#### MINISTERIO DE OBRAS PUBLICAS DIRECCION GENERAL DE AGUAS

Boletín Nº : 348 Mes : Abril Año : 2007

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 boletin
- -Caudales en tiempo real

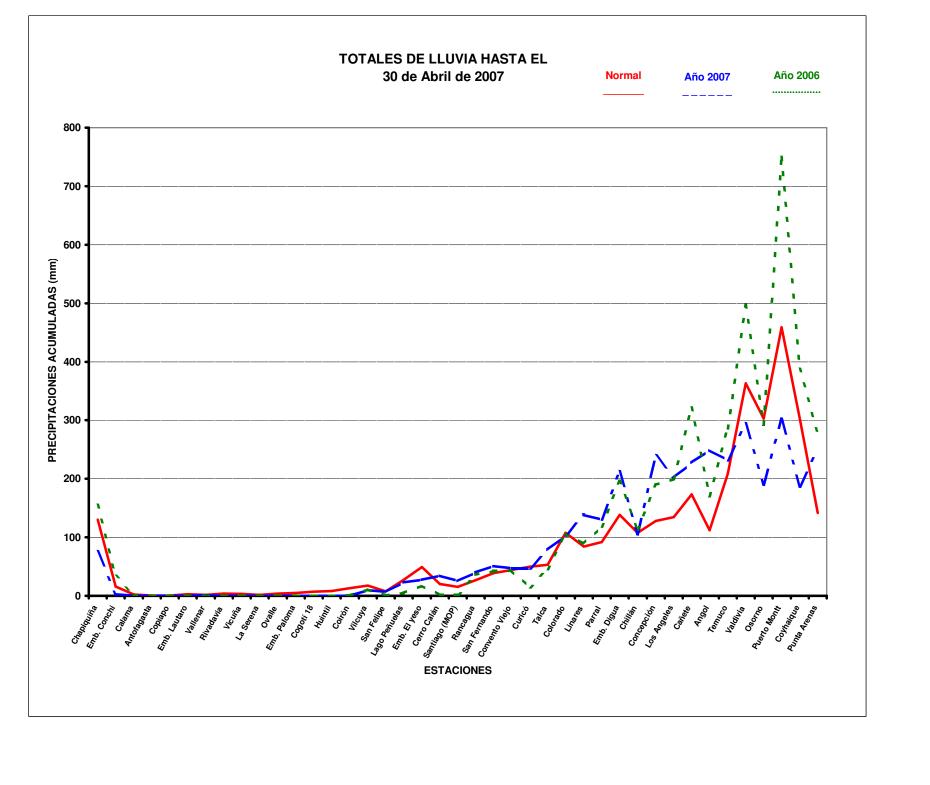
NOTA: Datos provisorios sujetos a modificaciones posteriores

INFORME PLUVIOMETRICO NACIONAL Nº04

		_TOTALES	AL 30	DE ABRIL_	
ESTACIONES	ABRIL	2007 (mm)	2006 (mm)	PROMEDIO (mm)	EXCESO O DÉFICIT (%)
CENTRAL CHAPIQUIÑA	0 0	76.1	155.5	130.2*	- 42
EMBALSE CONCHI	0.0	3.0	33.2	15.7*	- 81
CALAMA	0.0	0.0	0.7	2.0	-100
ANTOFAGASTA	0.0	0.0	0.0	0.6	-100
COPIAPÓ	0.0	0.0	0.0	0.6	-100
EMBALSE LAUTARO	0.0	0.0	0.0	2.5	-100
VALLENAR	1.0	1.0	0.0	1.7	- 42
RIVADAVIA	0.0	0.0	0.0	3.9	-100
VICUÑA	0.0	0.0	0.0	3.2	-100
LA SERENA	0.0	0.0	0.0	1.5	-100
OVALLE	0.0	0.0	0.0	3.7	-100
EMBALSE PALOMA	0.0	0.0	0.0	5.0	-100
COGOTÍ 18	0.0	0.0	0.0	7.2	-100
HUINTIL	0.0	0.0	0.0	8.3	-100
COIRÓN	0.0	0.0	0.0	12.9	-100
VILCUYA	0.0	10.0	11.0	17.4	- 43
SAN FELIPE	0.0	6.4	0.3	7.8	- 18
LAGO PEÑUELAS	0.0	23.0	5.0	27.6	- 17
EMBALSE EL YESO	0.5	27.5	16.8	49.0	- 44
CERRO CALÁN	0.0	34.4	1.5	20.1	71
SANTIAGO (MOP)	0.0	25.2	1.9	15.5	63
RANCAGUA	0.0	39.7	36.0	27.0	47
SAN FERNANDO	0.0	51.1	42.1	39.1	31
CONVENTO VIEJO	3.0	47.0	43.0	44.2	6
CURICO	0.0	46.9	14.5	49.9	- 6
TALCA	16.8	78.8	45.8	53.2	48
COLORADO	25.1	103.6	106.0	107.9	- 4
LINARES	37.3	138.6	89.0	84.2	65
PARRAL	64.5	130.0	118.1	92.1	41
EMBALSE DIGUA	81.4	212.8	196.4	138.6	54
CHILLÁN	52.7	104.8	113.0	107.9	- 3
CONCEPCIÓN	140.2	239.4	189.5	127.7	87
LOS ÁNGELES	132.9	201.9	199.4	134.5	50
CAÑETE	160.3	227.4	321.7	173.3	31
ANGOL	198.4	248.6	170.5	112.3	121
TEMUCO	129.1	231.1	286.1	209.0	11
VALDIVIA	182.6	295.0	497.3	362.8	- 19
OSORNO	112.0	189.9	292.6	303.0	- 37
PUERTO MONTT	138.9	302.6	749.9	458.8	- 34
COYHAIQUE	133.2	186.2	387.6	302.4	- 38
PUNTA ARENAS	108.9	250.3	277.9	141.4	77

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

 $<sup>\</sup>star$  : Promedios calculados para períodos inferiores a 30 años Valores expresados en milímetros (1 mm = 1 lt x m2)



#### **ESTADO DE EMBALSES**

PROMEDIO

Ultimo día del mes (Volúmenes en mill-m³)

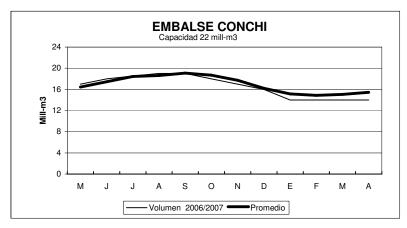
				TROPIDDIO		
				HISTORICO	Abr	il
EMBALSE	REGION	CUENCA	CAPACIDAD	MENSUAL	2007	2006
Conchi	II	Loa	22	15	14	17
Lautaro	III	Copiapó	35	12	0	11
Santa Juana	III	Huasco	166	119	118	166
La Laguna	IV	Elqui	40	22	30	32
Puclaro	IV	Elqui	200	117	188	200
Recoleta	IV	Limarí	100	59	67	94
La Paloma	IV	Limarí	748	387	452	536
Cogotí	IV	Limarí	150	71	43	82
Culimo	IV	Quilimarí	10	2.6	0.0	0.1
Corrales	IV	Illapel	50	38	40	48
Peñuelas	V	Peñuelas	95	21	18	21
El Yeso	RM	Maipo	256	191	206	243
Rungue	RM	Maipo	2.2	0.3	0.3	0.2
Rapel	VI	Rapel	695	497	420	479
Colbún	VII	Maule	1544	900	584	902
Lag. Maule	VII	Maule	1420	937	1333	1127
Bullileo	VII	Maule	60	2.2	0	0
Digua	VII	Maule	220	30	3.2	8.6
Tutuvén	VII	Maule	15	1.7	4.7	3.4
Coihueco	VIII	Itata	29	4.3	1.8	3.9
Lago Laja (&	) VIII	Bio-Bio	5582	3352	2775	2566

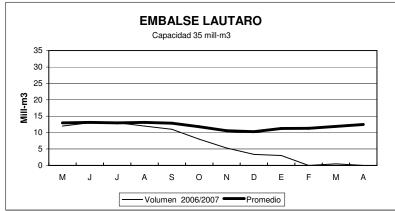
#### RESUMEN ANUAL

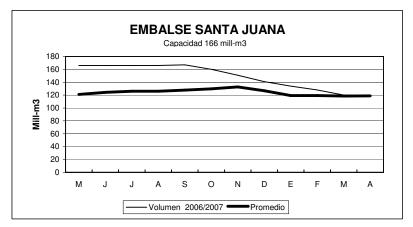
2006-2007												
EMBALSE	M	J	J	A	S	0	N	D	E	F	М	A
Conchi	17	18	19	19	19	18	17	16	14	14	14	14
Lautaro	12	13	13	12	11	8	5	3	3	0	0.5	0
Santa Juana	166	166	166	166	167	160	151	141	134	128	120	118
La Laguna	34	33	32	31	32	35	35	35	33	29	28	30
Puclaro	200	196	197	197	192	189	192	195	196	197	191	188
Recoleta	95	97	97	95	91	87	82	79	75	71	68	67
La Paloma	539	551	575	591	590	587	575	549	517	489	465	452
Cogotí	79	79	83	85	82	81	75	67	59	53	47	43
Culimo	0.4	0.4	0.7	1.3	1.4	1.6	1.7	1.6	1.0	0.4	0.3	0.0
Corrales	48	48	50	51	50	50	50	49	48	47	43	40
Peñuelas	20	21	30	34	33	32	29	26	24	24	20	18
El Yeso	241	235	230	215	206	178	176	203	214	213	212	206
Rungue	0.2	0.3	2.0	2.0	2.0	2.0	1.8	1.3	1.0	0.7	0.4	0.3
Rapel	511	605	605	622	599	636	626	625	617	613	500	420
Colbún	654	1078	1522	1491	1525	1555	1544	1544	1439	1308	945	584
Lag. Maule	1115	1159	1202	1234	1254	1283	1332	1408	1420	1411	1376	1333
Bullileo	7	30	60	60	60	60	60	60	50	35	6.5	0
Digua	2.7	93	179	219	220	220	220	155	85	29	4	3.2
Tutuvén	3.0	10	11	12	12	14	15	10	6	4	2	4.7
Coihueco	6	10	16	27	29	30	29	27	20	13.4	5.9	1.8
Lago Laja (&)	2365	2620	2989	3083	3224	3421	3590	3689	3522	3282	3024	2775

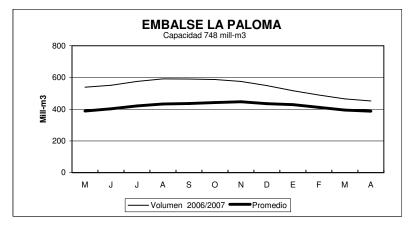
( & ): Volumen sobre cota 1300 msnm

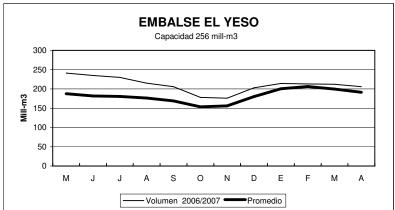
#### ESTADO DE EMBALSES

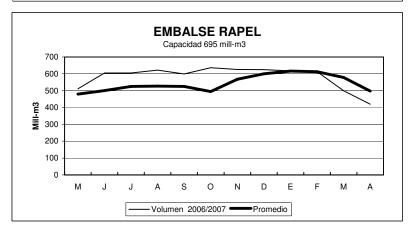


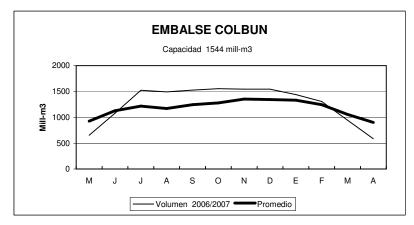


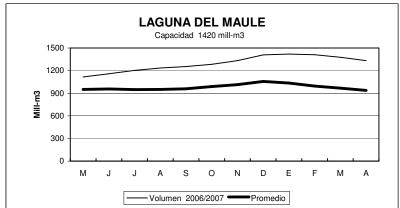


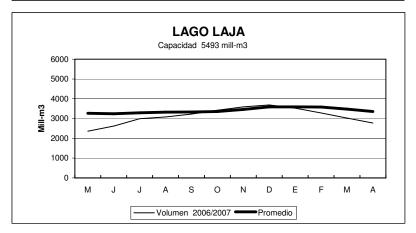








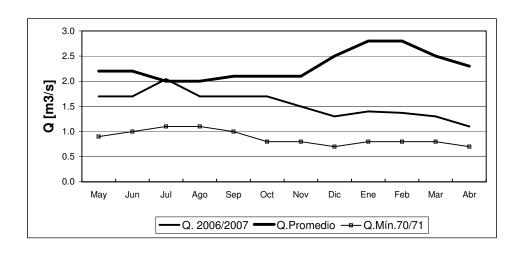




## INFORME FLUVIOMETRICO

Caudales medios mensuales en m3/seg

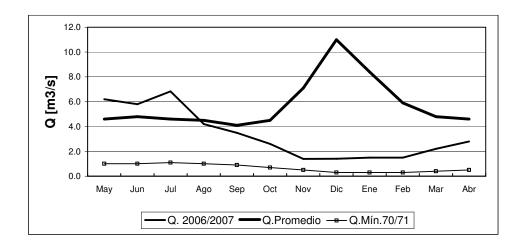
#### RIO COPIAPO EN LA PUERTA



Q. 2006/2007 Q.Promedio Q.Mín.70/71

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
1.7	1.7	2.0	1.7	1.7	1.7	1.5	1.3	1.4	1.4	1.3	1.1
2.2	2.2	2.0	2.0	2.1	2.1	2.1	2.5	2.8	2.8	2.5	2.3
0.9	1.0	1.1	1.1	1.0	8.0	8.0	0.7	0.8	8.0	8.0	0.7

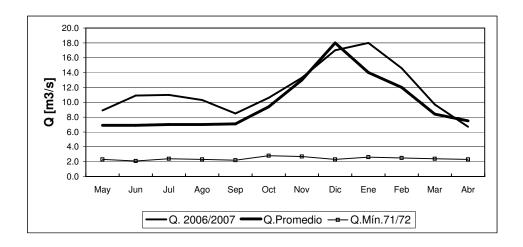
## RIO HUASCO EN ALGODONES



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
Q. 2006/2007	6.2	5.8	6.8	4.2	3.5	2.6	1.4	1.4	1.5	1.5	2.2	2.8
Q.Promedio	4.6	4.8	4.6	4.5	4.1	4.5	7.1	11.0	8.4	5.9	4.8	4.6
Q.Mín.70/71	1.0	1.0	1.1	1.0	0.9	0.7	0.5	0.3	0.3	0.3	0.4	0.5

Abr-07

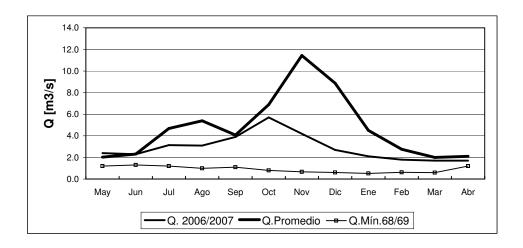
#### RIO ELQUI EN ALGARROBAL



Q. 2006/2007 Q.Promedio Q.Mín.71/72

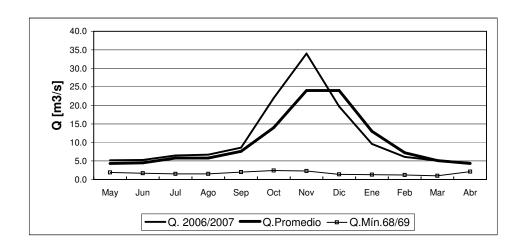
May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
8.9	10.9	11.0	10.3	8.5	10.6	13.3	17.0	18.0	14.6	9.7	6.7
6.9	6.9	7.0	7.0	7.1	9.4	13.0	18.0	14.0	12.0	8.4	7.5
2.3	2.1	2.4	2.3	2.2	2.8	2.7	2.3	2.6	2.5	2.4	2.3

#### RIO GRANDE EN LAS RAMADAS



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
Q. 2006/2007	2.4	2.3	3.1	3.1	3.9	5.7	4.2	2.7	2.1	1.8	1.7	1.7
Q.Promedio	2.0	2.3	4.7	5.4	4.1	6.9	11.4	8.9	4.5	2.8	2.0	2.1
Q.Mín.68/69	1.2	1.3	1.2	1.0	1.1	8.0	0.7	0.6	0.5	0.6	0.6	1.2

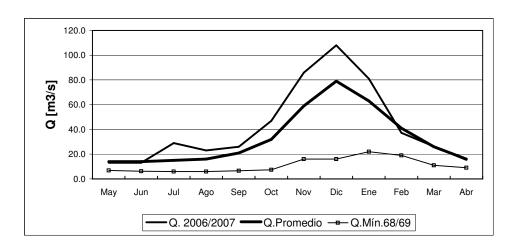
#### RIO CHOAPA EN CUNCUMEN



Q. 2006/2007 Q.Promedio Q.Mín.68/69

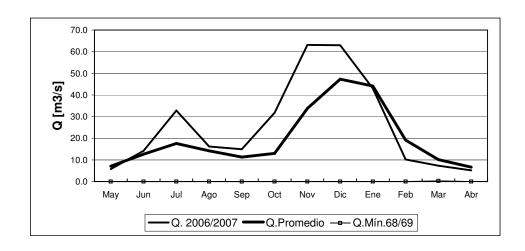
May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
5.2	5.3	6.5	6.7	8.6	22.0	34.0	19.7	9.6	6.1	5.1	4.5
4.3	4.5	5.8	5.8	7.6	14.0	24.0	24.0	13.0	7.2	5.1	4.3
1.9	1.7	1.5	1.5	2.0	2.4	2.3	1.4	1.3	1.2	1.0	2.1

## RIO ACONCAGUA EN CHACABUQUITO



	iviay	Jun	Jui	Ago	Sep	OCI	NOV	DIC	⊏ne	reb	iviar	ADr
Q. 2006/2007	13.0	13.0	29.0	23.0	26.0	47.0	85.8	108.0	81.0	37.2	26.3	15.4
Q.Promedio	14.0	14.0	15.0	16.0	21.0	32.0	59.0	79.0	63.0	41.0	26.0	16.0
Q.Mín.68/69	6.9	6.2	5.9	5.9	6.6	7.4	16.0	16.0	22.0	19.0	11.0	9.1

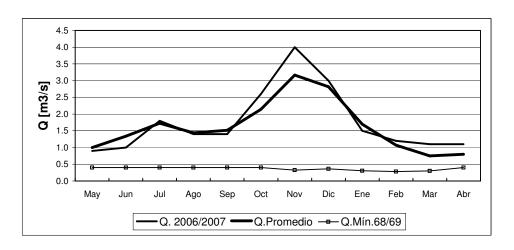
#### RIO ACONCAGUA EN SAN FELIPE



Q. 2006/2007 Q.Promedio Q.Mín.68/69

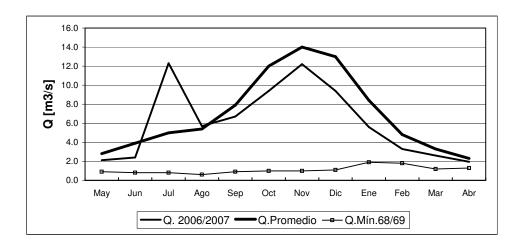
May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
5.8	14.2	32.8	16.2	14.9	31.8	63.1	63.0	43.0	10.2	7.3	5.2
7.1	12.7	17.6	14.2	11.3	13.0	33.8	47.3	44.1	19.1	10.2	6.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0

## ESTERO ARRAYAN EN LA MONTOSA



	iviay	Jun	Jui	Ago	Sep	OCI	NOV	DIC	⊏ne	reb	war	ADI
Q. 2006/2007	0.9	1.0	1.8	1.4	1.4	2.6	4.0	3.0	1.5	1.2	1.1	1.1
Q.Promedio	1.0	1.3	1.7	1.4	1.5	2.1	3.2	2.8	1.7	1.1	8.0	0.8
Q.Mín.68/69	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4

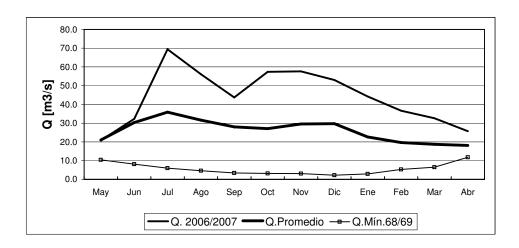
#### RIO MAPOCHO EN LOS ALMENDROS



Q. 2006/2007 Q.Promedio Q.Mín.68/69

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2.1	2.4	12.3	5.7	6.7	9.4	12.2	9.4	5.6	3.3	2.6	2.0
2.8	3.9	5.0	5.4	7.9	12.0	14.0	13.0	8.4	4.8	3.3	2.3
0.9	0.8	0.8	0.6	0.9	1.0	1.0	1.1	1.9	1.8	1.2	1.3

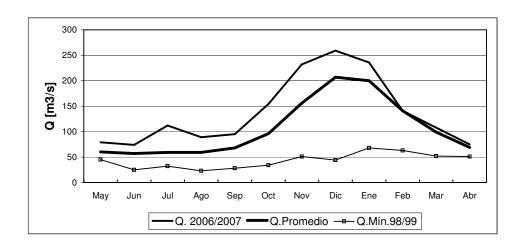
## RIO MAPOCHO EN RINCONADA DE MAIPU



Q. 2006/2007 Q.Promedio Q.Mín.68/69

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
20.8	32.3	69.4	56.1	43.7	57.4	57.6	53.0	44.2	36.6	32.6	25.7
21.0	30.3	35.9	31.6	28.0	27.1	29.5	29.7	22.6	19.6	18.7	18.1
10.4	8.1	6.0	4.6	3.4	3.2	3.1	2.2	2.9	5.3	6.5	11.8

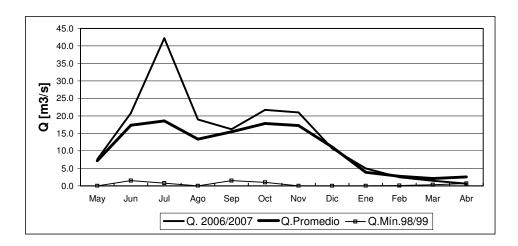
#### RIO MAIPO EN EL MANZANO



Q. 2006/2007 Q.Promedio Q.Mín.98/99

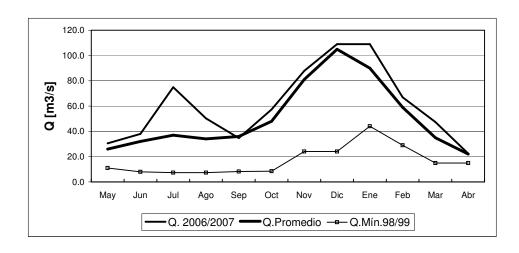
мау	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
79	73.8	112	89	95	154	232	259	236	141	108	75
60	57	59	59	68	96	156	207	200	141	99	69
45	25	32	23	28	34	51	44	68	63	52	51

#### **RIO CLARO EN EL VALLE 2**



Feb May Jun Jul Ago Sep Oct Nov Dic Ene Mar Abr Q. 2006/2007 7.6 20.8 42.2 16.2 21.7 21.0 10.7 5.0 2.5 0.7 19.0 1.5 Q.Promedio 7.2 18.6 2.6 17.3 13.4 15.5 17.9 17.2 3.9 2.7 2.1 11.1 Q.Mín.98/99 0.0 1.5 0.8 0.0 1.5 1.0 0.0 0.0 0.0 0.1 0.3 0.7

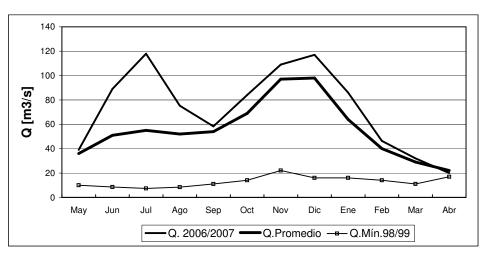
## **RIO TINGUIRIRICA BAJO BRIONES**



Q. 2006/2007 Q.Promedio Q.Mín.98/99

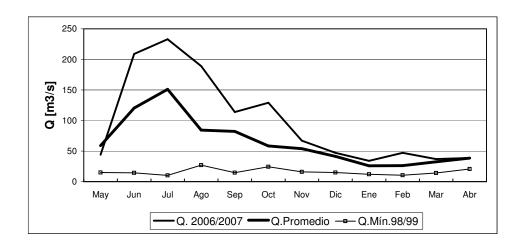
May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
30.5	38.0	74.9	50.3	34.7	57.3	87.9	109.0	109.0	67.0	47.4	22.4
26.0	32.0	37.0	34.0	36.0	48.0	81.0	105.0	90.0	59.0	35.0	22.0
11.0	8.0	7.4	7.4	8.2	8.5	24.0	24.0	44.0	29.0	15.0	15.0

# RIO TENO DESPUES DE JUNTA



	way	Jun	Jui	Ago	Sep	Oct	NOV	DIC	⊨ne	reb	war	Abr
Q. 2006/2007	39	89	118	75	58	84	109	117	86	46	32	20
Q.Promedio	36	51	55	52	54	69	97	98	64	40	29	22
Q.Mín.98/99	10	8.6	7.4	8.4	11	14	22	16	16	14	11	17

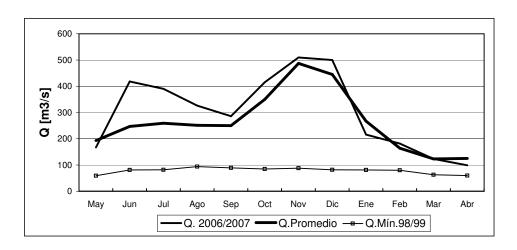
## RIO CLARO EN RAUQUEN



Q. 2006/2007 Q.Promedio Q.Mín.98/99

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
44	209	233	189	114	129	67	47	34	47	37	39
59	121	151	84	82	58	54	41	26	26	33	39
15	15	10	27	15	24	16	15	12	10	14	21

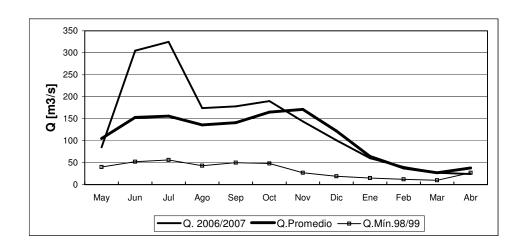
# RIO MAULE EN ARMERILLO (R. N.)



Q. 2006/2007
Q.Promedio
Q.Mín.98/99

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
167	418	390	326	286	415	510	500	216	182	123	99
193	247	259	251	250	350	487	445	267	164	123	125
59	81	82	94	89	85	88	82	81	80	63	60

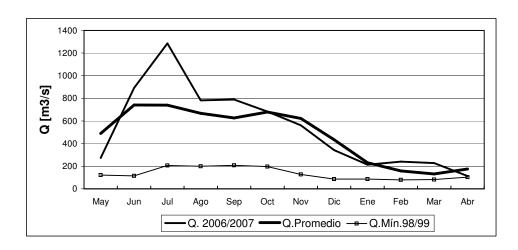
RIO ÑUBLE EN SAN FABIAN



Q. 2006/2007 Q.Promedio Q.Mín.98/99

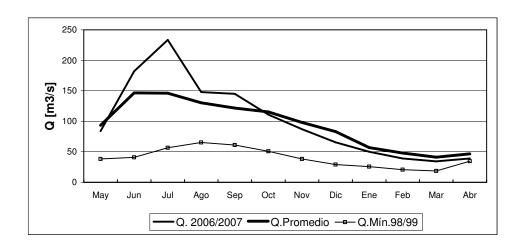
May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
85	305	325	174	178	190	144	101	60	40	27	24
105	153	156	136	141	165	171	122	64	38	27	38
40	52	56	43	50	48	27	19	15	12	10	27

## RIO BIO-BIO EN RUCALHUE



	iviay	Jun	Jui	Ago	Sep	OCI	NOV	DIC	⊏ne	reb	iviar	ADI
Q. 2006/2007	273	892	1285	782	789	683	561	342	214	240	227	113
Q.Promedio	489	741	740	668	627	679	622	434	231	158	132	176
Q.Mín.98/99	122	114	207	200	208	197	127	86	86	79	82	103

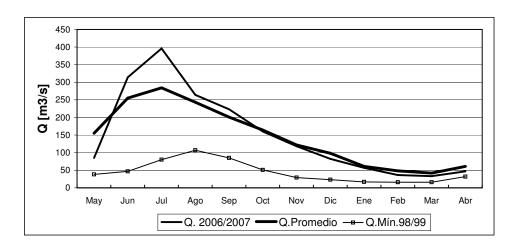
## RIO CAUTIN EN RARI-RUCA



Q. 2006/2007 Q.Promedio Q.Mín.98/99

May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
84	182	233	148	145	111	87	66	50	39	34	39
93	147	146	131	122	116	98	83	57	48	41	47
38	41	57	65	61	51	38	29	26	21	19	35

## **RIO CAUTIN EN CAJON**

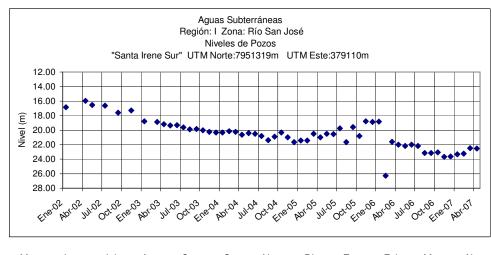


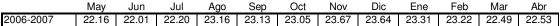
	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
Q. 2006/2007	85	314	396	264	223	160	118	82	57	36	33	47
Q.Promedio	155	255	284	243	201	164	122	98	61	48	42	61
Q.Mín.98/99	38	47	80	107	85	51	29	23	17	16	16	32

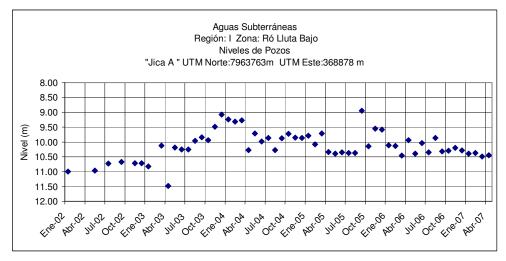
#### Informe de Aguas Subterráneas

Niveles de Pozos en metros

\*Gráficos de últimos cinco años.



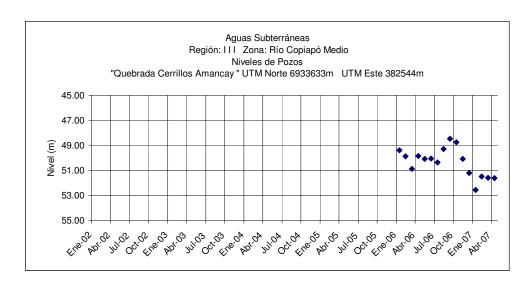




	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	10.39	10.04	10.35	9.87	10.32	10.30	10.20	10.29	10.39	10.37	10.49	10.45

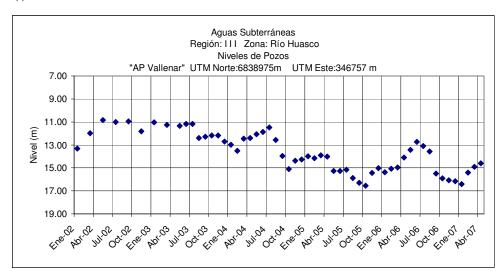


	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	26.43	26.34	26.25	26.22	26.28	26.35	26.25	27.39	27.47	27.42	24.73	25.07

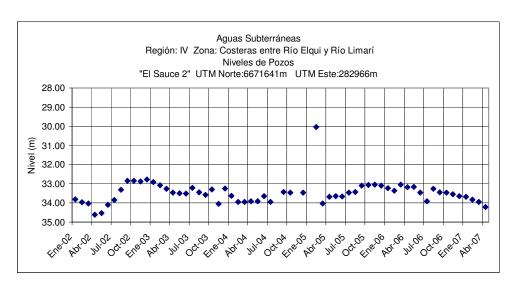


	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	50.08	50.06	50.36	49.30	48.47	48.77	50.09	51.21	52.58	51.50	51.59	51.63

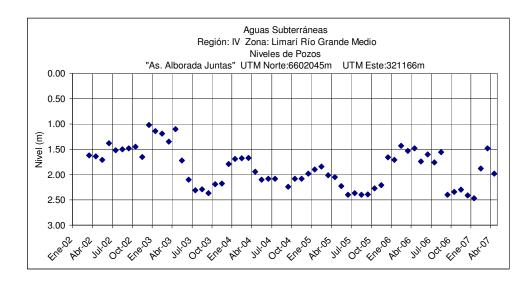
(.) Embancado



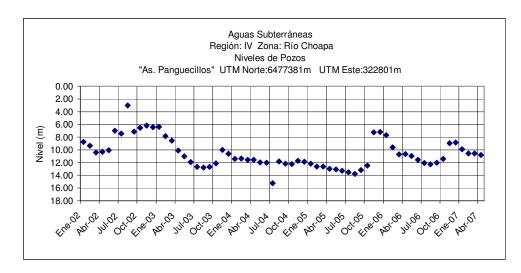
	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr	
2006-2007	13.42	12.73	13.11	13.57	15.50	15.92	16.07	16.17	16.41	15.41	14.92	14.61	1



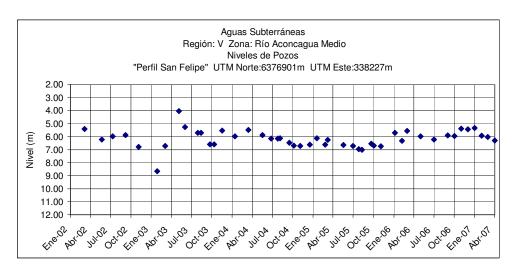
	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	33.17	•	33.92	33.27	33.45	33.47	33.54	33.65	33.68	33.83	33.95	34.22



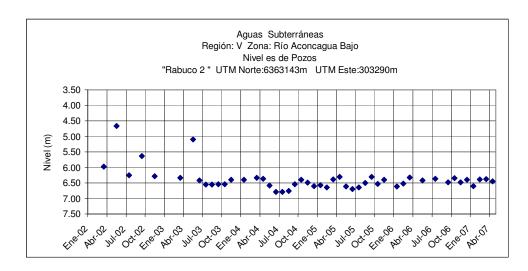
	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr	
2006-2007	1.54	1.60		1.56	2.40	2.34	2.30	2.41	2.47	1.88	1.48	1.98	



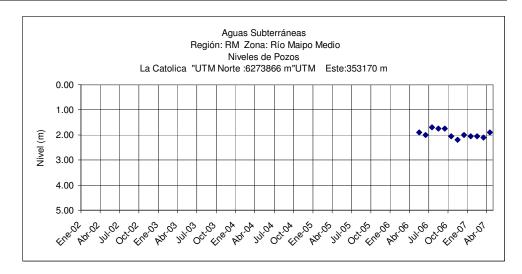
	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	10.96	11.58	12.08	12.26	12.00	11.40	8.93	8.85	9.90	10.55	10.56	10.80



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	5.89		6.22		5.91	5.95	5.39	5.45	5.34	5.93	6.03	6.30

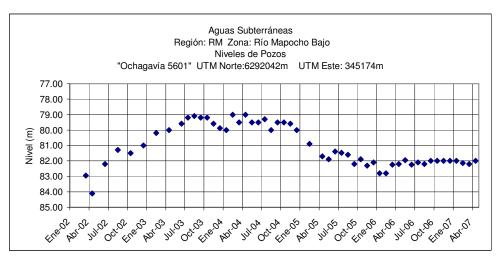


	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	6.42		6.37		6.48	6.35	6.48	6.40	6.60	6.39	6.38	6.45

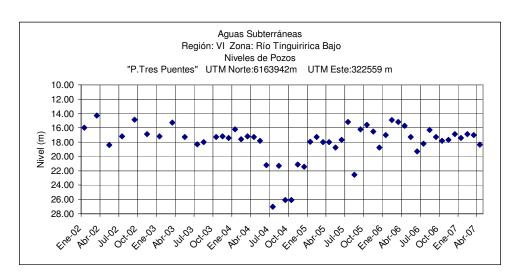


	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	1.90	2.00	1.70	1.75	1.75	2.05	2.20	2.00	2.05	2.05	2.10	1.90

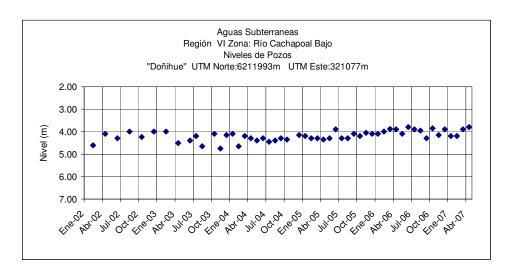
#### (.) Embancado



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	81.95	82.25	82.10	82.20	82.00	82.00	82.00	82.00	82.00	82.15	82.20	82.00



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	17.30	19.30	18.20	16.30	17.30	17.80	17.70	16.90	17.40	16.90	17.00	18.37



	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Ene	Feb	Mar	Abr
2006-2007	4.10	3.80	3.90	3.95	4.30	3.85	4.15	3.90	4.20	4.20	3.90	3.80