	250.7	1.7
9	24.0	18.1	15.2	4.5	1.1	818.7	96.0	86.3	70.0	17.6	984.0	353.9	2.8
10	25.7	18.8	15.3	4.5	1.3	817.2	95.0	84.8	64.0	22.4	1090.0	553.9	4.1
11	22.7	18.4	15.3	4.0	1.0	818.7	97.0	87.9	76.0	1.6	1000.0	288.4	2.3
12	23.3	19.4	16.5	4.5	1.3	819.1	97.0	81.9	63.0	7.6	933.0	241.4	2.1
13	25.4	20.4	16.7	4.9	1.7	817.5	82.0	72.3	53.0	0.0	1331.0	447.6	4.1
14	25.5	20.0	15.8	4.0	1.5	815.7	89.0	76.1	59.0	0.0	1109.0	437.2	3.7
15	24.9	20.1	16.8	4.0	1.2	816.2	91.0	75.8	54.0	0.0	1204.0	348.2	3.0
16	22.0	18.9	16.6	3.6	0.9	816.9	95.0	84.4	67.0	6.0	1071.0	243.9	2.1
17	22.9	18.8	16.4	2.7	0.8	817.1	96.0	85.5	76.0	10.0	1204.0	277.1	2.3
18	20.8	17.7	16.1	2.2	0.6	818.6	98.0	93.3	79.0	38.0	1127.0	236.0	1.6
19	22.2	18.4	15.5	3.6	0.7	817.8	98.0	90.2	75.0	1.0	875.0	264.3	2.0
20	23.1	18.6	16.3	4.0	0.8	817.3	99.0	89.2	71.0	10.2	1271.0	261.8	2.0
21	25.2	19.9	16.1	4.0	1.1	816.8	96.0	81.2	61.0	0.0	1229.0	408.7	3.3
22	23.0	19.4	16.8	3.1	0.7	816.0	97.0	87.6	72.0	3.6	916.0	306.9	2.3
23	25.4	19.4	16.3	4.0	1.1	816.0	95.0	86.3	65.0	6.4	1238.0	396.8	2.9
24	22.9	18.5	16.2	4.9	1.6	816.3	96.0	88.3	73.0	5.2	1188.0	215.2	1.9
25	21.8	18.5	15.9	3.6	1.1	817.2	97.0	87.6	75.0	1.4	805.0	207.4	1.7
26	23.9	19.3	16.7	4.5	1.0	817.5	97.0	86.3	64.0	3.4	1215.0	279.0	2.3
27	25.8	20.0	15.6	4.5	1.7	817.5	84.0	73.6	48.0	0.0	1155.0	402.4	3.6
28	25.4	20.3	16.9	4.5	1.6	815.9	87.0	77.0	57.0	0.0	1120.0	382.2	3.3
29	23.3	19.0	16.2	4.0	1.5	815.4	95.0	82.5	71.0	0.6	622.0	209.9	1.8
30	25.1	19.8	15.4	3.6	1.5	815.5	88.0	79.7	58.0	0.0	1176.0	353.1	3.1
<b>Mensual</b>	<b>26.0</b>	<b>19.1</b>	<b>14.6</b>	<b>5.4</b>	<b>1.2</b>	<b>817.1</b>	<b>99.0</b>	<b>81.8</b>	<b>40.0</b>	<b>207.4</b>	<b>1331.0</b>	<b>329.1</b>	<b>81.5</b>

Convenciones: V.V.: Velocidad del Viento P.B.: Presión Barométrica LI.: Lluvia diaria ET.: Evapotranspiración. Nota: Datos resaltados en rojo están incompletos.



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SEPTIEMBRE DE 2011

JORNADA DIURNA - DIRECCIÓN DEL VIENTO SEGÚN LA ROSA DE LOS VIENTOS (Frecuencia relativa)

Día	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	3%	6%	1%	0%	2%	9%	6%	1%	0%	1%	0%	5%	10%	15%	27%	15%
2	5%	3%	1%	0%	1%	4%	8%	5%	1%	0%	2%	3%	10%	13%	27%	15%
3	3%	2%	0%	1%	0%	2%	11%	3%	0%	0%	1%	2%	8%	15%	36%	16%
4	6%	3%	2%	0%	3%	10%	9%	12%	1%	0%	1%	1%	3%	12%	31%	8%
5	6%	4%	2%	2%	1%	2%	6%	8%	1%	0%	1%	5%	9%	13%	28%	11%
6	10%	6%	1%	0%	1%	2%	12%	3%	1%	1%	1%	1%	13%	13%	24%	14%
7	8%	4%	1%	0%	4%	8%	14%	8%	3%	0%	1%	0%	7%	16%	13%	14%
8	7%	6%	1%	1%	2%	1%	6%	6%	4%	1%	2%	2%	6%	15%	23%	17%
9	5%	5%	2%	1%	0%	5%	6%	9%	0%	1%	1%	1%	12%	11%	28%	15%
10	3%	4%	6%	1%	4%	3%	13%	8%	0%	1%	0%	4%	11%	18%	12%	12%
11	4%	1%	3%	0%	0%	7%	1%	3%	1%	0%	0%	2%	8%	17%	33%	20%
12	10%	5%	3%	6%	1%	6%	19%	10%	1%	0%	1%	1%	6%	8%	16%	6%
13	6%	3%	1%	2%	4%	3%	11%	5%	0%	0%	1%	3%	15%	14%	23%	7%
14	3%	6%	3%	1%	8%	12%	14%	6%	2%	0%	1%	2%	6%	10%	16%	9%
15	13%	6%	1%	0%	1%	3%	6%	6%	1%	0%	1%	2%	10%	23%	17%	12%
16	3%	6%	2%	2%	5%	4%	6%	11%	0%	1%	0%	0%	3%	15%	24%	17%
17	3%	3%	1%	0%	5%	11%	13%	15%	3%	1%	1%	2%	6%	10%	22%	6%
18	4%	1%	2%	2%	1%	6%	10%	8%	5%	0%	1%	1%	6%	13%	19%	22%
19	5%	0%	1%	1%	1%	6%	13%	7%	0%	0%	0%	1%	6%	20%	27%	10%
20	5%	3%	3%	1%	1%	0%	3%	0%	0%	0%	0%	0%	9%	16%	40%	19%
21	4%	4%	1%	0%	0%	3%	8%	5%	0%	1%	1%	4%	12%	15%	24%	17%
22	4%	1%	3%	1%	3%	12%	19%	3%	1%	0%	1%	2%	5%	14%	17%	13%
23	6%	7%	2%	1%	1%	2%	15%	6%	0%	0%	2%	4%	10%	19%	14%	12%
24	3%	3%	0%	3%	1%	15%	20%	11%	1%	0%	1%	3%	2%	9%	19%	9%
25	5%	1%	1%	0%	3%	13%	18%	15%	1%	0%	0%	0%	3%	8%	28%	5%
26	13%	8%	0%	2%	0%	1%	6%	6%	0%	1%	0%	3%	9%	12%	22%	17%
27	7%	6%	0%	1%	1%	1%	10%	6%	1%	0%	1%	8%	10%	18%	23%	8%
28	4%	6%	2%	0%	1%	3%	10%	5%	0%	1%	1%	6%	15%	17%	17%	13%
29	4%	3%	1%	1%	4%	17%	17%	10%	0%	0%	0%	3%	2%	14%	15%	9%
30	6%	3%	3%	0%	0%	1%	3%	10%	0%	1%	0%	2%	15%	17%	33%	7%
Mensual	6%	4%	2%	1%	2%	6%	10%	7%	1%	0%	1%	2%	8%	14%	23%	13%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	NO	ONO	NNO	SE	O	SSE	ESE	N	NNE	OSO	E	NE	ENE	S	SO	SSO
F. R.	23%	14%	13%	10%	8%	7%	6%	6%	4%	2%	2%	2%	1%	1%	1%	0%

Convenciones: R. V.: Rosa de los Vientos F. R.: Frecuencia Relativa. Nota: Datos resaltados en rojo están incompletos.



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JORNADA NOCTURNA - DIRECCIÓN DEL VIENTO SEGÚN LA ROSA DE LOS VIENTOS (Frecuencia relativa)

DIA	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSO	SO	OSO	O	ONO	NO	NNO
1	0%	0%	1%	1%	3%	15%	56%	20%	0%	0%	0%	0%	0%	0%	0%	5%
2	0%	11%	0%	0%	2%	17%	44%	24%	1%	1%	0%	0%	0%	0%	0%	0%
3	0%	0%	0%	0%	1%	15%	38%	35%	1%	0%	0%	0%	0%	0%	9%	0%
4	0%	1%	1%	0%	0%	13%	54%	26%	0%	0%	0%	0%	0%	0%	1%	3%
5	0%	1%	0%	0%	3%	12%	53%	24%	1%	0%	0%	0%	0%	0%	1%	6%
6	0%	0%	0%	0%	2%	13%	50%	29%	0%	2%	0%	0%	4%	0%	0%	0%
7	2%	1%	0%	0%	6%	10%	45%	24%	2%	1%	1%	2%	0%	0%	6%	1%
8	2%	8%	1%	0%	15%	22%	22%	12%	0%	0%	0%	0%	0%	8%	0%	10%
9	3%	1%	0%	0%	9%	20%	29%	30%	1%	0%	1%	0%	0%	1%	1%	4%
10	1%	4%	5%	1%	4%	19%	43%	16%	0%	0%	0%	2%	3%	1%	0%	1%
11	0%	5%	0%	2%	8%	22%	37%	22%	1%	0%	0%	0%	0%	0%	3%	1%
12	0%	0%	1%	3%	3%	22%	45%	25%	1%	0%	0%	0%	0%	0%	0%	0%
13	0%	0%	0%	0%	1%	22%	47%	30%	1%	0%	0%	0%	0%	0%	0%	0%
14	0%	2%	0%	1%	3%	20%	43%	24%	1%	0%	0%	1%	3%	1%	0%	1%
15	0%	0%	0%	1%	2%	24%	45%	24%	1%	0%	0%	0%	0%	2%	0%	1%
16	0%	0%	10%	2%	6%	25%	38%	20%	0%	0%	0%	0%	0%	0%	0%	0%
17	0%	5%	3%	1%	1%	27%	34%	17%	0%	0%	0%	0%	0%	1%	4%	8%
18	8%	3%	0%	1%	15%	22%	35%	10%	0%	0%	1%	0%	0%	1%	2%	1%
19	5%	2%	0%	0%	3%	21%	28%	8%	0%	0%	0%	0%	0%	5%	17%	10%
20	0%	0%	0%	0%	1%	4%	30%	20%	0%	1%	0%	0%	1%	5%	31%	8%
21	17%	3%	0%	0%	1%	10%	28%	21%	0%	0%	0%	1%	1%	0%	17%	3%
22	4%	0%	1%	0%	0%	22%	25%	35%	3%	0%	0%	1%	1%	3%	3%	1%
23	0%	0%	1%	0%	3%	11%	40%	40%	2%	0%	0%	0%	0%	0%	0%	3%
24	1%	0%	0%	2%	2%	22%	44%	22%	0%	0%	0%	0%	0%	0%	8%	0%
25	0%	0%	1%	1%	4%	13%	31%	22%	1%	0%	0%	0%	0%	0%	20%	8%
26	0%	3%	0%	2%	1%	15%	44%	26%	0%	0%	0%	0%	3%	2%	1%	4%
27	0%	0%	0%	0%	3%	16%	52%	24%	1%	0%	0%	0%	0%	0%	3%	1%
28	1%	0%	0%	0%	1%	16%	53%	26%	1%	0%	0%	1%	0%	0%	0%	1%
29	12%	6%	3%	0%	1%	13%	40%	15%	0%	0%	0%	0%	1%	5%	0%	3%
30	0%	0%	0%	0%	1%	15%	50%	25%	0%	0%	0%	0%	0%	6%	1%	1%
Mensual	2%	2%	1%	1%	3%	17%	41%	23%	1%	0%	0%	0%	1%	1%	4%	3%

DIRECCIÓN DEL VIENTO EN EL MES ORDENADA DE MAYOR A MENOR PREDOMINANCIA																
R. V.	SE	SSE	ESE	NO	E	NNO	N	NNE	ONO	NE	ENE	S	O	OSO	SSO	SO
F. R.	41%	23%	17%	4%	3%	3%	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%

Convenciones: R. V.: Rosa de los Vientos F. R.: Frecuencia Relativa. Nota: Datos resaltados en rojo están incompletos.