

promedio						
año	ramiriqui	jenesano	precipitacion	R	I	S CL (B) CN
1986	64,8566667	31,9266667	48,3916667	7,092924524	37,3589923	93,9452055 73
1987	62,2833333	25,5891667	53,93625	9,56931745	40,4271827	
1988	78,5333333	28,5046667	53,51875	9,373642767	40,2053574	
1990	85,675	11,0466667	48,3608333	7,079923511	37,34116	
1991	78,3333333	19,3316667	48,8325	7,279773738	37,6129765	
1992	70,7916667	37,3268333	54,058875	9,627061909	40,4920633	
1993	90,275	25,32833	57,801675	11,44712949	46,3545455	
1994	95,8333333	30,47	63,1516667	14,22943685	44,98248	
1995	87,5533333	23,449275	55,50055417	10,31508526	41,2457191	
1996	98,7491667	19,2371667	58,9931667	12,04904788	43,004369	
1997	68,1466667	30,8146667	49,4781667	7,556685389	37,9817315	
1998	101,5833333	24,033	62,80816665	14,04481434	44,8236025	
1999	96,475	3,20776667	49,84138333	7,714135005	#REF!	
2000	101,6666667	21,8703333	61,74340002	13,47759548	44,3260547	ETP1 ETP2 ETP3
2001	77,8833333	16,1076667	46,98315	6,508205657	36,5351945	3,38201842 3,79139374 4,64583726
2003	96,75	21,989	59,07445	12,09049201	43,0442082	
2004	91,3333333	35,8052333	63,5692833	14,45495493	45,1745786	
2005	71,7833333	44,902	58,3276667	11,71155262	42,6763642	
2006	102,446667	42,4	72,42083335	19,49063326	52,9302001	
2007	89,425	17,239	53,332	9,286583053	40,1056671	
2008	113,175	17,562	65,3685	15,43960985	45,9891403	
2009	69,375	13,39275	41,383875	4,380696298	33,0634289	
2010	111,325	14,92275	63,123875	14,21447019	44,969655	

HR	0,84	n	ETP
T1	13	0,39099717	3,38201842
T2	14	0,41938078	3,79139374
T3	16	0,47546869	4,64583726
			3,93974981

$$R = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

PERIODO	TEMPERATURA (°C)
PERIODO 1	13
PERIODO 2	14
PERIODO 3	16

$$ETP = 1,21 * 10^n * (1 - 0,01 * HR) + 0,21 * T - 2,30 \text{ (mm)}$$

$$n = \frac{7,45 * T}{234,7 + T}$$

$$I = P - (R + ETP)$$

Donde:

P: Precipitación

R: Escorrentía

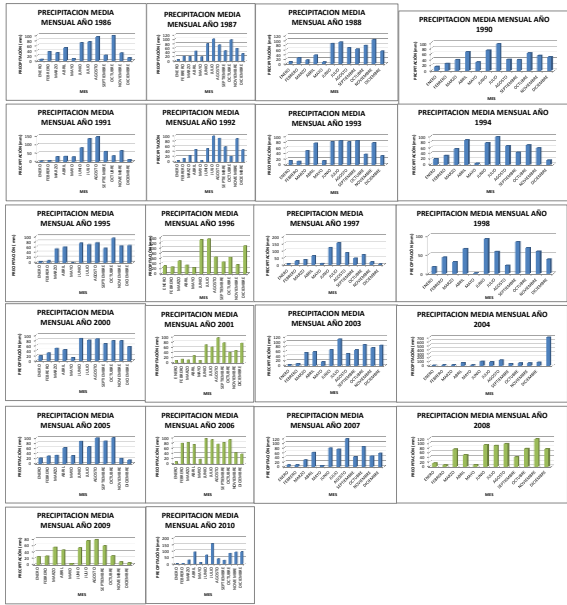
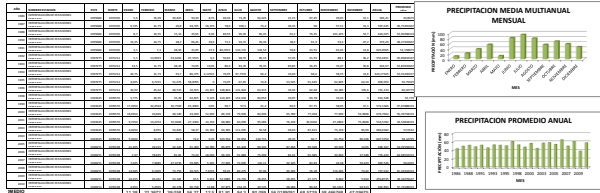
ETP: Evapotranspiración

RESULTADOS INTERPOLACION DE ESTACIONES CERCANAS

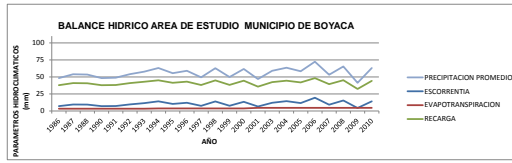
ANO	P	R	I
1986	48,3916667	7,092924524	41,29874214
1987	53,93625	9,56931745	40,42718274
1988	53,51875	9,373642767	40,20535742
1990	48,3608333	7,079923511	37,34116001
1991	48,8325	7,279773738	37,61297645
1992	54,058875	9,627061909	40,49206328
1993	57,801675	11,44712949	46,35454551
1994	63,1516667	14,22943685	44,98248001
1995	55,5005542	10,31508526	41,2457191
1996	58,9931667	12,04904788	43,00436898
1997	49,4781667	7,556685389	37,98173147
1998	62,8081667	14,04481434	44,8236025
1999	49,8413833	7,714135005	42,12724833
2000	61,7434	13,47759548	44,32605473
2001	46,98315	6,508205657	36,53519453
2003	59,07445	12,09049201	43,04420818
2004	63,5692833	14,45495493	45,17457859
2005	58,3276667	11,71155262	42,67636423
2006	72,4208334	19,49063326	52,93020009
2007	53,332	9,286583053	40,10566714
2008	65,3685	15,43960985	45,98914035
2009	41,383875	4,380696298	33,06342889
2010	63,123875	14,21447019	44,96965501

CEN	ESTACION/ESTADO	AÑO	ENERO	FEBRERO	MARZO	ABRIL	MAYO	JUNIO	JULIO	AGOSTO	SEPTIEMBRE	OCTUBRE	NOVIEMBRE	DICIEMBRE	TOTAL	PRECIPITACION PROMEDIO ANUAL
1001	ESTACION/ESTADO	1986	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1002	ESTACION/ESTADO	1987	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1003	ESTACION/ESTADO	1988	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1004	ESTACION/ESTADO	1989	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1005	ESTACION/ESTADO	1990	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1006	ESTACION/ESTADO	1991	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1007	ESTACION/ESTADO	1992	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1008	ESTACION/ESTADO	1993	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1009	ESTACION/ESTADO	1994	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1010	ESTACION/ESTADO	1995	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1011	ESTACION/ESTADO	1996	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1012	ESTACION/ESTADO	1997	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1013	ESTACION/ESTADO	1998	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1014	ESTACION/ESTADO	1999	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1015	ESTACION/ESTADO	2000	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1016	ESTACION/ESTADO	2001	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1017	ESTACION/ESTADO	2002	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1018	ESTACION/ESTADO	2003	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1019	ESTACION/ESTADO	2004	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1020	ESTACION/ESTADO	2005	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1021	ESTACION/ESTADO	2006	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1022	ESTACION/ESTADO	2007	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1023	ESTACION/ESTADO	2008	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1024	ESTACION/ESTADO	2009	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
1025	ESTACION/ESTADO	2010	11.1	12.4	18.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1

datos precipitacion mensual - metrica



AÑO	1986	1987	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	
PRECIPITACION PROMEDIO	48.3016667	53.06226	53.51874	48.3608333	48.8225	52.008875	57.801625	67.1516667	55.5200542	58.2931667	49.2781667	62.8081667	49.8418333	61.7424	46.89315	59.07145	63.5698333	58.2276667	77.2308334	53.2121	65.8085	41.283975	67.123875	
ESCORRENTA	7.09292452	9.56931745	9.37264277	7.07992351	7.27977374	9.62706151	11.4471295	14.2284368	10.3159853	12.0490479	7.55668539	14.0448143	7.71413501	13.4775955	6.50820556	12.090492	14.4549549	11.7115526	19.4906333	9.28658305	15.4396098	4.3806963	14.2144702	
EVAPOTRANSPIRACION	3.38201842	3.38201842	3.38201842	3.38201842	3.38201842	3.38201842	3.38201842	3.79139374	3.79139374	3.79139374	3.79139374	3.79139374	3.79139374	3.79139374	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726	4.64583726
DEFLA	37.9167237	40.9849141	40.7630888	37.8988914	38.1707078	41.0497947	42.9725271	45.1308361	41.3940751	43.152725	38.1300875	44.9719586	38.3358546	44.4744108	35.8291071	42.3381207	44.4684912	41.9702768	48.2843628	39.3995797	45.2830529	32.3573414	44.2635675	
RECHENAMIENTO	37.9167237	40.9849141	40.7630888	37.8988914	38.1707078	41.0497947	42.9725271	45.1308361	41.3940751	43.152725	38.1300875	44.9719586	38.3358546	44.4744108	35.8291071	42.3381207	44.4684912	41.9702768	48.2843628	39.3995797	45.2830529	32.3573414	44.2635675	
DEFICIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RECARGA	37.9167237	40.9849141	40.7630888	37.8988914	38.1707078	41.0497947	42.9725271	45.1308361	41.3940751	43.152725	38.1300875	44.9719586	38.3358546	44.4744108	35.8291071	42.3381207	44.4684912	41.9702768	48.2843628	39.3995797	45.2830529	32.3573414	44.2635675	



AÑO	1986	1987	1988	1990	1991	1992	1993	1994
PRECIPITACION PROMEDIO	48,3916667	53,93625	53,51875	48,3608333	48,8325	54,058875	57,801675	63,1516667
ESCORRENTIA	7,09292452	9,56931745	9,37364277	7,07992351	7,27977374	9,62706191	11,4471295	14,2294368
EVAPOTRANSPIRACION	3,38201842	3,38201842	3,38201842	3,38201842	3,38201842	3,38201842	3,38201842	3,79139374
DELTA	37,9167237	40,9849141	40,7630888	37,8988914	38,1707078	41,0497947	42,9725271	45,1308361
ALMACENAMIENTO	37,9167237	40,9849141	40,7630888	37,8988914	38,1707078	41,0497947	42,9725271	45,1308361
DEFICIT	0	0	0	0	0	0	0	0
RECARGA	37,9167237	40,9849141	40,7630888	37,8988914	38,1707078	41,0497947	42,9725271	45,1308361

AÑO	1995	1996	1997	1998	1999	2000	2001
PRECIPITACION PROMEDIO	55,5005542	58,9931667	49,4781667	62,8081667	49,8413833	61,7434	46,98315
ESCORRENTIA	10,3150853	12,0490479	7,55668539	14,0448143	7,71413501	13,4775955	6,50820566
EVAPOTRANSPIRACION	3,79139374	3,79139374	3,79139374	3,79139374	3,79139374	3,79139374	4,64583726
DELTA	41,3940751	43,152725	38,1300875	44,9719586	38,3358546	44,4744108	35,8291071
ALMACENAMIENTO	41,3940751	43,152725	38,1300875	44,9719586	38,3358546	44,4744108	35,8291071
DEFICIT	0	0	0	0	0	0	0
RECARGA	41,3940751	43,152725	38,1300875	44,9719586	38,3358546	44,4744108	35,8291071

AÑO	2003	2004	2005	2006	2007	2008	2009	2010
PRECIPITACION PROMEDIO	59,07445	63,5692833	58,3276667	72,4208334	53,332	65,3685	41,383875	63,123875
ESCORRENTIA	12,090492	14,4549549	11,7115526	19,4906333	9,28658305	15,4396098	4,3806963	14,2144702
EVAPOTRANSPIRACION	4,64583726	4,64583726	4,64583726	4,64583726	4,64583726	4,64583726	4,64583726	4,64583726
DELTA	42,3381207	44,4684912	41,9702768	48,2843628	39,3995797	45,2830529	32,3573414	44,2635675
ALMACENAMIENTO	42,3381207	44,4684912	41,9702768	48,2843628	39,3995797	45,2830529	32,3573414	44,2635675
DEFICIT	0	0	0	0	0	0	0	0
RECARGA	42,3381207	44,4684912	41,9702768	48,2843628	39,3995797	45,2830529	32,3573414	44,2635675