

OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

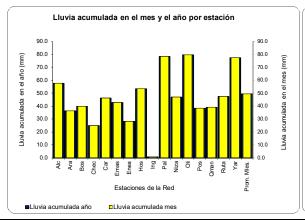
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

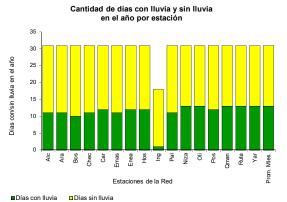
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



ENERO DE 2015

Estaciones		zares		njuez	No	ues del orte		Uribe		armen		nas		ea	Cal		•	minas		'alma	Ni		Queb Olivar Po	es-El pal		rados	Maniz Tes		Quebra Luis-R	uta 30		ımos	Prom Mania	nedio zales
Propietarios	Alcaldía		Alcaldía/		Alcaldía		CHEC S		Alcaldía		EMAS S		Alcaldía/		Alcaldía/			/OMPAD		/OMPAD	Alcaldía/		CORPO			nizales	CORPO		UN-Ma		Alcaldía			
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
J 1	0.0	69.6	0.0	42.2	0.0	88.4	0.0	51.0	0.0	78.0	0.0	79.2	0.0	69.6	0.0	72.0	0.0	72.4	0.0	78.8	0.0	71.2	0.0	106.4	0.0	54.9	0.0	111.0	0.0	73.6	0.0	95.8	0.0	81.5
V 2	0.0	68.8	0.0	42.2	0.0	84.8	0.0	51.0	0.0	74.7	0.0	73.2	0.0	69.6	0.0	70.0	0.0	69.4	0.0	68.4	0.0	70.6	0.0	102.2	0.0	54.1	0.0	111.0	0.0	72.0	0.0	91.7	0.0	78.8
S 3	0.0	45.6	0.0	19.2	0.0	45.6	0.0	41.8	0.0	47.3	0.0	46.6	0.0	39.9	0.0	35.8	0.0	41.8	0.0	44.0	0.0	39.6	0.0	64.4	0.0	26.2	0.0	75.0	0.0	36.2	0.0	54.9	0.0	48.5
D 4	0.0	41.8	0.0	8.6	0.0	33.0	0.0	36.4	0.0	36.8	0.0	39.0	0.0	16.0	0.0	19.0	0.0	37.4	0.0	41.2	0.0	18.4	0.0	38.6	0.0	14.7	0.0	40.6	0.0	19.0	0.0	33.5	0.0	31.7
L 5	0.0	41.6	0.0	8.4	0.0	32.6	0.0	36.2	0.0	36.3	0.0	38.6	0.0	15.7	0.0	18.8	0.0	37.0	0.0	40.6	0.0	18.2	0.0	38.2	0.0	14.5	0.0	40.0	0.0	18.4	0.0	33.3	0.0	31.3
Ma 6	0.0	41.2	0.0	7.8	0.0	28.0	0.0	36.2	0.0	35.8	0.0	37.8	0.0	10.4	0.0	16.6	0.0	36.6	0.0	40.6	0.0	13.0	0.0	24.2	0.0	12.2	0.0	29.0	0.0	17.4	0.0	18.8	0.0	26.5
Mi 7	0.0	18.0	0.0	5.6	0.0	16.8	0.0	27.4	0.0	8.4	0.0	18.2	0.0	6.1	0.0	9.2	0.0	14.6	0.0	23.6	0.0	10.2	0.0	20.6	0.0	9.4	0.0	19.2	0.0	10.8	0.0	15.2	0.0	15.6
J 8	0.0	17.2	0.0	5.2	0.0	16.4	0.0	26.8	0.0	7.9	0.6	18.4	0.0	5.8	0.0	8.8	0.0	14.0	0.0	22.8	0.0	9.8	0.0	20.2	0.0	8.9	0.0	17.8	0.0	10.0	0.0	14.7	0.0	15.0
	0.0	17.2	0.0	4.4	0.0	6.8	0.0	26.0	0.0	7.4	0.0	17.2	0.0	5.3	0.0	8.2	0.0	14.0	0.0	22.0	0.0	8.8	0.0	18.6	0.0	8.1	0.0	15.6	0.0	9.2	0.0	13.0	0.0	13.4
S 10 D 11	0.0	17.2	0.0	4.4	0.0	6.6	0.0	26.0 9.8	0.0	7.4	0.0	17.0	0.0	5.3	0.0	8.0	0.0	14.0	0.0	22.0	0.0	8.8	0.0	18.6	0.0	8.1	0.0	15.6	0.0	8.8	0.0	13.0	0.0	13.4
D 11 L 12	0.0	9.2	0.0	4.4	0.0	6.6 4.2	0.0	0.6	0.0	6.9 2.5	0.0	16.6 8.8	0.0	5.1	0.0	7.2 5.0	0.0	14.0 8.4	0.0	11.0	0.0	8.8	0.0	17.0 16.0	0.0	7.6 6.6	0.0	15.6 15.6	0.0	7.0	0.0	11.2	0.0	12.1 8.8
	0.0	4.0	0.0	4.0	0.0		0.0	0.6	0.0				0.0	3.8	0.0			8.4			0.0		0.0	16.0	0.0	6.6		15.0	0.0		0.0	10.7	0.0	
Ma 13 Mi 14	0.0	2.4	0.0	0.0	0.0	4.2	0.0	0.6	0.0	2.5 1.0	0.0	8.6 5.2	2.3	2.3	0.0	5.0 3.6	0.0	3.4	0.0	11.0	0.0	8.2 4.8	0.0	12.4	0.0	2.8	0.0	15.0	0.0	6.8	0.0	8.9	0.0 2.5	8.5 5.8
J 15	0.0	2.4	0.0	0.0	0.0	2.0	0.0	0.2	0.0	1.0	0.0	3.6	0.0	2.3	0.0	1.0	0.0	3.4	0.0	1.8	0.0	0.0	0.0		0.0	0.3	0.0	15.6	0.0	0.8	0.0	2.3	0.0	3.8
V 16	0.0	2.4	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.0	0.0	3.4	0.0	2.3	0.0	1.0	0.0	3.4	0.0	1.8	0.0	0.0	0.0	1.6	0.0	0.3	0.0	15.6	0.0	0.6	0.0	2.0	0.0	3.8
S 17	0.0	2.4	2.2	2.2	5.6	7.4	0.0	0.0	2.0	3.1	2.4	5.8	0.0	2.5	4.6	5.6	0.0	3.4	2.2	4.0	1.4	1.4	3.4	1.6 5.0	1.5	1.8	0.0	15.8	4.0	4.6	3.3	5.3	1.8	5.6
D 18	2.0	4.4	9.6	11.8	3.4	10.8	0.6	1.4	2.8	5.8	3.8	9.6	1.3	3.8	7.4	13.0	0.8	4.2	4.0	8.0	6.4	7.8	4.8	9.8	6.4	8.1	1.8	17.6	8.0	12.6	7.4	12.7	4.0	9.6
L 19	24.2	26.2	1.8	13.6	5.4	15.6	1.8	3.2	6.9	11.7	10.4	19.2	1.5	5.3	6.4	18.4	0.0	1.2	31.8	38.6	5.2	13.0	18.2	26.6	5.1	13.0	2.4	19.4	5.2	17.4	15.0	25.7	10.1	18.8
Ma 20	2.2	28.4	1.0	14.6	0.0	15.4	6.8	10.0	2.5	14.2	3.0	22.0	0.0	5.3	1.6	20.0		1.2	1.0	39.6	0.2	13.2	0.4	27.0	1.3	14.2	0.0	19.4	1.6	18.8	0.0	25.7	1.2	20.0
Mi 21	1.6	30.0	0.6	15.2	5.2	20.6	0.6	10.6	3.1	17.3	2.6	24.6	3.1	8.4	10.0	30.0		1.2	1.8	41.4	3.2	16.4	10.0	36.8	2.5	16.8	4.4	23.6	3.2	22.0	6.1	31.8	3.9	23.9
J 22	2.0	32.0	2.6	17.8	2.2	22.0	1.0	11.6	3.1	20.3	2.0	24.8	4.1	12.5	2.8	32.8		0.8	2.0	42.8	3.6	20.0	2.8	39.6	2.0	18.8	5.6	29.2	3.2	25.2	2.5	34.3	3.1	26.7
V 23	2.0	34.0	3.4	21.2	3.8	25.6	3.2	14.8	2.5	22.9	6.0	30.8	4.1	16.5	4.2	37.0		0.8	3.4	46.2	3.0	23.0	2.4	42.0	4.1	22.9	3.0	32.2	4.8	30.0	6.4	40.6	3.6	30.3
S 24	0.0	34.0	0.0	21.2	0.0	25.6	0.0	14.8	0.0	22.9	0.0	30.8	0.0	16.5	0.0	37.0		0.8	0.0	46.2	0.0	23.0	0.0	42.0	0.0	22.9	0.4	32.6	0.0	30.0	0.0	40.6	0.1	30.4
D 25	3.0	37.0	1.0	22.2	6.2	31.8	0.6	15.4	2.5	25.4	3.8	34.6	0.5	17.0	3.4	40.4		0.8	7.8	54.0	2.4	25.4	0.8	42.8	3.1	25.9	0.4	33.0	1.8	31.8	2.5	43.2	2.7	33.1
L 26	1.8	38.8	0.0	22.2	0.0	31.8	0.0	15.4	4.6	30.0	0.0	34.6	0.0	17.0	1.4	41.8		0.8	0.0	54.0	0.4	25.8	0.2	43.0	0.8	26.7	0.6	33.6	1.6	33.4	0.3	43.4	0.7	33.7
Ma 27	5.4	44.2	7.4	29.6	6.4	38.2	2.6	18.0	8.9	38.9	8.0	42.6	3.3	20.3	7.2	49.0		0.8	14.6	68.6	7.4	33.2	6.8	49.8	4.3	31.0	2.4	36.0	10.2	43.6	7.4	50.8	6.7	40.5
Mi 28	0.0	44.2	0.0	29.6	0.0	38.2	0.0	18.0	0.0	38.9	0.2	42.8	0.3	20.6	0.0	49.0		0.8	0.0	68.6	0.2	33.4	0.2	50.0	0.0	31.0	0.0	36.0	0.4	44.0	0.3	51.1	0.1	40.6
J 29	1.8	46.0	5.8	35.4	1.4	39.6	1.0	19.0	3.3	42.2	0.0	42.8	6.9	27.4	3.8	52.8		0.8	1.0	69.6	12.6	46.0	28.8	78.8	7.1	38.1	1.6	37.6	2.8	46.8	24.9	76.0	6.2	46.8
V 30	11.6	57.6	0.8	36.2	0.2	39.8	6.0	25.0	4.1	46.2	0.0	42.8	0.8	28.2	0.4	53.2		0.8	8.6	78.2	1.0	47.0	0.8	79.6	0.3	38.4	1.4	39.0	0.6	47.4	1.0	77.0	2.6	49.4
S 31	0.0	57.6	0.0	36.2	0.0	39.8	0.0	25.0	0.0	46.2	0.0	42.8	0.0	28.2	0.0	53.2		0.8	0.0	78.2	0.0	47.0	0.0	79.6	0.0	38.4	0.0	39.0	0.0	47.4	0.3	77.2	0.0	49.4
Ll. mes	57.6	T	36.2		39.8		25.0		46.2		42.8		28.2		53.2		0.8		78.2		47.0		79.6		38.4		39.0	1	47.4		77.2		49.4	
Máx. mes	24.2	69.6	9.6	42.2	6.4	88.4	6.8	51.0	8.9	78.0	10.4	79.2	6.9	69.6	10.0	72.0	0.8	72.4	31.8	78.8	12.6	71.2	28.8	106.4	7.1	54.9	14.8	111.0	10.2	73.6	24.9	95.8	10.1	81.5
Ll. acum. en el año	57	7.6	36	5.2	39	9.8	25	5.0	46	5.2	42	2.8	28	3.2	53	3.2	0	.8	78	3.2	47	'.0	79	.6	38	3.4	39	9.0	47	7.4	77	7.2	49	9.4
No. días Iluvia año	11	35%	11	35%	10	32%	11	35%	12	39%	11	35%	12	39%	12	39%	1	6%	11	35%	13	42%	13	42%	12	39%	13	42%	13	42%	13	42%	13	42%





	nscurrido a la fec		31
No. de di	ias con al	gún N.A. e	n el año
Estación	Α	N	R
Alc	0	0	0
Ara	0	0	0
Bos	0	0	0
Chec	0	0	0
Car	0	0	0
Emas	0	0	0
Enea	0	0	0
Hos	0	0	0
Ing	0	0	0
Pal	0	0	0
Niza	0	0	0
Oli	0	0	0
Pos	0	0	0
Qman	0	0	0
Ruta	0	0	0
Yar	0	0	0
Prom.	0	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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 R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl propietarias y participantes











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

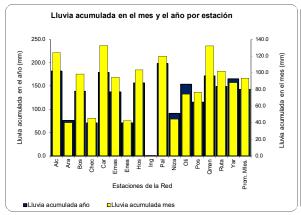
RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

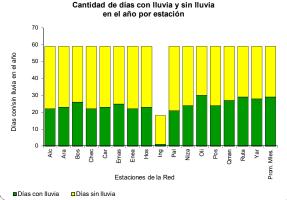
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

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

FEBRERO DE 2015

Estad		Alcáz Alcaldía	zares		njuez /OMPAD	N	ues del orte	Chec CHEC S		El Ca	rmen /OMPAD	En EMAS S	nas	Er Alcaldía	iea	Ca	ital de Idas	Ingeoi			'alma	Ni Alcaldía/	za	Queb Olivar Po	res-El pal		rados	Tes	zales- orito	Quebra Luis-R	uta 30		IMOS /OMPAD	Prom Maniz	nedio zales
Propie								CHEC S			_	EMAS S		Alcaldia										CORPO	_			CORPO		UN-Ma					
D	ıa 🕯	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25 25.0	Ll. d.	A25	Ll. d.	A25	LI. d.	A25 28.2	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25 78.2	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25 77.5	Ll. d.	A25 49.6
D	2	0.0	57.6	0.0	36.2 36.2	1.8	41.6	0.0	25.0	0.0	46.2	0.0	42.8	0.0	28.2	0.0	53.2 53.2		0.8	0.0	78.2	0.4	47.4	0.6	80.2 80.4	0.0	38.4 38.4	0.0	39.0 39.4	0.0	47.4	0.3		0.2	49.6
L	3		57.6	0.0		0.2	41.8	0.0	25.0	0.0	46.2	0.0	42.2	0.0	28.2	0.0	53.2		0.8	0.0	78.2	0.0	47.4 47.4	0.2	80.4	0.0	38.4	0.4	39.4	0.0	47.4	0.3	77.7	0.1	49.7
Ma	3	0.0	57.6	0.0	36.2	0.0	41.8	0.0	25.0	0.0	46.2	0.0	42.2	0.0		0.0	53.2		0.8	0.0		0.0		0.0		0.0		0.0		0.0	47.4	0.0	77.7	0.0	
Mi	4	0.0	57.6	0.0	36.2	0.0	41.8	0.0	26.2	0.0	46.2	0.0	42.2	0.0	28.2	0.0	57.2		0.8	0.0	78.2 78.2	0.0	47.4	0.0	80.4	0.0	38.4	0.0	39.4 55.6	0.0	47.4	0.0	77.7	0.0	49.7 54.5
J	5	0.8	58.4	2.4	38.6	1.0	42.8	1.2		1.3	47.5	0.8	43.0	6.6	34.8	4.0			0.8	0.0		4.0	51.4	5.0	85.4	4.8	43.2	16.2		3.0	50.4	4.3	82.1	4.8	
V	6	0.0	58.4	1.0	39.6	0.2	43.0	0.0	26.2	0.0	47.5	0.0	43.0	0.0	34.8	0.6	57.8		0.8	0.0	78.2	0.0	51.4	0.0	85.4	0.8	43.9	0.8	56.4	0.4	50.8	0.0	82.1	0.2	54.7
S	7	1.8	60.2	1.2	40.8	6.0	49.0	0.8	27.0	2.3	49.8	2.6	45.6	8.1	42.9	3.4	61.2		0.8	3.0	81.2	3.2	54.6	9.2	94.6	2.3	46.2	36.0	92.4	1.8	52.6	14.5	96.5	9.3	64.0
D	8	8.6	68.8	3.0	43.8	13.0	62.0	1.4	28.4	8.6	58.4	14.2	59.8	4.1	44.7	11.0	72.2		0.8	26.4	107.6	11.8	66.4	6.6	101.2	11.4	57.7	8.6	86.2	8.8	61.4	9.4	105.9	10.8	72.3
L NA-	9	10.6	79.4	3.6	47.4	5.8	67.8	0.4	28.8	6.1	64.5	7.6	67.4	5.6	50.3	19.2	91.4		0.8	9.8	117.4	6.6	73.0	11.0	112.2	16.3	73.9	11.6	97.8	22.2	83.6	15.0	120.9	9.6	81.9
Ma	10	42.8	122.2	15.0	62.4	28.6	96.4	19.8	48.6	48.0	112.5	28.2	95.6	2.3	52.6	38.0	129.4		0.8	41.8	159.2	5.4	78.4	8.2	120.4	13.7	87.6	6.8	104.6	26.4	110.0	10.4	131.3	21.2	103.0
Mi	11	2.8	125.0	4.8	65.0	1.4	92.2	1.2	49.0	2.3	112.8	2.2	95.4	0.0	52.3	3.6	128.4		8.0	2.4	159.4	1.4	78.4	0.4	117.4	6.4	92.5	0.0	104.4	4.4	110.4	1.8	129.8	1.8	102.9
J	12	0.0	123.0	0.0	55.4	0.0	88.8	0.0	48.4	0.0	110.0	0.0	91.6	0.0	51.1	0.0	121.0			0.0	155.4	0.0	72.0	0.0	112.6	0.0	86.1	0.0	102.6	0.0	102.4	0.0	122.4	0.0	99.0
V	13	7.4	106.2	1.6	55.2	2.2	85.6	11.2	57.8	18.8	121.9	7.4	88.6	0.0	49.5	4.6	119.2			3.0	126.6	0.0	66.8	0.2	94.6	2.0	83.1	0.0	100.2	13.2	110.4	0.0	107.4	4.0	92.9
S	14	0.0	104.0	0.0	54.2	0.0	85.6	0.0	51.0	0.0	119.4	0.2	85.8	0.0	49.5	0.0	117.6			0.0	125.6	0.0	66.6	0.2	94.4	0.0	81.8	0.4	100.6	0.4	109.2	0.3	107.7	0.1	91.8
D	15	0.0	102.4	0.0	53.6	0.0	80.4	0.0	50.4	0.0	116.3	0.0	83.2	0.0	46.5	0.0	107.6			0.0	123.8	0.0	63.4	0.0	84.4	0.0	79.3	0.0	96.2	0.0	106.0	0.0	101.6	0.0	87.9
<u> </u>	16	0.0	100.4	0.0	51.0	0.0	78.2	0.0	49.4	0.0	113.3	0.0	81.2	0.0	42.4	0.0	104.8			0.0	121.8	0.0	59.8	0.0	81.6	0.0	77.2	0.0	90.6	0.0	102.8	0.0	99.1	0.0	84.8
Ma	17	0.0	98.4	0.0	47.6	0.0	74.4	0.0	46.2	0.0	110.7	0.0	75.2	0.0	38.4	0.0	100.6			0.0	118.4	0.0	56.8	0.0	79.2	0.0	73.2	0.0	87.6	0.0	98.0	0.0	92.7	0.0	81.2
Mi	18	8.0	99.2	0.0	47.6	2.0	76.4	0.0	46.2	0.0	110.7	0.6	75.8	1.5	39.9	0.0	100.6			0.4	118.8	1.8	58.6	3.6	82.8	0.5	73.7	0.2	87.4	0.6	98.6	2.3	95.0	1.0	82.1
J	19	5.8	102.0	3.0	49.6	9.6	79.8	0.8	46.4	7.6	115.8	5.0	77.0	10.2	49.5	5.2	102.4			6.8	117.8	6.6	62.8	8.8	90.8	4.8	75.4	35.6	122.6	7.2	104.0	6.6	99.1	11.3	90.7
V	20	0.0	100.2	1.2	50.8	9.8	89.6	1.8	48.2	0.5	111.8	5.4	82.4	0.5	50.0	0.0	101.0			2.4	120.2	0.0	62.4	3.2	93.8	0.0	74.7	8.0	122.8	1.6	104.0	6.9	105.7	2.1	92.2
S	21	0.0	94.8	0.0	43.4	0.0	83.2	0.0	45.6	0.0	102.9	0.2	74.6	0.0	46.7	0.0	93.8			0.0	105.6	0.0	55.0	0.2	87.2	0.0	70.4	0.0	120.4	0.2	94.0	0.0	98.3	0.0	85.5
D	22	0.0	94.8	0.0	43.4	0.0	83.2	0.0	45.6	0.0	102.9	0.0	74.4	0.0	46.5	0.0	93.8			0.0	105.6	0.0	54.8	0.0	87.0	0.0	70.4	0.0	120.4	0.0	93.6	0.0	98.0	0.0	85.4
L	23	0.0	93.0	0.0	37.6	0.0	81.8	0.0	44.6	0.0	99.6	0.0	74.4	0.0	39.6	0.0	90.0			0.0	104.6	0.0	42.2	0.0	58.2	0.0	63.2	0.0	118.8	0.0	90.8	0.0	73.2	0.0	79.2
Ma	24	15.2	96.6	0.6	37.4	0.4	82.0	1.0	39.6	14.2	109.7	0.0	74.4	0.3	39.1	1.4	91.0			0.0	96.0	1.8	43.0	13.6	71.0	8.6	71.6	14.0	131.4	3.6	93.8	11.7	83.8	6.1	82.7
Mi	25	27.6	124.2	2.4	39.8	15.6	97.6	5.8	45.4	22.9	132.6	19.4	93.8	0.0	39.1	12.2	103.2			23.8	119.8	1.2	44.2	1.8	72.8	4.8	76.5	0.0	131.4	7.6	101.4	3.0	86.6	9.8	92.5
J	26	0.0	124.2	0.0	39.8	0.0	95.8	0.0	45.4	0.0	132.6	0.0	93.8	0.0	39.1	0.0	103.2		<u> </u>	0.0	119.8	0.0	43.8	0.0	72.2	0.0	76.5	0.2	131.6	0.2	101.6	0.0	86.4	0.0	92.3
V	27	0.0	124.2	0.0	39.8	0.0	95.6	0.0	45.4	0.0	132.6	0.0	93.8	0.0	39.1	0.0	103.2			0.0	119.8	0.0	43.8	0.0	72.0	0.0	76.5	0.0	131.2	0.0	101.6	0.0	86.1	0.0	92.3
S	28	0.0	124.2	0.0	39.8	0.8	96.4	0.0	45.4	0.0	132.6	0.6	94.4	3.1	42.2	0.0	103.2			0.0	119.8	0.0	43.8	1.4	73.4	0.0	76.5	0.6	131.8	0.0	101.6	1.3	87.4	0.6	92.9
D	1					<u> </u>																												,——	⊢
L	2																																		Щ.
Ma	3	1015		00.0			1	45.	ļ	100.5	ļ			10.5	<u> </u>	100 -			<u> </u>	440.5		44.0		1		70.5	ļ	100.5	<u> </u>	1016		07.0			
LI. mes		124.2		39.8		98.4		45.4		132.6		94.4		42.2		103.2	L	0.0	<u> </u>	119.8	L	44.2	L	74.2	L	76.5		132.2	L	101.6	L	87.9		93.2	
Máx. n		42.8	125.0	15.0	65.0	28.6	97.6	19.8	57.8	48.0	132.6	28.2	95.6	10.2	52.6	38.0	129.4	0.0	0.8	41.8	159.4	11.8	78.4	13.6	120.4	16.3	92.5	36.0	131.8	26.4	110.4	15.0	131.3	21.2	103.0
Ll. acu el año	n. en	18	1.8	76	6.0	13	38.2	70	0.4	17	8.8	13	7.2	70	0.4	15	6.4	0.	.8	19	0.8	91	1.2	15	3.8	11	4.8	17	1.2	14	9.0	16	5.1	14:	2.6
No. día Iluvia a		22	37%	23	39%	26	44%	22	37%	23	39%	25	42%	22	37%	23	39%	1	6%	21	36%	24	41%	30	51%	24	41%	27	46%	29	49%	28	47%	29	49%





	nscurrido a la fec		59
No. de di	ías con al	gún N.A. e	en el año
Estación	Α	N	R
Alc	0	0	0
Ara	0	0	0
Bos	0	0	0
Chec	0	0	0
Car	0	0	0
Emas	0	0	0
Enea	0	0	0
Hos	0	0	0
Ing	0	0	0
Pal	0	0	0
Niza	0	0	0
Oli	0	0	0
Pos	0	0	0
Qman	0	0	0
Ruta	0	0	0
Yar	0	0	0
Prom.	0	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl propietarias y participantes











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

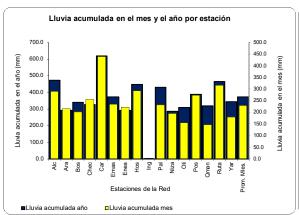
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

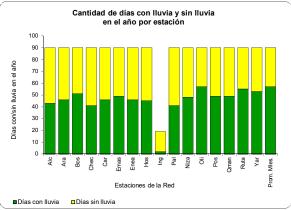
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



MARZO DE 2015

	iones		zares /OMPAD	Arar Alcaldía	ijuez	No.	ues del orte	Chec	Uribe	El Ca		Em		En Alcaldía		Hospi Cal Alcaldía/		Ingeor			'alma	Ni Alcaldía/	za	Queb Olivar Po	res-El pal	Posg	rados			Quebra Luis-R	uta 30	Yaru Alcaldía	mos	Prom Maniz	
D								LL d.	A25		_												A25				A25		A25	UIV-IVIA				Ll. d.	A25
D	1a	Ll. d. 6.4	A25 130.6	Ll. d. 1.4	A25 41.2	Ll. d. 4.8	A25 101.2	7.2	52.6	Ll. d. 18.0	A25 150.6	Ll. d. 20.2	A25 114.6	Ll. d. 2.3	A25 44.5	Ll. d. 12.0	A25 115.2	Ll. d.	A25	Ll. d. 11.2	A25 131.0	Ll. d. 3.6	47.4	Ll. d. 4.6	A25 78.0	Ll. d. 3.0	79.5	Ll. d. 9.8	141.6	9.6	A25 111.2	Ll. d. 4.3	A25 91.7		101.6
	2	2.0	131.8	1.6	40.4	0.0	100.2	0.0	51.4	2.5	151.9	1.2	115.0	0.3	38.1	2.2	113.4			0.4	131.4	0.0	43.4	0.4	73.4	0.8	75.4	3.8	129.2	1.6	109.8	0.0	87.4	1.3	98.1
Ma	3	13.2	145.0	9.2	48.6	0.0	100.2	12.6	64.0	35.6	187.5	10.4	125.4	22.9	61.0	13.4	126.2			1.4	132.8	4.6	48.0	1.0	74.4	13.7	88.4	1.2	129.2	18.0	127.4	2.0	89.4	9.3	107.2
Mi	4	0.0	143.2	6.2	53.6	2.6	97.0	0.0	63.2	0.0	185.2	0.6	123.4	0.5	53.3	1.0	123.8			0.0	129.8	8.4	53.2	0.6	65.8	2.0	88.1	1.4	95.0	2.2	127.4	1.0	76.0	1.6	99.4
.l	5	0.0	134.6	6.0	56.6	0.4	84.4	0.0	61.8	0.0	176.5	0.0	109.2	6.6	55.9	0.0	112.8			0.0	103.4	1.8	43.2	0.0	59.4	0.3	77.0	14.6	101.0	0.2	119.2	0.3	66.8	3.2	91.9
V	6	30.4	154.4	17.2	70.2	1.2	79.8	22.2	83.6	18.3	188.7	4.0	105.6	29.7	80.0	4.2	97.8			0.0	93.6	7.2	43.8	3.8	52.2	5.8	66.6	14.0	101.6	9.4	106.4	4.6	56.4	11.3	93.6
S	7	0.0	111.6	0.0	55.2	16.0	67.2	0.0	63.8	0.3	141.0	1.4	78.8	2.0	79.8	0.2	60.0			17.6	69.4	0.8	39.2	0.4	44.4	0.8	53.6	1.2	98.0	0.4	80.4	0.5	46.5	3.5	76.0
D	8	0.0	108.8	0.0	50.4	0.2	66.0	0.0	62.6	0.0	138.7	0.2	76.8	0.0	79.8	0.2	56.4			0.0	67.0	0.0	38.0	0.0	44.0	0.3	47.5	0.0	98.0	0.4	76.2	0.0	44.7	0.1	74.3
Ī	9	0.0	108.8	0.0	50.4	0.0	66.0	0.0	62.6	0.0	138.7	0.2	76.8	2.0	81.8	0.0	56.4			0.0	67.0	1.0	39.0	2.8	46.8	0.0	47.5	0.0	98.0	0.0	76.2	0.8	45.5	0.5	74.8
Ma	10	0.0	101.4	0.0	48.8	0.0	63.8	0.0	51.4	0.0	119.9	0.0	69.4	0.0	81.8	0.0	51.8			0.0	64.0	0.0	39.0	0.0	46.6	0.0	45.5	0.0	98.0	0.0	63.0	0.3	45.7	0.0	70.8
Mi	11	1.0	102.4	1.8	50.6	0.6	64.4	1.8	53.2	1.8	121.7	0.4	69.6	4.3	86.1	1.4	53.2			0.0	64.0	0.0	39.0	0.0	46.4	2.8	48.3	0.0	97.6	1.2	63.8	0.0	45.5	0.9	71.6
J	12	0.0	102.4	2.0	52.6	0.0	64.4	0.0	53.2	0.0	121.7	0.0	69.6	9.2	95.3	0.0	53.2			0.0	64.0	0.0	39.0	0.0	46.4	0.0	48.3	0.0	97.6	0.0	63.8	0.0	45.5	0.9	72.4
V	13	11.8	114.2	19.4	72.0	12.8	77.2	26.0	79.2	34.5	156.2	14.8	84.4	15.0	110.2	23.8	77.0			5.6	69.6	22.0	61.0	13.6	60.0	28.2	76.5	9.0	106.6	28.8	92.6	24.1	69.6	16.6	89.1
S	14	0.4	114.6	0.2	72.2	0.2	77.4	0.0	79.2	0.5	156.7	0.0	84.4	0.5	110.7	0.0	77.0			0.0	69.6	0.2	61.2	0.2	60.2	0.3	76.7	0.0	106.6	0.6	93.2	0.3	69.9	0.2	89.3
D	15	17.2	131.0	0.6	72.8	3.2	78.6	4.6	83.8	14.5	171.2	18.6	102.4	0.0	109.2	7.4	84.4			2.0	71.2	0.6	60.0	2.0	58.6	2.0	78.2	2.4	108.8	6.2	98.8	0.5	68.1	5.4	93.7
L	16	6.4	131.6	9.4	79.2	1.8	70.8	4.8	87.8	39.9	203.5	6.4	103.8	5.3	104.4	13.2	92.4			1.0	65.4	8.8	62.2	3.2	53.0	7.4	80.8	4.0	77.2	12.4	104.0	4.1	65.5	7.6	90.1
Ma	17	2.4	134.0	3.6	81.6	3.0	64.0	2.6	88.6	1.5	204.5	5.4	103.8	2.0	105.9	1.4	93.8			12.2	75.2	1.8	64.0	0.4	50.2	2.3	83.1	0.4	76.8	2.4	104.8	1.0	59.7	3.1	91.0
Mi	18	41.0	175.0	32.2	113.8	11.8	75.8	29.0	117.6	83.6	288.0	24.2	127.8	18.8	124.7	44.4	138.2			39.8	115.0	16.8	80.8	13.0	63.0	30.0	113.0	7.6	84.4	41.8	146.4	12.2	71.9	27.0	118.0
J	19	5.4	180.4	1.6	115.4	1.6	77.4	0.8	118.4	4.3	292.4	2.6	130.4	6.4	131.1	2.4	140.6			1.6	116.6	3.6	84.4	2.2	65.2	2.3	115.3	6.8	91.2	2.0	148.4	3.6	75.4	3.6	121.6
V	20	90.2	270.6	29.8	145.2	45.2	122.6	59.6	178.0	79.3	371.6	55.4	185.8	45.5	176.5	64.6	205.2			91.2	207.8	42.6	127.0	38.2	103.4	53.6	168.9	22.0	113.2	59.6	208.0	37.3	112.8	53.0	174.6
S	21	7.4	262.8	7.0	151.6	12.4	134.6	3.6	180.6	9.9	367.3	11.4	197.2	7.1	183.4	9.8	213.6			4.8	212.6	7.6	132.8	10.8	100.6	10.7	170.9	8.0	107.2	12.2	216.6	13.7	114.8	8.7	177.1
D	22	0.0	235.2	0.0	149.2	0.2	119.2	0.0	174.8	0.0	344.4	0.0	177.8	0.0	183.4	0.0	201.4			0.0	188.8	0.0	131.6	0.2	99.0	0.0	166.1	0.0	107.2	0.2	209.2	0.0	111.8	0.0	167.3
L	23	5.0	240.2	4.8	154.0	3.6	122.8	3.2	178.0	11.2	355.6	7.6	185.4	0.8	184.2	11.0	212.4			1.2	190.0	0.4	132.0	1.2	100.2	5.1	171.2	0.4	107.4	8.0	217.0	0.8	112.5	3.5	170.8
Ma	24	1.6	241.8	0.0	154.0	0.0	122.8	1.6	179.6	1.8	357.4	0.0	185.4	0.0	184.2	0.0	212.4			0.2	190.2	0.0	132.0	0.2	100.4	0.0	171.2	0.0	107.4	0.0	217.0	0.0	112.5	0.3	171.1
Mi	25	0.0	241.8	0.6	154.6	2.4	124.4	0.0	179.6	0.3	357.6	3.0	187.8	0.5	181.6	0.6	213.0			4.4	194.6	0.8	132.8	1.2	100.2	8.0	172.0	2.0	108.8	0.6	217.6	1.3	112.5	1.6	172.1
J	26	8.4	243.8	18.6	171.8	19.6	139.2	7.4	179.8	8.6	348.2	5.2	172.8	16.8	196.1	16.6	217.6			4.6	188.0	20.4	149.6	11.4	107.0	39.1	208.0	14.6	113.6	24.8	232.8	13.2	121.4	13.7	177.1
V	27	0.0	241.8	0.0	170.2	0.0	139.2	0.0	179.8	0.0	345.7	0.2	171.8	0.0	195.8	0.0	215.4			0.0	187.6	0.0	149.6	0.2	106.8	0.0	207.3	8.0	110.6	0.0	231.2	0.3	121.7	0.2	175.9
S	28	14.0	242.6	0.0	161.0	15.4	154.2	32.4	199.6	11.9	322.1	15.0	176.4	0.0	173.0	7.2	209.2			8.0	194.2	2.6	147.6	4.2	110.0	9.4	203.0	2.4	111.8	11.0	224.2	6.9	126.5	8.3	174.8
D	29	21.6	264.2	30.0	184.8	37.2	188.8	21.0	220.6	44.7	366.8	23.2	199.0	18.3	190.8	38.2	246.4			22.8	217.0	17.8	157.0	25.8	135.2	32.3	233.2	19.0	129.4	39.0	261.0	34.0	159.5	25.8	199.0
L	30	3.4	267.6	10.4	189.2	3.2	191.6	14.2	234.8	14.5	381.3	1.8	200.8	4.3	188.5	15.4	261.8			0.4	217.4	20.8	176.0	12.8	147.8	18.8	251.7	8.0	115.6	22.6	283.4	11.9	171.2	8.2	204.0
Ma	31	8.0	238.0	1.6	173.6	1.6	192.0	0.6	213.2	1.3	364.2	1.2	198.0	1.0	159.8	1.0	258.6	0.8	8.0	1.0	218.4	8.0	169.6	0.6	144.6	8.0	246.6	0.0	101.4	1.0	275.0	0.5	167.1	8.0	193.5
Ll. mes		290.0		215.2		201.4		255.2		438.7		234.4		222.0		291.4		8.0		231.4		195.2		155.2		272.3		146.4		316.0		179.3		229.0	
Máx. n	nes	90.2	270.6	32.2	189.2	45.2	192.0	59.6	234.8	83.6	381.3	55.4	200.8	45.5	196.1	64.6	261.8	8.0	8.0	91.2	218.4	42.6	176.0	38.2	147.8	53.6	251.7	22.0	141.6	59.6	283.4	37.3	171.2	53.0	204.0
Ll. acu el año		47	1.8	29	1.2	33	9.6	32	5.6	61	7.5	37	1.6	29	2.4	44	7.8	1.	.6	42	9.4	28	6.4	309	9.0	38	7.1	31	7.6	46	5.0	34	4.4	37	1.6
No. día		43	48%	46	51%	51	57%	41	46%	46	51%	49	54%	46	51%	45	50%	2	11%	41	46%	48	53%	57	63%	49	54%	49	54%	55	61%	53	59%	57	63%





	anscurrido o a la fec		90
No. de d	ías con al	gún N.A. e	en el año
Estación	Α	N	R
Alc	12	0	0
Ara	0	0	0
Bos	0	0	0
Chec	3	0	0
Car	4	12	0
Emas	1	0	0
Enea	0	0	0
Hos	12	0	0
Ing	0	0	0
Pal	5	0	0
Niza	0	0	0
Oli	0	0	0
Pos	6	0	0
Qman	0	0	0
Ruta	12	0	0
Yar	0	0	0
Prom.	1	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl

Otras entidades propietarias y participantes









OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

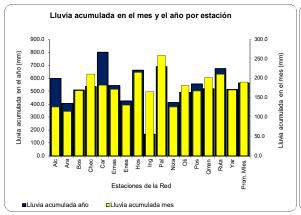
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

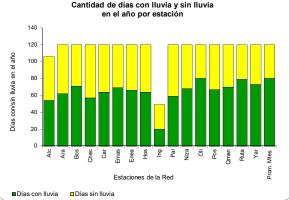
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



ABRIL DE 2015

Estaciones	Alcá	zares	Arar	njuez		ues del orte	Chec	Uribe	El Ca	rmen	Em	ıas	En	ea	Hospi Cal	das	Ingeo	minas	La P	'alma	Ni	za	Queb Olivar Pop	es-El	Posg	rados	Queb Maniz Tesc	ales-	Quebra Luis-R		Yaru	ımos	Prom Maniz	
Propietarios	Alcaldía	a/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	CORPO	CALDAS	UN-Ma	nizales	CORPO	CALDAS	UN-Ma	nizales	Alcaldía	OMPAD		
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
Mi 1	1.2	239.2	0.0	173.6	0.0	176.0	0.0	213.2	0.0	364.0	0.0	196.6	0.0	157.7	0.4	258.8	0.6	1.4	0.0	200.8	0.4	169.2	0.6	144.8	0.0	245.9	0.4	100.6	0.4	275.0	0.5	167.1	0.3	190.3
J 2	1.8	241.0	2.0	175.6	3.0	178.8	1.4	214.6	3.8	367.8	4.0	200.4	2.3	160.0	2.6	261.4	2.8	4.2	12.6	213.4	2.6	171.6	1.8	146.6	2.5	248.2	8.0	101.4	5.2	280.0	1.5	168.7	3.3	193.6
V 3	16.0	257.0	13.6	189.2	23.8	202.6	24.4	239.0	23.9	391.7	19.6	220.0	19.1	177.0	18.2	279.6	20.4	24.6	18.8	232.2	17.4	188.0	20.2	164.0	16.0	264.2	19.0	120.4	19.8	299.8	21.1	189.0	19.5	212.6
S 4	6.8	263.8	10.6	199.8	14.0	216.6	4.8	243.8	8.6	400.3	6.2	226.2	5.9	182.9	6.0	285.6	5.4	30.0	3.6	235.8	9.2	197.2	8.4	172.4	6.4	270.5	5.8	126.2	7.8	307.6	8.9	197.6	7.0	219.6
D 5	2.2	265.0	2.2	200.2	1.6	217.6	2.0	244.0	3.3	401.8	0.8	226.6	4.1	182.6	3.4	287.6	1.6	31.6	8.0	236.6	2.4	199.6	4.8	177.2	3.6	271.3	6.2	132.4	2.8	309.2	3.8	201.4	3.1	221.8
L 6	0.0	265.0	1.2	199.4	0.0	217.6	0.0	244.0	0.3	402.1	0.2	226.8	1.5	175.0	0.4	288.0	0.2	31.8	0.0	236.6	0.8	200.4	0.4	177.6	8.0	272.0	4.4	136.8	1.0	310.2	0.3	201.7	1.1	222.0
Ma 7	4.2	257.4	1.2	181.2	1.8	206.6	2.6	220.6	5.6	373.1	3.0	215.0	3.8	163.8	2.4	266.6	5.0	36.8	1.8	232.8	0.4	178.8	5.8	169.8	0.5	244.4	36.8	164.6	3.2	284.6	0.5	178.1	8.3	213.6
Mi 8	3.8	260.8	2.6	183.6	3.0	209.4	6.8	227.4	7.1	379.7	4.6	219.6	1.8	165.1	2.8	269.4	3.2	40.0	3.0	235.8	8.0	179.4	1.6	171.2	2.3	246.4	3.4	168.0	3.2	287.2	1.8	179.6	3.1	216.5
J 9	0.0	243.6	0.0	183.0	0.0	206.2	0.0	222.8	0.0	365.3	0.0	201.0	0.0	165.1	0.0	262.0	0.0	40.0	0.0	233.8	0.0	178.8	0.0	169.2	0.0	244.4	0.0	165.6	0.0	281.0	0.0	179.1	0.0	211.1
V 10	0.4	237.6	3.2	176.8	6.8	211.2	0.6	218.6	1.5	326.9	0.6	195.2	13.5	173.2	0.4	249.2	0.6	40.6	0.4	233.2	11.8	181.8	11.2	177.2	4.3	241.3	11.4	173.0	1.2	269.8	17.0	192.0	6.3	209.8
S 11	0.0	235.2	0.0	173.2	0.2	208.4	0.0	216.0	0.0	325.4	0.0	189.8	0.0	171.2	0.0	247.8	0.0	40.6	0.0	221.0	0.0	180.0	0.0	176.8	0.0	239.0	0.0	172.6	0.2	267.6	0.0	191.0	0.0	206.7
D 12	0.0	194.2	0.0	141.0	0.0	196.6	0.0	187.0	0.0	241.8	0.0	165.6	0.0	152.4	0.0	203.4	0.0	40.6	0.0	181.2	0.0	163.2	0.2	164.0	0.0	209.1	0.0	165.0	0.2	226.0	0.0	178.8	0.0	179.7
L 13	0.0	188.8	0.0	139.4	0.0	195.0	0.0	186.2	0.0	237.5	0.0	163.0	1.0	147.1	0.0	201.0	0.0	40.6	0.0	179.6	0.0	159.6	0.0	161.8	0.0	206.8	0.0	158.2	0.2	224.2	0.0	175.3	0.1	176.2
Ma 14	6.8	105.4	8.0	110.4	7.8	157.6	5.4	132.0	4.6	162.8	7.8	115.4	1.5	103.1	2.0	138.4	8.0	48.6	30.2	118.6	11.4	128.4	1.4	125.0	1.3	154.4	14.4	150.6	1.6	166.2	2.0	140.0	8.8	132.1
Mi 15	32.0	130.0	33.8	137.2	42.0	187.2	58.0	186.4	35.3	188.2	42.0	146.0	35.3	131.3	77.8	206.4	31.6	80.2	39.2	153.0	42.4	163.2	72.8	187.0	62.0	205.7	39.0	181.6	67.8	221.8	58.2	184.4	46.0	169.4
J 16	50.6	180.6	20.8	158.0	29.0	216.0	68.8	255.2	54.4	242.6	39.8	185.8	27.4	158.8	36.0	242.4	59.4	139.6	37.8	190.8	13.2	176.4	17.8	204.6	31.0	236.7	25.0	206.6	41.4	263.0	21.8	206.3	40.8	210.1
V 17		175.6	6.2	159.4	4.8	217.2	4.4	256.4	3.6	235.0	3.8	182.0	3.8	161.8	5.6	237.0	2.8	142.4	1.0	190.6	3.6	179.6	4.6	208.0	5.6	237.2	7.2	213.4	6.6	261.6	4.8	210.3	8.3	214.9
S 18		174.0	0.0	159.4	1.0	218.2	0.4	255.2	1.8	235.0	0.6	182.6	0.0	161.8	0.4	237.4	0.2	142.6	4.0	194.4	0.6	180.2	5.8	213.6	0.0	237.2	1.8	215.2	0.6	262.2	0.5	210.8	2.2	216.9
D 19		174.0	4.8	163.6	3.0	218.8	6.4	261.6	5.6	240.3	3.2	182.8	3.1	164.3	3.8	240.6	5.0	147.6	12.6	202.6	1.0	180.4	3.0	215.4	3.3	239.8	3.0	216.2	5.2	266.8	3.0	212.6	4.5	219.8
L 20		165.6	0.0	145.0	6.8	206.0	2.0	256.2	7.4	239.0	6.4	184.0	0.3	147.8	37.8	261.8	6.2	153.8	49.6	247.6	0.4	160.4	2.0	206.0	16.5	217.2	1.2	202.8	22.0	264.0	4.8	204.2	10.5	216.5
Ma 21		165.6	9.4	154.4	12.6	218.6	21.8	278.0	10.2	249.2	22.0	205.8	3.6	151.4	9.0	270.8	8.6	162.4	40.0	287.6	4.2	164.6	9.4	215.2	8.9	226.1	4.8	206.8	15.4	279.4	8.4	212.3	11.5	227.8
Mi 22		151.6	0.0	154.4	0.0	203.2	0.0	245.6	0.0	237.2	0.0	190.8	0.0	151.4	0.0	263.6	0.0	162.4	0.0	279.6	0.0	162.0	0.0	211.0	0.0	216.7	0.0	204.4	0.0	268.4	0.0	205.5	1.5	221.1
J 23		130.0	0.0	124.4	0.4	166.4	0.0	224.6	0.3	192.8	0.4	168.0	1.5	134.6	1.0	226.4	0.0	162.4	1.4	258.2	0.0	144.2	0.6	185.8	0.3	184.7	0.4	185.8	0.4	229.8	1.5	173.0	0.4	195.7
V 24		126.6	1.6	115.6	5.0	168.2	0.6	211.0	5.1	183.4	4.2	170.4	0.3	130.6	4.8	215.8	4.0	166.4	1.4	259.2	1.2	124.6	4.6	177.6	1.8	167.6	0.0	185.0	3.0	210.2	4.6	165.6	2.2	189.7
S 25		125.8	0.2	114.2	0.2	166.8	0.0	210.4	0.0	182.1	0.2	169.4	0.3	129.8	0.0	214.8	0.0	165.6	0.0	258.2	0.2	124.0	0.2	177.2	0.0	166.9	0.4	185.4	0.2	209.4	0.0	165.1	0.5	189.3
D 26		124.6	0.0	114.2	0.0	166.8	0.0	210.4	0.0	182.1	0.0	169.4	0.0	129.8	0.0	214.4	0.0	165.0	0.0	258.2	0.0	123.6	0.2	176.8	0.0	166.9	1.8	186.8	0.0	209.0	0.0	164.6	0.1	189.1
L 27		122.8	0.0	112.2	0.0	163.8	0.0	209.0	0.0	178.3	0.0	165.4	0.0	127.5	0.0	211.8	0.0	162.2	0.0	245.6	0.0	121.0	0.0	175.0	0.0	164.3	0.0	186.0	0.0	203.8	0.0	163.1	0.3	186.1
Ma 28		106.8	0.0	98.6	0.0	140.0	0.0	184.6	0.0	154.4	0.0	145.8	0.0	108.5	0.0	193.6	0.0	141.8	0.0	226.8	0.0	103.6	0.0	154.8	0.0	148.3	0.0	167.0	0.0	184.0	0.0	142.0	0.0	166.6
Mi 29		100.0	0.0	88.0	0.0	126.0	0.0	179.8	0.0	145.8	0.0	139.6	0.0	102.6	0.0	187.6	0.0	136.4	0.0	223.2	0.0	94.4	0.0	146.4	0.0	142.0	0.0	161.2	0.0	176.2	0.0	133.1	0.0	159.6
J 30		97.8	0.0	85.8	1.4	125.8	0.0	177.8	0.0	142.5	1.6	140.4	1.0	99.6	0.0	184.2	0.0	134.8	0.6	223.0	1.8	93.8	4.0	145.6	0.5	138.9	14.2	169.2	0.4	173.8	4.6	133.9	0.7	157.1
V 1																																		
Ll. mes	125.8		114.2		168.2		210.4		182.1		171.0		130.8		214.8		165.6		258.8		125.8		181.4		167.4		201.4		209.8		169.7		190.4	
Máx. mes	50.6	265.0	33.8	200.2	42.0	218.8	68.8	278.0	54.4	402.1	42.0	226.8	35.3	182.9	77.8	288.0	59.4	166.4	49.6	287.6	42.4	200.4	72.8	215.4	62.0	272.0	39.0	216.2	67.8	310.2	58.2	212.6	46.0	227.8
Ll. acum. en el año	59	97.6	40	5.4	50	7.8	53	6.0	79	9.6	542	2.6	42	3.2	66	2.6	16	7.2	68	8.2	41:	2.2	490	0.4	55	4.5	51	9.0	674	4.8	51	4.1	561	1.9
No. días Iluvia año	54	51%	62	52%	71	59%	57	48%	64	53%	69	58%	66	55%	64	53%	20	41%	59	49%	68	57%	80	67%	67	56%	70	58%	79	66%	73	61%	80	67%





	anscurrido o a la fec		120
No. de d	ías con al	lgún N.A. e	en el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	28	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl

Otras entidades propietarias y participantes











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

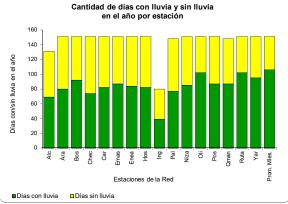
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



MAYO DE 2015

	ciones		zares /OMPAD	Aran Alcaldía	ijuez	No.	ues del orte	Chec CHEC S		El Ca		En EMAS S	nas A E S D	En Alcaldía/		Hospi Cal Alcaldía/		Ingeo			'alma	Ni Alcaldía/	iza	Queb Olivar Po	res-El pal		rados anizales	Mani: Tes	orada zales- orito CALDAS	Quebra Luis-R	uta 30	Yaru Alcaldía/	mos	Prom Maniz	nedio zales
	ía		_				_	LL d.																	A25		A25		A25	OI4-Ma				11.4	A25
V	1 1	Ll. d.	A25 97.8	Ll. d. 0.0	A25 84.6	Ll. d. 1.2	A25 127.0	0.0	A25 177.8	Ll. d. 2.0	A25 144.3	Ll. d. 0.8	A25 141.0	Ll. d. 1.0	A25 99.1	Ll. d. 0.0	A25 183.8	Ll. d. 6.6	A25	Ll. d. 1.0	A25 224.0	Ll. d. 0.4	A25 93.4	Ll. d. 3.2	148.4	Ll. d. 0.0	138.2	Ll. d. 1.8	166.6	0.0	A25 172.8	Ll. d. 2.3	A25 135.9	Ll. d. 3.6	159.6
S	2		93.6	0.0	83.4	0.2	125.4	0.0	175.2	0.0	138.7	0.0	138.0	0.3	95.5	0.0	181.4	0.0	136.2	0.0	222.2	0.4	93.4	5.8	148.4	0.0	137.7	12.6	142.4	0.0	169.6	0.8	136.2	0.6	151.9
D	3		89.8	0.0	80.8	18.4	140.8	1.6	170.0	4.1	135.6	26.0	160.2	13.0	106.7	0.8	179.4	22.4	155.4	40.2	259.4	1.0	93.0	1.2	148.0	0.5	135.9	10.0	149.0	0.4	166.8	0.8	135.1		161.4
1	4		89.8	8.0	88.8	13.8	154.6	0.2	170.0	0.0	135.6	0.0	160.2	0.0	106.7	1.0	180.4	0.2	155.6	0.2	259.4	0.0	93.2	0.0	148.0	1.8	137.7	2.0	151.0	1.0	167.8	0.5	135.6	2.9	164.2
Ma	5		89.4	0.4	86.0	2.0	149.8	0.2	169.6	0.0	134.1	0.0	160.2	13.2	106.7	1.8	181.8	0.2	155.0	0.2	259.0	7.2	88.6	7.0	143.8	2.5	135.9	13.2	152.8	1.4	168.0	4.3	122.9	2.6	160.6
Mi	6		89.4	0.0	86.0	0.4	150.0	0.0	169.6	0.3	134.1	0.0	160.4	2.3	108.7	0.8	182.6	0.0	155.0	1.8	261.0	1.0	89.6	3.6	147.4	1.3	137.2	10.4	163.2	1.2	169.0	2.0	125.0	3.3	163.9
IVII	7	0.0	89.4	0.0	86.0	0.0	150.0	0.0	169.6	0.0	134.4	0.2	160.6	0.0	108.7	0.0	182.6	0.0	155.0	0.0	261.0	1.0	90.6	2.4	149.6	0.3	137.4	0.4	163.6	0.0	168.8	0.8	125.7	0.4	164.2
V	8	0.0	89.4	0.0	86.0	0.0	150.0	0.0	169.6	0.0	134.4	0.0	160.6	0.0	107.7	0.0	183.0	0.0	155.0	0.0	261.0	0.0	90.6	2.2	151.8	0.8	138.2	0.4	163.6	0.8	169.4	1.5	127.3	0.4	164.4
S	9	0.0	82.6	0.0	85.2	0.0	142.2	0.0	164.2	0.0	129.8	0.0	152.8	3.3	107.7	0.0	181.0	0.0	147.0	1.2	232.0	0.0	79.6	0.4	150.8	0.8	137.2	0.0	149.2	0.8	168.0	0.0	125.2	0.5	156.1
D	10	1.2	51.8	5.2	56.6	0.0	100.2	1.0	107.2	2.3	96.8	1.4	112.0	0.0	74.2	2.6	105.8	1.4	116.8	0.4	193.2	0.0	37.2	0.0	78.0	2.5	77.7	0.0	110.2	3.8	104.0	0.0	67.1	0.9	111.0
Ť	11	0.0	1.2	0.0	35.8	0.0	71.2	1.0	39.4	0.0	42.4	0.0	72.4	0.0	46.7	0.0	69.8	0.0	57.4	0.0	155.4	0.0	24.0	0.0	60.2	0.0	46.7	0.0	85.2	0.0	62.6	0.0	45.2	0.0	70.2
Ma	12	0.0	1.2	0.0	29.6	0.0	66.4	0.0	35.0	0.0	38.9	0.0	68.6	0.0	42.9	0.0	64.2	0.0	54.6	0.0	154.4	0.0	20.4	0.0	55.6	0.0	41.2	0.0	78.0	0.0	56.0	0.0	40.4	0.0	61.9
Mi	13	0.0	1.2	0.0	29.6	0.0	65.4	0.0	34.6	0.0	37.1	0.0	68.0	0.0	42.9	0.0	63.8	0.0	54.4	0.0	150.4	0.0	19.8	0.0	49.8	0.0	41.2	0.0	76.2	0.0	55.4	0.0	39.9	0.0	59.7
1	14	0.0	1.2	0.0	24.8	0.0	62.4	0.0	28.2	0.0	31.5	0.0	64.8	0.0	39.9	0.0	60.0	0.0	49.4	0.0	137.8	0.0	18.8	0.0	46.8	0.0	37.9	0.0	73.2	0.0	50.2	0.0	36.8	0.0	55.2
V	15	1.0	2.2	1.2	26.0	8.0	63.6	2.0	28.2	1.5	25.7	9.0	67.4	0.5	40.1	2.2	24.4	2.2	45.4	10.4	98.6	0.6	19.0	3.4	48.2	1.8	23.1	3.6	75.6	1.2	29.4	3.8	35.8	3.7	48.5
s	16	2.4	4.6	0.4	17.0	0.2	51.2	0.0	6.4	1.0	16.5	0.2	45.6	0.0	36.6	0.0	15.4	2.2	39.0	1.4	60.0	0.0	14.8	0.0	38.8	0.0	14.2	0.0	70.8	0.6	14.6	0.3	27.7	0.5	37.5
D	17	23.6	28.2	22.6	39.6	0.0	51.2	12.4	18.8	27.9	44.5	8.0	53.6	0.3	36.8	5.0	20.4	19.4	58.4	10.8	70.8	0.0	14.8	0.2	39.0	0.8	15.0	0.0	70.8	9.0	23.6	0.8	28.5	7.1	43.1
L	18	0.0	28.2	0.4	40.0	1.0	51.8	0.0	18.8	0.0	44.2	0.0	53.2	0.0	35.3	0.0	19.4	0.2	58.6	10.0	69.4	0.0	14.8	0.2	38.6	0.0	14.7	0.0	70.4	0.2	23.4	0.3	27.2	0.1	42.8
Ma	19	1.2	29.4	0.2	38.6	0.0	46.8	1.8	20.0	0.3	39.4	0.0	49.0	0.0	35.1	0.0	14.6	0.8	55.4		68.0	0.0	13.6	0.2	34.2	0.0	13.0		70.4	0.2	20.6	0.0	22.6	0.3	40.9
Mi	20	0.0	29.4	0.0	38.4	1.0	47.6	0.0	20.0	0.0	39.4	0.6	49.4	0.0	34.8	0.0	14.6	0.0	55.4		68.0	0.0	13.4	0.0	34.0	0.0	13.0		70.0	0.0	20.4	0.0	22.6	0.1	40.6
J	21	15.4	44.8	30.2	68.6	2.6	50.2	18.0	38.0	20.1	59.4	14.2	63.6	1.0	35.8	13.8	28.4	18.2	73.6	5.4	73.4	1.0	14.4	5.6	39.4	8.6	21.6		68.2	17.8	38.2	4.3	26.9	9.7	50.2
V	22	1.4	46.2	1.8	70.4	1.6	51.8	1.2	39.2	2.0	61.5	1.0	64.6	3.3	39.1	2.0	30.4	1.4	75.0	1.2	74.6	2.0	16.4	2.6	42.0	1.8	23.4	5.2	73.4	2.2	40.4	2.0	29.0	2.0	51.9
S	23	0.0	46.2	0.0	70.4	0.2	52.0	0.0	39.2	0.0	61.5	0.0	64.6	0.0	39.1	0.0	30.4	0.0	75.0	0.0	74.6	0.0	16.4	0.0	42.0	0.0	23.4	0.0	73.4	0.2	40.6	0.0	29.0	0.0	51.9
D	24	6.8	53.0	1.2	71.6	4.2	56.2	1.4	40.6	5.6	67.1	4.8	69.4	1.0	40.1	6.0	36.4	7.2	82.2	5.8	80.4	1.2	17.6	8.6	50.6	3.3	26.7	2.0	75.4	4.0	44.6	7.9	36.8	4.2	56.1
L	25	12.4	65.4	7.4	79.0	4.6	59.4	9.2	49.8	11.4	78.5	14.8	82.6	3.3	42.4	17.8	54.2	16.8	99.0	12.6	92.4	4.0	19.8	10.6	57.2	15.8	41.9	5.8	67.0	16.4	60.6	9.9	42.2	9.8	65.2
Ma	26	3.0	68.4	4.2	83.2	1.2	59.4	2.6	52.4	4.1	80.5	1.2	83.0	4.8	46.2	3.4	57.6	3.2	95.6	0.6	92.0	3.8	23.2	2.8	56.8	6.1	48.0	1.6	66.8	8.6	69.2	5.6	45.5	3.0	64.7
Mi	27	3.2	71.6	5.4	88.6	1.6	60.8	5.6	58.0	3.3	83.8	2.6	85.6	14.5	60.5	5.8	63.4	4.0	99.6	1.6	93.6	9.8	33.0	3.6	54.6	7.1	55.1	1.0	55.2	7.8	77.0	3.6	48.3	4.8	68.8
J	28	0.8	72.4	2.8	91.4	4.0	46.4	1.6	58.0	1.8	81.5	1.8	60.6	2.0	49.5	5.2	67.8	1.0	78.2	1.8	55.2	2.4	34.4	2.4	55.8	5.6	60.2	2.6	47.8	3.8	80.4	3.6	51.1	2.5	58.8
V	29	18.6	91.0	6.8	90.2	10.8	43.4	6.6	64.4	9.7	91.2	13.4	74.0	10.2	59.7	9.2	76.0	21.6	99.6	43.6	98.6	3.6	38.0	12.2	68.0	5.3	63.8	7.6	53.4	7.4	86.8	12.2	62.7	13.3	69.2
S	30	1.2	92.2	1.2	91.0	0.6	42.0	0.8	65.2	1.3	92.5	0.0	73.2	1.5	48.0	1.0	75.2	1.4	101.0	0.0	98.6	1.4	32.2	1.8	62.8	1.0	62.2	3.6	43.8	1.4	86.8	1.5	59.9	1.4	68.0
D	31	2.0	94.2	0.2	91.2	3.2	44.8	0.8	66.0	1.8	94.0	2.0	75.0	0.3	46.0	2.8	77.2	2.4	103.4	1.6	98.4	1.0	32.2	1.8	61.0	1.3	62.2	2.0	35.4	1.4	87.0	2.0	59.9	1.7	66.3
Ll. me	s	94.2		99.6		80.8		67.8		100.3		103.6		75.7		81.6		132.6		141.6		41.8		81.8		68.3		85.4		91.0		70.6		91.9	
Máx. ı	nes	23.6	97.8	30.2	91.4	18.4	154.6	18.0	177.8	27.9	144.3	26.8	160.6	14.5	109.5	17.8	183.8	22.4	155.6	43.6	261.0	9.8	93.4	12.2	151.8	15.8	138.2	13.2	166.6	17.8	172.8	12.2	136.2	13.3	164.4
Ll. acu el año		69	11.8	50	5.0	58	8.6	60	3.8	89	9.9	64	6.2	49	8.9	74	4.2	29	9.8	82	9.8	45	4.0	572	2.2	62	2.8	60	4.4	765	5.8	58	4.7	653	3.8
No. di Iluvia a		69	53%	80	53%	92	61%	74	49%	82	54%	87	58%	84	56%	82	54%	39	49%	77	52%	85	56%	102	68%	87	58%	87	59%	102	68%	95	63%	106	70%





	nscurrido a la fec		151
No. de di	ias con al	gún N.A. e	n el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl propietarias y participantes











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

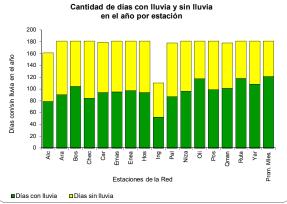
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



JUNIO DE 2015

Estaciones		zares		njuez	N.	ues del orte		Uribe	El Ca			nas		ea	Cal		•	minas		alma		za	Po	res-El pal		rados	Queb Maniz Tes	zales- orito	Quebra Luis-R	uta 30		ımos		nedio zales
Propietarios	Alcaldía		Alcaldía			/OMPAD	CHEC S		Alcaldía/		EMAS S.		Alcaldía/		Alcaldía		Alcaldía/		Alcaldía	/OMPAD	Alcaldía/		CORPO			nizales	CORPO		UN-Ma			OMPAD		
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
L 1	1.4	95.6	1.6	92.8	1.2	46.0	1.4	67.4	1.5	95.5	1.4	76.4	2.0	48.0	1.4	78.6	1.4	104.8	0.8	99.2	1.8	33.0	1.6	60.2	2.0	64.0	2.6	37.6	1.6	88.6	1.8	61.0	1.7	67.6
Ma 2	0.0	95.6	0.0	92.8	0.4	46.4	0.0	67.4	0.3	95.8	0.4	76.8	0.3	48.3	0.4	78.6	0.0	104.8	0.0	99.2	8.0	33.8	8.0	58.8	0.5	63.8	2.2	39.8	0.6	88.4	0.5	60.0	0.6	68.0
Mi 3	0.0	95.6	0.0	92.8	1.0	47.4	0.0	67.4	0.3	96.0	0.0	76.8	2.3	47.2	0.2	78.8	0.0	104.8	0.0	98.0	0.6	34.0	8.0	59.2	0.5	64.0	1.8	41.6	0.4	88.6	8.0	60.7	0.7	68.2
J 4	2.0	96.4	1.8	89.4	0.0	47.4	1.2	67.6	2.3	96.0	0.0	75.4	4.1	51.3	0.8	77.0	1.8	105.2	0.6	98.2	0.4	34.4	0.4	59.6	1.0	62.5	0.2	41.8	1.8	86.6	8.0	61.5	1.1	68.4
V 5	0.6	97.0	0.6	90.0	0.0	47.4	1.6	68.2	1.0	97.0	0.0	75.4	0.0	51.3	0.2	77.2	0.4	105.6	0.0	98.2	0.0	34.4	0.0	59.6	0.0	62.5	0.2	42.0	0.2	86.8	0.0	61.5	0.2	68.6
S 6	0.0	97.0	0.0	90.0	0.0	47.4	0.0	68.2	0.0	97.0	0.0	75.4	0.0	51.3	0.0	77.2	0.0	105.6	0.0	98.2	0.0	34.4	0.0	59.6	0.0	62.5	0.0	42.0	0.0	86.8	0.0	61.5	0.0	68.6
D 7	0.6	97.6	0.8	90.8	0.4	47.8	0.6	68.8		97.0	0.4	75.8	1.0	52.3	0.4	77.6	0.4	106.0	0.6	98.8	0.6	35.0	0.6	60.2	0.5	63.0	0.6	42.6	8.0	87.6	0.5	62.0	0.6	69.2
L 8	19.0	116.6	2.2	93.0	2.0	49.8	19.2	88.0		97.0	4.8	80.6	0.5	52.8	0.8	78.4	1.8	107.8	4.0	102.8	0.6	35.6	2.0	62.2	1.8	64.8	1.2	43.8	9.2	96.8	1.8	63.8	4.0	73.2
Ma 9	20.6	136.2	16.6	108.4	7.2	49.0	5.2	91.2	3.6	99.1	24.0	95.6	13.2	65.5	26.4	102.6	40.2	145.8	14.2	106.6	8.4	43.4	8.6	67.4	15.5	78.5	5.8	46.0	28.0	123.6	8.9	68.8	15.0	84.5
Mi 10	3.6	137.4	4.6	112.6	2.8	51.6	4.2	95.4	3.6	101.6	4.2	99.6	2.8	68.3	4.6	107.2	4.6	148.2	3.2	108.4	2.0	45.4	2.4	69.8	3.3	81.8	3.0	49.0	5.2	128.2	2.3	70.9	3.3	87.3
J 11	8.0	114.6	3.0	93.0	4.2	55.8	0.4	83.4	1.5	75.2	0.0	91.6	3.6	71.6	0.6	102.8	0.6	129.4	0.8	98.4	8.0	46.2	0.6	70.2	1.0	82.0	1.2	50.2	1.6	120.8	8.0	70.9	1.3	81.5
V 12	0.4	115.0	8.0	93.4	0.2	55.0	0.2	83.6	0.5	75.7	0.4	92.0	1.5	73.2	0.4	103.2	0.6	129.8	0.0	98.4	0.0	46.2	0.2	70.2	0.3	82.3	1.2	51.4	8.0	121.4	0.3	70.9	0.5	82.0
S 13	0.0	113.8	0.0	93.2	0.0	55.0	0.0	81.8	0.0	75.4	0.0	92.0	0.0	73.2	0.0	103.2	0.0	129.0	0.0	98.4	0.0	46.2	0.0	70.0	0.0	82.3	0.0	51.4	0.0	121.2	0.0	70.9	0.0	81.7
D 14	0.0	113.8	0.0	93.2	0.0	54.0	0.0	81.8	0.0	75.4	0.0	91.4	0.0	73.2	0.0	103.2	0.4	129.4	0.4	98.8	0.0	46.2	0.4	70.4	0.0	82.3	2.6	54.0	0.2	121.4	0.5	71.4	0.5	82.1
L 15	0.0	98.4	0.0	63.0	0.4	51.8	0.0	63.8	0.3	55.6	0.0	77.2	0.0	72.1	0.0	89.4	0.2	111.4	0.2	93.6	0.0	45.2	0.2	65.0	0.0	73.7	0.6	54.6	0.2	103.8	0.0	67.1	0.2	72.6
Ma 16	0.0	97.0	0.0	61.2	2.4	52.6	0.0	62.6	0.3	53.9	1.4	77.6	0.8	69.6	0.0	87.4	0.4	110.4	0.4	92.8	1.0	44.2	0.8	63.2	1.0	72.9	0.0	49.4	0.6	102.2	0.8	65.8	0.6	71.2
Mi 17	0.0	97.0	0.0	61.2	0.0	52.4	0.0	62.6	0.0	53.9	0.0	77.6	0.0	69.6	0.0	87.4	0.0	110.4	0.0	92.8	0.0	44.2	0.0	63.2	0.0	72.9	0.0	49.4	0.0	102.0	0.0	65.8	0.0	71.2
J 18	0.0	90.2	0.0	60.0	0.0	48.2	0.8	62.0	0.0	48.3	0.0	72.8	0.0	68.6	0.0	81.4	0.0	103.2	0.0	87.0	0.0	43.0	0.0	54.6	0.0	69.6	0.0	47.4	0.0	98.0	0.0	57.9	0.0	67.0
V 19	0.0	77.8	0.0	52.6	0.0	43.6	0.0	52.8	0.0	36.8	0.0	58.0	0.0	65.3	0.0	63.6	0.0	86.4	0.0	74.4	0.0	39.0	0.0	44.0	0.0	53.9	0.0	41.6	0.0	81.6	0.0	48.0	0.0	57.2
S 20	0.0	74.8	0.0	48.4	0.0	42.4	0.0	50.2	0.0	32.8	0.0	56.8	0.0	60.5	0.0	60.2	0.0	83.2	0.0	73.8	0.0	35.2	0.0	41.2	0.0	47.8	0.0	40.0	0.0	73.0	0.0	42.4	0.0	54.2
D 21	0.0	71.6	0.0	43.0	0.0	40.8	0.0	44.6	0.0	29.5	0.0	54.2	0.0	46.0	0.0	54.4	0.0	79.2	0.0	72.2	0.0	25.4	0.0	37.6	0.0	40.6	0.0	39.0	0.0	65.2	0.0	38.9	0.0	49.4
L 22	0.6	71.4	8.0	41.0	2.0	38.8	0.0	43.0	1.0	28.7	0.0	52.4	1.3	45.2	1.0	50.2	1.0	79.2	0.0	70.4	0.4	23.4	1.2	36.4	1.0	36.1	3.0	39.4	0.6	62.0	0.8	36.1	1.1	48.0
Ma 23	0.0	52.8	0.0	34.2	0.0	28.0	0.0	36.4	0.0	19.1	0.0	39.0	0.0	35.1	0.0	41.0	0.0	57.6	0.0	26.8	0.0	19.8	0.2	24.4	0.0	30.7	0.0	31.8	0.0	54.6	0.0	23.9	0.0	34.8
Mi 24	0.0	51.6	0.0	33.0	0.0	27.4	0.0	35.6	0.0	17.8	0.0	39.0	0.0	33.5	0.0	40.0	0.0	56.2	0.0	26.8	0.0	18.4	0.0	22.6	0.0	29.7	0.0	28.2	0.0	53.2	0.0	22.4	0.0	33.3
J 25	0.0	49.6	0.0	32.8	0.0	24.2	0.0	34.8	0.0	16.0	0.0	37.0	0.0	33.3	0.0	37.2	0.0	53.8	0.0	25.2	0.0	17.4	0.0	20.8	0.0	28.4	0.0	26.2	0.0	51.8	0.0	20.3	0.0	31.7
V 26	0.0	48.2	0.0	31.2	0.0	23.0	0.0	33.4	0.0	14.5	0.0	35.6	0.0	31.2	0.0	35.8	0.0	52.4	0.0	24.4	0.0	15.6	0.0	19.2	0.0	26.4	0.0	23.6	0.0	50.2	0.0	18.5	0.0	30.0
S 27	0.0	48.2	0.0	31.2	0.0	22.6	0.0	33.4	0.0	14.2	0.0	35.2	0.0	31.0	0.0	35.4	0.0	52.4	0.0	24.4	0.0	14.8	0.0	18.4	0.0	25.9	0.0	21.4	0.0	49.6	0.0	18.0	0.0	29.3
D 28	0.0	48.2	0.0	31.2	0.0	21.6	0.0	33.4	0.0	14.0	0.0	35.2	0.5	29.2	0.0	35.2	0.0	52.4	0.0	24.4	0.0	14.2	0.0	17.6	0.0	25.4	0.0	19.6	0.2	49.4	0.0	17.3	0.1	28.7
L 29	0.0	46.2	0.0	29.4	0.0	21.6	0.0	32.2	0.0	11.7	0.0	35.2	0.0	25.1	0.0	34.4	0.0	50.6	0.0	23.8	0.0	13.8	0.0	17.2	0.0	24.4	0.0	19.4	0.0	47.6	0.0	16.5	0.0	27.6
Ma 30	0.0	45.6	0.0	28.8	0.0	21.6	0.0	30.6	0.0	10.7	0.0	35.2	0.0	25.1	0.0	34.2	0.0	50.2	0.0	23.8	0.0	13.8	0.0	17.2	0.0	24.4	0.0	19.2	0.0	47.4	0.0	16.5	0.0	27.4
Mi 1																																		
LI. mes	49.6		32.8		24.2		34.8		16.0		37.0		33.8		37.2		53.8		25.2		17.4		20.8		28.4		26.2		52.0		20.3		31.7	
Máx. mes	20.6	137.4	16.6	112.6	7.2	55.8	19.2	95.4	3.6	101.6	24.0	99.6	13.2	73.2	26.4	107.2	40.2	148.2	14.2	108.4	8.4	46.2	8.6	70.4	15.5	82.3	5.8	54.6	28.0	128.2	8.9	71.4	15.0	87.3
Ll. acum. en el año	74	1.4	53	7.8	61	12.8	63	8.6	91	5.9	68	3.2	53:	2.6	78	1.4	35	3.6	85	55.0	47	1.4	59:	3.0	65	1.3	63	0.6	81	7.8	60	5.0	68	5.5
No. días Iluvia año	79	49%	90	50%	104	57%	84	46%	94	53%	95	52%	97	54%	94	52%	52	47%	87	49%	96	53%	117	65%	99	55%	101	57%	118	65%	108	60%	121	67%





	inscurrido a la fec		181
No. de d	ías con al	gún N.A. e	n el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl propietarias y participantes











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

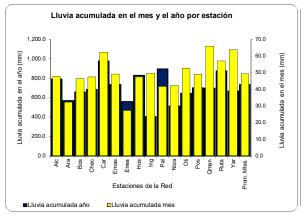
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

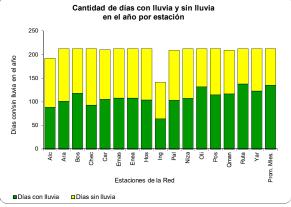
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

JULIO DE 2015



Estaciones		ázares	Aran		No.	ues del orte		Uribe	El Ca		Em			ea	Hospi Cal	das	Ingeo			alma		iza		res-El pal		rados	Mani Tes	brada zales- orito	Luis-R	ida San luta 30		imos	Prom Mania	
Propietarios	+	a/OMPAD	Alcaldía/		Alcaldía		CHEC S		Alcaldía/		EMAS S.			OMPAD	Alcaldía/	_		OMPAD		/OMPAD		/OMPAD	CORPO			nizales		CALDAS	UN-Ma		Alcaldía/			
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
Mi 1	0.0	45.6	0.0	28.8	0.0	21.6	0.0	30.6	0.0	10.7	0.0	35.2	0.0	25.1	0.0	34.2	0.0	50.2	0.0	23.8	0.0	13.8	0.0	17.2	0.0	24.4	0.0	19.2	0.0	47.4	0.0	16.5	0.0	27.4
J 2	0.0	45.0	0.0	28.0	0.0	21.2	0.0	30.0	0.0	10.7	0.0	34.8	0.0	24.1	0.0	33.8	0.0	49.8	0.0	23.2	0.0	13.2	0.0	16.6	0.0	23.9	0.0	18.6	0.0	46.6	0.0	16.0	0.0	26.8
V 3	0.0	26.0	0.0	25.8	0.0	19.2	0.0	10.8	0.0	10.7	0.0	30.0	0.0	23.6	0.0	33.0	0.0	48.0	0.0	19.2	0.0	12.6	0.0	14.6	0.0	22.1	0.0	17.4	0.0	37.4	0.0	14.2	0.0	22.7
S 4	0.0	5.4	0.0	9.2	0.0	12.0	0.0	5.6	0.0	7.1	0.0	6.0	0.0	10.4	0.0	6.6	0.0	7.8	0.0	5.0	0.0	4.2	0.0	6.0	0.0	6.6	0.0	11.6	0.0	9.4	0.0	5.3	0.0	7.7
D 5	0.0	1.8	0.0	4.6	0.0	9.2	0.0	1.4	0.0	3.6	0.0	1.8	0.0	7.6	0.0	2.0	0.0	3.2	0.0	1.8	0.0	2.2	0.0	3.6	0.0	3.3	0.0	8.6	0.0	4.2	0.0	3.1	0.0	4.4
L 6	0.0	1.0	0.6	2.2	3.6	8.6	0.0	1.0	0.0	2.0	1.0	2.8	1.0	5.1	0.0	1.4	0.0	2.6	2.8	3.8	0.4	1.8	0.4	3.4	0.3	2.5	1.6	9.0	0.4	3.0	0.5	2.8	1.0	4.1
Ma 7	0.0	0.6	0.4	1.8	5.6	14.0	0.0	8.0	0.5	2.0	14.4	16.8	3.8	7.4	5.2	6.2	0.8	2.8	7.6	11.4	7.4	9.2	6.0	9.2	5.3	7.6	17.6	25.4	2.8	5.0	13.7	16.3	7.4	10.9
Mi 8	0.0	0.6	0.0	1.8	0.0	14.0	0.0	0.8	0.0	2.0	0.0	16.8	0.0	7.4	0.0	6.2	0.0	2.8	0.0	11.4	0.0	9.2	0.0	9.2	0.0	7.6	0.4	25.8	0.2	5.2	0.0	16.3	0.1	11.0
J 9	0.0	0.6	0.0	1.8	0.0	14.0	0.0	8.0	0.0	2.0	0.0	16.8	0.0	7.4	0.0	6.2	0.0	2.4	0.0	11.0	0.0	9.2	0.0	8.8	0.0	7.6	0.0	23.2	0.0	5.0	0.0	15.8	0.0	10.4
V 10	0.0	0.6	0.0	1.8	0.0	13.6	0.0	8.0	0.0	1.8	0.0	16.8	0.0	7.4	0.0	6.2	0.0	2.2	0.0	10.8	0.0	9.2	0.0	8.6	0.0	7.6	0.0	22.6	0.0	4.8	0.0	15.8	0.0	10.3
S 11	0.0	0.6	0.0	1.8	0.0	11.2	0.0	0.8	0.0	1.5	0.0	15.4	0.0	6.6	0.0	6.2	0.0	1.8	0.0	10.4	0.0	8.2	0.0	7.8	0.3	6.9	0.0	22.6	0.2	4.4	0.0	15.0	0.0	9.7
D 12	0.0	0.6	0.0	1.8	0.0	11.2	0.0	8.0	0.0	1.5	0.0	15.4	0.3	6.9	0.0	6.2	0.0	1.8	0.0	10.4	0.0	8.2	0.0	7.8	0.0	6.9	0.2	22.8	0.2	4.6	0.0	15.0	0.1	9.7
L 13	0.0	0.6	0.4	2.2	0.0	11.2	0.2	0.2	0.0	1.5	0.0	15.4	0.0	6.9	0.0	6.2	0.0	1.8	0.0	10.4	1.0	9.2	8.0	8.6	2.3	9.1	0.0	22.8	1.6	6.2	0.3	15.2	0.3	10.0
Ma 14	0.0	0.6	0.0	2.2	0.0	11.2	0.0	0.2	0.0	1.5	0.0	15.4	0.0	6.9	0.0	6.2	0.0	1.8	0.4	10.8	0.0	9.2	0.0	8.6	0.0	9.1	0.0	22.8	0.2	6.4	0.0	15.2	0.0	10.1
Mi 15	1.6	2.2	0.0	2.2	6.4	17.6	0.0	0.2	1.0	2.5	3.8	19.2	1.0	7.9	1.6	7.8	2.2	4.0	5.0	15.8	0.6	9.8	1.6	10.2	1.0	10.2	2.6	25.4	0.4	6.8	1.5	16.8	2.2	12.3
J 16	0.0	2.2	0.0	2.2	0.4	18.0	0.0	0.2	0.0	2.5	0.0	19.2	0.0	7.9	0.0	7.8	0.2	4.2	0.0	15.8	0.0	9.8	0.0	10.2	0.0	10.2	0.4	25.8	0.0	6.8	0.0	16.8	0.1	12.4
V 17	1.2	2.8	0.4	1.8	1.8	17.8	5.8	6.0	0.3	1.8	1.0	20.2	0.0	6.6	1.0	7.8	0.4	3.6	0.8	16.6	0.4	9.8	0.8	9.8	0.8	9.9	0.2	23.0	0.4	6.6	1.0	17.0	0.8	12.1
S 18	1.0	3.8	1.0	2.8	1.8	19.6	1.8	7.8	2.0	3.8	2.8	23.0	1.3	7.9	1.6	9.4	1.2	4.8	2.0	18.6	1.2	11.0	1.4	11.0	1.5	11.4	2.2	25.2	2.2	8.8	2.0	19.1	1.8	13.8
D 19	11.4	15.2	5.4	8.2	1.2	20.8	8.6	16.4	10.7	14.5	1.0	24.0	1.0	8.9	0.6	10.0	6.4	11.2	0.6	19.2	0.0	11.0	1.8	12.8	0.3	11.7	8.0	26.0	2.6	11.4	1.3	20.3	2.6	16.4
L 20	23.0	38.2	17.8	26.0	13.2	34.0	22.8	39.2	35.1	49.5	13.0	37.0	10.9	19.8	22.0	32.0	26.6	37.8	14.0	33.2	19.8	30.8	22.4	35.2	22.9	34.6	27.6	53.6	31.8	43.2	22.6	42.9	21.1	37.5
Ma 21	6.2	44.4	2.4	28.4	8.6	42.6	2.4	41.6	7.4	56.9	8.6	45.6	2.5	22.4	10.2	42.2	8.0	45.8	3.8	37.0	6.6	37.4	13.4	48.6	7.6	42.2	7.0	60.6	8.0	51.2	17.0	60.0	7.2	44.8
Mi 22	2.4	46.8	2.4	30.8	2.0	44.6	2.4	44.0	3.6	60.5	1.0	46.6	3.6	25.9	2.0	44.2	2.4	48.2	1.8	38.8	2.2	39.6	2.2	50.8	2.5	44.7	3.0	63.6	2.8	54.0	1.8	61.7	2.4	47.2
J 23	0.0	46.8	0.0	30.8	0.0	44.6	0.0	44.0	0.0	60.5	0.0	46.6	0.0	25.4	0.0	44.2	0.0	48.2	0.0	38.8	0.0	39.6	0.2	51.0	0.3	45.0	0.0	63.6	0.2	54.0	0.0	61.7	0.0	47.2
V 24	0.0	46.8	0.0	30.8	0.0	44.6	0.0	44.0	0.0	60.5	0.0	46.6	0.0	25.4	0.0	44.2	0.0	48.2	0.0	38.8	0.0	39.6	0.0	51.0	0.0	45.0	0.0	63.6	0.2	54.2	0.0	61.7	0.0	47.2
S 25	0.0	46.8	0.0	30.8	0.0	44.6	0.0	44.0	0.0	60.5	0.0	46.6	0.0	25.4	0.0	44.2	0.0	48.2	0.0	38.8	0.0	39.6	0.0	51.0	0.0	45.0	0.0	63.6	0.0	54.2	0.0	61.7	0.0	47.2
D 26	0.0	46.8	0.0	30.8	0.4	45.0	0.0	44.0	0.3	60.7	0.4	47.0	0.0	25.4	0.0	44.2	0.4	48.6	0.4	39.2	0.0	39.6	0.2	51.2	0.3	45.2	0.6	64.2	0.2	54.4	0.3	62.0	0.3	47.4
L 27	0.4	47.2	0.4	31.2	0.6	45.6	0.4	44.4	0.3	61.0	0.4	47.4	0.3	25.7	0.4	44.6	0.4	49.0	0.4	39.6	0.0	39.6	0.4	51.6	0.3	45.5	1.0	65.2	0.6	55.0	0.3	62.2	0.5	47.9
Ma 28	0.6	47.8	1.0	32.2	0.4	46.0	3.0	47.4	1.3	62.2	1.2	48.6	1.5	27.2	2.8	47.4	0.6	49.6	1.0	40.6	1.8	41.4	0.2	51.8	3.3	48.8	0.2	65.4	1.8	56.8	0.5	62.7	1.1	49.0
Mi 29	0.0	47.8	0.0	32.2	0.0	46.0	0.0	47.4	0.0	62.2	0.0	48.6	0.0	27.2	0.0	47.4	0.0	49.6	0.2	40.8	0.0	41.4	0.0	51.8	0.0	48.8	0.0	65.4	0.0	56.8	0.0	62.7	0.0	49.0
J 30	0.0	47.8	0.0	32.2	0.4	46.4	0.0	47.4	0.0	62.2	0.6	49.2	0.0	27.2	0.0	47.4	0.0	49.6	0.6	41.4	0.8	42.2	0.8	52.6	0.3	49.0	0.4	65.8	0.0	56.8	0.8	63.5	0.4	49.4
V 31	0.0	47.8	0.0	31.6	0.0	42.8	0.0	47.4	0.0	62.2	0.0	48.2	0.0	26.2	0.0	47.4	0.0	49.6	0.2	38.8	0.0	41.8	0.0	52.2	0.0	48.8	0.0	64.2	0.2	56.6	0.3	63.3	0.0	48.4
Ll. mes	47.8	1	32.2	27.0	46.4		47.4	1	62.2		49.2		27.2		47.4		49.6	.5.0	41.6	23.0	42.2		52.6		49.0	.5.0	65.8		57.0	23.0	63.8	23.0	49.4	
Máx. mes	23.0	47.8	17.8	32.2	13.2	46.4	22.8	47.4	35.1	62.2	14.4	49.2	10.9	27.2	22.0	47.4	26.6	50.2	14.0	41.4	19.8	42.2	22.4	52.6	22.9	49.0	27.6	65.8	31.8	56.8	22.6	63.5	21.1	49.4
Ll. acum. en el año		89.2	570			9.2		86.0	97		732			9.8		8.8		3.2		6.6		3.6		5.6		0.3		6.4		4.8		8.8		5.0
No. días	88	46%	101	48%	118	56%	93	44%	105	50%	108	51%	108	51%	104	49%	64	45%	103	49%	107	50%	132	62%	115	54%	117	56%	138	65%	123	58%	135	64%
lluvia año	- 00	7070	101	4070	1 '''	5075	55	7770	100	3070	100	3170	100	3170	104	7575	0-7	4070	100	7070	107	0070	102	02.70	110	U-7,0		0070	100	0070	120	0070	100	0770





	anscurrido o a la fec		212
No. de d	ías con al	gún N.A. e	en el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

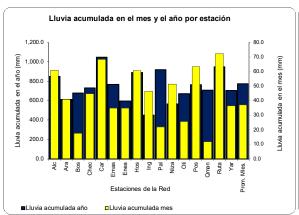
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

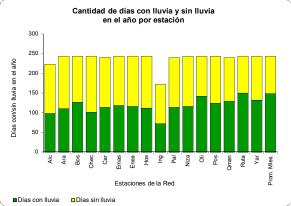
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



AGOSTO DE 2015

Estaciones	Alcáz		Aran	ijuez		ues del orte	Chec	Uribe	El Ca		En	nas	En	ea	Hospi Cal		Ingeo	minas	La P	alma	Ni	iza	Po	res-El pal	Posg	rados	Queb Maniz Tesc	ales-		ida San luta 30		mos	Prom	nedio zales
Propietarios	Alcaldía/		Alcaldía/	OMPAD	Alcaldía	/OMPAD	CHEC S		Alcaldía/	OMPAD	EMAS S		Alcaldía/		Alcaldía/	OMPAD	Alcaldía/	OMPAD	Alcaldía	OMPAD	Alcaldía/		CORPO		UN-Ma	anizales	CORPO		UN-Ma		Alcaldía	OMPAD		
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
S 1	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.4	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.4	0.0	46.6	0.0	53.8	0.0	49.5	0.0	41.1
D 2	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.4	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.4	0.0	46.2	0.0	53.6	0.0	49.5	0.0	41.0
L 3	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.4	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.4	0.0	46.2	0.0	53.6	0.0	49.5	0.0	41.0
Ma 4	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.4	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.4	0.0	46.2	0.0	53.6	0.0	49.5	0.0	41.0
Mi 5	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.4	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.2	0.0	46.2	0.0	53.4	0.0	49.5	0.0	41.0
J 6	0.0	47.8	0.0	31.2	0.0	37.2	0.0	47.4	0.0	61.7	0.0	33.8	0.0	22.1	0.0	42.2	0.0	48.8	0.0	31.2	0.0	34.4	0.0	46.2	0.0	43.2	0.0	46.0	0.0	53.2	0.0	49.5	0.0	40.9
V 7	0.0	47.8	0.0	30.8	0.0	37.2	0.0	47.2	0.0	61.7	0.0	33.8	0.0	22.1	0.0	42.2	0.0	48.8	0.0	31.2	0.0	33.4	0.0	45.4	0.0	40.9	0.0	46.0	0.0	51.6	0.0	49.3	0.0	40.6
S 8	2.6	50.4	2.2	33.0	2.2	39.4	3.2	50.4	3.1	64.8	7.4	41.2	3.6	25.7	2.4	44.6	4.0	52.8	6.4	37.2	1.0	34.4	2.2	47.6	2.3	43.2	2.2	48.2	1.6	53.0	2.3	51.6	3.2	43.8
D 9	18.4	67.2	3.0	36.0	0.0	33.0	14.8	65.2	12.2	76.0	1.6	39.0	5.3	30.0	2.4	45.4	10.4	61.0	0.8	33.0	6.4	40.2	8.0	46.8	3.1	45.2	1.6	47.2	2.8	55.4	2.5	52.6	4.6	46.1
L 10	0.2	67.4	0.0	36.0	0.0	32.6	0.0	65.2	0.0	76.0	0.0	39.0	0.0	30.0	0.0	45.4	0.0	60.8	0.0	33.0	0.0	40.2	0.0	46.8	0.0	45.2	0.0	46.8	0.0	55.4	0.0	52.6	0.0	46.0
Ma 11	0.0	66.2	0.0	35.6	0.0	30.8	0.0	59.4	0.0	75.7	0.0	38.0	0.0	30.0	0.0	44.4	0.0	60.4	0.0	32.2	0.0	39.8	0.0	46.0	0.0	44.5	0.0	46.6	0.0	55.0	0.0	51.6	0.0	45.2
Mi 12	0.0	65.2	0.0	34.6	0.0	29.0	0.0	57.6	0.0	73.7	0.0	35.2	0.0	28.7	0.0	42.8	0.0	59.2	0.0	30.2	0.0	38.6	0.0	44.6	0.0	42.9	0.0	44.4	0.0	52.8	0.0	49.5	0.0	43.4
J 13 V 14	0.0	53.8	0.0	29.2	0.0	27.8	0.0	49.0 26.2	0.0	63.0	0.0	34.2	0.0	27.7	0.0	42.2	0.0	52.8	0.0	29.6	0.0	38.6	0.0	42.8	0.0	42.7	0.0	43.6	0.0	50.2	0.0	48.3	0.0	40.8
	0.0	30.8	0.0	11.4	0.0	14.6	0.0		0.0	27.9	0.0	21.2	0.0	16.8	0.0	20.2	0.0	26.2	0.0	15.6	0.0	18.8	0.2	20.6	0.0	19.8	0.4	16.4	0.0	18.4	0.0	25.7	0.1	19.8
S 15	0.0 15.0	24.6 37.2	0.0	9.0	0.0	6.0	0.0	23.8	0.0	20.6	0.0	12.6 20.2	0.0	14.2	0.0	10.0	0.0	18.2 26.2	0.0	11.8	0.0	12.2 13.0	0.0	7.2	0.0 14.7	12.2 24.4	0.0	9.4	0.0	10.4	0.0	8.6	0.0	12.6
D 16	0.0	37.2	1.8	8.4 8.4	1.4	5.4 6.4	2.6 0.0	24.0	13.5	30.5 30.5	0.4	20.2	3.3 0.0	14.0	16.6	24.6	10.4 0.0	26.2	0.8	10.8	3.0 0.4	13.4	3.0 0.8	8.0 8.6	0.0	24.4	5.0 0.2	11.4 11.6	11.8 0.2	19.4 19.4	3.6 0.3	10.4 10.7	6.2 0.3	16.4 16.6
Ma 18	0.0	37.2	0.0	8.4	0.8	7.2	0.0	24.0	0.0	30.5	1.0	21.6	0.0	14.0	0.0	24.6	0.0	26.2	3.2	14.4	0.4	13.4	0.0	8.6	0.0	24.1	0.2	12.0	0.2	19.4	0.3	10.7		17.1
Mi 19	0.0	37.2	0.0	8.4	0.0	7.2	0.0	24.0	0.0	30.5	0.0	21.6	0.0	14.0	0.0	24.6	0.0	26.2	0.0	14.4	0.0	13.4	0.0	8.6	0.0	24.1	0.4	12.0	0.2	19.4	0.0	10.9	0.5	17.1
J 20	6.8	44.0	13.8	22.2	1.8	8.6	6.8	30.8	12.7	42.9	0.0	25.6	0.0	14.0	13.4	38.0	6.4	32.2	4.6	18.6	6.8	20.2	3.8	12.2	12.7	36.6	0.6	12.0	14.6	33.8	9.9	20.6	5.6	22.5
V 21	12.6	56.2	16.0	37.8	5.6	13.6	13.8	44.2	16.8	59.4	6.6	31.8	16.5	30.2	22.2	59.8	10.0	41.8	3.8	22.0	32.2	52.4	13.6	25.4	26.9	63.3	0.0	11.2	30.2	63.4	16.5	36.8	12.9	34.9
S 22	1.6	57.2	0.0	36.8	0.0	13.2	0.6	41.8	3.8	62.0	0.0	30.6	0.0	28.7	0.6	57.6	0.0	41.2	0.0	21.0	0.6	51.2	0.0	25.2	1.3	61.2	0.2	11.0	2.8	64.4	0.0	36.3	0.5	34.3
D 23	2.6	59.8	2.4	39.2	4.2	17.4	2.8	44.6	5.3	67.3	4.0	34.6	0.0	28.7	2.8	60.4	4.0	45.2	1.0	21.8	0.0	51.2	0.0	25.2	1.8	63.0	0.0	11.0	6.2	70.6	0.0	36.3	1.8	36.1
L 24	0.2	60.0	0.4	39.6	0.6	17.6	0.2	44.8	0.0	67.3	0.4	34.4	0.8	29.5	0.2	60.6	0.2	45.4	0.2	21.4	0.6	51.0	0.6	25.0	0.3	63.0	0.6	11.2	0.6	71.2	0.5	36.1	0.4	36.2
Ma 25	0.0	60.0	0.0	39.6	0.0	17.6	0.0	44.8	0.0	67.3	0.0	34.4	0.0	29.5	0.0	60.6	0.0	45.4	0.0	21.2	0.0	51.0	0.0	25.0	0.0	63.0	0.0	11.2	0.0	71.0	0.0	35.8	0.0	36.2
Mi 26	0.0	60.0	0.4	40.0	0.0	17.6	0.0	44.8	0.0	67.3	0.0	34.4	2.0	31.5	0.0	60.6	0.0	45.4	0.0	21.2	0.0	51.0	0.4	25.4	0.0	63.0	0.0	11.4	0.0	71.0	0.5	36.3	0.3	36.4
J 27	0.0	60.0	0.0	40.0	0.0	17.6	0.0	44.8	0.0	67.3	0.0	34.4	2.8	34.3	0.0	60.6	0.0	45.4	0.0	21.2	0.4	51.4	0.2	25.6	0.0	63.0	0.2	11.6	0.2	71.2	0.0	36.3	0.3	36.8
V 28	0.8	60.8	0.8	40.8	0.0	17.6	0.0	44.8	1.0	68.3	0.4	34.8	0.5	34.8	0.0	60.6	1.0	46.4	0.8	22.0	0.0	51.4	0.0	25.6	0.3	63.2	0.2	11.8	1.0	72.2	0.0	36.3	0.4	37.2
S 29	0.0	60.8	0.0	40.8	0.0	17.6	0.0	44.8	0.0	68.3	0.0	34.8	0.0	34.8	0.0	60.6	0.0	46.4	0.0	22.0	0.0	51.4	0.0	25.6	0.0	63.2	0.0	11.8	0.0	72.2	0.0	36.3	0.0	37.2
D 30	0.0	60.8	0.0	40.8	0.0	17.6	0.0	44.8	0.0	68.3	0.0	34.8	0.0	34.8	0.0	60.6	0.0	46.4	0.0	22.0	0.0	51.4	0.0	25.6	0.0	63.2	0.0	11.8	0.0	72.2	0.0	36.3	0.0	37.2
L 31	0.0	60.8	0.0	40.8	0.0	17.6	0.0	44.8	0.0	68.3	0.0	34.8	0.0	34.8	0.0	60.6	0.0	46.4	0.0	22.0	0.0	51.4	0.0	25.6	0.0	63.2	0.0	11.8	0.0	72.2	0.0	36.3	0.0	37.2
LI. mes	60.8		40.8		17.6		44.8		68.3		34.8		34.8		60.6		46.4		22.0		51.4		25.6		63.2		11.8		72.2		36.3		37.2	
Máx. mes	18.4	67.4	16.0	40.8	5.6	39.4	14.8	65.2	16.8	76.0	8.6	41.2	16.5	34.8	22.2	60.6	10.4	61.0	6.4	37.2	32.2	52.4	13.6	47.6	26.9	63.3	5.0	48.2	30.2	72.2	16.5	52.6	12.9	46.1
Ll. acum. en el año	85	0.0	61	0.8	67	6.8	73	0.8	104	6.5	76	7.2	59	4.6	88	9.4	44	9.6	91	8.6	56	5.0	67	1.2	76	3.5	70	8.2	94	7.0	70	5.1	77:	2.1
No. días Iluvia año	98	44%	110	45%	126	52%	101	42%	113	47%	118	49%	116	48%	112	46%	72	42%	113	47%	116	48%	142	58%	124	51%	129	54%	150	62%	132	54%	148	61%





	anscurrido o a la fec		243
No. de d	ías con al	gún N.A. e	n el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año

Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl

OBSERVACIONES:

Otras entidades propietarias y participantes









OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

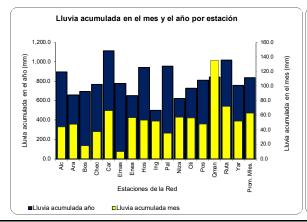
RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

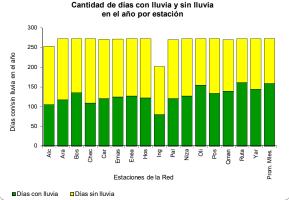
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

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

SEPTIEMBRE DE 2015

Estacion		Alcáz Alcaldía/			njuez /OMPAD	N	ues del orte	Chec	Uribe		rmen /OMPAD	Em	nas	En Alcaldía/		Hospi Cal Alcaldía/		Ingeo			'alma	Ni Alcaldía/	za	Queb Olivar Po	res-El pal		rados anizales	Queb Maniz Teso	zales- orito	Quebra Luis-R	uta 30	Yaru Alcaldía/	mos	Prom Maniz	
Propietar	108							CHECS				EIVIAS S.		Alcaidia/																UN-IVIA					105
Ma Día	_	Ll. d. 0.0	A25 60.8	Ll. d. 0.0	A25 40.8	U. d. 0.0	A25 17.6	0.0	A25 44.8	Ll. d. 0.0	A25 68.3	0.0	A25 34.8	0.0	A25 34.8	Ll. d. 0.0	A25 60.6	Ll. d. 0.0	A25 46.4	Ll. d. 0.0	A25 22.0	Ll. d. 0.0	A25 51.4	Ll. d. 0.0	A25 25.6	Ll. d. 0.0	A25 63.2	Ll. d. 0.0	A25 11.8	0.0	A25 72.2	Ll. d. 0.0	A25 36.3	Ll. d. 0.0	A25 37.2
	2	0.0	58.2	0.0	38.6		15.4	0.0	41.6	0.0	65.3	0.0	27.4	0.0	31.2	0.0	58.2	0.0	40.4	0.0	15.6	0.0	50.4	0.0	23.4	0.0	61.0	0.0	9.6	0.0	70.6	0.0	34.0	0.0	34.0
	3	0.0	39.8	0.0	35.6	0.0	15.4	0.0	26.8	0.0	53.1		25.8		25.9	0.0	55.8	0.0	32.0	0.0	14.8		44.0	0.0	22.6	0.0	57.9		8.0	0.0	67.8	0.0	31.5		29.4
V	J	0.0	39.6	0.0	35.6	0.0	15.4	0.0	26.8	0.0	53.1	0.0	25.8	0.0	25.9	0.0	55.8	0.0	32.0		14.8	0.0	44.0	0.0	22.6	0.0	57.9	0.0	8.0	0.0	67.8	0.0	31.5	0.0	29.4
	5	0.0	39.6	0.0	35.6	0.0	15.4	0.0	26.8	0.0	53.1	0.0	25.8	0.0	25.9	0.0	55.8	0.0	32.0	0.0	14.8	0.0	44.0	0.0	22.6	0.0	57.9	0.0	8.0	0.0	67.8	0.0	31.5		29.4
	6	0.0	39.6	0.0	35.6		15.4	0.0	27.2	0.0	53.1	0.0	25.8	0.0	25.9	0.0	55.8	0.0	32.0	0.0	14.8	0.0	44.0	0.0	22.8	0.0	57.9		8.0	0.0	68.0	0.0	31.8	0.0	29.4
	7	0.0	39.6	0.0	35.6	0.0	15.4	0.4	27.2	0.0	53.1		25.8	0.0	26.2	0.6	56.4	0.0	32.0	0.0	14.8	1.4	45.4	1.0	23.8	0.0	58.4	1.0	9.0	0.2	68.6	0.8	32.5		29.4
	8	0.0	39.6	0.0	35.6	0.0	15.4	0.0	27.2	0.0	53.1	0.0	25.8	0.3	26.2	0.0	56.4	0.0	32.0	0.0	14.8	0.0	45.4	0.0	23.6	0.0	58.4	0.0	8.6	0.0	68.6	0.0	32.5	0.5	29.8
ivid	9	0.0	39.6	0.0	35.6	0.0	15.4	0.0	27.2	0.0	53.1	0.0	25.8	0.0	26.2	0.0	56.4	0.0	32.0	0.0	14.8	0.0	45.4	0.0	23.6	0.0	58.4	0.0	8.6	0.0	68.6	0.0	32.5	0.0	29.8
	10	4.2	28.8	1.2	35.0	2.0	16.0	2.2	26.8	9.4	49.0	1.8	19.0	4.8	27.7	6.6	46.4	6.4	28.0	5.4	19.4	2.0	44.4	2.8	23.4	5.6	49.3	2.6	6.2	5.6	62.4	3.6	32.5	3.9	27.5
	11	5.0	33.8	1.0	36.0	2.8	17.8	1.0	27.8	8.9	57.9	3.8	22.4	1.5	29.2	7.6	54.0	4.6	32.6	2.8	21.8	2.0	46.0	3.4	26.0	3.6	52.8	1.8	7.8	4.4	66.6	5.1	37.3	3.3	30.5
	12	0.0	33.8	0.0	36.0	0.0	17.0	0.0	27.8	0.0	57.9	0.0	21.4	0.0	29.2	0.0	54.0	0.0	32.6	0.0	18.6	0.0	46.0	0.2	26.2	0.0	52.8	0.0	7.4	0.2	66.6	0.0	37.1	0.0	30.1
	13	0.0	33.8	0.0	36.0	0.0	17.0	0.0	27.8	0.0	57.9	0.0	21.4	0.0	29.2	0.0	54.0	0.0	32.6	0.0	18.6	0.0	46.0	0.0	26.2	0.0	52.8	0.0	7.4	0.0	66.6	0.0	37.1	0.0	30.1
	14	0.0	27.0	0.0	22.2	0.0	15.2	0.0	21.0	0.0	45.2	0.0	17.0	0.0	29.2	0.0	40.6	0.0	26.2	0.0	14.0	0.0	39.2	0.0	22.4	0.0	40.1	0.0	6.8	0.0	52.0	0.0	27.2	0.0	24.4
	15	0.0	14.4	0.0	6.2	0.0	9.6	0.0	7.2	0.0	28.5	0.0	10.4	0.0	12.7	0.0	18.4	0.0	16.2	0.0	10.2	0.0	7.0	0.0	8.8	0.0	13.2	0.0	6.6	0.0	21.8	0.0	10.7	0.0	11.5
	16	0.0	12.8	0.0	6.2	0.4	10.0	0.0	6.6	0.0	24.6	0.0	10.4	3.3	16.0	0.4	18.2	0.0	16.2	0.0	10.2	4.0	10.4	2.6	11.4	1.3	13.2	1.8	8.4	0.0	19.0	2.3	13.0	1.3	12.3
	17	6.6	16.8	10.2	14.0	5.2	11.0	2.0	5.8	19.1	38.4	1.4	7.8	1.5	17.5	12.4	27.8	11.8	24.0	4.8	14.0	0.6	11.0	0.6	12.0	4.8	16.3	0.0	8.4	18.0	30.8	0.5	13.5	4.7	15.1
	18	0.4	17.0	1.4	15.0	0.8	11.2	0.6	6.2	0.8	39.1	0.4	7.8	3.3	20.1	1.2	28.8	1.0	24.8	0.8	14.6	3.0	13.4	4.0	15.4	1.5	17.5	8.0	15.8	1.4	31.6	2.0	15.0	2.7	17.4
	19	0.4	17.4	3.6	18.6	4.0	15.2	1.0	7.2	0.5	39.6	0.6	8.4	17.3	37.3	1.2	30.0	0.6	25.4	0.6	15.2	15.4	28.8	13.8	29.2	6.1	23.6	67.4	83.2	2.4	34.0	11.7	26.7	15.8	33.2
	20	1.0	18.4	1.6	19.8	1.4	16.6	0.6	7.8	1.3	40.9	1.8	10.2	1.8	37.1	2.4	32.4	1.4	26.8	1.0	16.2	2.4	31.2	2.8	31.6	2.3	25.9	3.4	86.4	2.6	36.6	2.8	29.0	2.1	35.0
	21	0.0	18.4	0.0	19.8	0.6	17.2	0.0	7.8	0.3	41.2	0.4	10.6	0.8	35.1	0.4	32.8	0.2	27.0	0.4	16.6	0.6	31.4	1.0	32.4	0.3	26.2	10.2	96.4	0.8	37.2	0.5	29.5	2.0	36.7
Ma 2	22	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
Mi 2	23	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
J :	24	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
V :	25	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
S :	26	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
D :	27	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
L :	28	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.0	34.5	0.0	32.8	0.0	26.0	0.0	15.8	0.0	31.4	0.0	32.4	0.0	25.9	0.0	96.2	0.0	36.2	0.0	29.5	0.0	36.3
Ma 2	29	0.0	17.6	0.0	19.0	0.0	17.2	0.0	7.8	0.0	40.1	0.0	10.2	0.3	34.8	0.0	32.8	0.0	26.0	0.0	15.8	1.2	32.6	4.6	37.0	0.0	25.9	10.8	107.0	0.0	36.2	1.8	31.2	2.3	38.6
Mi 3	30	26.2	43.8	28.2	47.2	0.6	17.8	29.6	37.4	25.9	66.0		10.2	21.6	56.4	20.2	53.0	25.8	51.8	19.2	35.0	24.4	57.0	19.2	56.2	21.8	47.8	28.2	135.2	35.6	71.8	20.3	51.6	24.1	62.6
J	1																																		
Ll. mes		43.8		47.2		17.8		37.4		66.0		10.2		56.4		53.0		51.8		35.0		57.0		56.2		47.8		135.2		71.8		51.6		62.6	
Máx. mes	;	26.2	60.8	28.2	47.2	5.2	17.8	29.6	44.8	25.9	68.3	3.8	34.8	21.6	56.4	20.2	60.6	25.8	51.8	19.2	35.0	24.4	57.0	19.2	56.2	21.8	63.2	67.4	135.2	35.6	72.2	20.3	51.6	24.1	62.6
Ll. acum. el año	en	89	3.8	65	8.0	69	94.6	76	8.2	111	12.5	77	7.4	65	1.0	94	2.4	50	1.4	95	3.6	62:	2.0	72	7.4	81	1.3	84	3.4	101	8.8	75	6.7	834	4.8
No. días Iluvia año		105	42%	117	43%	135	49%	109	40%	121	45%	125	46%	127	47%	122	45%	80	40%	121	45%	127	47%	155	57%	134	49%	139	51%	161	59%	144	53%	159	58%





	anscurrido o a la fec		273
No. de d	lías con al	gún N.A. e	n el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	13	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	7	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

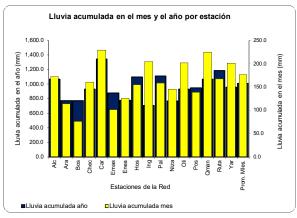
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

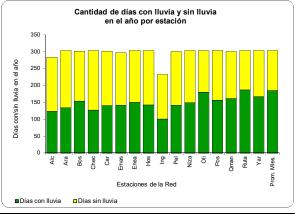
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS

OCTUBRE DE 2015



Estaciones		zares	Aran		No.	ues del orte		Uribe	El Ca			nas		iea	Cal		Ingeo			alma		za	Oliva Po	pal		rados	Mani Tes	brada zales- orito	Quebra Luis-R	uta 30		imos	Prom Maniz	
Propietarios	Alcaldía		Alcaldía/			/OMPAD		.A. E.S.P	Alcaldía/		EMAS S		Alcaldía			OMPAD		OMPAD		/OMPAD		OMPAD	CORPO			anizales		CALDAS	UN-Ma		Alcaldía/		1	
Día	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	LI. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
J 1	50.0	93.8	13.8	61.0	12.2	30.0	28.0	65.0	78.2	144.3	29.2	39.4	22.1	78.5	26.6	79.6	55.0	106.8	16.0	51.0	25.6	82.6	21.2	77.2	17.5	65.3	16.8	152.0	21.8	93.4	21.1	72.4	27.5	90.1
V 2	0.0	93.8	0.2	61.2	1.8	31.8	0.0	65.0	0.0	144.3	0.2	39.6	0.0	78.2	0.0	79.0	0.0	106.8	0.0	51.0	0.2	81.4	0.0	76.2	0.0	64.8	0.6	151.6	0.2	93.0	0.0	71.6	0.1	89.7
S 3	2.4	96.2	2.4	63.6	0.4	32.2	2.2	67.2	3.0	147.3	2.0	41.6	2.5	80.8	1.8	80.8	2.4	109.2	2.2	53.2	2.4	83.8	2.2	78.4	2.3	67.1	2.4	154.0	2.6	95.6	2.3	73.9	2.3	92.1
D 4	0.0	96.2	0.0	63.6	0.0	32.2	0.0	67.2	0.0	147.3	0.0	41.6	0.0	80.8	0.0	80.8	0.0	109.2	0.0	53.2	0.0	83.8	0.0	78.4	0.0	67.1	0.0	154.0	0.2	95.8	0.0	73.9	0.0	92.1
L 5	0.0	92.0	0.0	62.4	0.0	30.2	0.0	65.0	0.0	137.9	0.0	39.8	0.0	76.0	0.0	74.2	0.0	102.8	0.0	47.8	0.0	81.8	0.0	75.6	0.0	61.5	0.0	151.4	0.0	90.2	0.0	70.4	0.0	88.2
Ma 6	0.0	87.0	0.0	61.4	0.0	27.4	0.0	64.0	0.0	129.0	0.0	36.0	0.0	74.4	0.0	66.6	0.0	98.2	0.0	45.0	0.0	79.8	0.0	72.2	0.0	57.9	0.0	149.6	0.0	85.8	0.0	65.3	0.0	84.9
Mi 7	0.0	87.0	0.0	61.4	0.6	28.0	0.0	64.0	0.0	129.0	0.0	36.0	0.0	74.4	0.0	66.6	0.0	98.2	0.0	45.0	0.0	79.8	0.4	72.4	0.0	57.9	0.0	149.6	0.0	85.6	0.3	65.5	0.1	84.9
J 8	0.0	87.0	0.0	61.4	0.0	28.0	0.0	64.0	0.0	129.0	0.0	36.0	0.0	74.4	0.0	66.6	0.0	98.2	4.8	49.8	0.0	79.8	0.2	72.6	0.0	57.9	0.0	149.6	0.0	85.6	0.0	65.5	0.5	85.4
V 9	0.0	87.0	0.0	61.4	0.6	28.6	0.0	64.0	0.0	129.0	8.0	36.8	1.0	75.4	1.8	68.4	0.0	98.2	0.4	50.2	2.8	82.6	5.6	78.2	3.8	61.7	12.6	162.2	1.8	87.4	3.1	68.6	3.3	88.7
S 10	2.2	89.2	0.0	61.4	<u> </u>	0.0	9.4	73.4	0.3	129.3	2.0	38.8	0.3	75.7	1.4	69.8	12.0	110.2	11.6	61.8	0.0	82.6	0.2	78.4	0.3	62.0	8.0	163.0	0.2	87.6	0.0	68.6	2.8	91.5
D 11	36.8	126.0	29.2	90.6		0.0	28.4	101.8	32.0	161.3	29.2	68.0	7.1	79.5	39.8	109.2	38.4	148.6	30.8	92.6	17.0	95.6	22.2	98.0	31.0	91.7	7.0	168.2	45.8	133.4	33.8	100.1	24.8	115.0
L 12	4.8	124.2	1.6	82.0	2.6	0.0	11.2	111.0	14.2	156.5	3.0	69.6	13.5	91.4	2.8	99.6	2.0	138.8	6.4	94.2	4.6	99.6	7.2	104.6	3.3	90.2	4.6	172.8	8.6	124.0	4.1	103.6	6.1	116.4
Ma 13	21.6	145.4	22.4	103.0	5.2	0.0	16.2	126.6	22.4	178.1	13.8	83.0	30.5	118.6	23.0	121.4	24.0	161.8	19.4	112.8	27.2	123.8	25.4	126.0	24.1	112.8	17.2	182.0	24.0	146.6	23.6	125.2	21.8	135.6
Mi 14	4.8	149.8	5.4	104.8	1.6	0.0	4.8	130.4	4.6	182.1	4.0	86.4	7.4	108.7	4.6	124.8	5.6	166.8	5.0	117.2	4.6	113.0	6.6	118.8	5.6	112.3	9.2	123.8	6.8	151.0	6.6	120.1	6.0	125.8
J 15	0.4	149.2	0.0	103.2	0.0	0.0	0.0	129.8	0.8	181.6	0.0	84.6	1.3	108.2	0.8	123.2	0.4	165.8	0.0	116.2	0.0	110.6	0.2	116.2	0.0	110.0	0.0	120.4	0.2	148.6	0.0	117.4	0.3	123.9
V 16	2.2	151.4	3.2	106.4	3.0	0.0	13.4	143.2	2.5	183.9	1.8	86.0	2.3	109.7	0.2	123.0	4.0	169.6	11.6	127.4	0.8	110.8	0.4	115.6	0.5	110.2	0.4	110.6	2.2	150.0	0.5	117.4	2.9	124.8
S 17	0.6	152.0	2.6	109.0	2.0	0.0	2.0	145.2	1.5	185.4	1.8	87.8	4.3	114.1	1.8	124.8	1.4	171.0	0.6	128.0	2.4	113.2	4.8	120.4	1.3	111.5	14.2	124.8	2.0	152.0	3.6	120.9	4.2	128.9
D 18	0.6	152.6	0.4	109.4	2.4	0.0	0.2	145.4	0.5	185.9	2.0	89.8	0.3	114.3	2.8	127.6	1.8	172.8	0.2	128.2	5.2	118.4	7.8	128.2	2.5	114.1	0.0	124.8	1.6	153.6	5.6	126.5	2.0	131.0
L 19	0.0	152.6	0.0	109.4	0.0	0.0	0.0	145.4	0.0	185.9	0.2	90.0	2.8	117.1	0.0	127.6	0.0	172.8	0.0	128.2	0.8	119.2	2.2	130.4	0.3	114.3	27.4	152.2	0.2	153.8	1.5	128.0	4.9	135.8
Ma 20	3.0	155.6	0.0	109.4	5.0	0.0	2.2	147.6	5.9	191.8	7.0	97.0	0.5	117.6	10.8	138.4	9.2	182.0	2.4	130.6	1.2	120.4	11.0	141.4	7.6	121.9	1.2	153.4	5.4	159.2	8.1	136.2	5.0	140.8
Mi 21	0.0	155.6	0.0	109.4	0.0	0.0	0.0	147.6	0.3	192.0	1.0	98.0	0.3	117.9	5.0	143.4	0.6	182.6	0.0	130.6	2.0	122.4	4.4	145.8	4.1	126.0	13.8	167.2	3.0	162.2	6.9	143.0	3.5	144.4
J 22	0.0	155.6	0.0	109.4	1.2	0.0	0.0	147.6	0.0	192.0	0.0	98.0	0.0	117.9	0.0	143.4	0.0	182.6	0.0	130.6	3.0	125.4	4.8	150.6	0.3	126.2	15.6	182.8	0.2	162.4	2.0	145.0	3.2	147.6
V 23	2.8	158.4	11.4	120.8	7.0	0.0	15.8	163.4	5.3	197.4		98.0	3.8	121.7	14.6	158.0	2.2	184.8	2.8	133.4	16.2	141.6	18.2	168.8	14.0	140.2	2.0	184.8	15.8	178.2	31.8	176.8	10.8	158.4
S 24	11.2	169.6	12.6	133.4	8.6	0.0	11.4	174.8	17.0	214.4		98.0	17.5	138.9	9.6	167.6	11.6	196.4	10.0	143.4	17.8	158.2	17.8	182.0	13.2	153.4	42.8	216.8	13.8	192.0	12.4	187.5	18.3	174.4
D 25	0.6	144.0	1.2	106.4	10.0	0.0	1.2	146.4	0.5	189.0		98.0	0.3	117.6	0.8	148.2	0.6	171.2	0.4	124.6	0.6	134.4	8.8	171.6	0.5	132.1	0.2	188.8	1.2	157.6	10.2	177.3	2.7	153.0
L 26	0.0	94.0	0.4	93.0	5.4	0.0	0.2	118.6	0.0	110.7		68.8	3.3	98.8	0.0	121.6	0.2	116.4	1.4	110.0	3.8	112.6	15.0	165.4	0.3	114.8	26.4	198.4	0.6	136.4	13.2	169.4	7.0	132.5
Ma 27	2.2	96.2	1.4	94.2	2.8	0.0	0.6	119.2	3.1	113.8		68.6	2.0	100.8	3.0	124.6	2.0	118.4	2.2	112.2	3.2	115.6	4.6	170.0	2.8	117.6	4.4	202.2	3.0	139.2	4.3	173.7	3.0	135.3
Mi 28	1.0	94.8	0.6	92.4	3.6	0.0	0.2	117.2	1.0	111.8		66.6	1.0	99.3	1.6	124.4	1.6	117.6	2.6	112.6	0.8	114.0	2.0	169.8	0.8	116.1	1.6	201.4	0.6	137.2	2.3	173.7	1.8	134.8
J 29	10.4	105.2	0.0	92.4	0.0	0.0	0.0	117.2	19.3	131.1	0.5	67.1	0.3	99.6	0.4	124.8	13.8	131.4	15.0	127.6	0.0	114.0	0.2	170.0	0.8	116.8	1.4	202.8	0.2	137.2	0.3	174.0	4.8	139.6
V 30	14.6	119.8	5.0	97.4	0.0	0.0	12.8	130.0	16.8	147.8	3.3	70.3	1.3	100.8	2.0	126.8	15.8	147.2	12.4	140.0	3.0	117.0	8.0	178.0	1.5	118.4	1.4	204.2	5.0	142.2	3.6	177.5	6.9	146.5
S 31	0.0	119.8	0.0	97.4	0.0	0.0	0.0	130.0	0.0	147.8	0.0	70.3	0.0	100.8	0.0	126.8	0.0	147.2	0.0	140.0	0.0	117.0	0.0	178.0	0.0	118.4	0.0	204.2	0.0	142.2	0.0	177.5	0.0	146.5
Ll. mes	172.2		113.8		76.0	3.0	160.2		229.1		101.7	. 5.0	125.5		155.2	0.0	204.6		158.2		145.2		201.4	5.0	138.2		224.0		167.0		200.9		176.5	5.0
Máx. mes	50.0	169.6	29.2	133.4	12.2	32.2	28.4	174.8	78.2	214.4	29.2	98.0	30.5	138.9	39.8	167.6	55.0	196.4	30.8	143.4	27.2	158.2	25.4	182.0	31.0	153.4	42.8	216.8	45.8	192.0	33.8	187.5		174.4
Ll. acum. en		66.0	77			70.6		8.4		11.6	87			6.5		97.6		6.0		11.8		7.2		8.8		9.5		67.4	118			7.6	101	
el año					<u> </u>		<u> </u>						<u> </u>				<u> </u>						<u> </u>											
No. días Iluvia año	124	44%	134	44%	154	51%	127	42%	141	47%	142	48%	150	49%	143	47%	101	43%	142	47%	149	49%	181	60%	157	52%	162	54%	187	62%	167	55%	185	61%





	a la fec		304
No. de d	ías con al	gún N.A. e	en el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	14	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	7	0	0
Pos	27	0	0
Qman	13	0	0
Ruta	35	3	0
Yar	9	0	0
Prom.	17	0	0

Días transcurridos en el

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl

Otras entidades propietarias y participantes











OBSERVATORIOS AMBIENTALES PARA EL DESARROLLO URBANO SOSTENIBLE EN MANIZALES

RED DE ESTACIONES HIDROMETEOROLÓGICAS PARA PREVENCIÓN DE DESASTRES DE MANIZALES

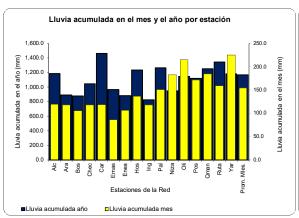
Contrato Municipio de Manizales/UGR - Universidad Nacional de Colombia

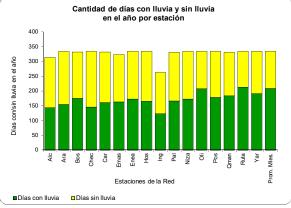
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



NOVIEMBRE DE 2015

Estac		Alcáz Alcaldía	zares	Ara r	njuez	No	ues del orte		Uribe .A. E.S.P	El Ca		Em	ias	En Alcaldía	iea		ital de das	•	minas 'OMPAD		Palma NOMPAD		i za /OMPAD	Queb Olivar Po	res-El pal		grados anizales	Quel Mania Tes	zales- orito	Quebra Luis-R	uta 30	Yaru Alcaldía	Imos	Prom Maniz	
Propie			A25	Ll. d.	A25	Ll. d.	A25	LL d.	A. E.S.P	LL d.	A25	LL d.	A. E.S.P A25	LL d.	A25	LL d.	A25	Ll. d.		LI. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	LL d.	A25	LL d.	A25	Ll. d.		LL d.	A25
D	1 1	Ll. d. 8.0	127.8	16.6	114.0	5.4	0.0	10.4	140.4	13.2	161.0	LI. G.	77 F	13.7	114.6	22.6	149.4	10.6	A25 157.8	9.6	149.6	40.8	157.8	38.8	216.4	31.0	149.4	23.6	A25	21.4	163.6	44.2	A25	22.0	168.5
ı	2	6.2	134.0	7.0	121.0	17.8	0.0	5.2	145.6	6.9	167.9	14.6	92.1	8.9	123.4	13.2	162.6	6.6	164.4	5.4	150.2	8.2	166.0	19.2	235.4	10.7	160.0	11.2	230.0	9.2	172.8	23.1	244.6	10.3	178.3
Ma	3	0.2	134.2	0.2	121.2	0.0	0.0	0.2	145.8	0.3	168.2	0.2	91.5	0.5	122.9	0.2	161.0	0.4	164.8	0.0	149.8	0.8	164.0	0.2	230.0	0.3	156.5	0.8	227.2	0.2	171.2	0.3	241.8	0.4	175.3
Mi	4	6.4	138.4	1.8	123.0	5.2	0.0	4.6	141.0	6.4	174.2	3.5	93.0	1.8	124.5	4.6	164.2	10.4	163.2	25.4	163.6	3.8	167.8	15.4	245.2	2.3	158.5	10.2	236.6	2.8	173.8	11.4	253.2	9.2	181.8
	5	8.0	109.6	6.6	100.4	1.4	90.2	8.2	120.8	8.4	150.6	4.4	68.2	4.6	121.9	6.2	130.6	10.2	135.0	9.4	142.2	5.6	156.4	4.8	227.8	5.6	133.1	11.6	241.2	8.4	136.4	4.8	224.3	7.7	164.7
V	6	7.8	112.6	5.0	103.8	12.2	99.8	15.2	124.8	10.2	146.6	7.4	72.6	13.0	121.4	9.0	136.8	7.2	140.2	8.0	143.8	13.2	165.0	13.8	234.4	12.7	142.5	14.0	250.6	12.6	140.4	18.6	238.8	11.6	170.2
S	7	7.2	98.2	6.2	87.6	6.2	100.8	5.4	114.0	7.1	131.3	1.8	60.6	9.7	100.6	5.0	118.8	6.0	122.2	5.6	130.0	6.2	144.0	6.6	215.6	4.6	122.9	11.8	245.2	6.2	122.6	5.8	221.0	7.3	155.7
D	8	0.6	94.0	0.4	82.6	1.6	100.8	0.8	110.0	0.5	127.3	0.0	56.6	1.3	94.5	0.4	114.6	0.8	117.4	0.6	125.6	0.6	140.0	1.0	210.0	0.8	118.1	0.8	236.8	1.0	116.8	1.0	215.4	0.8	150.4
L	9	0.0	93.6	0.0	82.6	3.8	104.6	0.0	110.0	0.0	126.5	1.9	58.5	0.0	93.2	2.4	116.2	1.0	118.0	3.0	128.6	1.4	141.4	1.2	211.0	1.3	119.4	0.6	237.4	0.6	117.2	1.0	216.4	1.2	151.4
Ma	10	0.0	91.4	0.0	79.4	0.0	101.6	0.0	96.6	0.0	124.0	0.0	56.7	0.3	91.2	0.0	116.0	0.0	114.0	0.0	117.0	0.0	140.6	0.2	210.8	0.0	118.9	0.0	237.0	0.2	115.2	0.0	215.9	0.0	148.5
Mi	11	0.0	90.8	0.0	76.8	0.4	100.0	0.0	94.6	0.0	122.4	0.2	55.1	0.0	86.9	0.6	114.8	0.0	112.6	1.0	117.4	0.6	138.8	0.6	206.6	0.3	117.9	0.0	222.8	0.6	113.8	0.5	212.9	0.3	144.7
J	12	0.0	90.2	0.0	76.4	0.0	97.6	0.0	94.4	0.0	121.9	0.0	53.1	0.0	86.6	0.0	112.0	0.0	110.8	0.2	117.4	0.0	133.6	0.0	198.8	0.0	115.3	0.0	222.8	0.2	112.4	0.0	207.3	0.0	142.7
V	13	0.0	90.2	0.0	76.4	0.0	97.6	0.0	94.4	0.0	121.9	0.0	52.9	0.0	83.8	0.0	112.0	0.0	110.8	0.0	117.4	0.0	132.8	0.0	196.6	0.0	115.1	0.0	195.4	0.0	112.2	0.0	205.7	0.0	137.8
S	14	0.0	87.2	0.0	76.4	0.0	92.6	0.0	92.2	0.0	116.1	0.0	45.9	0.0	83.3	0.0	101.2	0.0	101.6	0.0	115.0	0.0	131.6	0.0	185.6	0.0	107.4	0.0	194.2	0.0	106.8	0.0	197.6	0.0	132.8
D	15	4.4	91.6	6.0	82.4	1.4	94.0	2.4	94.6	6.9	122.7	0.6	45.5	4.8	87.9	1.2	97.4	3.2	104.2	2.6	117.6	8.0	130.4	8.0	182.0	8.0	104.1	0.0	180.4	4.0	107.8	1.0	191.8	2.4	131.7
L	16	25.2	116.8	3.0	85.4	0.4	93.2	6.6	101.2	9.9	132.6	1.0	46.5	0.5	88.4	2.6	100.0	15.4	119.6	3.6	121.2	1.4	128.8	1.4	178.6	5.1	109.0	5.0	169.8	7.6	115.2	2.0	191.8	4.3	132.8
Ma	17	20.2	134.2	34.4	108.4	7.8	94.0	26.6	112.0	26.4	153.7	17.4	63.9	16.0	100.6	25.6	111.0	21.0	138.4	15.4	133.8	28.6	141.2	22.8	183.2	32.0	127.0	27.0	194.8	30.8	130.2	27.7	187.7	23.6	145.6
Mi	18	1.2	124.2	1.2	97.0	3.4	88.8	2.2	102.8	2.0	138.7	3.2	67.1	3.3	86.4	12.8	114.2	3.2	130.0	6.0	129.8	5.6	129.0	5.4	170.8	7.1	120.9	7.8	159.8	7.4	123.8	4.8	180.1	5.3	132.6
J	19	5.4	129.0	0.8	96.6	5.6	84.4	13.4	115.0	2.5	140.7	2.2	69.3	2.0	88.1	4.8	118.2	2.8	132.2	9.6	139.0	3.0	131.4	14.2	176.2	4.8	125.2	6.4	166.0	4.8	127.4	21.3	191.3	6.9	136.9
V	20	1.2	130.2	3.6	99.8	4.0	83.0	0.8	115.6	2.0	142.8	10.0	79.3	4.3	89.2	3.2	121.4	1.6	133.6	12.4	150.0	9.6	137.2	8.6	169.8	8.6	133.6	5.2	144.8	5.6	132.4	7.9	185.9	5.8	135.7
S	21	1.4	129.4	19.8	118.2	16.0	96.2	3.4	118.4	2.0	141.7	3.2	82.5	8.1	95.3	12.6	131.0	1.6	133.2	0.6	148.4	32.6	166.6	37.2	202.4	36.8	167.6	6.8	147.2	25.4	154.8	34.0	215.6	14.0	146.7
D	22	0.4	128.8	0.4	118.0	5.6	98.2	0.2	118.4	1.5	142.2	3.4	85.9	1.3	95.5	1.0	130.4	0.4	132.0	2.2	148.0	0.4	166.2	0.4	200.8	0.0	166.9	3.2	148.8	0.4	154.6	0.3	213.6	1.2	146.1
L	23	0.0	118.4	0.0	118.0	3.6	101.8	0.0	118.4	0.0	122.9	0.6	86.1	1.0	96.3	1.2	131.2	0.6	118.8	0.2	133.2	1.2	167.4	4.2	204.8	1.3	167.4	1.6	149.0	8.0	155.2	4.1	217.4	1.4	142.7
Ma	24	8.0	104.6	0.6	113.6	2.4	104.2	0.0	105.6	8.0	106.9	1.4	84.2	0.3	95.3	1.2	130.4	1.0	104.0	8.0	121.6	5.6	170.0	7.4	204.2	1.8	167.6	0.2	147.8	1.4	151.6	4.3	218.2	1.9	137.6
Mi	25	10.6	115.2	1.8	115.4	0.2	104.4	8.8	114.4	7.9	114.8	2.2	86.4	0.5	95.8	4.8	135.2	8.4	112.4	8.4	130.0	0.8	170.8	8.0	205.0	1.3	168.9	0.4	148.2	4.4	156.0	1.8	220.0	4.0	141.6
J	26	0.0	107.2	0.6	99.4	0.0	99.0	0.0	104.0	0.0	101.6	0.2	79.4	4.1	86.1	0.0	112.6	0.0	101.8	0.0	120.4	8.2	138.2	2.0	168.2	0.0	137.9	22.0	146.6	0.2	134.8	2.0	177.8	4.8	124.4
V	27	2.2	103.2	0.0	92.4	0.0	81.2	1.0	99.8	1.3	96.0		64.8	0.0	77.2	0.0	99.4	3.2	98.4	17.0	132.0	1.0	131.0	5.4	154.4	0.0	127.3	8.2	143.6	0.0	125.6	1.5	156.2	4.3	118.4
S	28	2.2	105.2	2.2	94.4	8.0	82.0	2.4	102.0	2.5	98.3		64.6	5.8	82.6	1.4	100.6	2.0	100.0	3.8	135.8	2.6	132.8	2.4	156.6	2.3	129.3	5.8	148.6	2.6	128.0	1.5	157.5	3.2	121.3
D	29	0.0	98.8	0.0	92.6	0.0	76.8	0.0	97.4	0.0	92.0		61.1	0.3	81.0	0.0	96.0	0.0	89.6	0.2	110.6	0.0	129.0	0.2	141.4	0.0	127.0	0.0	138.4	0.4	125.6	0.0	146.1	0.1	112.2
L NA-	30	0.0	90.8	0.0	86.0	0.0	75.4	0.0	89.2	0.0	83.6		56.7	0.0	76.5	0.0	89.8	0.0	79.4	0.0	101.2	0.0	123.4	0.0	136.6	0.0	121.4	0.0	126.8	0.0	117.2	0.0	141.2	0.0	104.4
Ma	1	119.6		118.2		105.2		447.0		440.0		86.6		405.0		400.0		447.0		454.0		400.0		045.0		171.2		184.2		450.0		225.1	\longmapsto	154.0	
Ll. mes	100	25.2	138.4	34.4	123.0	105.2	104.6	117.8 26.6	145.8	118.6 26.4	174.2	17.4	93.0	105.9 16.0	124.5	136.6 25.6	164.2	117.6 21.0	164.8	151.0 25.4	163.6	182.6 40.8	170.8	215.0 38.8	245.2	36.8	168.9	27 N	250.6	159.2 30.8	173.8	44.2	253.2	23.6	181.8
Ll. acu		25.2	130.4	34.4	123.0	17.0	104.0	20.0	145.6	20.4	174.2	17.4	93.0	10.0	124.5	25.0	104.2	21.0	104.0	25.4	103.0	40.6	170.6	30.0	245.2	30.0	100.9	21.0	250.6	30.0	1/3.0	44.2	255.2	23.0	101.0
el año		118	35.6	89	0.0	87	5.8	104	6.2	146	60.3	96	5.7	88	2.4	123	34.2	82	3.6	12	62.8	94	9.8	114	3.8	11:	20.7	125	51.6	134	5.0	118	82.6	116	35.3
No. día lluvia a		144	46%	154	46%	175	53%	146	44%	161	48%	163	50%	173	52%	165	49%	123	47%	166	50%	173	52%	207	62%	178	53%	184	56%	213	64%	191	57%	209	63%





	anscurrido o a la fec		334
No. de d	ías con al	gún N.A. e	en el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	14	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	23	0	0
Pos	27	0	0
Qman	25	0	0
Ruta	35	3	0
Yar	27	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

OBSERVACIONES:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl











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

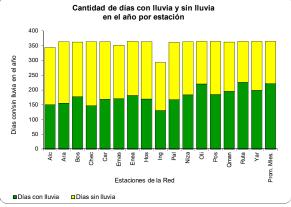
REGISTROS DE LLUVIA DIARIA E INDICADORES DE LLUVIA ANTECEDENTE DE 25 DÍAS



DICIEMBRE DE 2015

Estac		Alcáz			njuez	N	ues del orte		Uribe	El Ca			nas	En		Hospi	das	Ingeo			alma		iza	Oliva: Po	pal		rados	Tes	zales- orito	Quebra Luis-R	uta 30		mos	Prom	nedio zales
Propie		Alcaldía/		Alcaldía/			/OMPAD		A. E.S.P	Alcaldía/		EMAS S		Alcaldía/		Alcaldía/		Alcaldía/			/OMPAD	Alcaldía/	_	CORPO			nizales	CORPO		UN-Ma		Alcaldía/			
D	ia ,	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25	Ll. d.	A25
Ma	1	0.6	83.6	0.0	81.0	0.0	63.2	0.0	74.0	1.3	74.7		49.3	0.0	63.5	0.0	80.8	0.6	72.8	0.0	93.2	1.6	111.8	1.0	123.8	0.0	108.7	0.2	113.0	0.0	104.6	0.0	122.7	0.4	93.2
Mi	2	0.0	76.4	0.0	74.8	0.0	57.0	0.0	68.6	0.0	67.6		47.5	0.0	53.9	0.0	75.8	0.0	66.8	0.0	87.6	0.2	105.8	0.2	117.4	0.0	104.1	0.0	101.2	0.2	98.6	0.0	116.8	0.0	86.0
J	3	0.0	75.8	0.0	74.4	0.0	55.4	0.0	67.8	0.0	67.1	0.0	47.5	0.0	52.6	0.0	75.4	0.0	66.0	0.0	87.0	0.0	105.2	0.0	116.4	0.0	103.4	0.0	100.4	0.0	97.6	0.0	115.8	0.0	85.2
V	4	0.0	75.8	0.0	74.4	0.0	51.6	0.0	67.8	0.0	67.1	0.0	45.6	0.0	52.6	0.0	73.0	0.0	65.0	0.0	84.0	0.0	103.8	0.0	115.2	0.0	102.1	0.0	99.8	0.0	97.0	0.0	114.8	0.0	84.0
S	5	0.0	75.8	0.0	74.4	0.0	51.6	0.0	67.8	0.0	67.1	0.0	45.6	0.0	52.3	0.0	73.0	0.0	65.0	0.0	84.0	0.6	104.4	0.0	115.0	0.0	102.1	0.4	100.2	0.2	97.0	0.0	114.8	0.1	84.1
D	6	0.0	75.8	0.0	74.4	0.0	51.2	0.0	67.8	0.0	67.1	0.0	45.4	1.0	53.3	0.0	72.4	0.0	65.0	0.0	83.0	0.0	103.8	0.0	114.4	0.0	101.9	18.6	118.8	0.0	96.4	0.0	114.3	3.0	86.8
_ L	7	0.6	76.4	0.0	74.4	0.0	51.2	0.0	67.8	0.3	67.3	0.4	45.8	6.1	59.4	5.0	77.4	2.2	67.2	0.0	82.8	9.4	113.2	1.8	116.2	4.6	106.4	1.4	120.2	5.4	101.6	5.8	120.1	2.9	89.6
Ma	8	0.0	76.4 76.4	0.0	74.4	0.0	51.2	0.0	67.8	0.0	67.3	2.2	48.0	0.0	59.4 59.4	1.0	78.4 78.4	0.0	67.2 67.2	0.0	82.8 82.8	3.6	116.8	3.0	119.2	1.3	107.7	0.2	120.4	0.6	102.2 102.4	6.6	126.7 126.7	1.2	90.9
Mi	_	0.0		0.0	74.4	0.0	51.2		67.8		67.3	0.0	48.0	0.0	54.6	0.0	_	0.0		0.0	80.2	0.0	116.8	0.0	119.2	0.0	107.7	0.0	120.4		98.4	0.0	125.7	0.0	88.5
J	10	0.0	72.0	0.0	68.4 65.4	0.0	49.8	0.0	65.4 58.8	0.0	60.5 50.5	0.0	47.4	0.0	55.6	0.0	77.2 74.6	0.0	64.0	0.0	76.6	0.0	116.0	0.0	118.4	0.0	106.9	0.0	120.4	0.0		0.0	125.7	0.0	85.5
V	11		46.8 26.6	0.0		0.0	49.4		32.2	0.0		0.0	46.4	1.5	39.6	0.0		0.0	48.6 27.6	0.0		0.4	115.0	2.0	119.0	0.3	102.1 70.1	6.2	121.6 94.6	0.0	90.8	0.3	96.3	1.3	61.9
S D	12 13	0.0	25.4	0.0	31.0 29.8	0.0	41.6 38.2	0.0	30.0	0.0	24.1	0.0	29.0	0.0 1.8	38.1	0.0	49.0 36.2	0.0	24.4	0.0	61.2 55.2	0.0	86.4 82.2	0.0	96.2 91.6	0.0	63.3	7.4	94.0	0.2	53.0	0.0	90.3	0.0	58.1
- 	14	0.6	20.6	0.0	29.0	1.4	34.0	0.0	16.6	1.8	21.3	1.6	25.0	0.3	36.3	1.6	33.0	0.0	22.4	0.0	45.6	1.4 0.4	79.6	0.8	78.2	0.0	58.4	2.0	89.8	1.0	49.2	0.3	70.6	0.0	52.1
Ma	15	0.0	19.4	0.0	25.4		30.0	0.0	15.8	0.0	19.3	1.6	20.Z		32.0	0.0	29.8	0.6	21.4		33.6	0.4	79.6		73.0	0.0	49.8	0.2	84.8	1.0 0.0	49.2	0.0	62.7	0.9	46.7
Mi		0.0	18.0	0.0	5.6	0.0	14.0	0.0	12.4	0.0	17.3	0.0	10.2	0.0	23.9	0.0	17.2	0.0	19.8	0.4	33.0	0.4	37.8	0.2	36.0	0.0	13.0		78.0	0.0	18.2	0.0	28.7	0.4	32.8
IVII	16 17	5.2	22.8	0.0	5.0	0.0	8.4	4.0	16.2	9.9	25.7	1.0	12.0	10.0	40.6	4.2	20.4	0.0	28.0	0.0	30.8	4.0	41.4	1.0	36.6	2.3	15.2	0.0 2.8	77.6	1.4	19.2	2.5	31.0	0.0	35.8
V	18	0.0	22.8	6.0	11.2	0.6	5.4	0.0	16.2	2.3	27.9	1.2	9.0	8.9	48.5		24.8	2.6	30.0	0.0	30.6	4.0	44.2	2.6	35.0	2.3	16.3	9.2	85.2	6.0	24.4	2.0	29.0	3.9	38.4
S	19	0.0	22.0	0.0	10.6	0.0	3.0	0.0	16.2	0.0	27.2	0.0	0.0	0.0	48.3	5.6 0.0	23.6	0.0	29.0	0.0	29.8	0.0	38.6	0.0	27.6	0.0	14.5	0.0	85.0	0.0	23.2	0.0	24.6	0.0	36.5
D	20	0.0	11.4	0.0	8.8	0.0	2.8	0.0	7.4	4.8	24.1	0.0	11.0	15.2	63.0	0.0	18.8	0.0	20.6	0.0	21.4	0.0	37.8	1.4	28.2	6.1	19.3	0.0	85.0	14.0	32.8	1.5	24.6	2.9	35.4
1	21	0.0	11.4	0.0	8.2	0.0	2.8	0.0	7.4	0.0	24.1	0.0	10.8	0.0	58.9	0.0	18.8	0.0	20.6	0.0	21.4	0.0	29.6	0.0	26.2	0.0	19.3	0.0	63.0	0.0	32.6	0.0	22.4	0.0	30.6
Ma	22	0.0	9.2	0.0	8.2	0.0	2.8	0.0	6.4	0.0	22.9	0.0	10.8	0.0	58.9	0.0	18.8	0.0	17.4	0.0	4.4	0.0	28.6	0.0	20.2	0.0	19.3	0.0	54.8	0.0	32.6	0.0	20.8	0.0	26.3
Mi	23	0.0	7.0	0.0	6.0	0.0	2.0	0.0	4.0	0.0	20.3	0.0	10.8	0.0	53.1	0.0	17.4	0.0	15.4	0.0	0.6	0.0	26.0	0.6	19.0	0.0	17.0	0.0	49.0	0.0	30.0	0.0	19.3	0.0	23.1
IVII	24	0.0	7.0	0.0	6.0	0.0	2.0	0.0	4.0	0.0	20.3	0.0	11.0	0.0	52.8	0.0	17.4	0.0	15.4	0.0	0.4	0.0	26.0	0.0	18.8	0.0	17.0	0.0	49.0	0.0	29.8	0.0	19.3	0.0	23.0
V	25	0.0	7.0	0.0	6.0	0.0	2.0	0.0	4.0	0.0	20.3	0.2	11.0	0.0	52.8	0.0	17.4	0.0	15.4	0.0	0.4	0.0	26.0	0.0	18.8	0.0	17.0	0.0	49.0	0.2	29.8	0.0	19.3	0.0	23.0
S	26	1.2	7.6	0.0	6.0	0.0	2.0	0.0	4.0	0.0	19.1	0.0	11.0	0.0	52.8	0.0	17.4	0.6	15.4	0.0	0.4	0.0	24.4	0.0	17.8	0.0	17.0	0.0	48.8	0.0	29.8	0.0	19.3	0.1	22.7
D	27	0.0	7.6	0.0	6.0	0.0	2.0	0.0	4.0	0.0	19.1	0.0	11.0	0.0	52.8	0.0	17.4	0.0	15.4	0.0	0.4	0.0	24.2	0.0	17.6	0.0	17.0	0.0	48.8	0.0	29.6	0.0	19.3	0.0	22.7
ī	28	3.6	11.2	0.0	6.0	0.0	2.0	0.0	4.0	3.1	22.1	0.2	11.2	0.0	52.8	0.0	17.4	5.0	20.4	0.0	0.4	0.0	24.2	0.0	17.6	0.0	17.0	0.0	48.8	0.0	29.6	0.0	19.3	0.6	23.3
Ma	29	0.0	11.2	0.0	6.0	0.0	2.0	0.0	4.0	0.0	22.1	0.0	11.2	0.0	52.8	0.0	17.4	0.0	20.4	0.0	0.4	0.0	24.2	0.0	17.6	0.0	17.0	0.0	48.8	0.0	29.6	0.0	19.3	0.0	23.3
Mi	30	0.0	11.2	0.0	6.0	0.0	2.0	0.0	4.0	0.0	22.1	0.0	11.2	0.0	52.8	0.0	17.4	0.0	20.4	0.0	0.4	0.0	23.6	0.0	17.6	0.0	17.0	0.0	48.4	0.0	29.4	0.0	19.3	0.0	23.1
J	31	0.0	11.2	0.0	6.0	0.0	2.0	0.0	4.0	0.0	22.1	0.0	11.2	0.0	51.8	0.0	17.4	0.0	20.4	0.0	0.4	0.0	23.6	0.0	17.6	0.0	17.0	0.0	29.8	0.0	29.4	0.0	19.3	0.0	20.1
LI. mes		11.8	11.2	6.0	0.0	2.0	2.0	4.0	7.0	23.4	22.1	11.2	11.2	52.8	51.0	17.4	17.4	21.0	20.7	0.4	0.4	26.0	20.0	18.8	17.0	17.0	17.0	49.0	20.0	29.8	20.7	19.3	10.0	23.7	
Máx. m		5.2	83.6	6.0	81.0	1.4	63.2	4.0	74.0	9.9	74.7	4.4	49.3	18.0	63.5	5.6	80.8	8.6	72.8	0.4	93.2	9.4	116.8	3.4	123.8	6.1	108.7	18.6	121.6	14.0	104.6	6.6	126.7	4.3	93.2
Ll. acur													10.0				55.0				00.2		110.0				•								
el año		119	97.4	89	6.0	87	77.8	10	50.2	148	33.6	97	6.9	93	5.2	125	51.6	84	4.6	120	63.2	97	5.8	116	62.6	113	37.7	130	00.6	137	4.8	120	1.9	118	9.0
No. día	is	150	4.40/	455	420/	177	400/	147	400/	160	460/	171	400/	101	E00/	170	470/	121	450/	167	400/	104	E40/	220	600/	105	51%	100	E 40/	226	620/	100	EE0/	222	61%
lluvia a	ño	150	44%	155	43%	177	49%	147	40%	168	46%	171	49%	181	50%	170	47%	131	45%	167	46%	184	51%	220	60%	185	51%	196	54%	226	62%	199	55%	222	01%





	nscurrido a la fec		365
No. de di	ias con a	lgún N.A. e	en el año
Estación	Α	N	R
Alc	23	0	0
Ara	1	0	0
Bos	16	0	0
Chec	26	0	0
Car	14	20	3
Emas	10	0	0
Enea	0	0	0
Hos	38	0	0
Ing	0	0	0
Pal	37	0	0
Niza	1	0	0
Oli	23	0	0
Pos	27	0	0
Qman	25	0	0
Ruta	35	3	0
Yar	27	0	0
Prom.	17	0	0

CONVENCIONES

Ll. d. : Lluvia diaria en mm

A25 : Indicador Iluvia antecedente de 25 días en mm

Ll. mes: Lluvia parcial o total en el mes en mm

Máx. mes: Valores máximos de lluvia diaria y A25 en el mes en mm

Ll. acum. en el año: Lluvia acumulada en el año en mm

No. días lluvia año: Número de días con lluvia en lo corrido del año Resalta la lluvia diaria máxima del mes

valor Iluvia diaria correspondiente a una estación cercana

* Indicadores con base a los días de funcinamiento 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

R A25 >= 400 mm Roja o alta:

1. La lluvia promedio y acumulada en lo corrido del año para Manizales se calcularon con el Método de los Polígonos de Thiessen

2. Datos resaltados en rojo están incompl propietarias y participantes







