

Boletín N° : 331
Mes : Noviembre
Año : 2005

DE : JAVIER NARBONA NARANJO
ING. JEFE DEPARTAMENTO DE HIDROLOGIA

*INFORMACION PLUVIOMETRICA, FLUVIOMETRICA,
ESTADO DE EMBALSES Y AGUAS SUBTERRANEAS*

Contenido :

- 1.- Informe pluviométrico
- 2.- Volúmenes de embalses
- 3.- Informe fluviométrico
- 4.- Informe aguas subterráneas

En Internet (www.dga.cl) se publica: .

- los informes de este boletín
- Caudales medios diarios de los principales ríos actualizados semanalmente
- Caudales en tiempo real

NOTA: Datos provisorios sujetos a modificaciones posteriores

INFORME PLUVIOMETRICO NACIONAL N°11

ESTACIONES	NOVIEMBRE	TOTALES AL 30 DE NOVIEMBRE			EXCESO O DÉFICIT (%)
		2005 (mm)	2004 (mm)	PROMEDIO (mm)	
CENTRAL CHAPIQUIÑA	0.0	104.0	137.5	141.7	- 27
EMBALSE CONCHI	0.0	28.5	15.0	18.2*	57
CALAMA	0.0	4.5	0.5	4.2	6
ANTOFAGASTA	0.0	0.5	0.1	4.2	- 88
COPIAPÓ	0.0	18.7	8.9	13.2	42
EMBALSE LAUTARO	0.0	31.5	30.5	30.6	3
VALLENAR	0.0	28.6	46.5	34.3	- 17
RIVADAVIA	0.0	84.5	80.5	94.8	- 11
VICUÑA	0.0	65.6	109.3	95.2	- 31
LA SERENA	0.0	63.8	117.4	81.7	- 22
OVALLE	0.0	51.8	131.2	103.3	- 50
EMBALSE PALOMA	0.0	80.4	159.1	135.3	- 41
COGOTÍ 18	0.0	120.0	214.0	186.2	- 36
HUINTIL	1.8	162.2	205.7	223.3	- 27
COIRÓN	40.0	329.7	166.7	333.1	- 1
VILCUYA	10.5	614.0	385.0	335.1	83
SAN FELIPE	4.3	247.2	254.9	206.3	20
LAGO PEÑUELAS	32.0	718.6	696.4	615.1	17
EMBALSE EL YESO	3.5	1325.6	473.4	532.1	149
CERRO CALAN	11.3	651.8	425.3	399.6	63
SANTIAGO (MOP)	10.0	508.3	388.2	309.4	64
RANCAGUA	32.0	579.3	490.7	408.9	42
SAN FERNANDO	23.0	1034.8	637.0	690.1	50
CONVENTO VIEJO	38.0	1075.7	535.3	684.1	57
CURICO	36.0	954.5	538.0	695.6	37
TALCA	38.2	841.7	550.1	636.1	32
COLORADO	86.0	1815.7	1379.4	1382.7	31
LINARES	37.3	1074.3	860.3	892.4	20
PARRAL	35.0	1037.0	859.5	948.1	9
EMBALSE DIGUA	80.7	1755.9	1381.0	1458.3	20
CHILLÁN	14.9	1206.1	961.1	980.5	23
CONCEPCIÓN	48.0	1381.5	1187.0	1147.2	20
LOS ÁNGELES	39.5	1188.7	889.4	1070.0	11
CAÑETE	109.2	1498.4	1184.1	1212.7	24
ANGOL	56.1	1418.5	1180.7	1043.0	36
TEMUCO	171.3	1531.2	1284.0	1134.1	35
VALDIVIA	233.3	2365.3	1834.8	2087.7	13
OSORNO	104.4	1363.7	1256.9	1468.9	- 7
PUERTO MONTT	208.2	2166.7	2143.0	1804.8	20
COYHAIQUE	98.3	1060.5	989.3	1124.4*	- 6
PUNTA ARENAS	56.7	526.2	526.9	403.7	30

Promedios acumulados para el período 1961-1990 (D.G.A)

* : Promedios calculados para períodos inferiores a 30 años

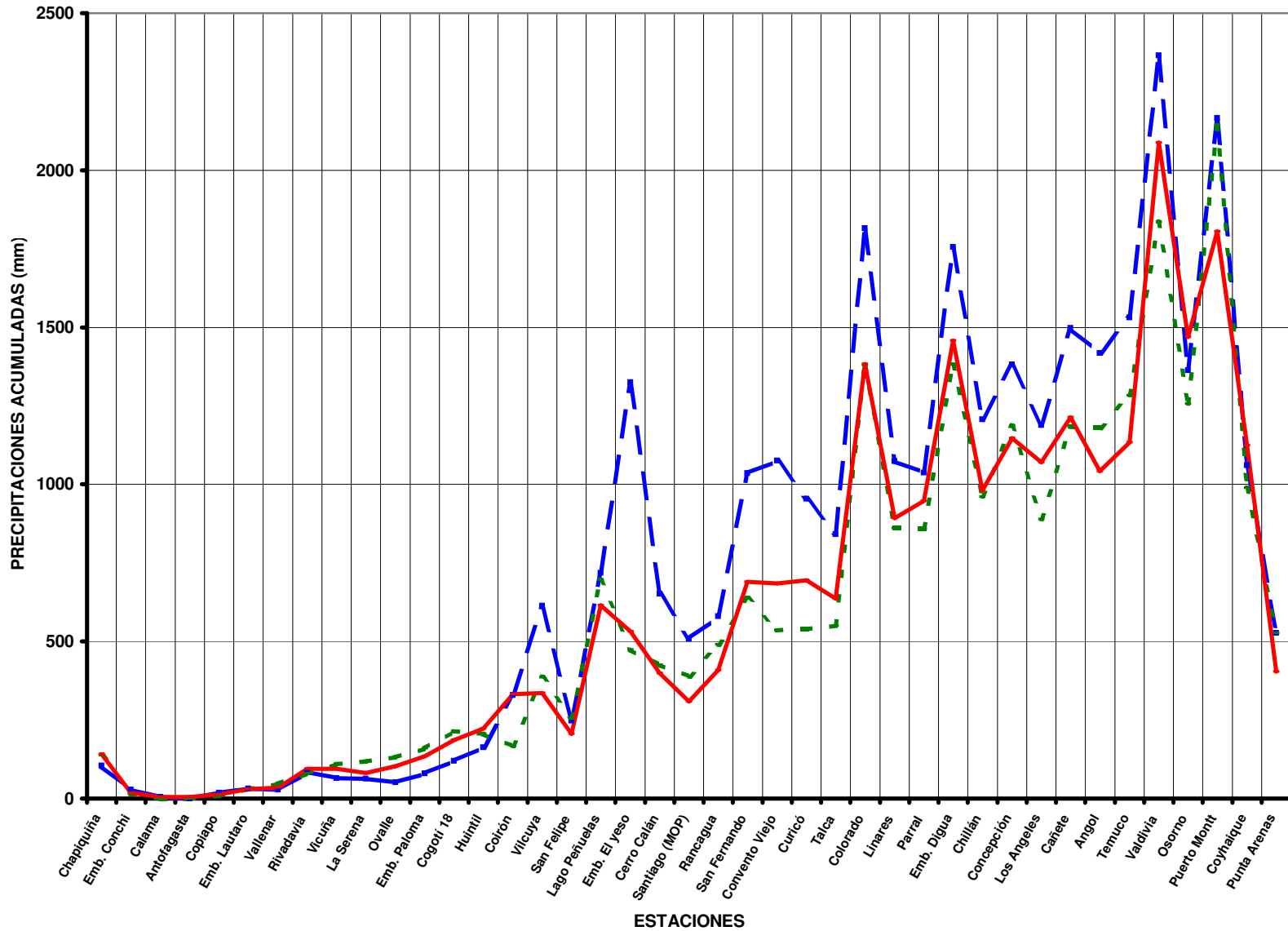
Valores expresados en milímetros (1 mm = 1 lt x m2)

TOTALES DE LLUVIA HASTA EL
30 de Noviembre del 2005

Normal

Año 2005

Año 2004



ESTADO DE EMBALSES

Ultimo día del mes
(Volúmenes en mill-m³)

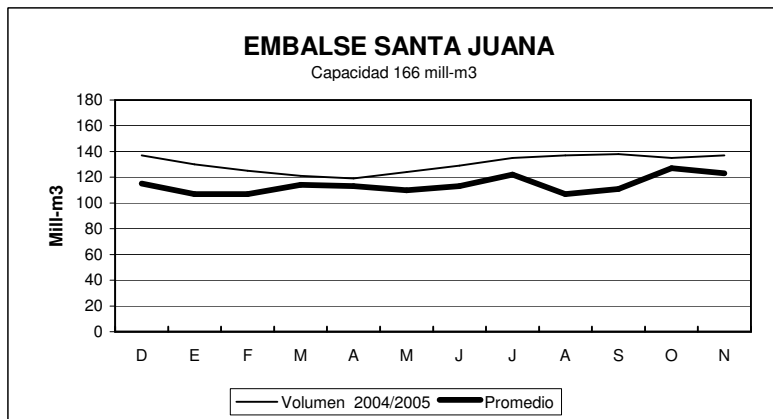
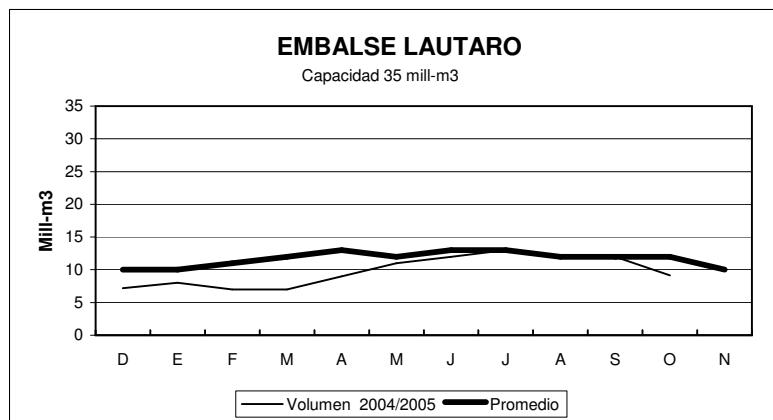
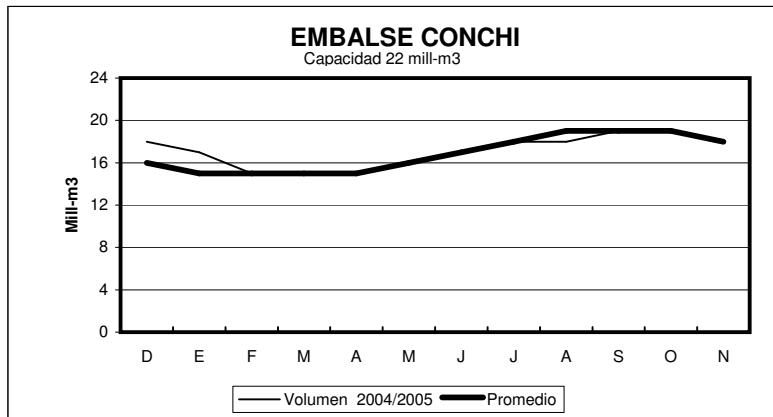
EMBALSE	REGION	CUENCA	CAPACIDAD	PROMEDIO	Noviembre	
				HISTORICO MENSUAL	2005	2004
Conchi	II	Loa	22	18	18	19
Lautaro	III	Copiapó	35	11		10
Santa Juana	III	Huasco	166	123	137	147
La Laguna	IV	Elqui	40	22	37	36
Puclaro	IV	Elqui	200	72	155	179
Recoleta	IV	Limarí	100	65	86	89
La Paloma	IV	Limarí	748	431	559	551
Cogotí	IV	Limarí	150	90	100	81
Culimo	IV	Quilimarí	10	5.1		5.0
Corrales	IV	Illapel	50	35	44	50
Peñuelas	V	Peñuelas	95	29	32	40
El Yeso	RM	Maipo	256	152	181	162
Rungue	RM	Maipo	2.2	1.3	1.9	1.8
Rapel	VI	Rapel	695	566	616	528
Colbún	VII	Maule	1544	1333	1542	1447
Lag. Maule	VII	Maule	1420	1001	914	983
Bullileo	VII	Maule	60	57	60	60
Digua	VII	Maule	220	199	199	220
Tutuvén	VII	Maule	15	10.9	12	13
Coihueco	VIII	Itata	29	28	29	29
Lago Laja (&)	VIII	Bio-Bio	5582	3617	2970	2525

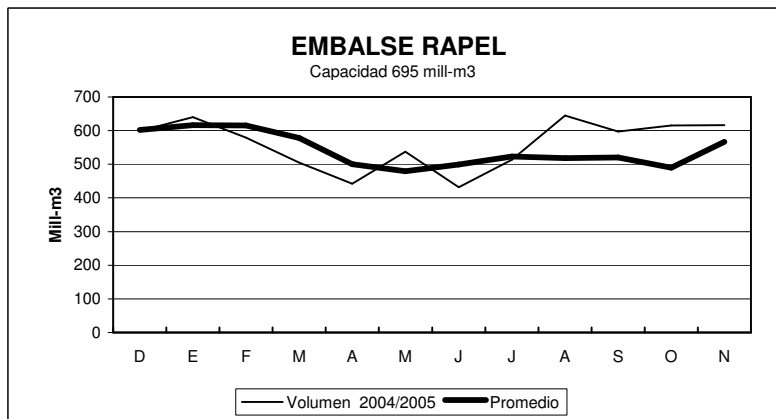
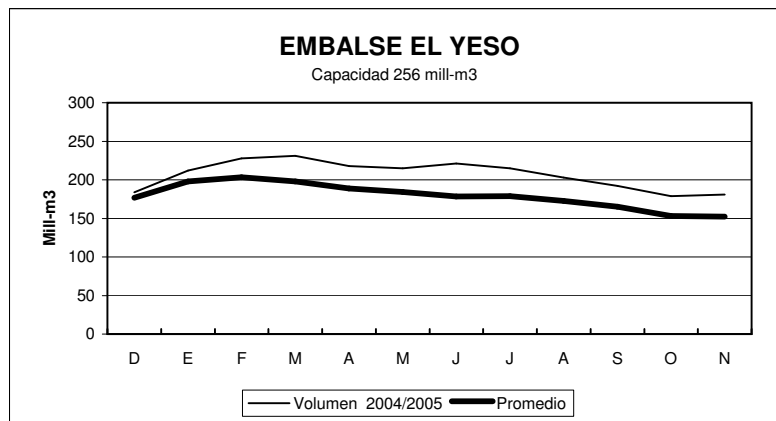
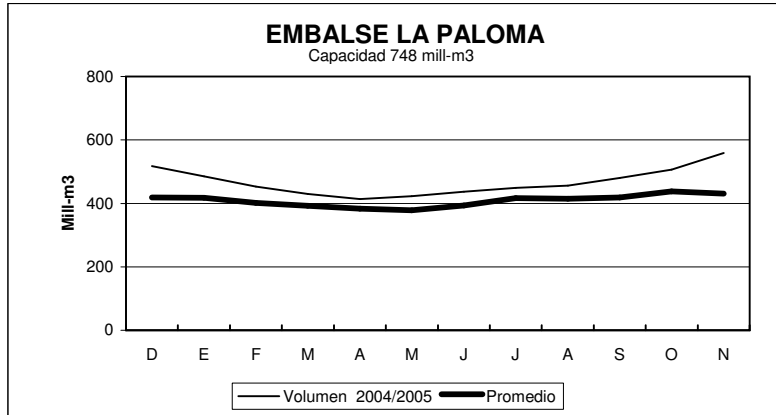
RESUMEN ANUAL

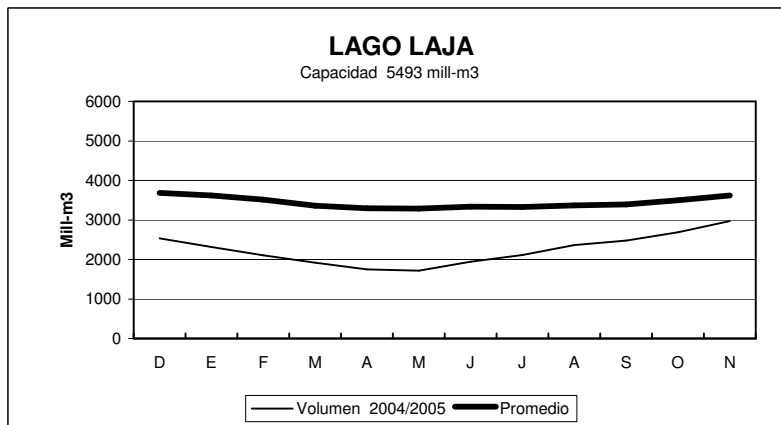
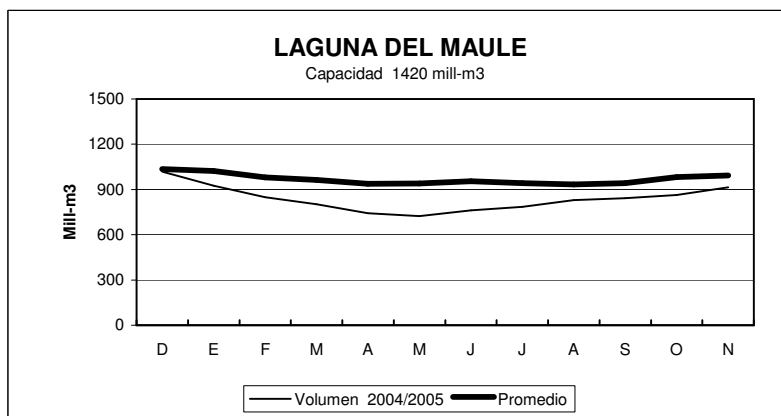
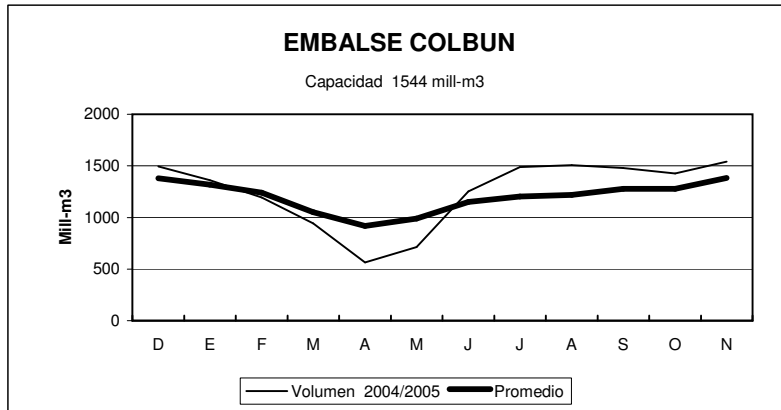
EMBALSE	2004 2005											
	D	E	F	M	A	M	J	J	A	S	O	N
Conchi	18	17	15	15	15	16	17	18	18	19	19	18
Lautaro	7	8	7	7	9	11	12	13	12	12	9	
Santa Juana	137	130	125	121	119	124	129	135	137	138	135	137
La Laguna	33	31	30	25	26	25	27	29	31	32	36	37
Puclaro	162	153	142	134	128	133	137	140	140	141	142	155
Recoleta	83	77	72	68	65	69	73	75	77	80	81	86
La Paloma	518	485	453	430	414	423	437	449	456	480	506	559
Cogotí	75	66	60	56	53	54	58	61	63	73	80	100
Culimo	4.4	3.3	1.96	0.6	0.0	0.0	0.0	0.0	1.3	3.1	3.7	
Corrales	49	47	40	33	31	31	32	32	37	42	43	44
Peñuelas	36	33	31	29	27	28	29	30	35	35	34	32
El Yeso	184	212	228	231	218	215	221	215	203	192	179	181
Rungue	1.3	0.8	0.4	0.2	0.1	0.1	0.6	1.2	2.0	2.1	2.0	1.9
Rapel	599	640	579	505	442	537	432	514	645	597	615	616
Colbún	1496	1361	1195	942	565	714	1253	1488	1506	1480	1425	1542
Lag. Maule	1018	924	849	802	743	723	761	786	829	843	863	914
Bullileo	38	40	16	1.3	0	19	44	60	60	60	60	60
Digua	170	91	28	6.5	4.0	28	105	160	219	220	220	199
Tutuvén	10.1	8.1	4	2.1	0	3	15	13	15	13	12	12
Coihueco	27	20	13	6	1.4	1.6	13.4	24	28.3	29	29	29
Lago Laja (&)	2532	2314	2108	1923	1748	1716	1943	2110	2365	2480	2690	2970

(&) : Volumen sobre cota 1300 msnm

ESTADO DE EMBALSES



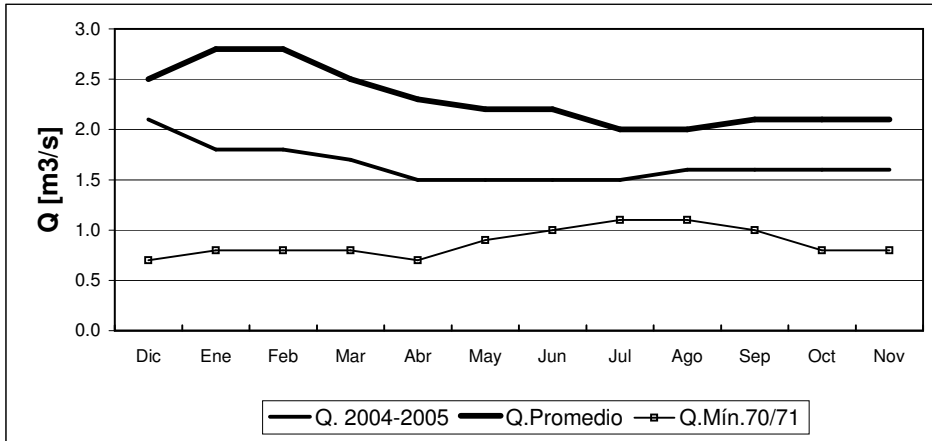




INFORME FLUVIOMETRICO
Caudales medios mensuales en m3/seg

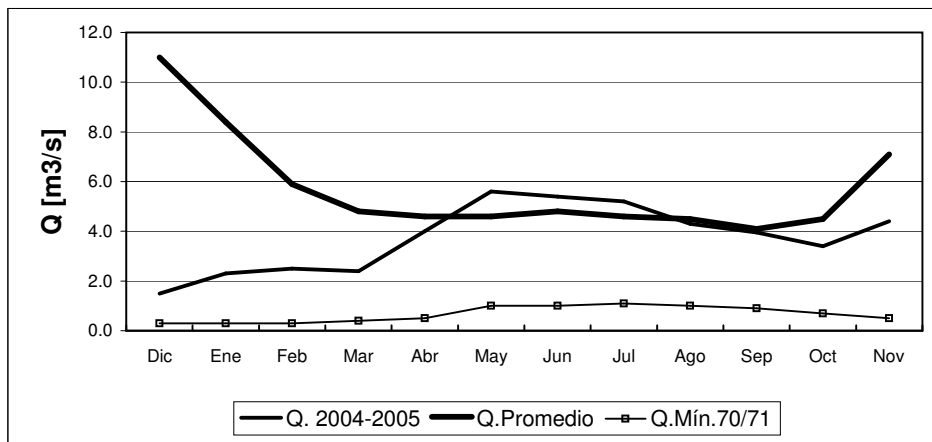
Nov-05

RIO COPIAPO EN LA PUERTA



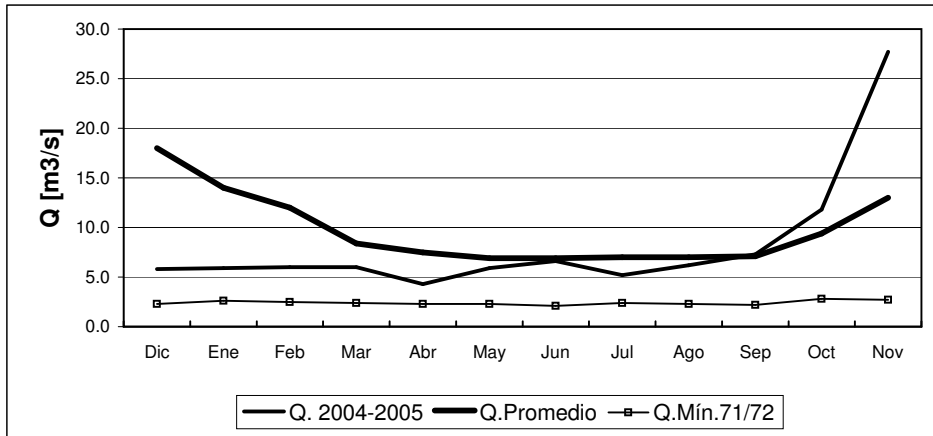
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	2.1	1.8	1.8	1.7	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6
Q. Promedio	2.5	2.8	2.8	2.5	2.3	2.2	2.2	2.0	2.0	2.1	2.1	2.1
Q. Mín.70/71	0.7	0.8	0.8	0.8	0.7	0.9	1.0	1.1	1.1	1.0	0.8	0.8

RIO HUASCO EN ALGODONES



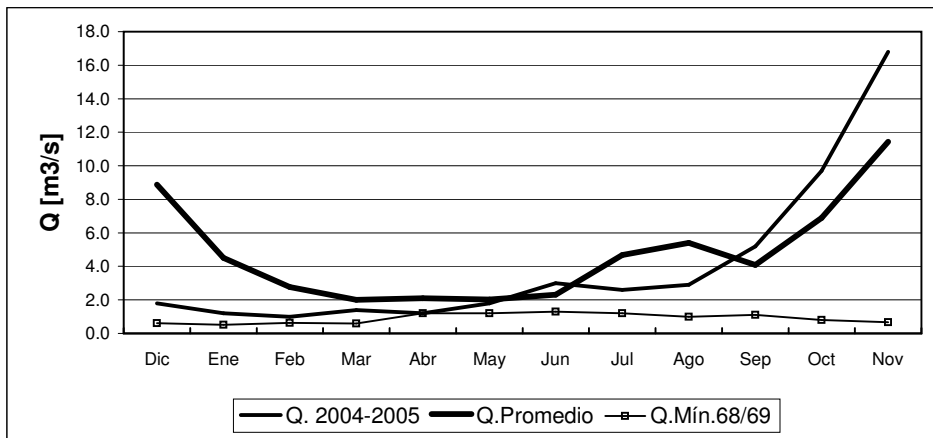
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Q. 2004-2005	1.5	2.3	2.5	2.4	4.0	5.6	5.4	5.2	4.3	4.0	3.4	4.4
Q. Promedio	11.0	8.4	5.9	4.8	4.6	4.6	4.8	4.6	4.5	4.1	4.5	7.1
Q. Mín.70/71	0.3	0.3	0.3	0.4	0.5	1.0	1.0	1.1	1.0	0.9	0.7	0.5

RIO ELQUI EN ALGARROBAL



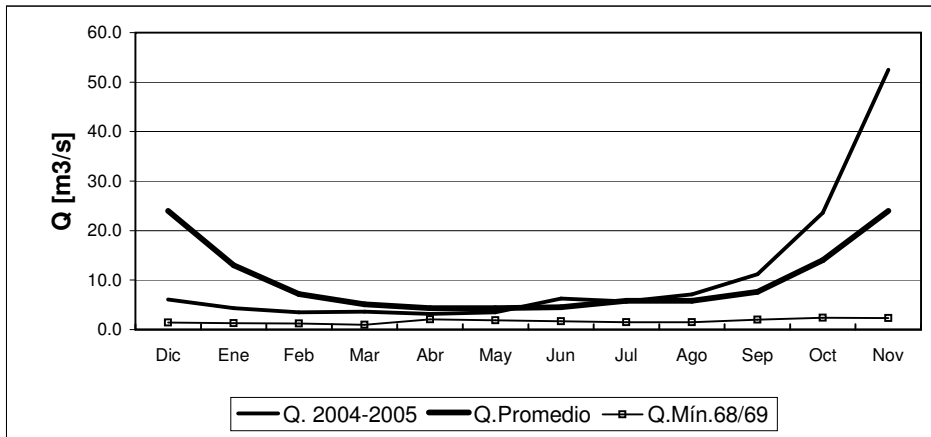
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	5.8	5.9	6.0	6.0	4.3	5.9	6.6	5.2	6.2	7.3	11.8	27.7
Q. Promedio	18.0	14.0	12.0	8.4	7.5	6.9	6.9	7.0	7.0	7.1	9.4	13.0
Q. Mín. 71/72	2.3	2.6	2.5	2.4	2.3	2.3	2.1	2.4	2.3	2.2	2.8	2.7

RIO GRANDE EN LAS RAMADAS



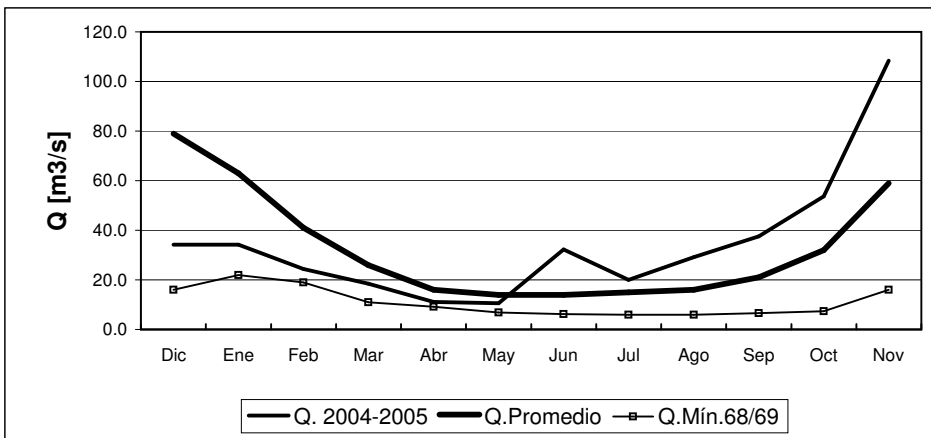
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	1.8	1.2	1.0	1.4	1.2	1.8	3.0	2.6	2.9	5.2	9.7	16.8
Q. Promedio	8.9	4.5	2.8	2.0	2.1	2.0	2.3	4.7	5.4	4.1	6.9	11.4
Q. Mín. 68/69	0.6	0.5	0.6	0.6	1.2	1.2	1.3	1.2	1.0	1.1	0.8	0.7

RIO CHOAPA EN CUNCUMEN



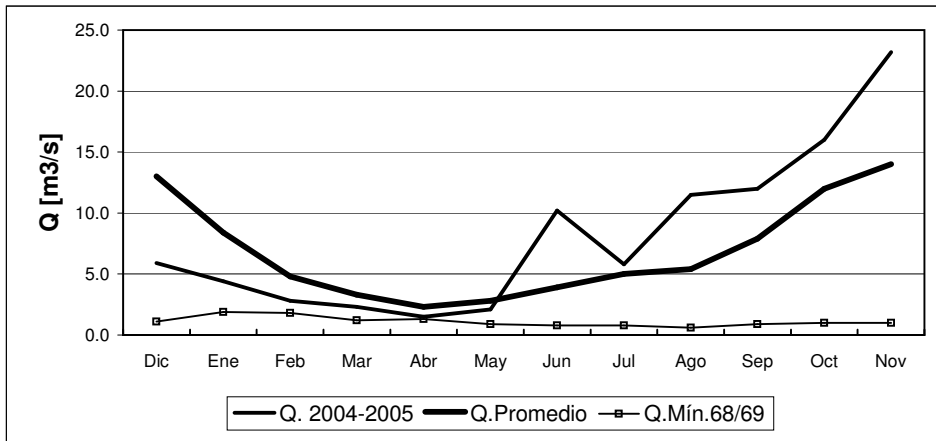
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	6.1	4.3	3.5	3.6	3.2	3.5	6.3	5.7	7.1	11.2	23.6	52.5
Q.Promedio	24.0	13.0	7.2	5.1	4.3	4.3	4.5	5.8	5.8	7.6	14.0	24.0
Q.Mín.68/69	1.4	1.3	1.2	1.0	2.1	1.9	1.7	1.5	1.5	2.0	2.4	2.3

RIO ACONCAGUA EN CHACABUQUITO



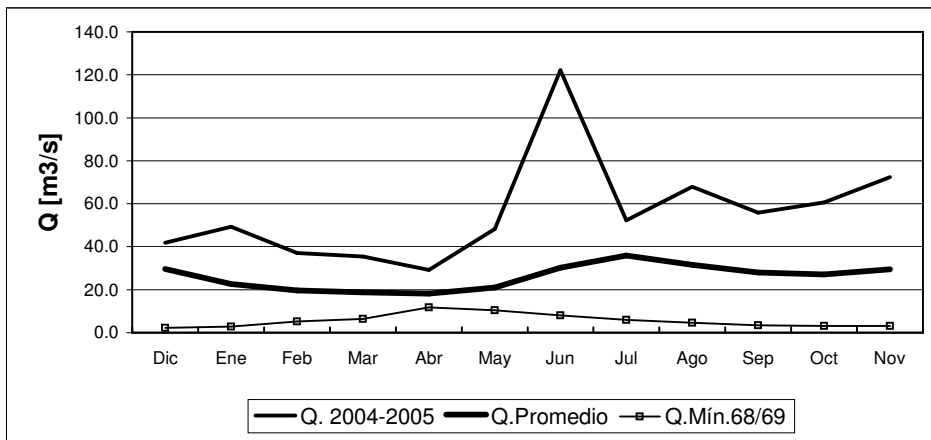
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Q. 2004-2005	34.2	34.2	24.4	18.5	11.1	10.6	32.2	20.0	29.1	37.5	53.7	108.4
Q.Promedio	79.0	63.0	41.0	26.0	16.0	14.0	14.0	15.0	16.0	21.0	32.0	59.0
Q.Mín.68/69	16.0	22.0	19.0	11.0	9.1	6.9	6.2	5.9	5.9	6.6	7.4	16.0

RIO MAPOCHO EN LOS ALMENDROS



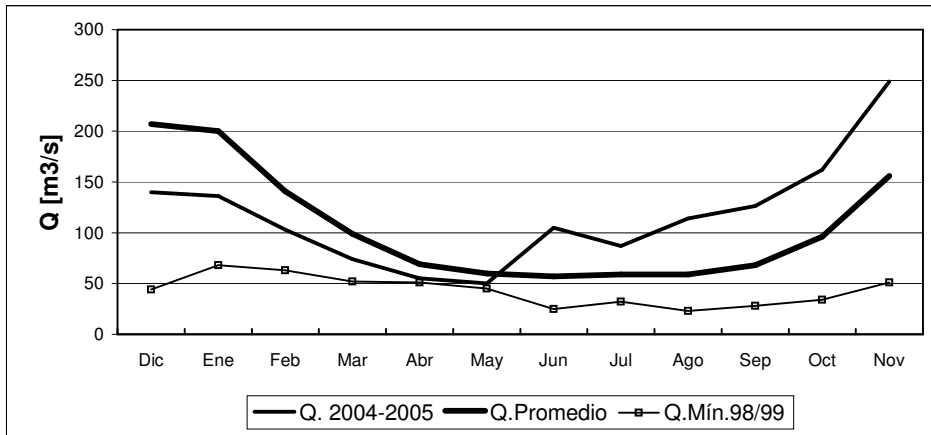
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	5.9	4.4	2.8	2.3	1.5	2.1	10.2	5.8	11.5	12.0	16.0	23.2
Q.Promedio	13.0	8.4	4.8	3.3	2.3	2.8	3.9	5.0	5.4	7.9	12.0	14.0
Q.Mín.68/69	1.1	1.9	1.8	1.2	1.3	0.9	0.8	0.8	0.6	0.9	1.0	1.0

RIO MAPOCHO EN RINCONADA DE MAIPU



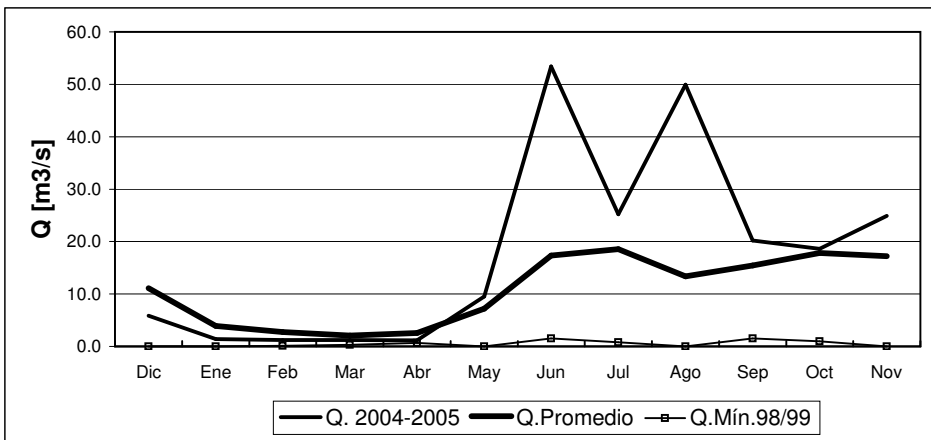
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	41.8	49.3	37.1	35.5	29.2	48.2	122.1	52.3	67.9	55.9	60.6	72.4
Q.Promedio	29.7	22.6	19.6	18.7	18.1	21.0	30.3	35.9	31.6	28.0	27.1	29.5
Q.Mín.68/69	2.2	2.9	5.3	6.5	11.8	10.4	8.1	6.0	4.6	3.4	3.2	3.1

RIO MAIPO EN EL MANZANO



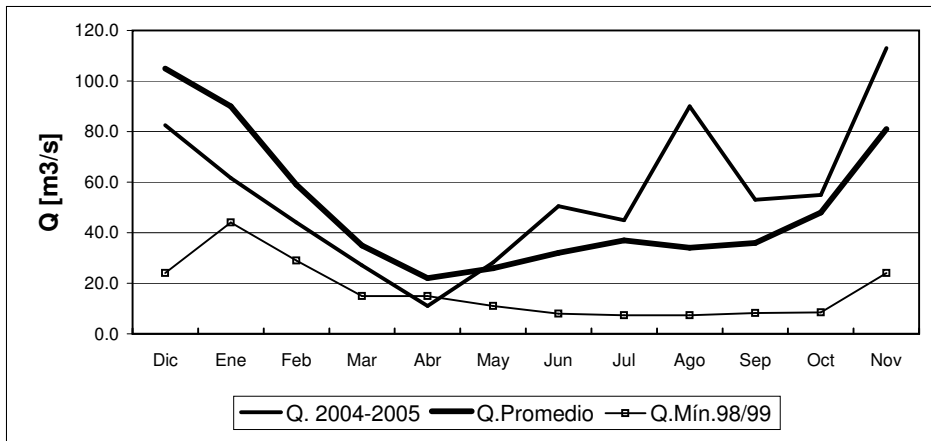
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Q. 2004-2005	140	136	103	74	55	50	105	87	114	126	162	249
Q. Promedio	207	200	141	99	69	60	57	59	59	68	96	156
Q. Mín.98/99	44	68	63	52	51	45	25	32	23	28	34	51

RIO CLARO EN EL VALLE 2



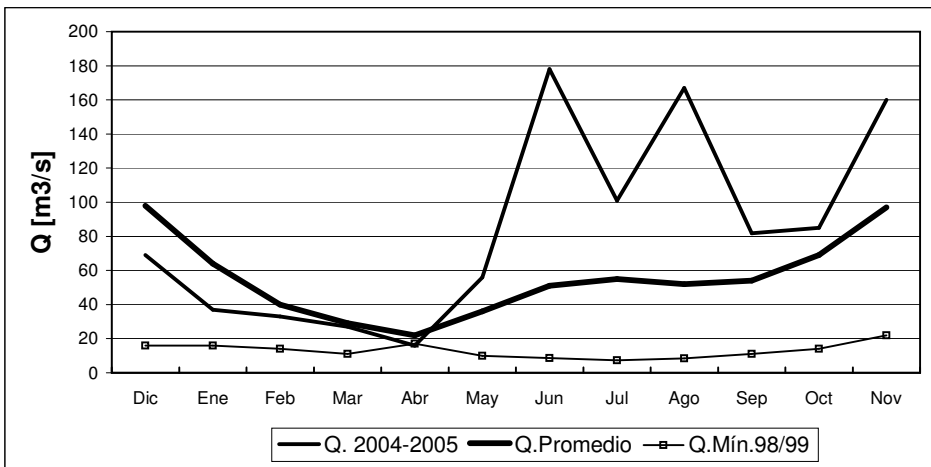
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Q. 2004-2005	5.8	1.4	1.2	1.2	1.1	9.5	53.4	25.2	49.9	20.2	18.6	24.9
Q. Promedio	11.1	3.9	2.7	2.1	2.6	7.2	17.3	18.6	13.4	15.5	17.9	17.2
Q. Mín.98/99	0.0	0.0	0.1	0.3	0.7	0.0	1.5	0.8	0.0	1.5	1.0	0.0

RIO TINGUIRIRICA BAJO BRIONES



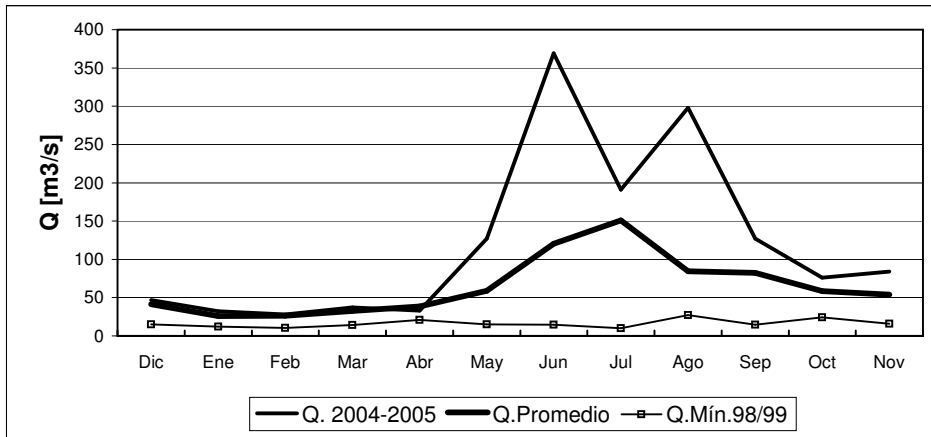
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	82.5	61.7	44.0	27.1	11.0	28.2	50.5	44.9	90.0	53.0	55.0	113.0
Q. Promedio	105.0	90.0	59.0	35.0	22.0	26.0	32.0	37.0	34.0	36.0	48.0	81.0
Q. Mín. 98/99	24.0	44.0	29.0	15.0	15.0	11.0	8.0	7.4	7.4	8.2	8.5	24.0

RIO TENO DESPUES DE JUNTA



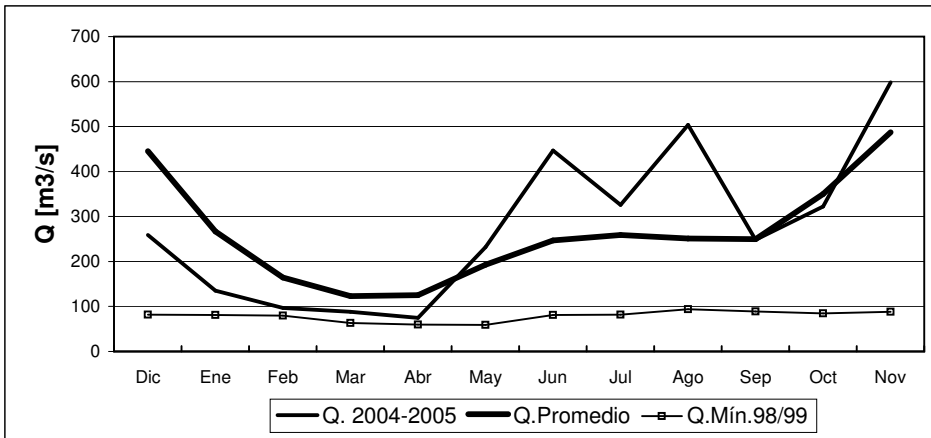
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Q. 2004-2005	69	37	33	27	16	56	178	101	167	82	85	160
Q. Promedio	98	64	40	29	22	36	51	55	52	54	69	97
Q. Mín. 98/99	16	16	14	11	17	10	8.6	7.4	8.4	11	14	22

RIO CLARO EN RAUQUEN



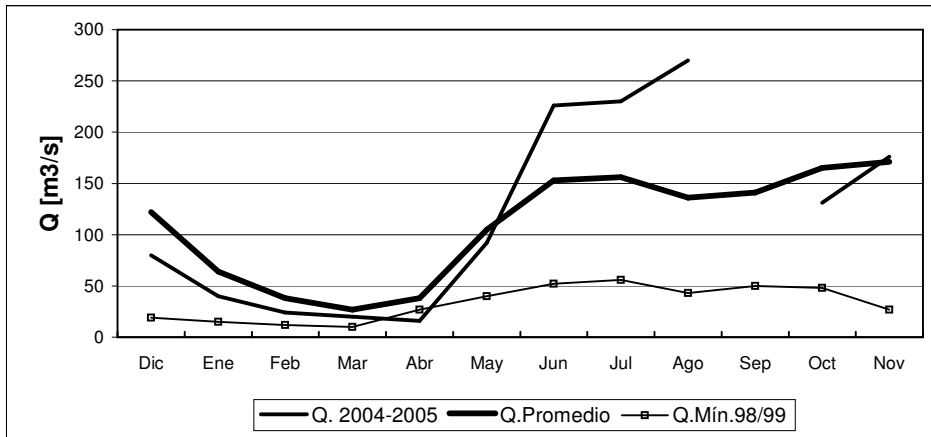
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Q. 2004-2005	47	32	28	37	33	127	369	191	298	127	76	84
Q. Promedio	41	26	26	33	39	59	121	151	84	82	58	54
Q. Mín.98/99	15	12	10	14	21	15	15	10	27	15	24	16

RIO MAULE EN ARMERILLO



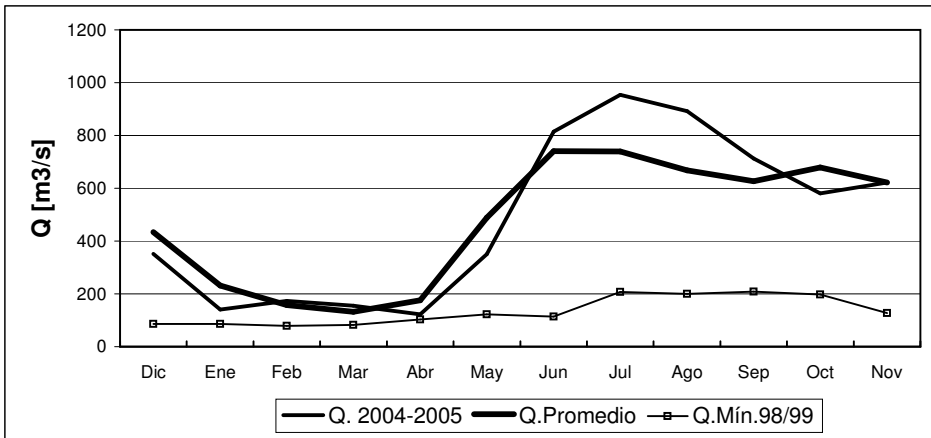
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	259	135	97	88	75	232	447	326	504	248	322	598
Q. Promedio	445	267	164	123	125	193	247	259	251	250	350	487
Q. Mín.98/99	82	81	80	63	60	59	81	82	94	89	85	88

RIO ÑUBLE EN SAN FABIAN



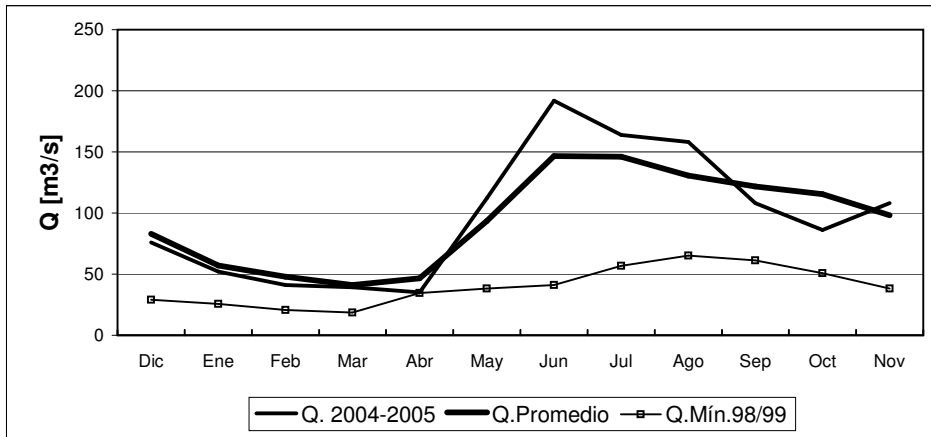
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	80	40	24	20	16	92	226	230	270	141	131	176
Q. Promedio	122	64	38	27	38	105	153	156	136	141	165	171
Q. Mín.98/99	19	15	12	10	27	40	52	56	43	50	48	27

RIO BIO-BIO EN RUCALHUE



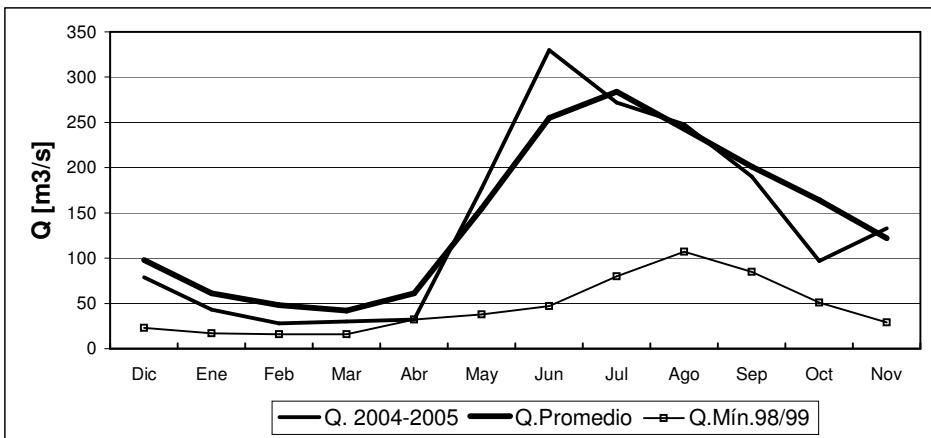
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	352	141	173	155	123	350	815	954	892	713	581	622
Q. Promedio	434	231	158	132	176	489	741	740	668	627	679	622
Q. Mín.98/99	86	86	79	82	103	122	114	207	200	208	197	127

RIO CAUTIN EN RARI-RUCA



	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	76	52	41	39	35	112	192	164	158	108	86	108
Q. Promedio	83	57	48	41	47	93	147	146	131	122	116	98
Q. Mín.98/99	29	26	21	19	35	38	41	57	65	61	51	38

RIO CAUTIN EN CAJON

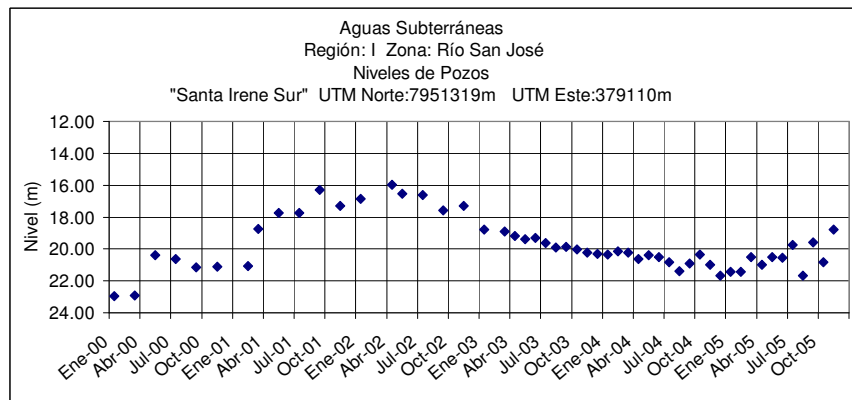


	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
Q. 2004-2005	79	43	28	30	32	177	330	272	248	190	97	133
Q. Promedio	98	61	48	42	61	155	255	284	243	201	164	122
Q. Mín.98/99	23	17	16	16	32	38	47	80	107	85	51	29

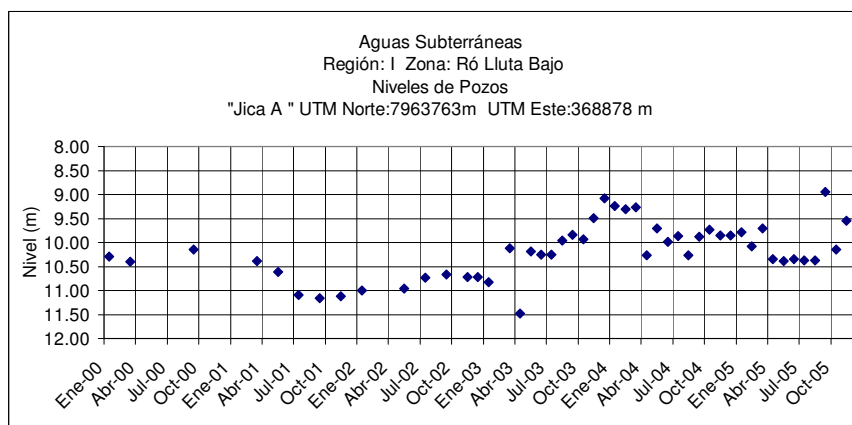
Informe de Aguas Subterráneas

Niveles de Pozos en metros

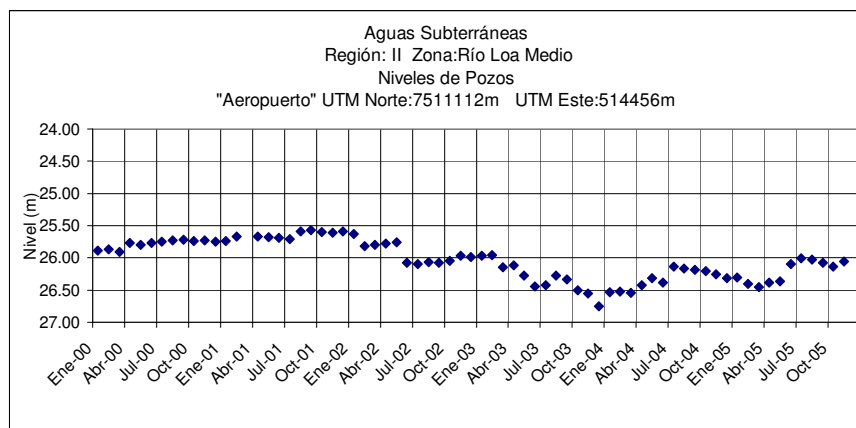
*Gráficos de últimos cinco años.



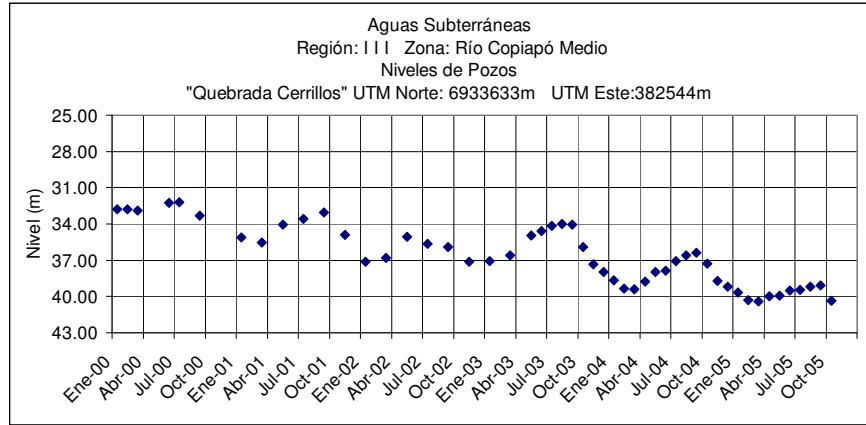
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	21.66	21.43	21.43	20.50	21.00	20.52	20.54	19.75	21.67	19.60	20.82	18.78



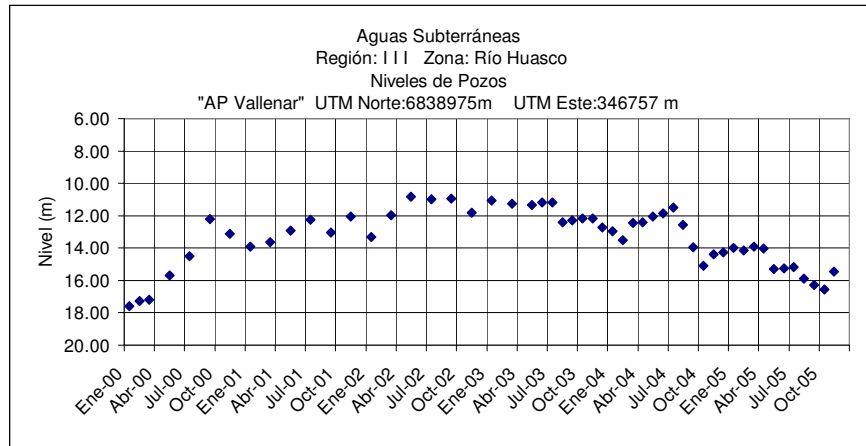
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	9.86	9.79	10.08	9.71	10.34	10.39	10.35	10.37	10.37	8.95	10.15	9.55



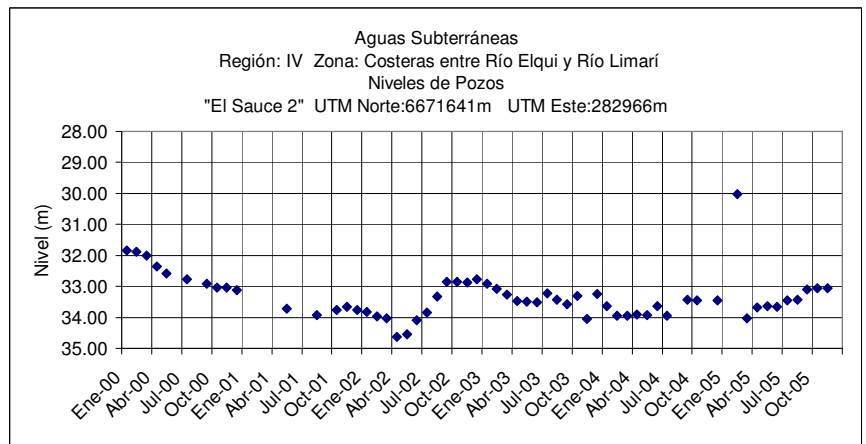
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	26.31	26.30	26.40	26.45	26.38	26.36	26.10	26.01	26.03	26.08	26.14	26.06



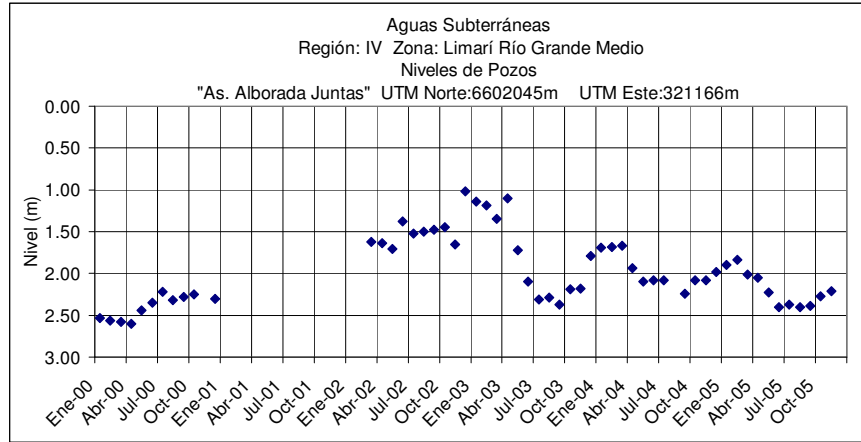
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	39.18	39.68	40.31	40.42	39.98	39.92	39.51	39.46	39.19	39.06	40.36	.



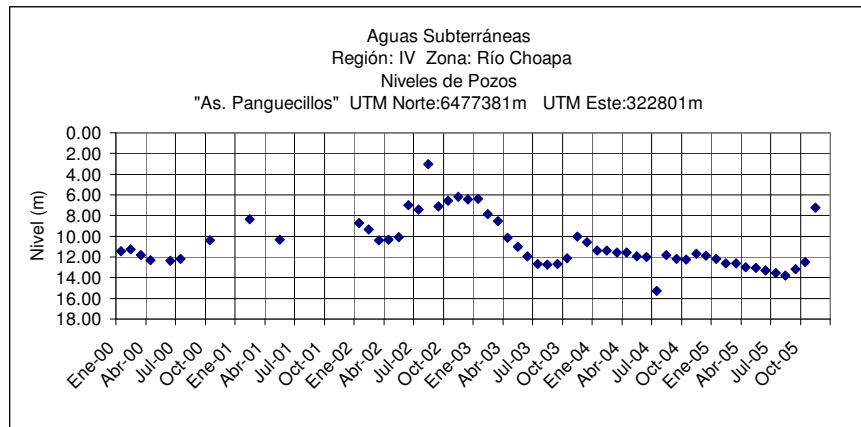
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	14.27	13.99	14.16	13.90	14.02	15.28	15.26	15.17	15.87	16.29	16.56	15.45



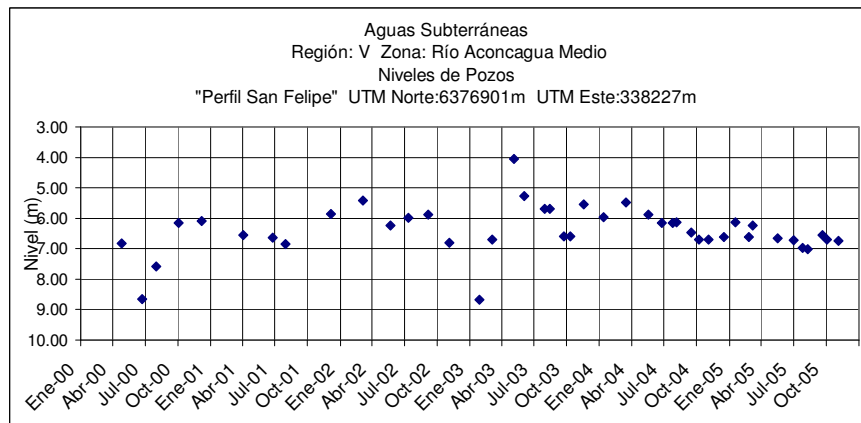
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	33.25	32.56	30.03	34.03	32.56	33.64	33.66	33.46	33.43	33.10	33.06	33.05



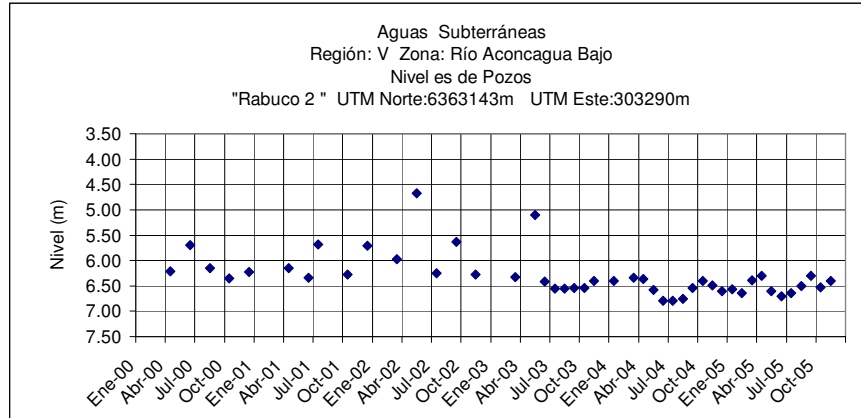
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	1.98	1.90	1.84	2.01	2.05	2.23	2.40	2.37	2.40	2.39	2.27	2.21



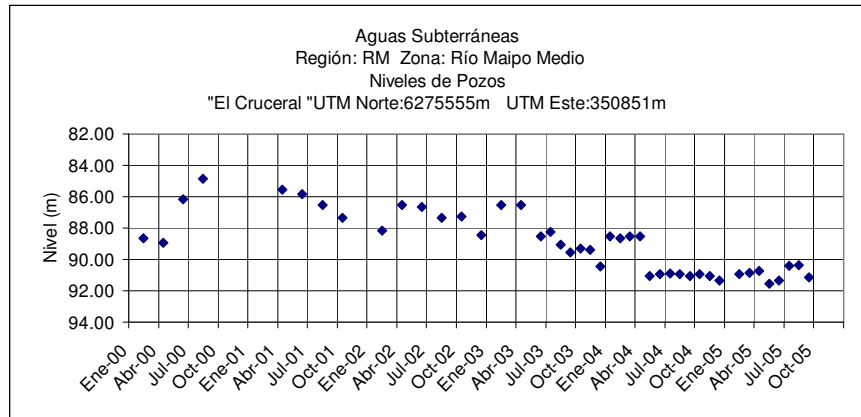
	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	11.88	12.17	12.62	12.60	12.96	13.08	13.27	13.55	13.78	13.16	12.49	7.24



	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	6.62	6.13	6.62	6.24	.	6.65	6.72	6.97	7.02	6.55	6.70	6.75

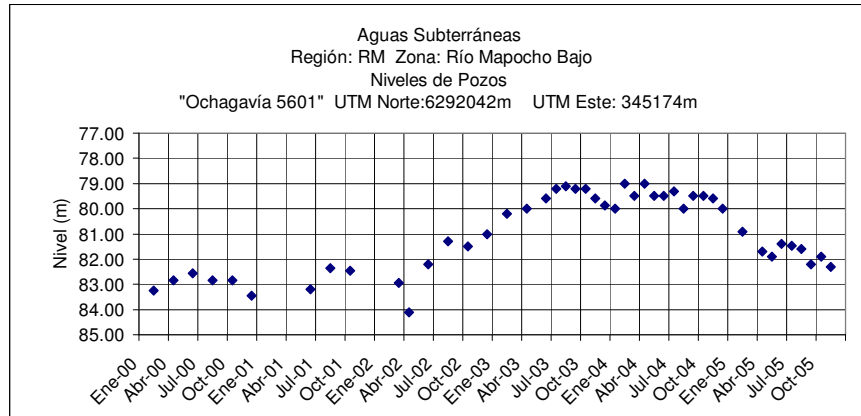


	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	6.60	6.57	6.64	6.39	6.30	6.61	6.70	6.64	6.50	6.30	6.53	6.40

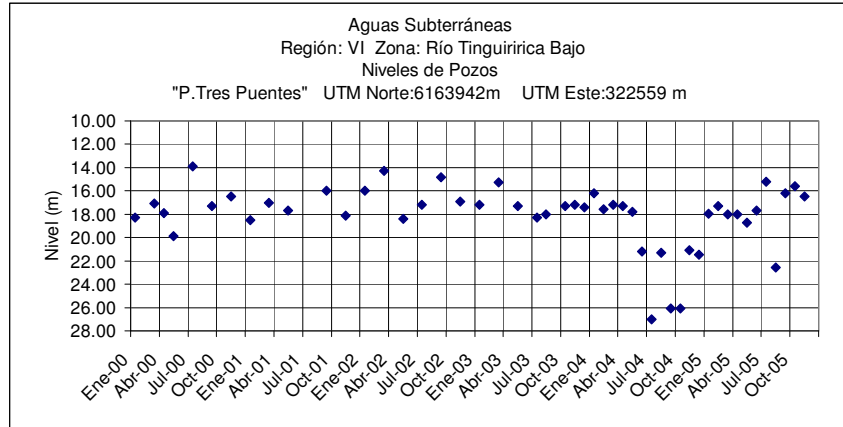


	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	91.35	.	90.95	90.85	90.75	91.55	91.35	90.40	90.35	91.15	.	.

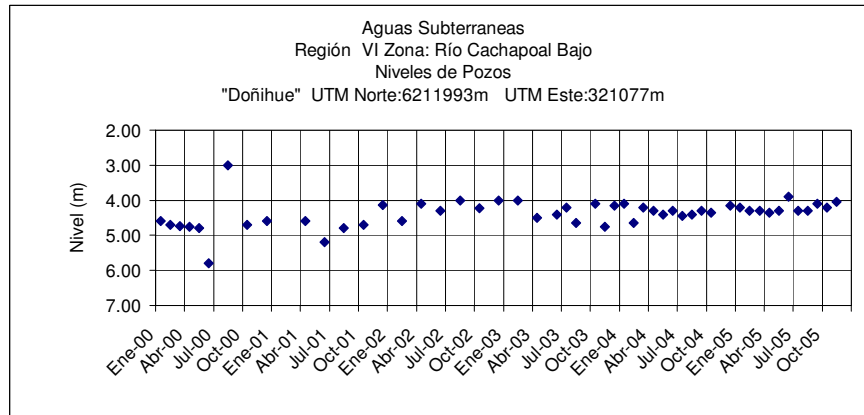
(*) Embancado



	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	80.00	.	80.90	.	81.70	81.90	81.40	81.47	81.60	82.20	81.90	82.30



	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	21.45	17.95	17.30	18.00	18.00	18.75	17.70	15.20	22.55	16.20	15.60	16.50



	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov
2004-2005	4.15	4.20	4.30	4.30	4.35	4.30	3.90	4.30	4.30	4.10	4.20	4.05