

Boletín N° : 329
Mes : Septiembre
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°09

ESTACIONES	SEPTIEMBRE	TOTALES AL 30 DE SEPTIEMBRE			EXCESO O DÉFICIT (%)
		2005 (mm)	2004 (mm)	PROMEDIO (mm)	
CENTRAL CHAPIQUIÑA	7.5	104.0	137.5	137.8	- 25
EMBALSE CONCHI	5.5	28.5	15.0	17.8*	60
CALAMA	0.5	4.5	0.5	4.1	10
ANTOFAGASTA	0.0	0.5	0.1	4.1	- 88
COPIAPÓ	0.0	18.7	8.9	12.7	48
EMBALSE LAUTARO	0.0	31.5	30.5	29.1	8
VALLENAR	0.0	28.6	43.5	33.5	- 15
RIVADAVIA	11.5	84.5	79.0	92.0	- 8
VICUÑA	3.6	65.6	109.3	91.5	- 28
LA SERENA	4.5	63.4	115.6	78.3	- 19
OVALLE	5.0	51.3	130.2	99.6	- 49
EMBALSE PALOMA	16.9	79.0	155.8	130.0	- 39
COGOTÍ 18	11.0	108.5	212.0	179.0	- 39
HUINTIL	23.3	155.9	201.7	212.2	- 27
COIRÓN	39.0	259.3	156.7	317.8	- 18
VILCUYA	53.5	570.5	318.5	307.9	85
SAN FELIPE	18.8	238.7	215.7	194.0	23
LAGO PEÑUELAS	57.0	664.1	659.7	585.4	13
EMBALSE EL YESO	95.5	1301.1	300.3	486.6	167
CERRO CALAN	38.2	588.7	338.7	371.1	59
SANTIAGO (MOP)	25.1	478.5	312.9	286.2	67
RANCAGUA	23.5	520.3	422.4	374.4	39
SAN FERNANDO	19.1	988.5	572.7	639.9	54
CONVENTO VIEJO	24.0	1026.2	476.8	628.9	63
CURICO	32.5	913.0	470.0	540.9	42
TALCA	28.0	790.0	489.2	588.2	34
COLORADO	75.5	1686.7	1232.9	1248.8	35
LINARES	51.4	1019.3	772.6	813.6	25
PARRAL	38.6	982.5	744.1	862.4	14
EMBALSE DIGUA	66.5	1641.0	1175.0	1307.8	25
CHILLÁN	30.9	1173.2	843.6	881.2	33
CONCEPCIÓN	71.1	1297.1	1011.7	1031.5	26
LOS ÁNGELES	62.4	1123.5	773.1	956.3	17
CAÑETE	48.6	1359.5	984.7	1087.4	25
ANGOL	66.8	1340.1	1072.2	954.4	40
TEMUCO	86.3	1320.0	1018.8	997.1	32
VALDIVIA	135.6	2064.4	1560.0	1857.1	11
OSORNO	55.8	1228.9	1053.7	1308.5	- 6
PUERTO MONTT	120.9	1879.5	1798.7	1565.3	20
COYHAIQUE	13.0	878.8	838.6	1012.2*	- 13
PUNTA ARENAS	38.0	402.8	446.3	344.0	17

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

* : Promedios calculados para períodos inferiores a 30 años

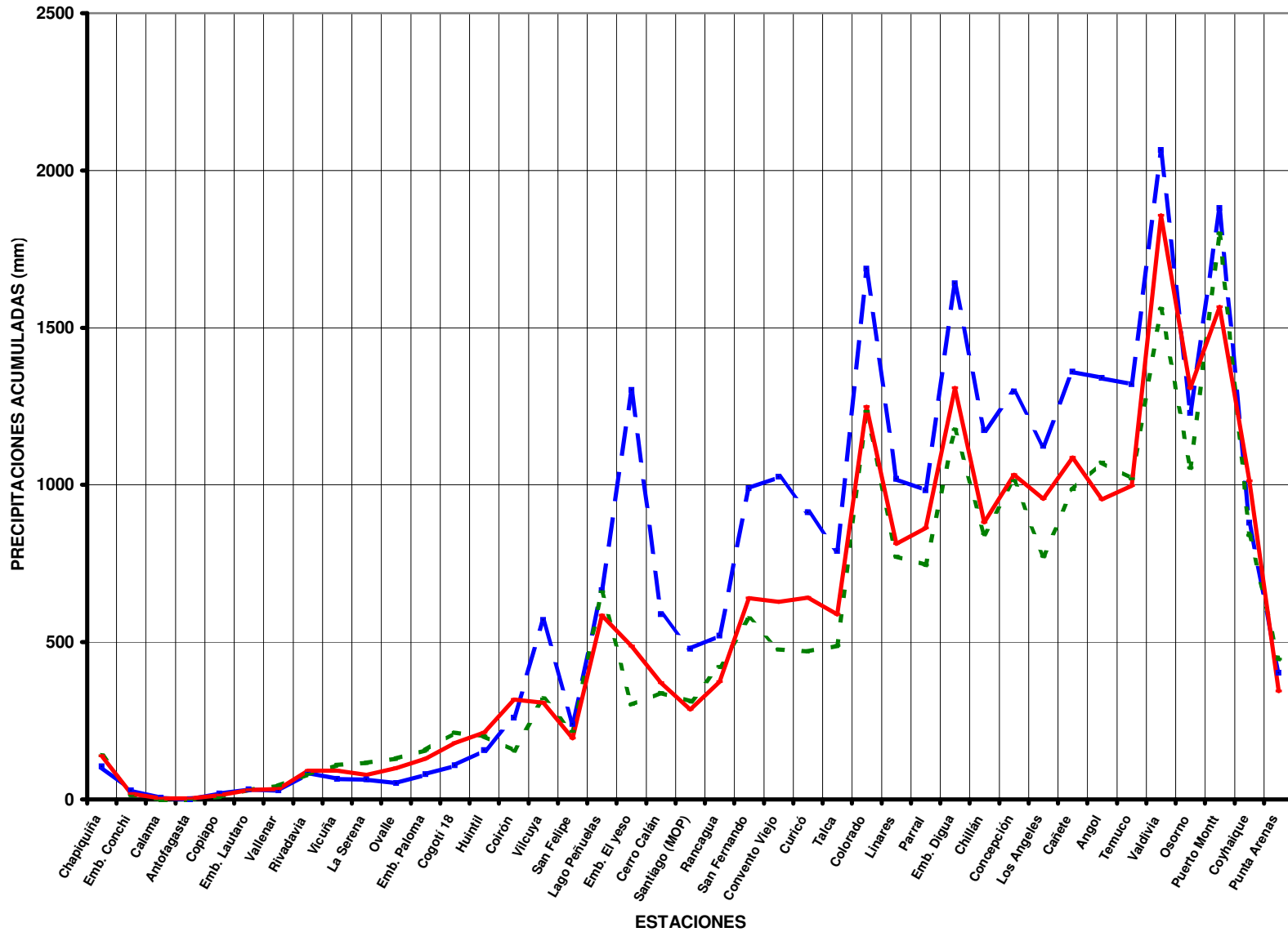
Valores expresados en milímetros (1 mm = 1 lt x m2)

TOTALES DE LLUVIA HASTA EL
30 de Septiembre del 2005

Normal

Año 2005

Año 2004



ESTADO DE EMBALSES

Ultimo día del mes
(Volúmenes en mill-m³)

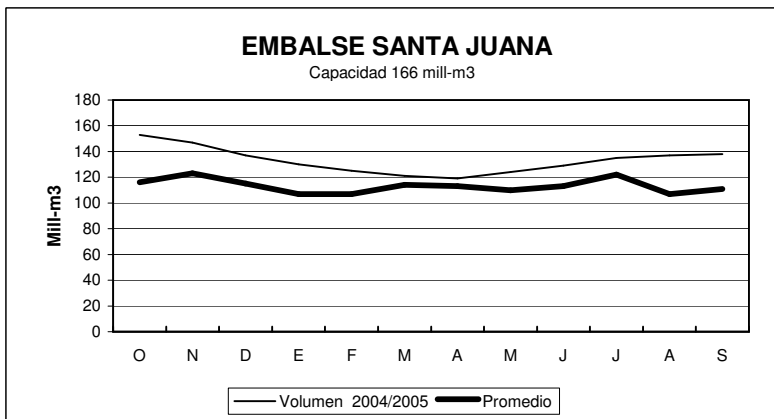
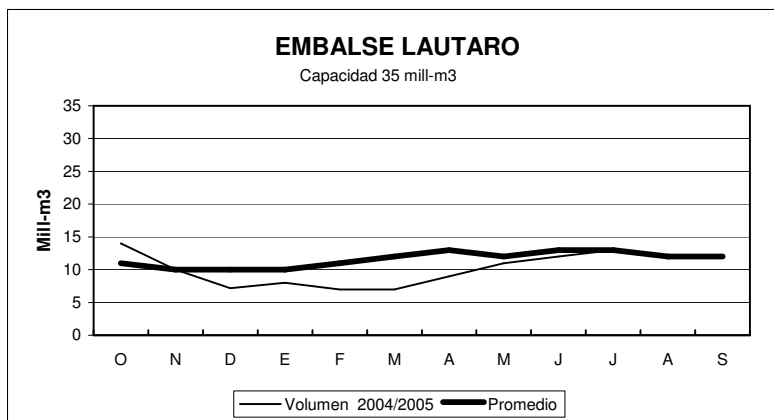
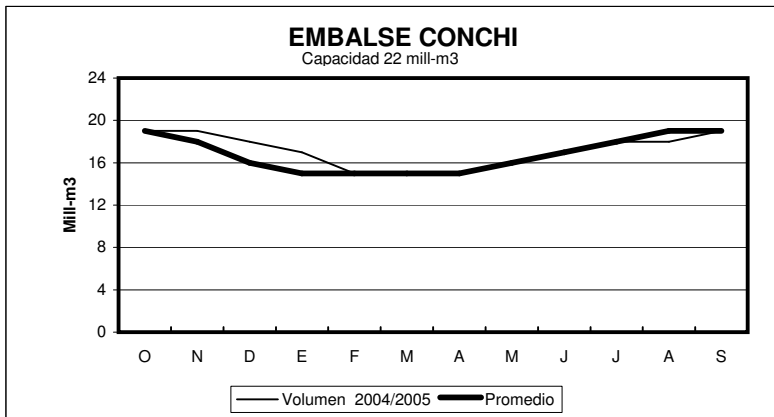
EMBALSE	REGION	CUENCA	CAPACIDAD	PROMEDIO	Septiembre	
				HISTORICO MENSUAL	2005	2004
Conchi	II	Loa	22	19	19	20
Lautaro	III	Copiapó	35	12	12	17
Santa Juana	III	Huasco	166	111	138	161
La Laguna	IV	Elqui	40	25	32	38
Puclaro	IV	Elqui	200	82	141	200
Recoleta	IV	Limarí	100	67	80	96
La Paloma	IV	Limarí	748	419	480	589
Cogotí	IV	Limarí	150	86	73	87
Culimo	IV	Quilimarí	10	5.7	3.1	5.2
Corrales	IV	Illapel	50	34	42	50
Peñuelas	V	Peñuelas	95	32	35	
El Yeso	RM	Maipo	256	165	192	175
Rungue	RM	Maipo	2.2	1.6	2.1	2.0
Rapel	VI	Rapel	695	520	597	531
Colbún	VII	Maule	1544	1236	1480	1264
Lag. Maule	VII	Maule	1420	948	843	924
Bullileo	VII	Maule	60	56	60	60
Digua	VII	Maule	220	215	220	220
Tutuvén	VII	Maule	15	11.7	13	14
Coihueco	VIII	Itata	29	28	29	29
Lago Laja (&)	VIII	Bio-Bio	5582	3391	2480	2240

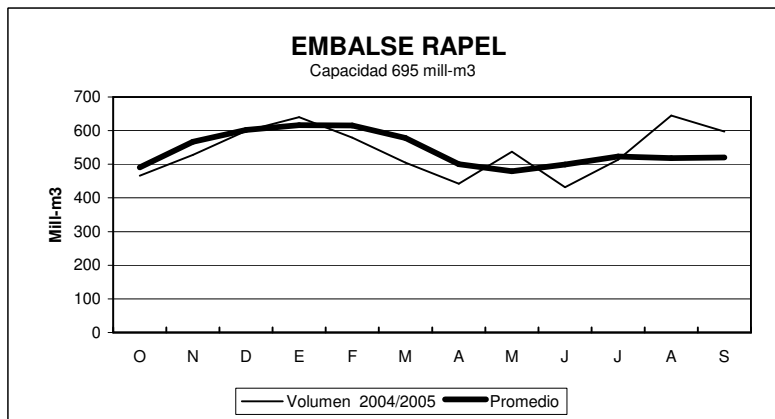
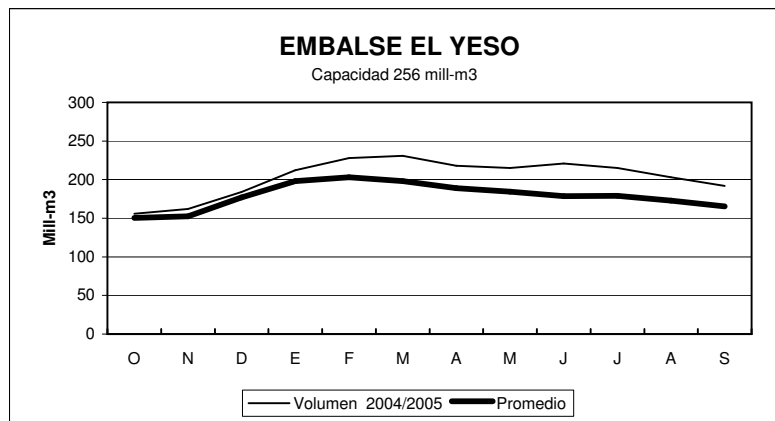
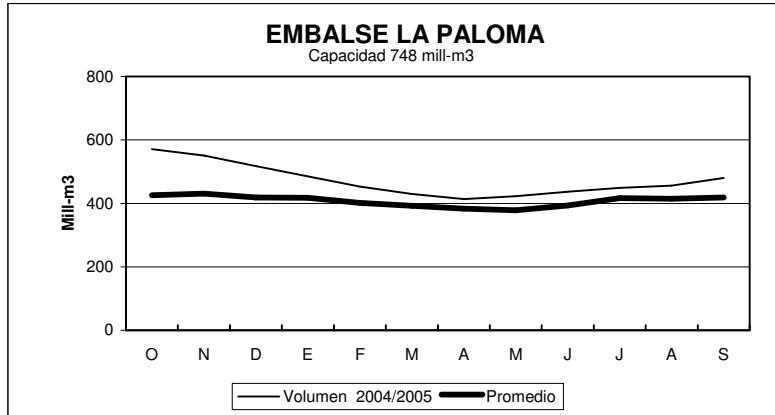
RESUMEN ANUAL

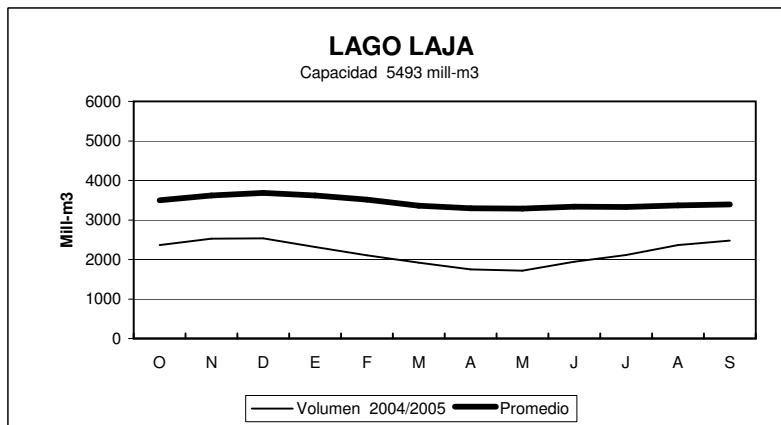
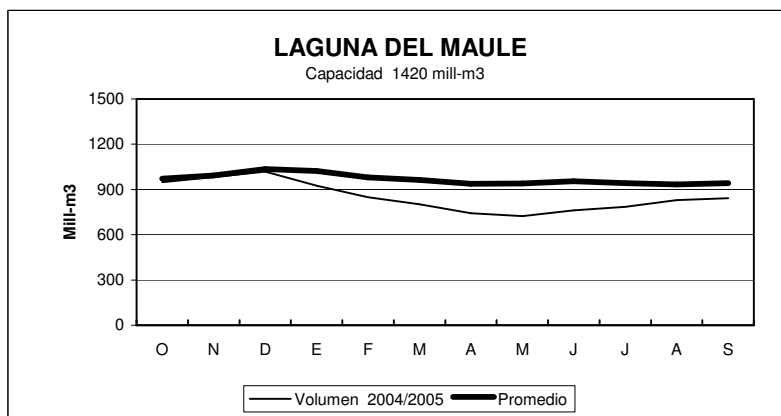
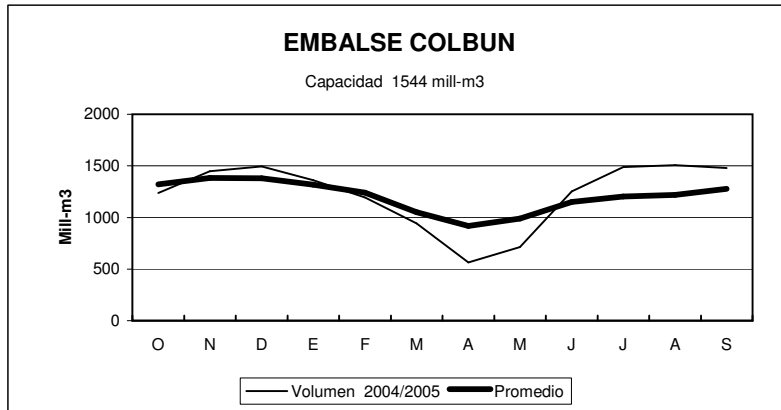
EMBALSE	2004 2005											
	O	N	D	E	F	M	A	M	J	J	A	S
Conchi	19	19	18	17	15	15	15	16	17	18	18	19
Lautaro	14	10	7	8	7	7	9	11	12	13	12	12
Santa Juana	153	147	137	130	125	121	119	124	129	135	137	138
La Laguna	38	36	33	31	30	25	26	25	27	29	31	32
Puclaro	190	179	162	153	142	134	128	133	137	140	140	141
Recoleta	93	89	83	77	72	68	65	69	73	75	77	80
La Paloma	571	551	518	485	453	430	414	423	437	449	456	480
Cogotí	85	81	75	66	60	56	53	54	58	61	63	73
Culimo	5.4	5.0		3.3	1.96	0.6		0.0	0.0	0.0	1.3	3.1
Corrales	50	50	49	47	40	33	31	31	32	32	37	42
Peñuelas	42	40	36	33	31	29	27	28	29	30	35	35
El Yeso	156	162	184	212	228	231	218	215	221	215	203	192
Rungue		1.8	1.3	0.8	0.4	0.2	0.1	0.1	0.6	1.2	2.0	2.1
Rapel	466	528	599	640	579	505	442	537	432	514	645	597
Colbún	1237	1447	1496	1361	1195	942	565	714	1253	1488	1506	1480
Lag. Maule	948	983	1018	924	849	802	743	723	761	786	829	843
Bullileo	60	60	38	40	16	1.3	0	19	44	60	60	60
Digua	220	220	170	91	28	6.5	4.0	28	105	160	219	220
Tutuvén	14	13	10.1	8.1	4	2.1	0	3	15	13	15	13
Coihueco	29	29	27	20	13	6	1.4	1.6	13.4	24	28.3	29
Lago Laja (&)	2365	2525	2532	2314	2108	1923	1748	1716	1943	2110	2365	2480

(&) : Volumen sobre cota 1300 msnm

ESTADO DE EMBALSES



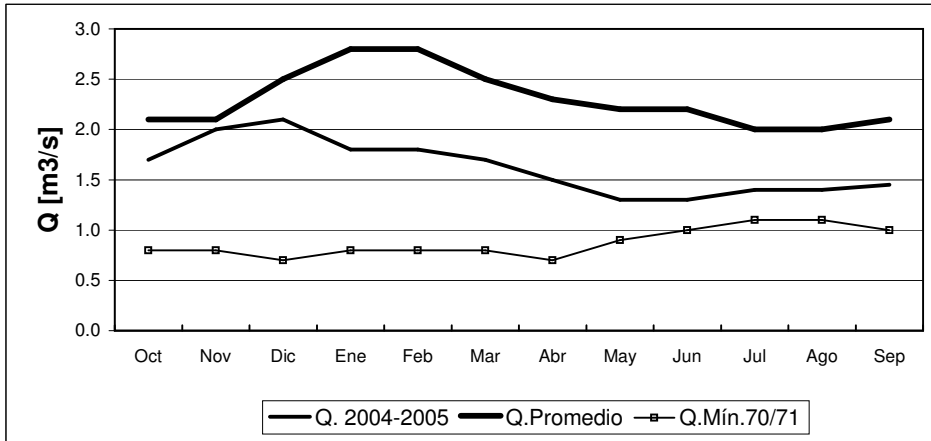




INFORME FLUVIOMETRICO
Caudales medios mensuales en m3/seg

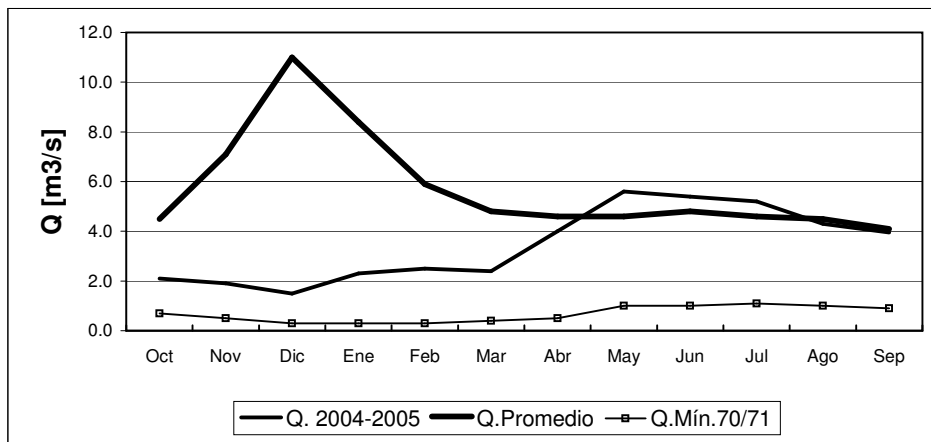
Sep-05

RIO COPIAPO EN LA PUERTA



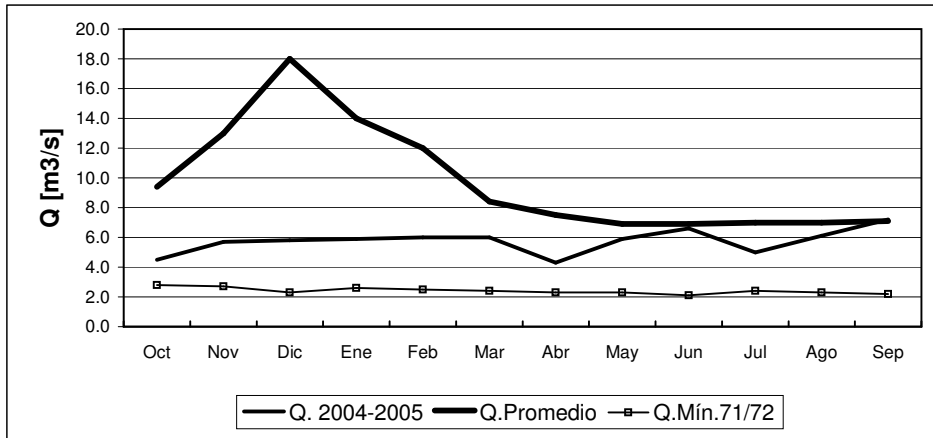
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	1.7	2.0	2.1	1.8	1.8	1.7	1.5	1.3	1.3	1.4	1.4	1.5
Q. Promedio	2.1	2.1	2.5	2.8	2.8	2.5	2.3	2.2	2.2	2.0	2.0	2.1
Q. Mín.70/71	0.8	0.8	0.7	0.8	0.8	0.8	0.7	0.9	1.0	1.1	1.1	1.0

RIO HUASCO EN ALGODONES



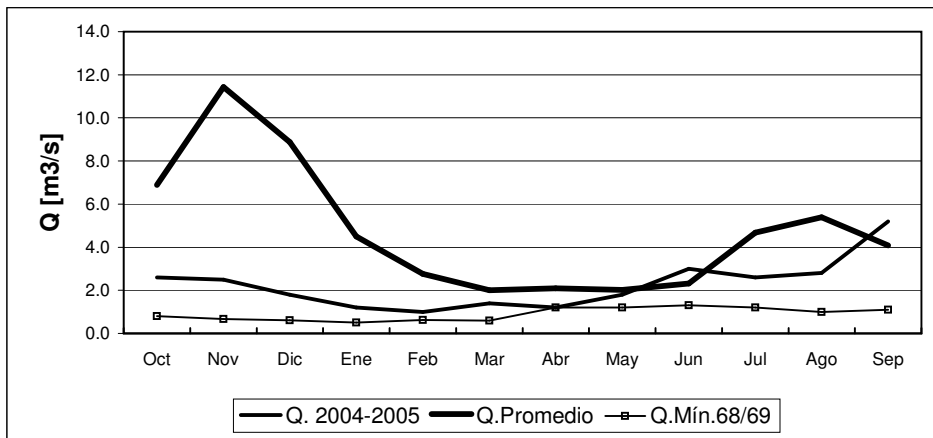
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	2.1	1.9	1.5	2.3	2.5	2.4	4.0	5.6	5.4	5.2	4.3	4.0
Q. Promedio	4.5	7.1	11.0	8.4	5.9	4.8	4.6	4.6	4.8	4.6	4.5	4.1
Q. Mín.70/71	0.7	0.5	0.3	0.3	0.3	0.4	0.5	1.0	1.0	1.1	1.0	0.9

RIO ELQUI EN ALGARROBAL



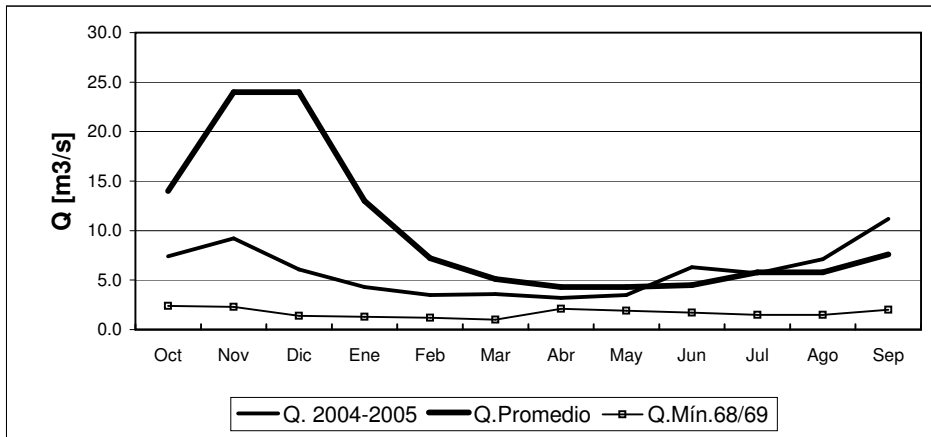
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	4.5	5.7	5.8	5.9	6.0	6.0	4.3	5.9	6.6	5.0	6.1	7.2
Q. Promedio	9.4	13.0	18.0	14.0	12.0	8.4	7.5	6.9	6.9	7.0	7.0	7.1
Q. Mín. 71/72	2.8	2.7	2.3	2.6	2.5	2.4	2.3	2.3	2.1	2.4	2.3	2.2

RIO GRANDE EN LAS RAMADAS



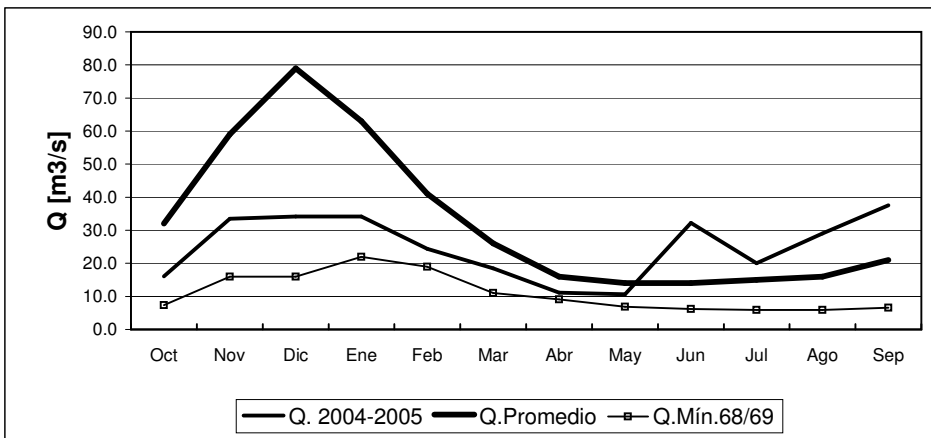
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	2.6	2.5	1.8	1.2	1.0	1.4	1.2	1.8	3.0	2.6	2.8	5.2
Q. Promedio	6.9	11.4	8.9	4.5	2.8	2.0	2.1	2.0	2.3	4.7	5.4	4.1
Q. Mín. 68/69	0.8	0.7	0.6	0.5	0.6	0.6	1.2	1.2	1.3	1.2	1.0	1.1

RIO CHOAPA EN CUNCUMEN



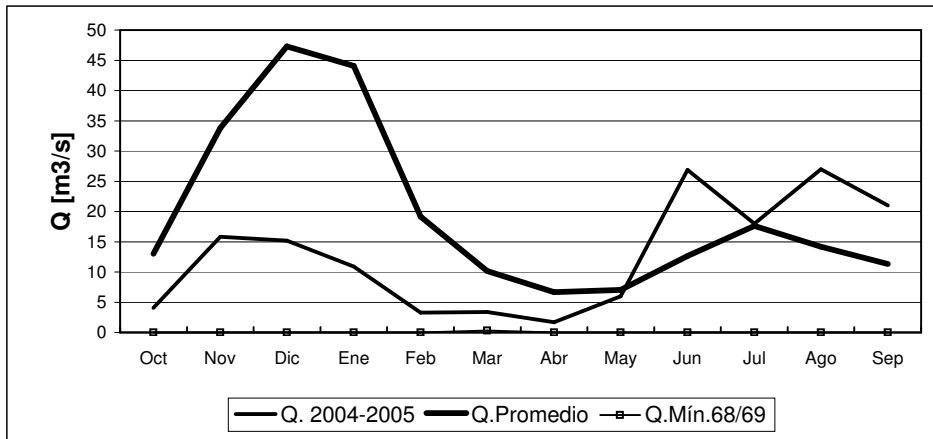
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	7.4	9.2	6.1	4.3	3.5	3.6	3.2	3.5	6.3	5.7	7.1	11.2
Q.Promedio	14.0	24.0	24.0	13.0	7.2	5.1	4.3	4.3	4.5	5.8	5.8	7.6
Q.Mín.68/69	2.4	2.3	1.4	1.3	1.2	1.0	2.1	1.9	1.7	1.5	1.5	2.0

RIO ACONCAGUA EN CHACABUQUITO



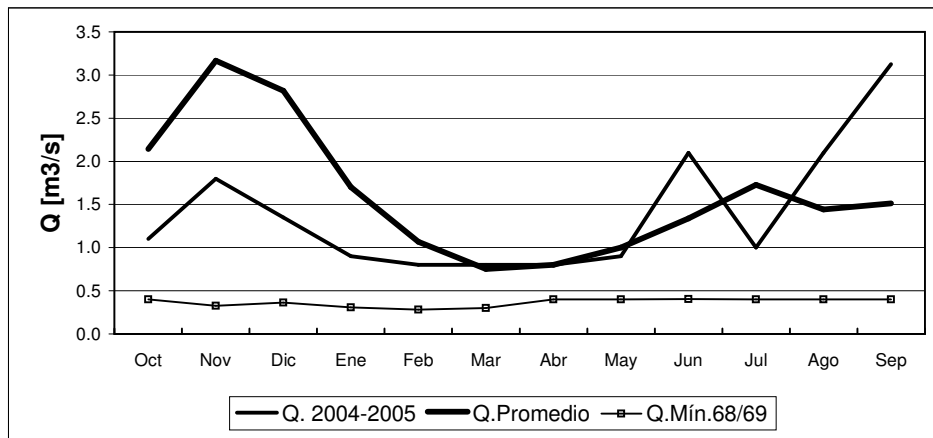
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	16.1	33.5	34.2	34.2	24.4	18.5	11.1	10.6	32.2	20.0	29.0	37.5
Q.Promedio	32.0	59.0	79.0	63.0	41.0	26.0	16.0	14.0	14.0	15.0	16.0	21.0
Q.Mín.68/69	7.4	16.0	16.0	22.0	19.0	11.0	9.1	6.9	6.2	5.9	5.9	6.6

RIO ACONCAGUA EN SAN FELIPE



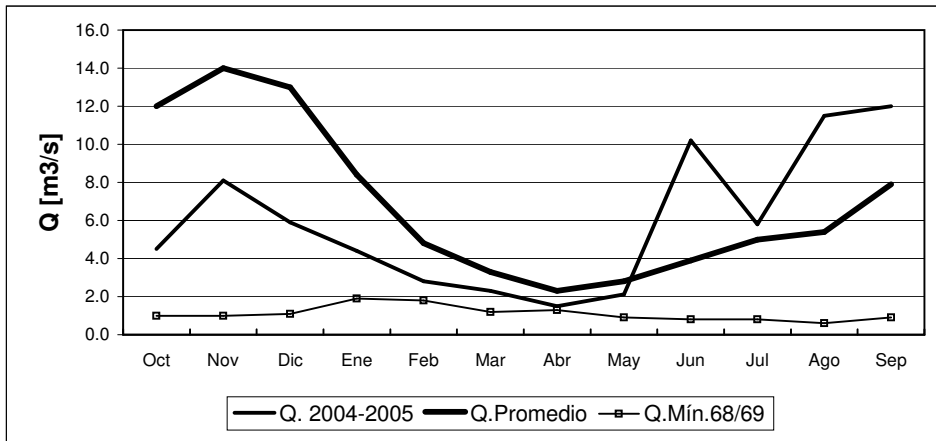
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	4.1	15.8	15.2	10.9	3.3	3.4	1.7	6.0	26.9	18.0	27	21
Q.Promedio	13.0	33.8	47.3	44.1	19.1	10.2	6.7	7.1	12.7	17.6	14.2	11.3
Q.Mín.68/69	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

ESTERO ARRAYAN EN LA MONTOSA



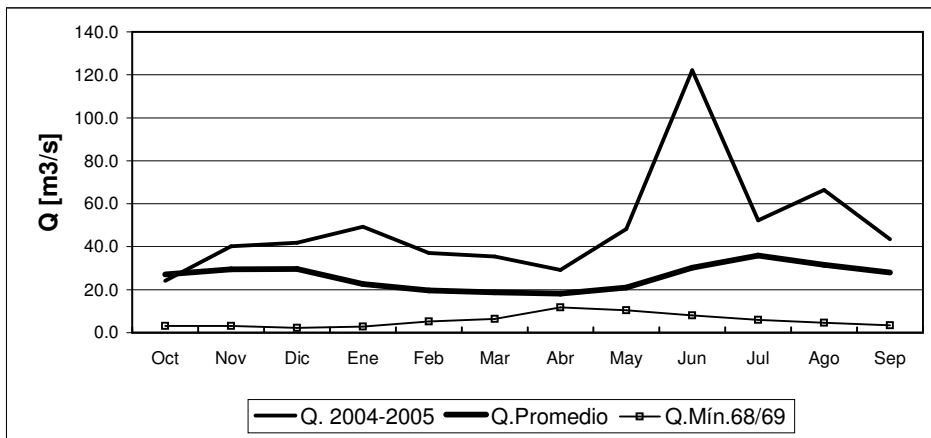
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	1.1	1.8	1.4	0.9	0.8	0.8	0.8	0.9	2.1	1.0	2.1	3.1
Q.Promedio	2.1	3.2	2.8	1.7	1.1	0.8	0.8	1.0	1.3	1.7	1.4	1.5
Q.Mín.68/69	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4

RIO MAPOCHO EN LOS ALMENDROS



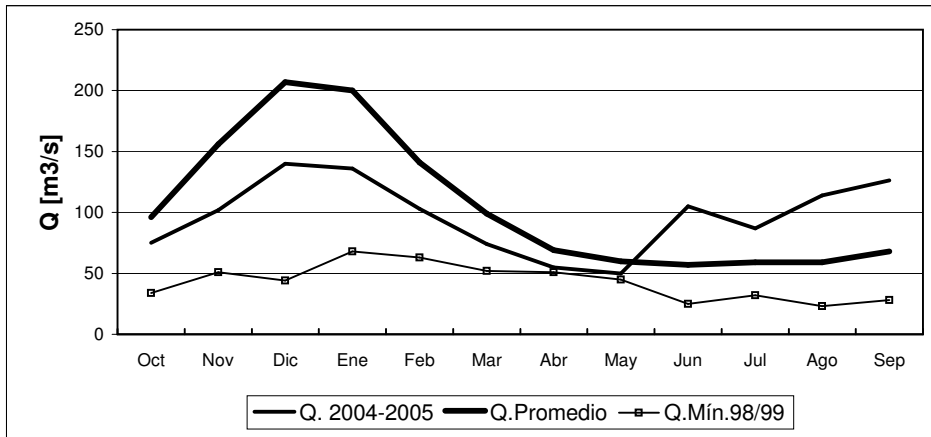
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	4.5	8.1	5.9	4.4	2.8	2.3	1.5	2.1	10.2	5.8	11.5	12.0
Q. Promedio	12.0	14.0	13.0	8.4	4.8	3.3	2.3	2.8	3.9	5.0	5.4	7.9
Q. Mín.68/69	1.0	1.0	1.1	1.9	1.8	1.2	1.3	0.9	0.8	0.8	0.6	0.9

RIO MAPOCHO EN RINCONADA DE MAIPU



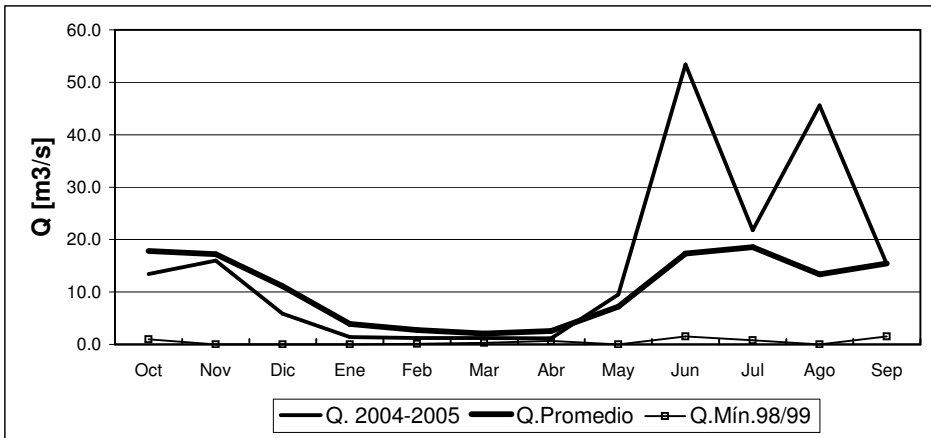
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	24.1	40.2	41.8	49.3	37.1	35.5	29.2	48.2	122.1	52.3	66.5	43.6
Q. Promedio	27.1	29.5	29.7	22.6	19.6	18.7	18.1	21.0	30.3	35.9	31.6	28.0
Q. Mín.68/69	3.2	3.1	2.2	2.9	5.3	6.5	11.8	10.4	8.1	6.0	4.6	3.4

RIO MAIPO EN EL MANZANO



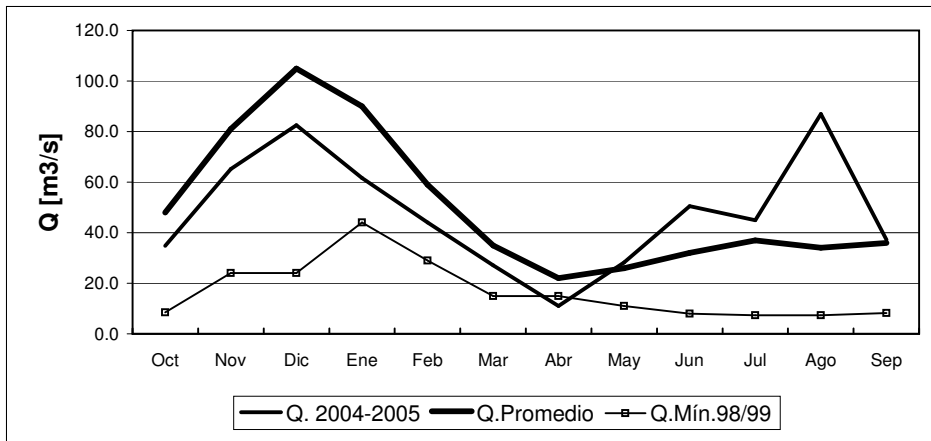
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	75	102	140	136	103	74	55	50	105	87	114	126
Q. Promedio	96	156	207	200	141	99	69	60	57	59	59	68
Q. Mín.98/99	34	51	44	68	63	52	51	45	25	32	23	28

RIO CLARO EN EL VALLE 2



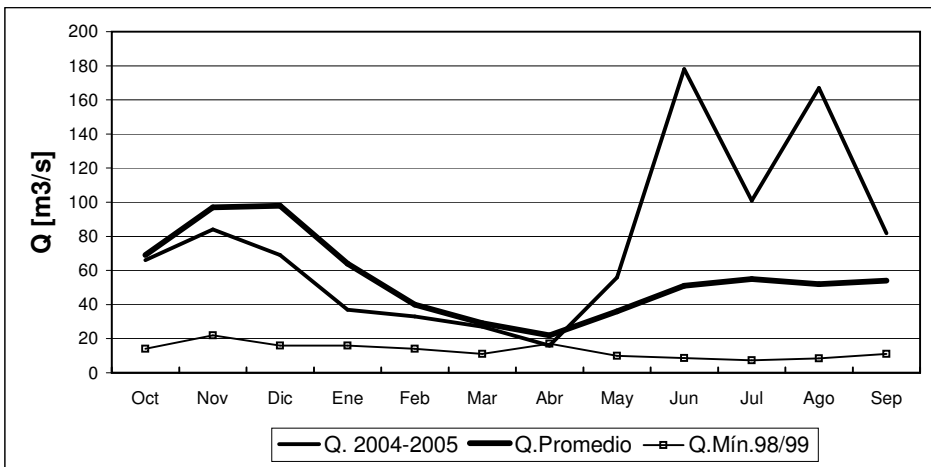
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	13.4	16.0	5.8	1.4	1.2	1.2	1.1	9.5	53.4	21.8	45.6	15.4
Q. Promedio	17.9	17.2	11.1	3.9	2.7	2.1	2.6	7.2	17.3	18.6	13.4	15.5
Q. Mín.98/99	1.0	0.0	0.0	0.0	0.1	0.3	0.7	0.0	1.5	0.8	0.0	1.5

RIO TINGUIRIRICA BAJO BRIONES



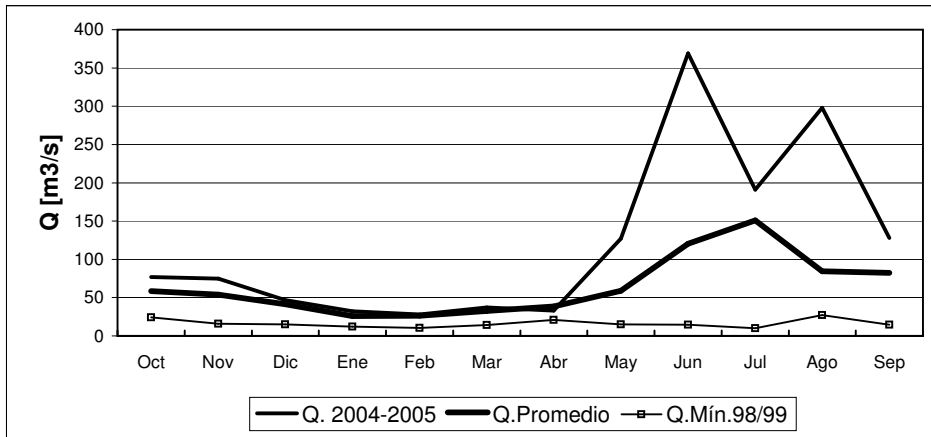
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	34.8	65.2	82.5	61.7	44.0	27.1	11.0	28.2	50.5	44.9	86.9	37.2
Q.Promedio	48.0	81.0	105.0	90.0	59.0	35.0	22.0	26.0	32.0	37.0	34.0	36.0
Q.Mín.98/99	8.5	24.0	24.0	44.0	29.0	15.0	15.0	11.0	8.0	7.4	7.4	8.2

RIO TENO DESPUES DE JUNTA



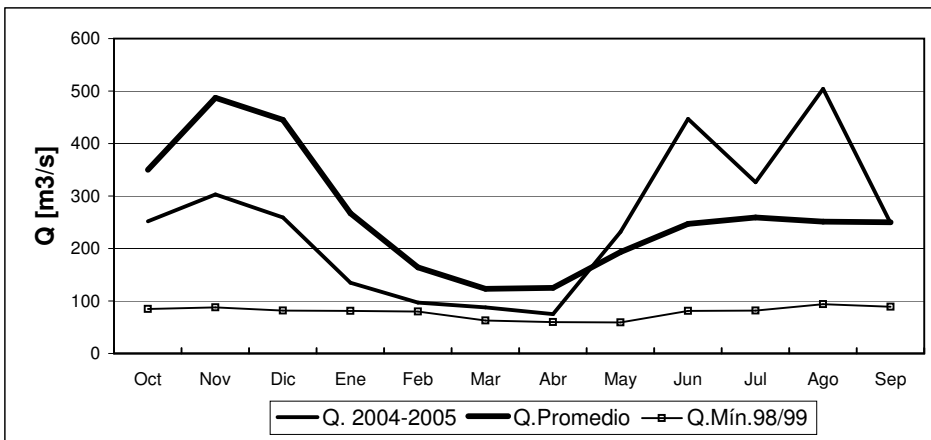
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	66	84	69	37	33	27	16	56	178	101	167	82
Q.Promedio	69	97	98	64	40	29	22	36	51	55	52	54
Q.Mín.98/99	14	22	16	16	14	11	17	10	8.6	7.4	8.4	11

RIO CLARO EN RAUQUEN



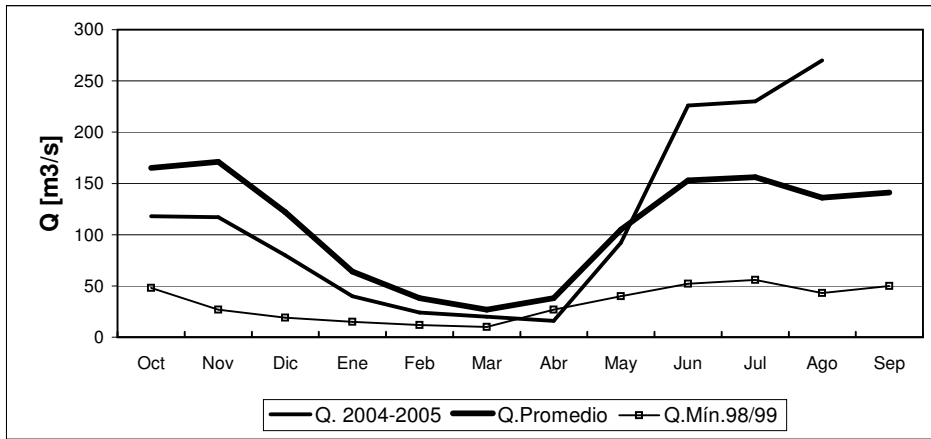
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	77	75	47	32	28	37	33	127	369	191	298	128
Q. Promedio	58	54	41	26	26	33	39	59	121	151	84	82
Q. Mín.98/99	24	16	15	12	10	14	21	15	15	10	27	15

RIO MAULE EN ARMERILLO



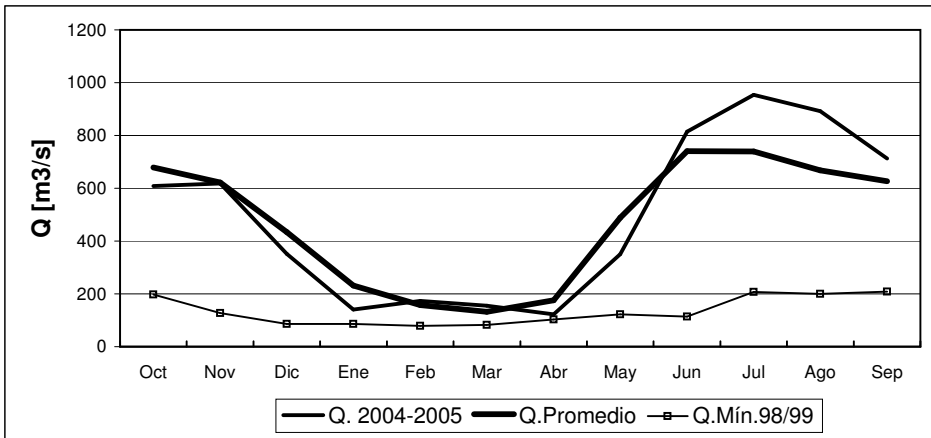
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	252	303	259	135	97	88	75	232	447	326	504	248
Q. Promedio	350	487	445	267	164	123	125	193	247	259	251	250
Q. Mín.98/99	85	88	82	81	80	63	60	59	81	82	94	89

RIO ÑUBLE EN SAN FABIAN



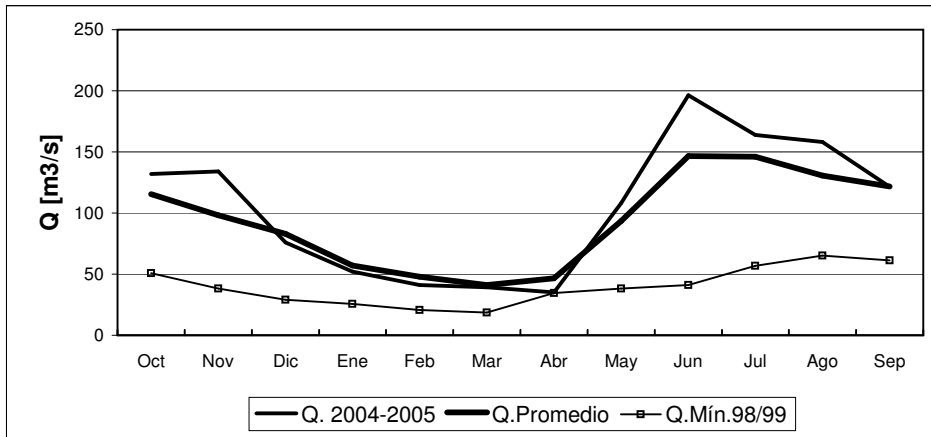
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	118	117	80	40	24	20	16	92	226	230	270	230
Q. Promedio	165	171	122	64	38	27	38	105	153	156	136	141
Q. Mín.98/99	48	27	19	15	12	10	27	40	52	56	43	50

RIO BIO-BIO EN RUCALHUE



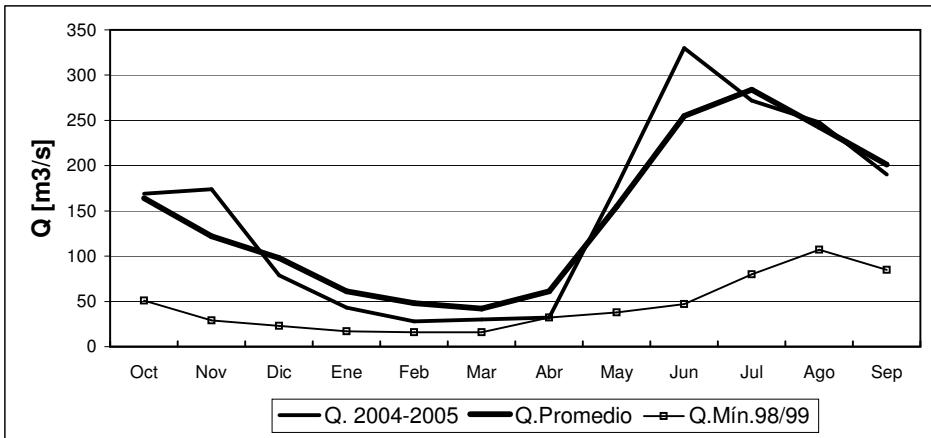
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	609	618	352	141	173	155	123	350	815	954	892	713
Q. Promedio	679	622	434	231	158	132	176	489	741	740	668	627
Q. Mín.98/99	197	127	86	86	79	82	103	122	114	207	200	208

RIO CAUTIN EN RARI-RUCA



	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	132	134	76	52	41	39	35	108	196	164	158	121
Q.Promedio	116	98	83	57	48	41	47	93	147	146	131	122
Q.Mín.98/99	51	38	29	26	21	19	35	38	41	57	65	61

RIO CAUTIN EN CAJON

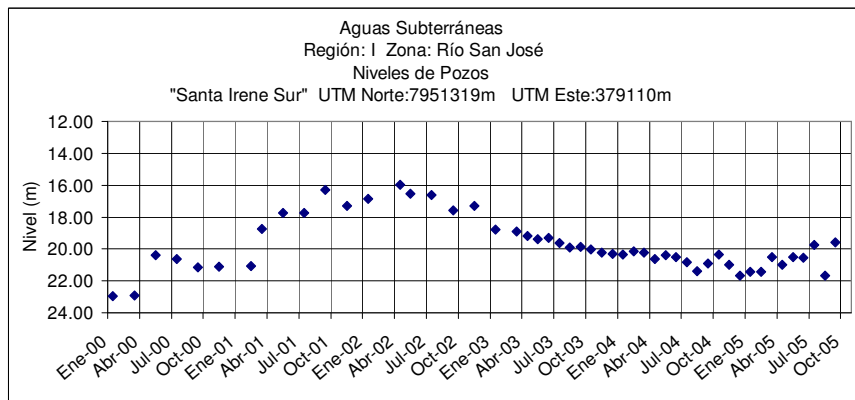


	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
Q. 2004-2005	169	174	79	43	28	30	32	177	330	272	248	190
Q.Promedio	164	122	98	61	48	42	61	155	255	284	243	201
Q.Mín.98/99	51	29	23	17	16	16	32	38	47	80	107	85

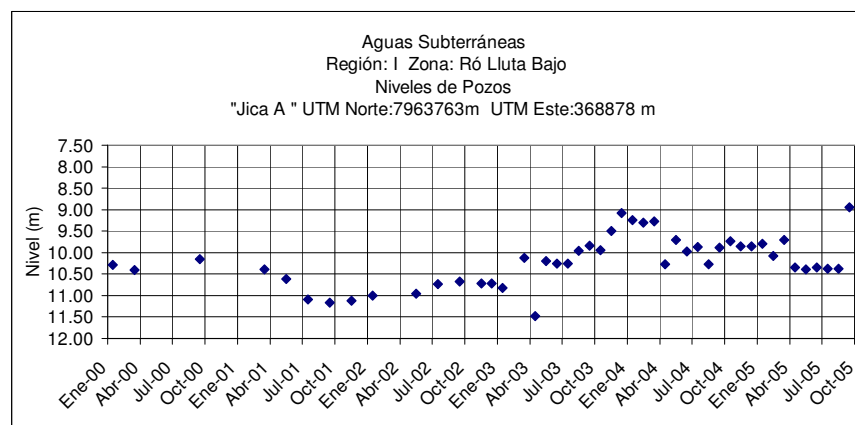
Informe de Aguas Subterráneas

Niveles de Pozos en metros

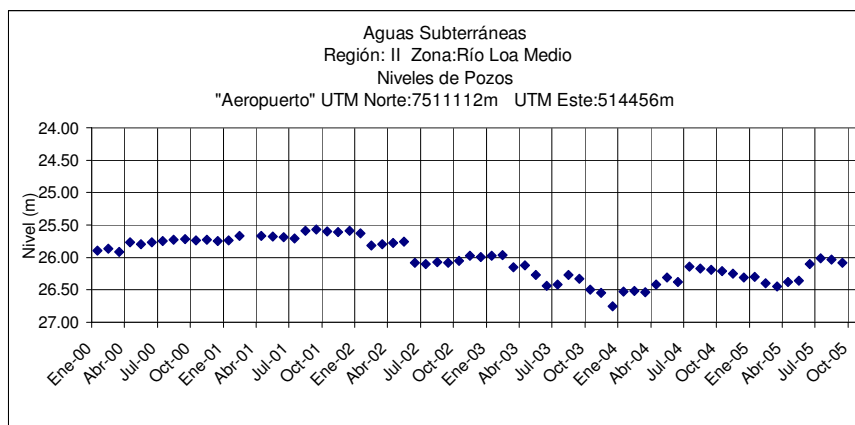
*Gráficos de últimos cinco años.



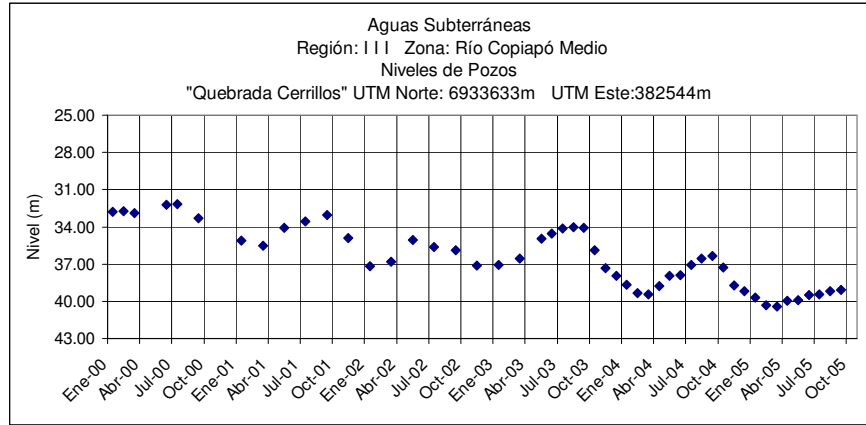
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	20.35	20.98	21.66	21.43	21.43	20.50	21.00	20.52	20.54	19.75	21.67	19.60



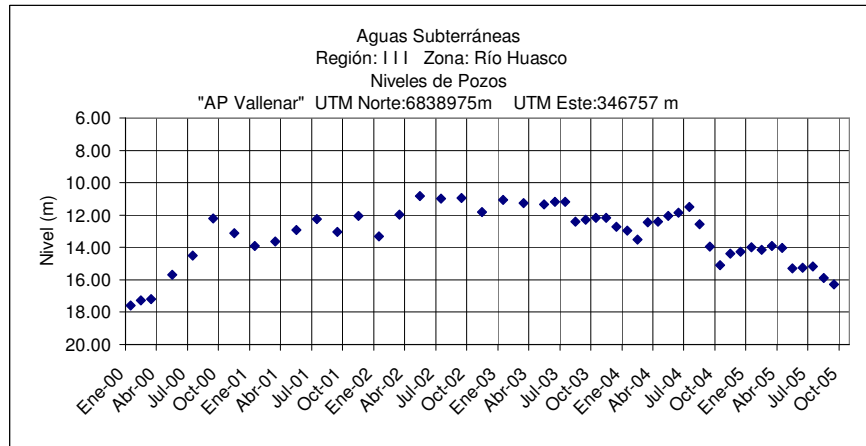
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	10.23	9.85	9.86	9.79	10.08	9.71	10.34	10.39	10.35	10.37	10.37	8.95



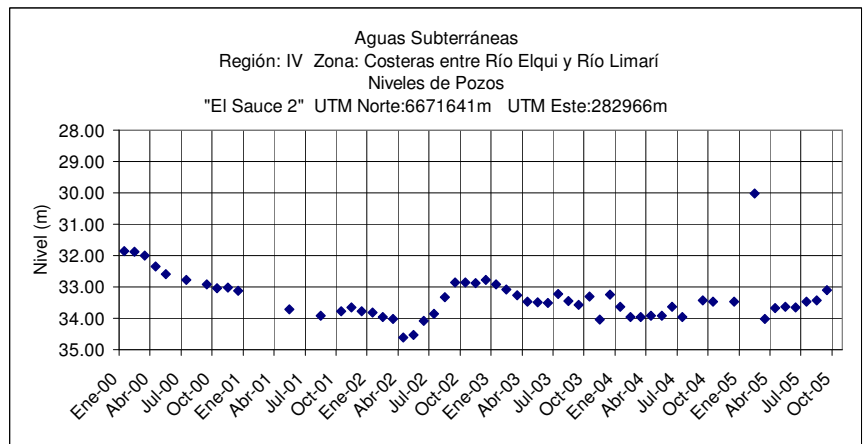
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	26.21	26.25	26.31	26.30	26.40	26.45	26.38	26.36	26.10	26.01	26.03	26.08



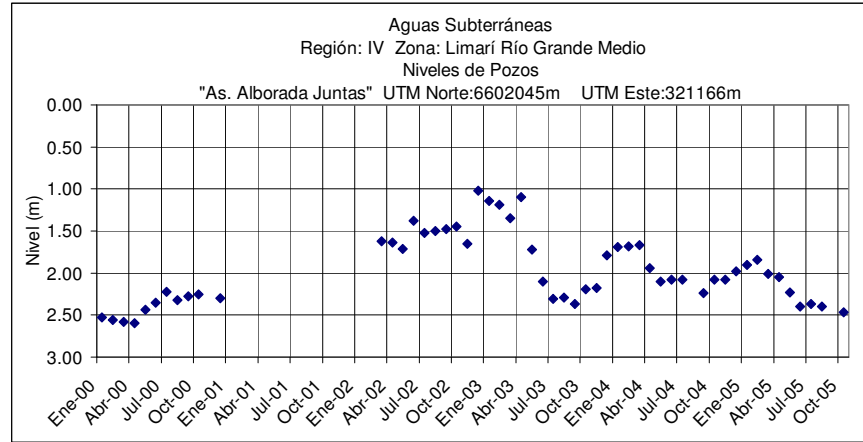
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	37.26	38.71	39.18	39.68	40.31	40.42	39.98	39.92	39.51	39.46	39.19	39.06



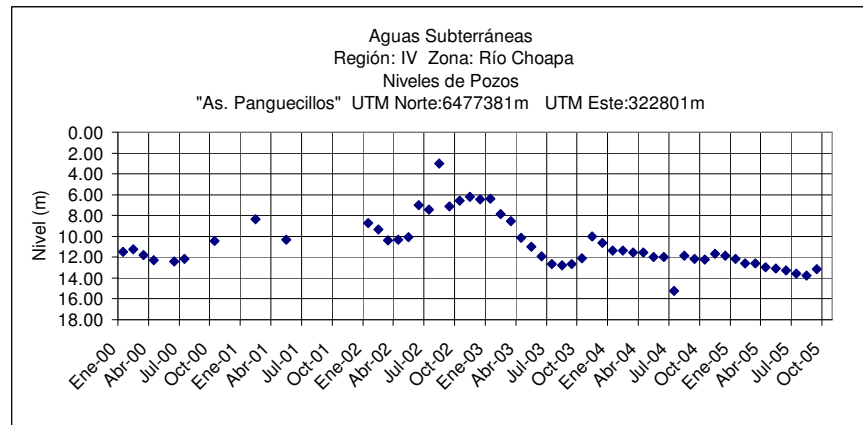
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	15.09	14.38	14.27	13.99	14.16	13.90	14.02	15.28	15.26	15.17	15.87	16.29



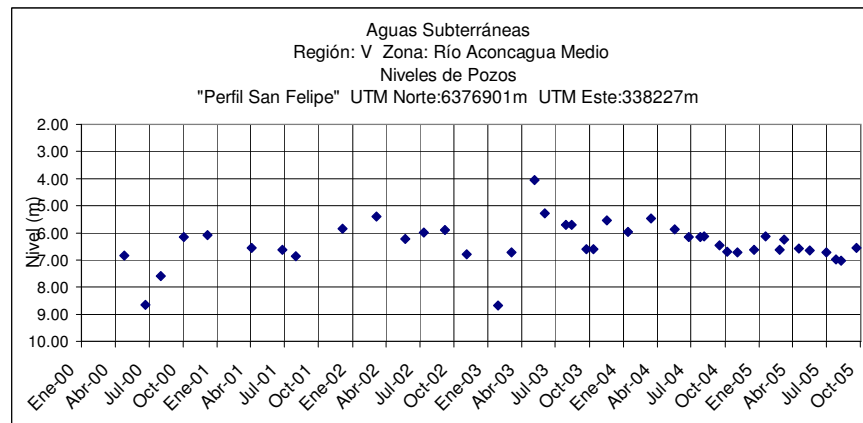
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	33.46	.	33.25	32.56	32.56	34.03	33.68	33.64	33.66	33.46	33.43	33.10



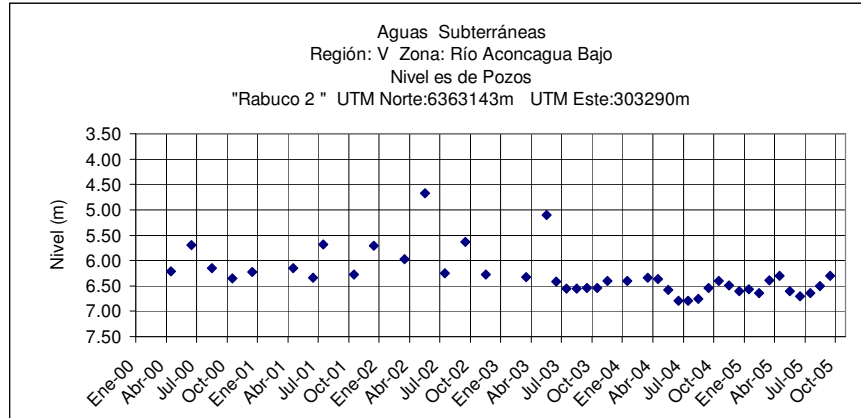
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	2.08	2.08	1.98	1.90	1.84	2.01	2.05	2.23	2.40	2.37	2.40	2.47



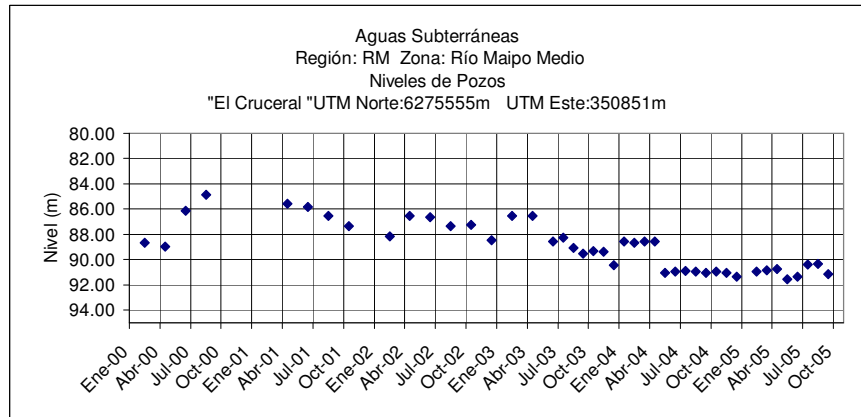
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	12.22	11.70	11.88	12.17	12.62	12.60	12.96	13.08	13.27	13.55	13.78	13.16



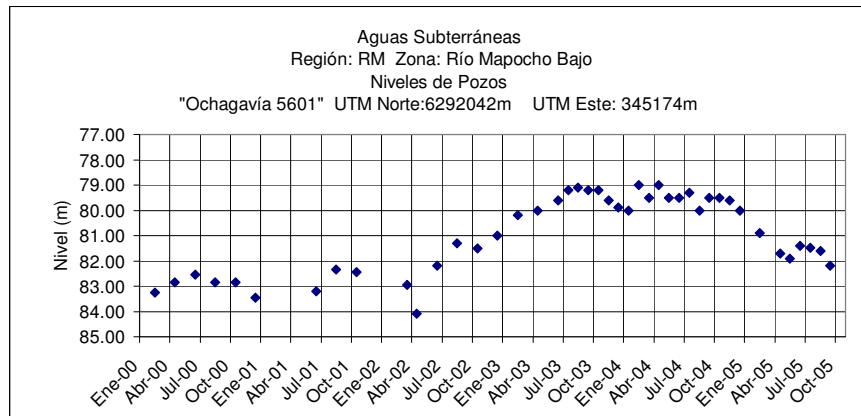
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	6.70	6.71	6.62	6.13	6.62	6.24	6.57	6.65	6.72	6.97	7.02	6.55



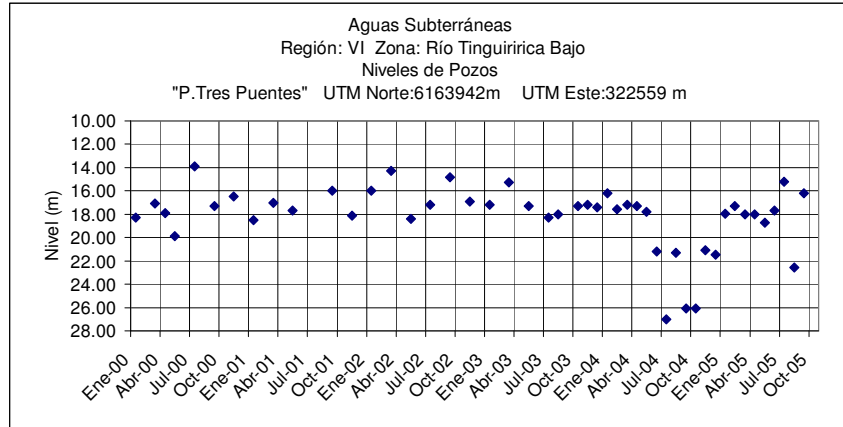
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	6.40	6.49	6.60	6.57	6.64	6.39	6.30	6.61	6.70	6.64	6.50	6.30



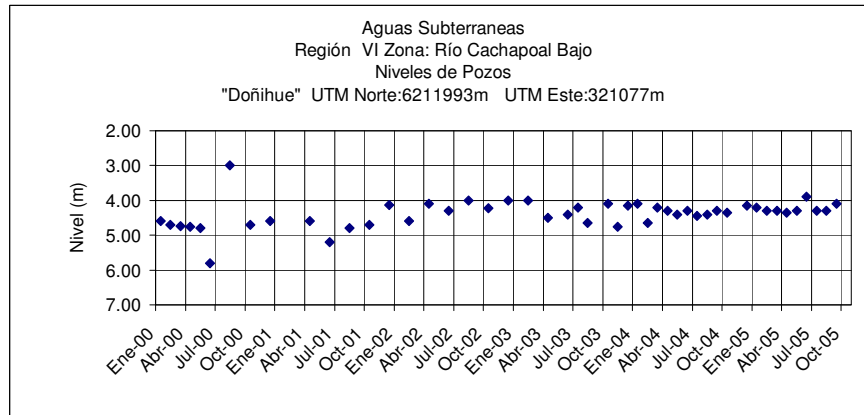
	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	90.95	91.05	91.35	.	90.95	90.85	90.75	91.55	91.35	90.40	90.35	91.15



	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	79.50	79.60	80.00	.	80.90	.	81.70	81.90	81.40	81.47	81.60	82.20



	Oct	Nov	Dic	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep
2004-2005	26.10	21.10	21.45	17.95	17.30	18.00	18.00	18.75	17.70	15.20	22.55	16.20



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