



UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MANIZALES

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

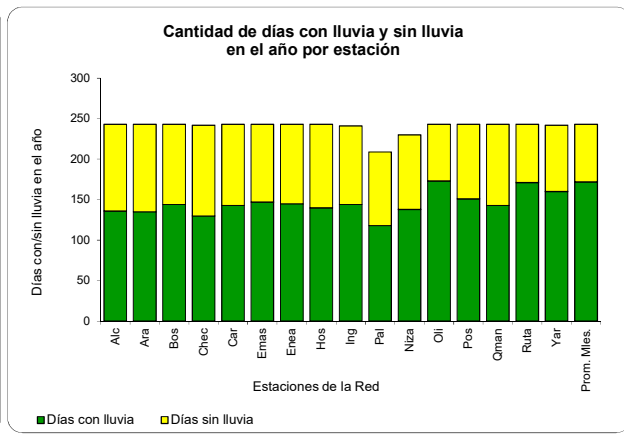
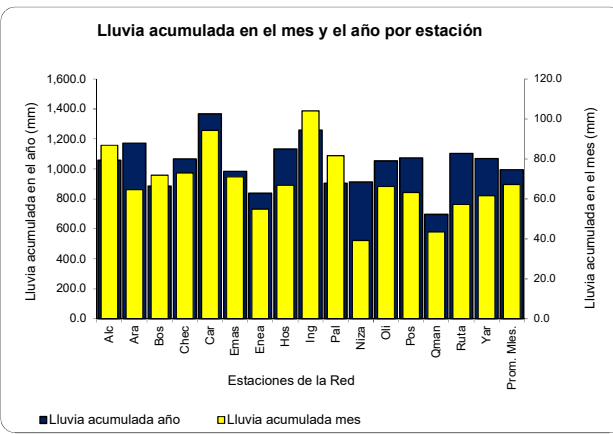
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia



REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

AGOSTO DE 2013

Estaciones	Alcázaras		Aranjuez		Bosques del Norte		Chec Uribe		El Carmen		Emas		Enea		Hospital de Caldas		Ingeominas		La Palma		Niza		Quebrada Olivares-El Popal		Posgrados		Quebrada Manizales-Tesorito		Quebrada San Luis-Ruta 30		Yarumos		Promedio Manizales	
	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25		
Propietarios	Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CHEC S.A. E.S.P		Alcaldía/OMPAD		EMAS S.A. E.S.P		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CORPOCALDAS		UN-Manizales		CORPOCALDAS		UN-Manizales		Alcaldía/OMPAD		Alcaldía/OMPAD	
Día	Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CHEC S.A. E.S.P		Alcaldía/OMPAD		EMAS S.A. E.S.P		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CORPOCALDAS		UN-Manizales		CORPOCALDAS		UN-Manizales		Alcaldía/OMPAD		Alcaldía/OMPAD	



Días transcurridos en el año a la fecha	243		
No. de días con algún N.A. en el año	A	N	R
Alc	34	0	0
Ara	18	12	0
Bos	17	0	0
Chec	39	3	0
Car	33	13	4
Emas	11	8	0
Enea	0	0	0
Hos	10	15	0
Ing	26	15	0
Pal	9	12	0
Niza	11	0	0
Oli	26	0	0
Pos	24	0	0
Qman	0	0	0
Ruta	8	11	0
Year	24	0	0
Prom.	17	0	0

CONVENCIONES

- Li. d. : Lluvia diaria en mm
- A25 : Indicador lluvia antecedente de 25 días en mm
- Li. mes: Lluvia parcial o total en el mes en mm
- Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm
- Li. acum. en el año: Lluvia acumulada en el año en mm
- No. días lluvia año: Número de días con lluvia en el corrido del año
- Resalta la lluvia diaria máxima del mes
- Acumulado de lluvia asignado a uno de los dos días

* Indicadores con base a los días de funcionamiento de cada estación

NIVELES DE ALERTA (N.A.)

- Amarilla o baja: A 200 mm <= A25 < 300 mm
- Naranja o media: N 300 mm <= A25 < 400 mm
- Roja o alta: R A25 >= 400 mm

OBSERVACIONES:

- La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen
- Datos resaltados en rojo están incompletiones

Entidades propietarias y participantes



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REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

SEPTIEMBRE DE 2013

Estaciones	Alcázares		Aranjuez		Bosques del Norte		Chec Uribe		El Carmen		Emas		Enea		Hospital de Caldas		Ingeominas		La Palma		Niza		Quebrada Olivares-El Popal		Posgrados		Quebrada Manizales-Tesorito		Quebrada San Luis-Ruta 30		Yarumos		Promedio Manizales								
	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25								
Propietarios	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	CHEC S.A. E.S.P	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	EMAS S.A. E.S.P	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	CORPOCALDAS	Li. d.	A25	UN-Manizales	Li. d.	A25	CORPOCALDAS	Li. d.	A25	UN-Manizales	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Li. d.	A25
Día	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	CHEC S.A. E.S.P	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	EMAS S.A. E.S.P	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	CORPOCALDAS	Li. d.	A25	UN-Manizales	Li. d.	A25	CORPOCALDAS	Li. d.	A25	UN-Manizales	Li. d.	A25	Alcaldía/OMPAD	Li. d.	A25	Li. d.	A25
D	1	3.0	75.8	3.0	58.4	0.0	63.2	3.4	70.2	9.7	89.9	0.0	60.0	0.0	50.8	2.8	55.4	3.6	92.6	0.0	72.4	0.0	31.8	0.2	59.2	3.1	53.1	0.0	40.2	5.0	53.4	0.3	54.9	1.5	51.5	60.2					
L	2	4.6	76.4	1.2	55.6	4.6	63.4	0.4	68.0	5.9	90.9	8.8	62.0	2.5	49.3	2.4	53.6	9.2	96.8	3.6	72.4	3.4	29.2	4.0	54.4	2.8	51.6	2.2	38.0	1.6	50.8	4.6	53.9	3.9	59.2	1.5	59.2				
Ma	3	16.2	90.2	14.0	69.0	10.6	73.6	11.2	78.0	14.2	99.8	21.6	82.6	8.9	57.4	12.2	65.4	113.0	16.0	87.4	19.2	47.8	15.8	69.8	12.5	63.8	7.6	45.2	13.0	63.2	12.4	65.8	13.9	71.9							
Mi	4	5.4	81.4	11.0	78.2	8.0	80.4	2.4	59.8	8.4	95.3	5.4	86.8	15.5	70.6	7.6	71.2	6.6	98.6	3.6	85.4	13.6	59.6	12.4	79.6	9.4	71.4	20.0	61.2	9.2	70.4	11.2	74.9	10.6	76.9						
J	5	1.4	62.8	3.8	49.8	3.0	72.0	1.2	35.0	2.3	71.4	2.0	76.2	4.3	64.3	2.8	54.2	1.4	84.8	0.8	68.8	4.4	52.4	3.8	72.0	2.8	53.6	3.4	64.6	3.2	52.8	3.3	64.8	2.8	66.0						
V	6	15.4	75.2	23.8	70.2	10.0	79.2	18.8	52.6	24.6	91.4	18.4	91.8	24.4	82.8	17.2	68.0	22.2	107.0	14.6	81.0	19.4	66.6	17.2	86.2	17.6	67.6	18.2	76.0	19.2	68.4	15.0	75.4	18.5	80.7						
S	7	16.0	89.4	5.4	75.2	0.6	79.2	3.2	54.0	21.1	111.3	2.2	93.4	0.5	83.3	7.8	74.6	8.2	115.2	0.6	79.4	0.4	64.2	0.4	84.4	5.6	72.2	0.8	74.6	4.8	72.4	0.5	74.9	3.6	83.0						
D	8	2.6	91.4	4.0	78.4	3.8	82.2	1.8	55.4	4.6	114.8	3.4	96.0	4.3	85.9	3.4	77.2	3.2	117.4	2.8	82.0	5.0	68.0	4.6	88.4	3.6	74.7	5.2	76.0	3.6	74.8	4.1	77.7	4.0	85.6						
L	9	34.6	125.2	6.4	84.8	22.4	103.4	6.2	61.2	20.8	134.9	17.2	112.6	11.2	97.0	20.4	96.2	43.4	160.4	3.4	85.4	17.2	84.4	15.0	103.0	18.6	92.0	3.0	78.6	16.4	90.4	12.7	89.7	14.9	99.9						
Ma	10	5.8	129.0	8.6	91.2	7.4	105.8	4.2	64.6	6.6	139.2	7.0	117.0	7.6	99.1	7.4	102.2	9.4	167.6																						
Mi	11	8.2	130.2	1.4	91.2	1.0	106.0	1.8	65.6	10.4	144.0	1.6	114.8	1.3	96.0	2.6	98.8	11.6	170.4	1.0	78.2	4.2	93.2	5.0	106.4	3.6	97.4	2.4	83.2	4.2	96.6	5.8	98.3	3.7	103.1						
J	12	13.6	137.0	42.4	132.2	33.6	138.0	13.2	77.0	18.8	158.5	28.0	141.2	32.3	127.8	34.4	129.8	13.4	166.6	12.0	88.0	38.0	131.2	31.6	134.0	42.7	137.0	2.6	83.8	34.0	128.8	25.2	123.5	23.1	122.9						
V	13	0.4	137.4	1.2	133.4	0.2	124.6	0.2	77.2	0.5	159.0	0.4	135.4	0.5	127.0	0.6	130.4	0.6	166.4	0.4	80.2	1.4	132.6	1.0	134.8	0.5	137.3	3.4	87.2	0.4	129.0	0.5	118.1	1.0	121.4						
S	14	0.4	137.8	0.0	131.8	4.6	121.0	0.0	77.2	0.8	158.8	1.2	131.0	0.0	120.4	4.8	133.8	0.8	166.4	0.4	78.8	5.0	137.6	6.8	133.8	7.1	143.1	0.4	87.6	3.6	131.2	8.6	120.4	2.4	120.8						
D	15	0.0	135.6	0.0	131.4	0.8	121.8	0.0	76.2	0.0	157.7	0.6	131.6	0.0	120.4	0.0	133.8	0.0	164.4	0.6	79.2	0.0	137.6	0.0	133.8	0.0	143.1	0.4	88.0	0.0	131.2	0.0	120.4	0.2	120.6						
L	16	0.0	135.6	0.0	130.8	0.0	121.0	0.0	76.2	0.0	157.7	0.0	131.6	0.0	120.1	0.0	133.8	0.0	164.4	0.0	78.6	0.0	137.6	0.0	133.2	0.0	143.1	0.0	87.0	0.0	131.0	0.0	120.1	0.0	120.2						
Ma	17	3.0	138.6	5.8	136.6	5.0	126.0	2.4	78.6	5.1	162.8	4.8	136.4	5.9	125.2	4.6	138.4	4.2	168.6	4.0	82.6	6.2	143.8	6.6	139.8	6.6	149.7	8.0	95.0	4.8	135.8	6.9	127.0	5.5	125.7						
Mi	18	2.0	139.6	3.0	139.6	2.8	123.2	1.2	79.4	3.3	165.1	2.8	131.0	2.5	127.5	2.4	139.8	2.6	169.8	3.2	81.0	2.6	146.4	2.8	141.6	3.3	152.5	3.6	98.4	2.6	138.0	2.8	128.8	2.8	126.7						
J	19	0.6	136.4	0.4	137.2	0.0	119.4	2.4	80.0	0.5	159.8	0.0	126.0	0.0	123.5	0.2	135.2	0.2	165.4	0.2	77.2	0.0	146.4	0.0	136.2	0.0	148.2	0.0	92.6	0.2	134.0	0.0	123.7	0.2	122.3						
V	20	0.0	135.8	0.0	136.2	0.0	119.2	0.0	79.8	0.0	158.8	0.0	125.8	0.0	122.2	0.0	134.4	0.0	165.0	0.0	77.2	0.0	146.4	0.0	135.6	0.0	147.4	0.0	89.6	0.0	133.4	0.0	122.9	0.0	121.3						
S	21	0.0	135.6	0.0	136.2	0.0	118.4	0.0	79.8	0.0	158.2	0.0	125.4	0.0	121.9	0.0	134.0	0.0	164.4	0.0	76.6	0.0	146.4	0.0	134.6	0.0	146.9	0.0	89.2	0.0	133.2	0.0	121.9	0.0	120.8						
D	22	0.0	135.6	0.0	136.2	0.0	118.4	0.0	79.8	0.0	158.2	0.0	125.4	0.0	121.9	0.0	134.0	0.0	164.4	0.0	76.6	0.0	146.4	0.0	134.4	0.0	146.9	0.0	89.2	0.0	133.0	0.0	121.9	0.0	120.8						
L	23	0.0	133.2	0.0	136.2	0.0	118.4	0.0	74.8	0.0	157.5	0.0	125.4	0.0	121.7	0.0	133.6	0.0	161.8	0.0	67.2	0.0	146.4	0.0	134.4	0.0	146.4	0.0	89.2	0.0	132.4	0.0	121.7	0.0	119.3						
Ma	24	0.0	133.2	1.0	137.2	10.2	128.6	0.0	74.8	0.3	157.7	2.6	128.0	5.6	127.3	0.8	134.4	0.0	161.8	1.6	68.8	4.2	150.6	5.0	139.4	2.0	148.4	0.0	89.2	0.8	133.2	4.3	126.0	2.5	121.8						
Mi	25	0.0	133.2	0.0	136.4	0.2	128.8	0.0	74.0	0.0	157.7	0.0	128.0	0.0	127.3	0.0	134.4	0.0	161.8	0.0	68.8	0.0	150.6	0.0	139.2	0.0	148.4	0.0	89.2	0.0	133.2	0.0	125.7	0.0	121.8						
J	26	3.2	133.4	4.0	137.4	6.2	135.0	1.8	72.4	4.6	152.7	3.6	131.6	14.0	141.2	4.2	135.8	3.0	161.2	1.4	70.2	4.8	155.4	8.4	147.4	5.9	151.2	4.8	94.0	3.2	131.4	10.2	135.6	5.3	125.6						
V	27	1.4	130.2	2.4	138.6	1.2	131.6	5.0	77.0	4.6	151.4	0.8	123.6	3.3	142.0	2.2	135.6	3.0	155.0	2.2	68.8	4.0	156.0	3.4	146.8	2.8	151.2	10.0	101.8	0.8	130.6	2.8	133.9	3.9	125.5						
S	28	5.6	119.6	7.2	131.8	8.6	129.6	5.2	71.0	8.1	145.3	7.2	109.2	7.9	141.0	5.4	128.8	7.8	141.6	7.8	60.6	8.0	144.8	8.4	139.4	7.1	145.9	11.6	105.8	6.8	124.8	8.9	130.3	8.1	119.8						
D	29	5.6	119.8	6.6	127.4	7.0	128.6	1.0	69.6	10.9	147.8	6.6	110.4	7.1	132.6	10.4	131.6	7.8	142.8	6.4	63.4	11.8	143.0	12.4	139.4	11.7	148.2	8.4	94.2	9.6	124.8	13.0	132.1	8.5	117.6						
L	30	12.2	130.6	17.2	140.8	1.8	127.4	11.6	80.0	8.1	153.7	6.2	114.6	2.5	130.8	5.6	134.4	17.2	158.6	38.2	100.8	2.2	140.8	2.2	137.8	6.4	151.7	2.0	92.8	12.6	134.2	2.0	130.8	8.9	123.7						
Ma	1																																								
Li. mes		161.2		173.8		153.6		98.6		194.1		152.4		162.1		162.2		200.6		124.8		181.4		174.0		182.2		126.0		166.2		162.6		156.4							
Máx. mes		34.6	139.6	42.4	140.8	33.6	138.0	18.8	80.0	24.6	165.1	28.0	141.2	32.3	142.0	34.4	139.8																								



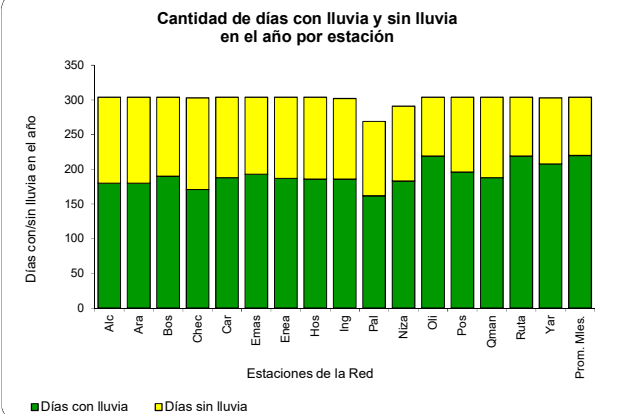
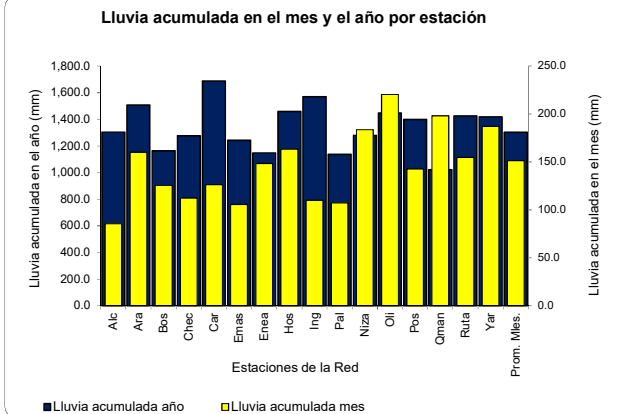
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OCTUBRE DE 2013

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	Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CHEC S.A. E.S.P		Alcaldía/OMPAD		EMAS S.A. E.S.P		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		Alcaldía/OMPAD		CORPOCALDAS		UN-Manizales		CORPOCALDAS		UN-Manizales		Alcaldía/OMPAD		Alcaldía/OMPAD		
	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.	A25	LI. d.
Ma 1	0.6	115.8	0.8	117.8	1.4	118.8	0.2	61.4	0.8	129.8	1.4	97.6	1.0	107.4	0.8	118.0	0.8	137.2	1.2	87.4	1.0	122.4	1.2	121.8	1.0	135.2	1.2	75.8	0.8	115.8	1.3	117.1	1.0	106.3	
Mi 2	0.0	99.8	3.4	115.8	0.0	118.2	1.4	59.6	2.0	110.7	0.4	95.8	11.2	118.1	2.6	112.8	0.0	129.0	1.0	87.8	5.6	127.6	5.8	127.2	5.3	134.9	15.0	90.0	3.8	114.8	6.1	127.7	5.3	107.9	
J 3	0.8	98.0	1.4	113.2	5.0	119.4	0.8	58.6	1.8	108.0	4.2	96.6	4.6	118.4	3.2	112.6	2.4	128.2	3.6	88.6	5.4	128.0	4.6	127.2	3.6	134.9	4.8	89.6	2.8	114.0	3.6	122.2	3.7	107.7	
V 4	3.0	66.4	4.0	110.8	2.6	99.6	0.4	52.8	5.3	92.5	2.8	82.2	4.8	112.0	3.8	96.0	4.8	89.6	2.0	87.2	2.0	112.8	2.0	114.2	3.8	120.2	3.4	90.0	4.0	101.6	1.8	111.3	3.1	95.9	
S 5	0.0	60.6	0.2	102.4	0.0	92.2	0.0	48.6	0.0	85.9	0.0	75.2	0.0	104.4	0.0	88.6	0.0	80.2	0.0	87.2	0.0	106.4	0.0	107.2	0.0	113.3	0.0	82.0	0.2	95.2	0.3	103.9	0.0	89.4	
D 6	0.0	52.4	0.0	101.0	0.0	91.2	0.0	46.8	0.0	75.4	0.0	73.6	0.0	103.1	0.0	86.0	0.0	68.6	0.0	86.2	0.0	102.2	0.0	102.2	0.0	109.8	0.0	79.6	0.0	91.0	0.0	98.0	0.0	85.7	
L 7	0.0	38.8	0.0	58.6	0.0	57.6	0.0	33.6	0.0	56.6	0.0	45.6	0.0	70.9	0.0	51.6	0.0	55.2	0.0	74.2	0.0	70.6	0.0	70.6	0.0	67.1	0.4	77.4	0.0	57.0	0.3	73.2	0.1	62.6	
Ma 8	0.0	38.4	0.0	57.4	0.0	57.4	0.0	33.4	0.0	56.1	0.0	45.2	0.0	70.4	0.0	51.0	0.0	54.6	0.0	73.8	0.0	62.8	0.0	69.6	0.0	66.6	0.0	74.0	0.0	56.6	0.0	72.7	0.0	61.6	
Mi 9	0.0	38.0	0.0	57.4	0.0	52.8	0.0	33.4	0.0	55.4	0.0	44.0	0.0	70.4	0.0	46.2	0.0	53.8	0.0	73.4	0.0	57.8	0.0	62.8	0.0	59.4	0.0	73.6	0.0	53.0	0.0	64.0	0.0	59.2	
J 10	2.4	40.4	0.0	57.4	7.4	59.4	0.6	34.0	3.1	58.4	4.4	47.8	0.3	70.6	1.8	48.0	3.2	57.0	18.0	90.8	1.2	59.0	1.6	64.4	0.8	60.2	0.2	73.4	1.2	54.2	1.8	65.8	3.4	62.4	
V 11	3.2	43.6	0.8	58.2	0.4	59.8	6.0	40.0	3.6	62.0	2.4	50.2	0.0	70.6	0.8	48.8	4.6	61.6	3.8	94.6	0.4	59.4	0.4	64.8	0.8	61.0	2.0	75.4	1.4	55.6	0.3	66.0	1.9	64.3	
S 12	8.4	49.0	24.2	76.6	2.2	57.0	15.2	52.8	15.8	72.7	5.0	50.4	6.4	71.1	19.2	63.4	9.0	66.4	8.2	98.8	5.2	58.4	4.0	62.2	9.4	63.8	21.0	88.4	27.0	77.8	3.8	63.0	11.1	69.9	
D 13	3.0	50.0	1.4	75.0	1.0	55.2	0.4	52.0	5.3	74.7	3.2	50.8	0.3	68.8	6.0	67.0	4.6	68.4	1.0	96.6	0.6	56.4	0.4	59.8	6.9	67.3	0.0	84.8	4.6	79.8	1.0	61.2	1.9	69.0	
L 14	3.8	53.2	6.4	81.0	17.2	72.4	2.2	51.8	7.6	81.8	7.8	58.6	10.7	79.5	11.8	78.6	5.0	73.2	4.2	100.6	13.4	69.8	18.0	77.8	7.6	74.9	11.2	96.2	8.2	87.8	11.4	72.7	9.8	78.5	
Ma 15	0.2	53.4	0.4	81.4	1.0	73.4	0.0	51.8	0.0	81.8	0.4	59.0	2.5	82.0	0.4	79.0	0.0	73.2	0.0	100.6	4.0	73.8	2.4	80.2	0.3	75.2	14.2	110.2	0.2	88.0	2.0	74.7	3.2	81.7	
Mi 16	6.6	60.0	7.8	89.2	9.6	83.0	5.6	57.4	8.1	89.9	9.6	68.6	9.9	91.9	16.8	95.8	9.4	82.6	11.2	111.8	16.8	90.6	18.4	98.6	11.7	86.9	8.0	118.2	10.0	98.0	22.1	96.8	11.2	92.9	
J 17	5.4	65.4	7.4	96.6	6.0	89.0	5.4	62.8	6.1	96.0	5.8	74.4	6.4	98.3	8.2	104.0	7.0	89.6	5.2	117.0	6.8	97.4	6.8	105.4	7.4	94.2	6.4	124.6	8.2	106.2	7.1	103.9	6.4	99.3	
V 18	0.4	65.8	0.0	96.6	5.8	94.8	0.6	63.4	0.8	96.8	3.4	77.8	0.0	98.3	0.0	104.0	0.6	90.2	2.4	119.4	1.2	98.6	1.4	106.8	0.0	94.2	0.2	124.8	0.2	106.4	1.3	105.2	1.2	100.5	
S 19	0.0	65.8	0.0	95.6	0.0	84.6	0.0	63.4	0.0	96.5	0.0	75.2	0.0	92.7	0.0	103.2	0.0	90.2	0.0	117.8	0.0	94.4	0.0	101.8	0.0	92.2	0.0	124.8	0.0	105.6	0.0	100.8	0.0	98.1	
D 20	1.8	67.6	1.4	97.0	2.6	87.0	0.0	63.4	2.8	99.3	1.4	76.6	1.5	94.2	2.4	105.6	2.0	92.2	1.4	119.2	1.8	96.2	2.0	103.8	1.8	94.0	3.2	128.0	1.8	107.4	1.8	102.6	2.0	100.0	
L 21	2.2	66.6	4.0	97.0	2.0	82.8	2.2	63.8	3.1	97.8	2.6	75.6	3.3	83.6	3.4	104.8	2.8	92.0	2.2	120.0	3.8	95.2	4.4	99.8	2.5	90.7	1.4	124.6	3.0	107.2	3.3	95.8	2.8	97.4	
Ma 22	18.4	83.6	36.4	131.0	21.2	102.8	22.8	81.6	22.4	115.6	20.2	95.0	25.2	105.4	33.2	135.8	24.2	113.2	16.4	134.2	30.2	121.4	36.0	132.4	28.5	116.3	14.0	128.6	31.2	137.6	29.5	122.4	23.8	117.4	
Mi 23	1.2	79.2	0.4	124.2	5.4	99.6	0.4	76.8	2.0	109.5	4.2	92.0	0.8	98.3	2.2	132.6	1.6	107.0	3.0	129.4	10.6	124.0	10.2	134.2	2.0	111.2	13.8	130.8	1.4	132.2	7.4	120.9	5.6	114.9	
J 24	0.4	74.0	1.6	119.2	2.8	95.4	0.2	76.0	1.5	100.1	1.8	87.2	1.8	93.0	2.4	124.6	0.6	99.8	1.2	124.2	3.6	115.8	5.8	127.6	2.3	101.8	11.2	133.6	2.4	125.0	4.6	112.5	3.7	110.1	
V 25	0.2	62.0	2.6	104.6	1.2	94.8	0.0	64.4	0.5	92.5	0.2	81.2	1.5	92.0	0.6	119.6	0.0	82.6	0.2	86.2	1.0	114.6	0.4	125.8	0.8	96.3	0.6	132.2	1.4	113.8	1.5	112.0	0.7	101.9	
S 26	0.0	61.4	0.0	103.8	0.0	93.4	0.0	64.2	0.0	91.7	0.0	79.8	0.0	90.9	0.0	118.8	0.0	81.8	0.0	85.0	0.0	113.6	0.0	124.6	0.0	95.2	0.0	131.0	0.0	113.0	0.0	110.7	0.0	100.8	
D 27	6.2	67.6	20.4	120.8	5.6	99.0	34.2	97.0	5.6	95.3	4.2	83.6	23.9	103.6	3.6	119.8	3.6	85.4	4.6	88.6	9.8	117.8	10.4	129.2	5.1	95.0	10.2	126.2	4.8	114.0	10.4	115.1	10.0	105.6	
L 28	0.0	66.8	0.2	119.6	0.6	94.6	0.0	96.2	0.0	93.5	0.2	79.6	2.3	101.3	0.4	117.0	0.0	83.0	0.0	85.0	3.8	116.2	7.8	132.4	1.8	93.2	1.4	122.8	0.4	111.6	9.7	121.2	1.8	103.7	
Ma 29	2.2	66.8	5.8	121.4	7.8	99.8	1.8	97.6	7.1	95.3	4.6	81.4	3.6	100.1	10.0	123.2	4.2	82.4	3.0	86.0	17.4	131.6	14.6	145.0	13.0	102.4	3.0	122.4	8.4	116.0	9.1	128.5	6.9	107.4	
Mi 30	8.0	74.0	2.6	123.8	1.8	101.6	8.8	106.4	7.9	103.1	3.6	85.0	3.8	103.9	4.2	127.4	8.2	90.6	5.8	91.8	8.8	140.4	33.6	178.6	4.6	106.9	10.8	133.2	4.0	119.8	20.1	148.3	9.1	116.6	
J 31	7.2	81.2	26.6	150.4	15.0	116.6	3.0	109.4	13.2	116.3	12.0	97.0	22.9	126.8	25.4	152.8	11.4	102.0	7.6	99.4	29.2	169.6	28.0	206.6	22.1	129.0	40.4	173.6	23.2	143.0	25.7	174.0	21.5	138.1	
LI. mes	85.6		160.2		125.6		112.2		126.2		105.8		148.3		163.2		110.0		107.2		183.6		220.2		142.7		198.0		154.6		186.9		151.2		
Máx. mes	18.4	115.8	36.4	150.4	21.2	119.4	34.2	109.4	22.4	129.8	20.2	97.6	25.2	126.8	33.2	152.8	24.2	137.2	18.0	134.2	30.2	169.6	36.0	206.6	28.5	135.2	40.4	173.6	31.2	143.0	29.5	174.0	23.8	138.1	
LI. acum. en el año	1303.4		1506.2		1164.2		1276.6		1687.1		1242.6		1146.8		1457.8		1569.6		1136.0		1277.6		1447.2		1398.6		1020.4		1424.8		1418.0		1302.3		
No. días lluvia año	180	59%	180	59%	190	63%	171	56%	188	62%	193	63%	187	62%	186	61%	186	62%	162	60%	183	63%	219	72%	196	64%	188	62%	219	72%	208	69%	220	72%	



Días transcurridos en el año a la fecha		304	
No. de días con algún N.A. en el año			
Estación	A	N	R
Alc	34	0	0
Ara			



UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MANIZALES

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia



REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

NOVIEMBRE DE 2013

Estaciones	Alcázares		Aranjuez		Bosques del Norte		Chec Uribe		El Carmen		Emas		Enea		Hospital de Caldas		Ingeominas		La Palma		Niza		Quebrada Olivares-El Popal		Posgrados		Quebrada Manizales-Tesorito		Quebrada San Luis-Ruta 30		Yarumos		Promedio Manizales		
	Día	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	CHEC S.A. E.S.P	Alcaldía/OMPAD	EMAS S.A. E.S.P	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	CORPOCALDAS	UN-Manizales	CORPOCALDAS	UN-Manizales	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	UN-Manizales	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD			
		Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25		
V 1	9.8	91.0	31.0	181.4	21.2	137.8	12.2	121.6	11.2	127.5	11.6	108.6	7.9	134.6	21.0	173.8	12.2	114.2	24.2	123.6	11.6	181.2	19.2	225.8	22.4	151.4	15.6	188.8	20.4	163.4	21.3	195.1	16.1	154.1	
S 2	6.0	97.0	1.4	182.8	15.0	152.8	0.2	121.8	5.6	133.1	11.0	119.6	13.0	147.6	6.0	179.8	8.0	122.2	5.6	129.2	6.2	187.4	9.6	235.4	5.1	156.5	14.0	202.8	2.8	166.2	7.1	202.2	8.6	162.7	
D 3	0.4	97.4	0.6	183.4	0.2	153.0	0.0	121.8	0.3	133.4	0.0	119.6	0.5	148.1	5.4	185.2	0.6	122.8	3.8	133.0	1.2	188.6	7.2	242.6	1.3	157.7	4.0	206.8	2.0	168.2	12.2	214.4	2.5	165.2	
L 4	20.4	115.4	20.8	204.2	11.0	156.6	19.0	140.2	16.5	146.8	15.2	130.4	15.0	162.8	15.6	199.0	32.2	141.8	15.4	130.4	10.0	197.4	12.2	253.2	10.9	167.9	22.6	229.2	11.6	178.6	10.7	223.3	16.0	177.9	
Ma 5	2.8	115.0	5.8	209.2	11.4	167.6	1.4	135.6	3.6	146.8	7.8	135.8	5.6	168.4	4.6	202.8	2.2	140.4	3.8	130.4	3.8	200.8	4.6	257.4	4.6	171.7	10.8	238.0	4.6	181.8	4.8	227.8	5.8	181.8	
Mi 6	65.2	171.8	43.4	228.4	41.2	206.6	57.8	178.2	82.3	213.4	48.0	178.8	30.8	192.9	43.0	226.6	80.0	211.4	59.4	181.6	20.8	216.4	24.4	277.8	34.5	196.9	15.0	232.0	37.0	191.8	23.1	247.1	40.4	211.1	
J 7	1.0	169.8	23.0	250.0	27.6	233.2	1.2	179.0	2.8	210.8	14.2	189.8	9.5	202.1	21.4	242.0	5.2	212.0	1.4	182.0	19.8	235.6	16.8	294.2	12.7	202.7	8.2	240.2	10.0	197.2	14.0	260.1	11.2	220.5	
V 8	11.8	177.8	8.4	252.0	8.2	224.2	1.8	178.6	25.7	228.9	10.6	192.6	2.4	193.8	22.8	253.0	19.2	226.2	2.0	179.8	2.4	224.6	5.2	281.4	18.0	213.1	0.2	229.2	21.6	210.6	9.4	258.1	8.1	218.9	
S 9	2.4	180.0	25.6	277.2	10.4	233.6	1.4	180.0	5.9	234.7	9.2	201.4	21.0	212.3	15.8	268.4	4.6	230.8	0.8	180.6	31.8	252.4	33.6	312.6	29.2	242.1	17.4	232.4	23.6	234.0	29.5	285.5	16.2	231.9	
D 10	3.2	176.6	4.4	273.8	3.6	227.6	2.4	176.8	4.6	231.1	3.6	195.4	5.5	207.9	4.6	256.2	4.0	225.4	1.0	170.4	5.8	241.4	6.2	300.4	5.8	236.2	6.4	230.8	4.6	228.6	4.8	268.2	4.6	225.3	
L 11	0.0	171.2	0.0	266.4	0.4	222.0	0.0	171.4	0.0	225.1	0.2	189.8	0.2	201.7	0.0	248.0	0.0	218.4	0.0	165.2	0.2	234.8	0.2	293.8	0.0	228.9	0.8	225.2	0.2	220.6	0.3	261.4	0.2	219.0	
Ma 12	0.0	170.8	0.0	266.4	0.4	216.6	0.4	171.2	0.0	224.3	0.0	186.4	3.3	205.0	0.8	248.8	0.0	217.8	0.0	162.8	1.4	235.0	1.2	293.6	1.5	230.4	0.0	225.0	0.8	221.2	1.0	261.1	0.7	218.5	
Mi 13	0.0	170.8	0.0	266.4	0.2	216.8	0.0	171.2	0.0	224.3	0.0	186.4	0.0	205.0	0.0	248.8	0.0	217.8	0.0	162.8	0.0	235.0	0.2	293.8	0.0	230.4	0.0	225.0	0.0	221.2	0.0	261.1	0.0	218.5	
J 14	0.0	169.0	0.0	265.0	0.0	214.2	0.0	171.2	0.0	221.5	0.0	185.0	0.0	203.5	0.0	246.4	0.0	215.8	0.0	161.4	0.0	233.2	0.4	292.2	0.0	228.6	0.0	221.8	0.0	219.4	0.0	259.3	0.0	216.6	
V 15	0.0	166.8	0.0	261.0	0.0	212.2	0.0	169.0	0.3	218.7	0.0	182.4	0.0	200.2	1.8	244.8	0.0	213.0	0.0	159.2	0.0	229.4	0.2	288.0	1.5	227.6	0.2	220.6	1.6	218.0	0.5	256.5	0.3	214.1	
S 16	0.8	149.2	1.8	226.4	0.4	191.4	0.0	146.2	0.5	196.9	0.0	162.2	5.4	180.5	2.6	214.2	0.4	189.2	0.0	142.8	1.0	200.2	5.2	257.2	1.0	200.2	0.0	206.6	1.2	188.0	4.8	231.9	1.5	191.8	
D 17	0.0	148.0	0.4	226.4	2.8	188.8	0.0	145.8	0.0	194.8	1.0	159.0	2.0	181.7	0.4	214.2	0.2	187.8	0.0	139.8	1.4	191.0	3.0	250.0	1.0	199.1	6.6	199.4	0.4	187.0	1.8	226.3	2.0	188.1	
L 18	48.0	195.6	40.4	265.2	21.0	207.0	54.6	200.2	52.3	245.6	29.8	187.0	60.7	240.6	46.4	256.4	59.6	246.8	41.2	179.8	17.2	204.6	26.0	270.2	37.1	233.9	32.6	220.8	45.8	230.4	21.1	242.8	38.3	222.8	
Ma 19	28.0	223.4	21.4	284.0	17.6	223.4	17.0	217.2	31.8	276.9	21.8	208.6	3.5	242.6	25.2	281.0	35.4	282.2	21.8	201.4	11.4	215.0	15.8	285.6	22.6	255.8	23.0	243.2	21.8	250.8	17.0	258.3	20.1	242.2	
Mi 20	9.2	232.6	4.8	288.8	0.2	223.6	4.4	221.6	8.4	285.3	8.0	216.6	0.0	242.6	1.2	282.2	15.4	297.6	0.0	201.4	12.0	227.0	17.6	303.2	16.0	271.8	6.4	249.6	8.4	259.2	8.6	267.0	7.3	249.4	
J 21	0.4	226.8	0.6	269.0	2.2	220.0	0.0	187.4	1.3	280.9	0.6	213.0	4.6	223.3	1.2	279.8	0.8	294.8	0.0	196.8	10.0	227.0	14.8	307.6	2.5	269.2	17.6	257.0	1.0	255.4	12.4	269.0	6.1	245.5	
V 22	0.4	227.2	0.0	268.8	16.6	236.2	2.4	189.8	0.3	281.2	0.0	212.8	1.0	222.0	1.2	280.6	0.4	295.2	0.4	197.2	5.0	228.4	10.2	310.0	3.3	270.8	9.0	264.6	1.4	256.4	8.6	268.0	4.4	248.1	
S 23	22.6	247.6	20.4	283.4	19.4	247.8	30.8	218.8	47.0	321.1	15.2	223.4	25.0	243.5	40.2	310.8	43.4	334.4	6.2	200.4	16.6	227.6	16.8	312.2	28.7	286.5	5.2	266.8	35.6	283.6	19.6	278.4	20.8	262.0	
D 24	3.6	243.2	0.8	281.6	26.2	272.2	2.2	212.2	1.5	314.7	14.8	234.6	2.8	242.5	11.4	318.0	10.8	337.0	5.4	200.0	1.6	220.4	3.8	282.4	1.5	283.5	7.0	263.0	2.0	281.6	4.8	263.1	6.6	259.5	
L 25	1.8	237.8	4.6	259.6	2.0	259.2	0.6	209.8	2.0	303.5	2.4	225.0	6.5	226.1	2.4	295.0	1.8	327.4	14.2	206.6	8.6	199.8	9.6	264.0	6.4	267.7	12.0	234.6	3.2	261.6	6.4	243.8	6.7	244.6	
Ma 26	12.8	240.8	4.4	233.0	5.4	243.4	30.2	227.8	38.1	330.5	3.0	216.4	7.3	225.5	5.4	279.4	32.2	347.4	0.2	182.6	19.4	207.6	35.0	279.8	4.3	249.7	15.4	230.4	5.6	246.8	13.7	236.2	14.8	243.3	
Mi 27	24.2	259.0	2.6	234.2	7.2	235.6	28.8	256.4	22.4	347.2	3.2	208.6	38.7	251.3	9.8	283.2	28.2	367.6	0.8	177.8	19.2	220.6	21.0	291.2	27.7	272.3	14.0	234.4	8.0	252.0	27.4	256.5	17.2	251.8	
J 28	47.0	305.6	39.4	273.0	54.2	289.6	42.8	299.2	83.8	430.6	63.6	272.2	42.0	292.8	53.0	330.8	68.2	435.2	85.2	259.2	27.4	246.8	43.4	327.4	48.0	319.0	47.4	277.8	45.6	295.6	43.9	288.3	52.7	302.0	
V 29	20.6	305.8	27.8	280.0	20.6	299.2	14.2	294.4	26.4	440.7	15.2	272.2	14.7	292.5	27.8	343.0	25.0	438.0	9.6	253.4	14.6	251.4	19.8	335.0	22.0	279.2	24.8	308.8	17.5	295.2	19.5	305.5			
S 30	57.2	360.2	37.2	311.4	38.2	326.0	57.6	350.6	83.1	520.2	28.4	292.8	35.5	322.4	45.2	383.6	64.2	499.0	21.2	270.8	19.4	267.0	43.6	374.0	38.6	364.2	34.2	302.6	34.8	339.0	46.7	337.1	39.5	339.1	
D 1																																			
Li. mes	399.6		371.0		384.8		383.4		557.3		338.4		364.3		436.2		545.2		323.6		299.8		426.8		408.4		369.6		380.4		393.2		388.3		
Máx. mes	65.2	360.2	43.4	311.4	54.2	326.0	57.8	350.6	83.8	520.2	63.6	292.8	60.7	322.4	53.0	383.6	80.0	499.0	85.2	270.8	31.8	267.0	43.6	374.0	48.0	364.2	47.4	302.6	45.8	339.0	46.7	337.1	52.7	339.1	
Li. acum. en el año	1703.0		1877.2		1549.0		1660.0		2244.3		1581.0		1511.1		1894.0		2114.8		1459.6		1577.4		1874.0		1807.1		1390.0		1805.2		1811.2		1690.5		
No. días lluvia año	204	61%	204	61%	218	65%	193	58%	213	64%	216	65%	213	64%	213	64%	211	64%	183	61%	210	65%	249	75%	223	67%	214</								



UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MANIZALES

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia



REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

DICIEMBRE DE 2013

Estaciones	Alcázares		Aranjuez		Bosques del Norte		Chec Uribe		El Carmen		Emas		Enea		Hospital de Caldas		Ingeominas		La Palma		Niza		Quebrada Olivares-El Popal		Posgrados		Quebrada Manizales-Tesorito		Quebrada San Luis-Ruta 30		Yarumos		Promedio Manizales	
	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25	Li. d.	A25
	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	CHEC S.A. E.S.P.	CHEC S.A. E.S.P.	Alcaldía/OMPAD	Alcaldía/OMPAD	EMAS S.A. E.S.P.	EMAS S.A. E.S.P.	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	CORPOCALDAS	CORPOCALDAS	UN-Manizales	UN-Manizales	CORPOCALDAS	CORPOCALDAS	UN-Manizales	UN-Manizales	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD	Alcaldía/OMPAD		
D 1	12.0	307.0	27.2	295.2	37.6	322.4	17.8	310.6	20.6	458.5	14.6	259.4	10.5	302.1	23.8	364.4	22.8	441.8	17.0	228.4	9.8	256.0	14.4	364.0	23.4	353.1	7.8	295.4	24.0	326.0	18.3	332.2	16.5	315.2
L 2	14.6	320.6	26.8	299.0	57.0	351.8	32.4	341.8	39.4	495.1	23.6	268.8	42.3	334.9	43.6	386.6	24.4	461.0	14.4	241.4	22.8	259.0	49.0	396.2	37.6	378.0	34.8	322.0	32.0	348.0	45.0	363.2	33.2	337.2
Ma 3	2.4	311.2	0.8	291.4	3.6	347.2	0.4	340.4	1.3	470.7	2.4	260.6	0.5	333.0	0.8	364.6	6.4	448.2	0.4	239.8	2.4	259.0	3.6	394.6	1.5	361.4	2.6	324.4	3.0	327.4	3.1	356.9	2.2	331.2
Mi 4	0.0	308.8	0.0	265.8	0.2	337.0	0.0	339.0	0.0	464.8	0.2	251.6	0.0	312.0	0.0	348.8	0.2	443.8	0.4	239.4	0.2	227.4	0.2	361.2	0.0	332.2	0.2	307.2	0.2	304.0	0.0	327.4	0.1	315.2
J 5	1.2	306.8	0.0	261.4	0.0	333.4	0.0	336.6	4.3	464.6	0.0	248.0	0.0	306.7	3.6	347.8	0.0	439.8	0.0	238.4	0.0	221.6	2.0	357.0	2.3	328.7	0.0	300.8	1.2	300.6	3.6	326.1	0.8	311.4
V 6	7.6	314.4	0.0	261.4	0.4	333.4	1.6	338.2	3.6	468.1	0.6	248.4	1.6	308.1	0.4	348.2	4.2	444.0	0.0	238.4	0.0	221.4	0.2	357.0	0.3	328.9	0.2	300.2	0.0	300.4	0.5	326.4	1.1	312.3
S 7	8.6	323.0	9.0	270.4	3.8	336.8	16.2	354.0	8.4	476.5	2.8	251.2	5.0	309.8	3.0	350.4	11.0	455.0	6.0	244.4	16.4	236.4	15.4	371.2	5.6	333.0	5.6	305.8	2.8	302.4	6.9	332.2	7.9	319.5
D 8	4.2	327.2	2.8	273.2	3.6	340.2	3.8	357.8	3.1	479.6	13.0	264.2	5.4	315.2	17.8	368.2	8.0	463.0	12.4	256.8	3.8	240.2	4.8	375.8	9.7	342.7	4.6	310.4	1.8	304.2	4.6	336.8	6.6	326.1
L 9	0.4	327.6	1.2	274.4	2.0	342.2	0.4	358.2	1.0	480.6	2.0	266.2	2.8	318.0	1.4	369.6	1.4	464.4	1.0	257.8	1.2	241.4	1.6	377.0	1.0	343.7	2.2	312.6	0.8	305.0	1.5	338.3	1.5	327.6
Ma 10	0.0	327.6	0.2	274.6	0.4	342.6	0.0	358.2	0.0	480.3	0.0	266.2	0.2	318.2	0.0	367.8	0.0	464.4	0.0	257.8	0.0	241.4	0.0	376.8	0.0	342.1	0.0	312.4	0.2	303.6	0.0	337.8	0.1	327.4
Mi 11	0.0	326.8	0.0	272.8	0.0	342.2	0.0	358.2	0.0	479.8	0.0	266.2	0.0	312.8	0.0	365.2	0.0	464.0	0.0	257.8	0.0	240.4	0.0	371.6	0.0	341.1	0.0	312.4	0.0	302.4	0.0	333.0	0.0	325.9
J 12	0.0	326.8	0.0	272.4	0.0	339.4	0.0	358.2	0.0	479.8	0.0	265.2	0.0	310.8	0.0	364.8	0.0	463.8	0.0	257.8	0.0	239.0	0.0	368.6	0.0	340.1	0.0	305.8	0.0	302.0	0.0	331.2	0.0	324.0
V 13	0.4	279.2	0.0	232.0	1.6	320.0	0.0	303.6	0.8	428.3	0.0	235.4	1.0	251.1	0.8	319.2	0.6	404.8	0.0	216.6	7.2	229.0	8.0	350.6	1.5	304.6	6.0	279.2	1.0	257.2	3.8	314.0	2.7	288.3
S 14	0.0	251.2	0.0	210.6	0.0	302.4	0.0	286.6	0.0	396.5	0.0	213.6	0.0	247.6	0.0	294.0	0.0	369.4	0.0	194.8	0.0	217.6	0.0	334.8	0.0	281.9	0.0	256.2	0.0	235.4	0.0	296.9	0.0	268.2
D 15	0.0	242.0	0.0	205.8	0.0	302.2	0.0	282.2	0.0	388.1	0.0	205.6	0.0	247.6	0.0	292.8	0.0	354.0	0.0	194.8	0.0	205.6	0.0	317.2	0.0	265.9	0.0	249.8	0.0	227.0	0.0	288.3	0.0	261.0
L 16	0.0	241.6	0.0	205.2	0.0	300.0	0.0	282.2	0.0	386.8	0.0	205.0	0.5	243.5	0.0	291.6	0.0	353.2	0.0	194.8	0.0	195.6	0.0	302.4	0.0	263.4	0.0	232.2	0.0	226.0	0.0	275.9	0.0	254.9
Ma 17	4.8	246.0	2.6	207.8	2.2	285.6	5.4	285.2	5.6	392.2	6.2	211.2	1.0	243.5	6.6	297.0	7.8	360.6	20.2	214.6	3.0	193.6	0.8	293.0	1.8	261.9	1.0	224.2	10.2	234.8	1.0	268.2	5.0	255.6
Mi 18	1.0	224.4	3.8	191.2	1.6	267.8	1.2	255.6	1.8	347.0	3.4	199.4	0.4	218.9	3.4	260.2	1.6	318.8	1.6	210.0	1.4	178.4	3.2	279.4	2.5	235.7	3.0	222.0	2.2	201.4	3.3	252.0	2.2	236.9
J 19	8.0	228.8	6.8	197.2	2.0	243.6	13.4	266.8	7.1	352.6	6.4	191.0	6.5	222.6	6.4	255.2	6.2	314.2	8.0	212.6	6.6	183.4	4.6	280.2	9.1	243.3	7.8	222.8	8.6	208.0	6.4	253.5	7.0	237.3
V 20	10.2	237.2	7.4	200.0	5.2	246.8	6.2	272.4	9.4	359.9	4.0	192.6	14.8	230.9	8.6	261.4	11.8	324.0	5.8	204.2	3.8	178.6	11.4	282.0	7.1	244.1	7.0	217.8	6.4	211.2	10.4	257.6	8.0	238.6
S 21	0.4	224.8	1.8	197.4	0.2	241.6	1.8	244.0	1.3	323.1	0.0	189.6	5.5	229.1	0.6	256.6	4.4	296.2	0.0	204.0	0.6	159.8	0.6	247.6	1.0	240.8	5.0	207.2	1.0	249.9	2.0	225.8		
D 22	40.0	240.6	54.4	249.2	22.8	257.2	32.8	248.0	68.3	369.1	44.8	231.2	50.0	240.4	69.8	316.6	63.0	331.0	49.6	252.8	21.8	162.4	45.6	272.2	52.8	265.9	32.4	225.8	56.0	255.2	40.4	257.8	44.0	252.6
L 23	5.6	199.2	17.6	227.4	6.0	209.0	7.0	212.2	11.9	297.2	5.0	172.6	8.0	206.4	11.6	275.2	7.2	270.0	5.2	172.8	10.4	145.4	10.6	239.4	16.0	233.9	7.6	186.0	11.8	221.4	11.9	225.8	8.7	208.6
Ma 24	2.0	180.6	0.6	200.2	2.8	191.2	1.0	199.0	2.3	273.1	3.0	160.4	0.0	191.7	1.4	248.8	3.8	248.8	2.4	165.6	0.8	131.6	1.8	221.4	1.3	213.1	1.2	163.2	1.2	197.8	1.3	209.6	1.7	190.8
Mi 25	0.6	124.0	0.0	163.0	0.2	153.2	1.2	142.6	1.8	191.8	0.6	132.6	0.0	156.2	0.4	204.0	1.2	185.8	2.4	146.8	0.0	112.2	0.0	177.8	0.3	174.8	0.0	129.0	0.6	163.6	0.3	163.1	0.6	151.9
J 26	1.0	113.0	2.2	138.0	18.6	134.2	1.4	126.2	1.5	172.7	1.6	119.6	4.2	149.9	2.2	182.4	1.6	164.6	1.6	131.4	2.4	104.8	4.4	167.8	1.8	153.2	15.8	137.0	2.2	141.8	1.5	146.3	5.3	140.7
V 27	0.0	98.4	2.4	113.6	0.4	77.6	1.8	95.6	0.0	133.4	0.2	96.2	0.0	107.6	0.2	139.0	0.0	140.2	0.0	117.0	2.6	84.6	1.8	120.6	1.0	116.6	0.0	102.2	0.8	110.6	1.5	102.9	0.7	108.1
S 28	0.0	96.0	0.0	112.8	0.0	74.0	0.0	95.2	0.0	132.1	0.0	93.8	0.0	107.1	0.0	138.2	0.0	133.8	0.0	116.6	0.0	82.2	0.2	117.2	0.0	115.1	0.0	99.6	0.2	109.8	0.0	99.8	0.0	106.0
D 29	0.0	96.0	0.0	112.8	0.0	73.8	0.0	95.2	0.0	132.1	0.0	93.8	0.0	107.1	0.0	138.2	0.0	133.6	0.0	116.2	0.0	82.0	0.0	117.0	0.0	115.1	0.0	99.4	0.0	109.6	0.0	99.8	0.0	105.8
L 30	0.0	94.8	0.0	112.8	0.0	73.8	0.0	95.2	0.0	127.8	0.0	93.6	0.0	106.9	0.0	134.6	0.0	133.6	0.0	116.2	0.0	82.0	0.0	115.0	0.0	112.8	0.0	99.4	0.2	108.6	0.0	96.3	0.0	105.0
Ma 31	0.0	87.2	0.0	112.8	0.0	73.4	0.0	93.6	0.0	124.2	0.0	93.0	0.0	105.3	0.0	134.2	0.0	129.4	0.0	116.2	0.0	82.0	0.0	114.8	0.0	112.5	0.0	99.2	0.0	108.6	0.0	95.8	0.0	103.9
Li. mes	125.0		167.6		172.2		145.8		193.3		134.4		160.4		206.4		187.4		148.4		117.2		184.2		177.6		144.8		167.0		166.1		157.9	
Máx. mes	40.0	327.6	54.4	299.0	57.0	351.8	32.8	358.2	68.3	495.1	44.8	268.8	50.0	334.9	69.8	386.6	63.0	464.4	49.6	257.8	22.8	259.0	49.0	396.2	52.8	378.0	34.8	324.4	56.0	348.0	45.0	363.2	44.0	337.2
Li. acum. en el año	1828.0		2044.8		1721.2		1805.8		2437.6		1715.4		1671.5		2100.4		2302.2		1608.0		1694.6		2058.2		1984.6		1534.8		1972.2		1977.3		1848.4	
No. días lluvia año	223	61%	221	61%	239	65%	211	58%	232	64%	234	64%	232	64%	233	64%	230	63%	199	60%	228	65%	270	74%	243	67%	232	64%						