MINISTERIO DE OBRAS PUBLICAS DIRECCION GENERAL DE AGUAS

Boletín Nº : 344

Mes : Diciembre Año : 2006

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

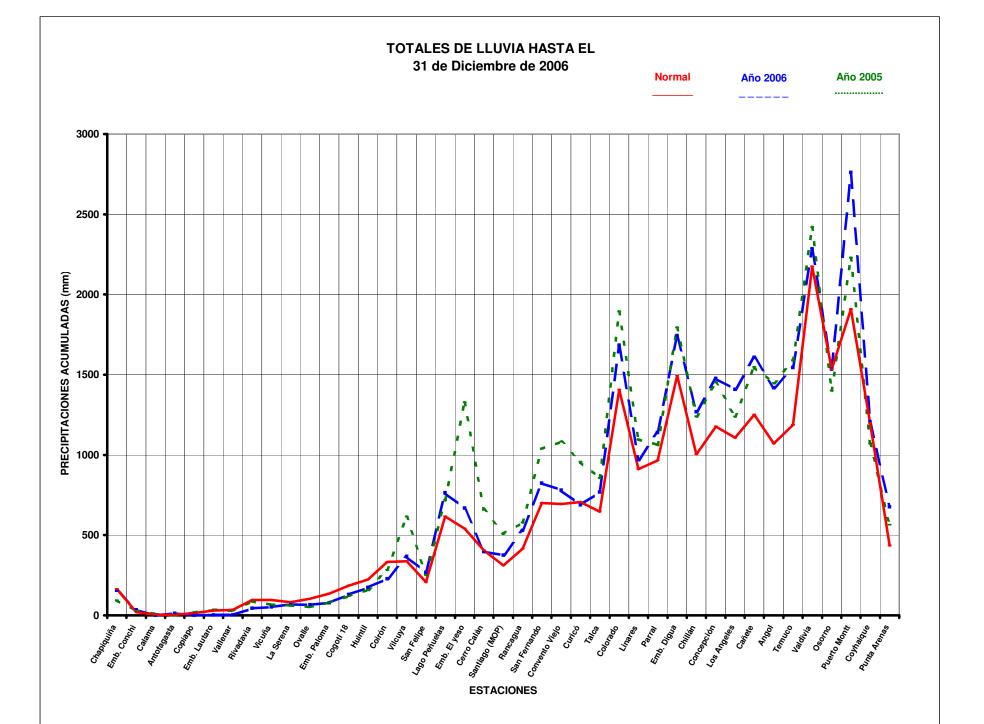
NOTA: Datos provisorios sujetos a modificaciones posteriores

INFORME PLUVIOMETRICO NACIONAL Nº12

		_TOTALES	AL 31	DE DICIEMBRE	
					EXCESO O
		2006	2005	PROMEDIO	DÉFICIT
ESTACIONES	DICIEMBRE	(mm) 	(mm)	(mm)	(용)
CENTRAL CHAPIQUIÑA	0.0	155.5	94.5	163.0*	- 5
EMBALSE CONCHI	0.0	34.2	27.0	19.1*	79
CALAMA	0.0	0.7	7.0	4.2	- 84
ANTOFAGASTA	0.0	11.5	0.5	4.2	174
COPIAPÓ	0.0	0.0	18.7	13.2	-100
EMBALSE LAUTARO	0.0	1.0	31.5	30.7	- 97
VALLENAR	0.0	2.0	28.6	34.3	- 94
RIVADAVIA	0.0	43.0	86.9	94.8	- 55
VICUÑA	0.0	51.4	65.6	95.2	- 46
LA SERENA	0.0	68.6	62.4	81.8	- 16
OVALLE	0.0	66.2	51.8	103.3	- 36
EMBALSE PALOMA	0.0	77.7	80.4	135.4	- 43
COGOTÍ 18	0.0	129.5	120.0	186.3	- 30
HUINTIL	0.0	173.0	159.7	223.3	- 23
COIRÓN	0.0	226.6	283.3	333.7	- 32
VILCUYA	0.0	366.7	614.0	337.8	9
SAN FELIPE	0.0	268.2	251.0	207.1	29
LAGO PEÑUELAS	0.0	764.0	718.6	616.7	24
EMBALSE EL YESO	0.0	667.3	1325.6	540.4	23
CERRO CALÁN	0.0	396.8	657.6	404.3	- 2
SANTIAGO (MOP)	0.0	374.1	508.4	311.2	20
RANCAGUA	0.0	528.5	579.3	414.8	27
SAN FERNANDO	0.0	824.3	1037.3	699.4	18
CONVENTO VIEJO	7.5	779.5	1081.7	694.0	12
CURICO	12.0	688.3	958.0	705.3	- 2
TALCA	16.6	767.9	855.5	646.0	19
COLORADO	20.6	1684.1	1892.4	1405.5	20
LINARES	31.4	970.0	1097.0	911.6	6
PARRAL	36.0	1139.6	1061.7	965.8	18
EMBALSE DIGUA	50.0	1744.1	1793.7	1494.4	17
CHILLÁN	77.2	1268.3	1241.4	1003.0	26
CONCEPCIÓN	55.2	1477.0	1450.0	1176.1	26
LOS ÁNGELES	75.0	1408.2	1239.1	1106.6	27
CAÑETE	68.1	1608.5	1547.5	1250.9	29
ANGOL	38.0	1418.4	1449.1	1071.0	32
TEMUCO	68.2	1543.4	1586.8	1187.1	30
VALDIVIA	171.4	2283.1	2419.5	2174.9	5
OSORNO	112.1	1534.2	1399.9	1533.7	0
PUERTO MONTT	280.2	2759.8	2227.9	1908.5	45
COYHAIQUE	125.2	1207.0	1070.6	1199.1	1
PUNTA ARENAS	62.1	675.7	565.5	434.4	56

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

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



ESTADO DE EMBALSES

Ultimo día del mes (Volúmenes en mill-m³)

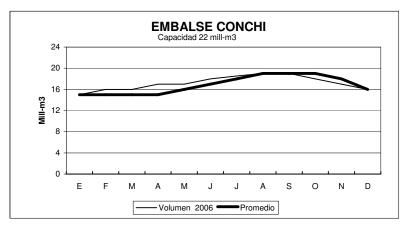
		(**************************************	,			
				PROMEDIO		
				HISTORICO	Dicie	mbre
EMBALSE	REGION	CUENCA	CAPACIDAD	MENSUAL	2006	2005
Conchi	ΙΙ	Loa	22	16	16	16
Lautaro	III	Copiapó	35	10	3	8
Santa Juana	III	Huasco	166	127	141	148
La Laguna	IV	Elqui	40	24	35	38
Puclaro	IV	Elqui	200	130	195	189
Recoleta	IV	Limarí	100	67	79	91
La Paloma	IV	Limarí	748	435	549	583
Cogotí	IV	Limarí	150	88	67	104
Culimo	IV	Quilimarí	10	4.4	1.6	2.4
Corrales	IV	Illapel	50	43	49	46
Peñuelas	V	Peñuelas	95	27	26	29
El Yeso	RM	Maipo	256	180	203	206
Rungue	RM	Maipo	2.2	1.7	1.3	2.2
Rapel	VI	Rapel	695	600	625	629
Colbún	VII	Maule	1544	1343	1544	1544
Lag. Maule	VII	Maule	1420	1056	1408	1001
Bullileo	VII	Maule	60	56	60	60
Digua	VII	Maule	220	167	155	220
Tutuvén	VII	Maule	15	9.5	10	15
Coihueco	VIII	Itata	29	26	27	28
Lago Laja (&	a) VIII	Bio-Bio	5582	3588	3689	3120

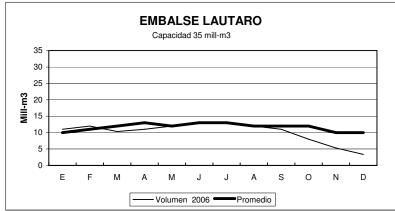
RESUMEN ANUAL

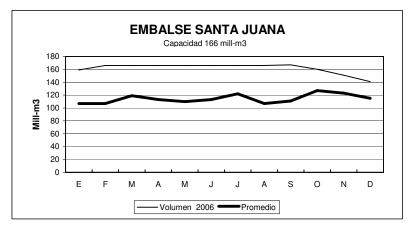
EMBALSE Conchi Lautaro Santa Juana La Laguna Puclaro Recoleta La Paloma Cogotí 1.4 1.7 Culimo 1.9 1.2 0.4 0.1 0.4 0.4 0.7 1.3 1.6 1.6 Corrales Peñuelas El Yeso 1.0 0.6 0.3 0.2 0.2 0.3 2.0 2.0 2.0 2.0 1.8 1.3 Rungue Rapel Colbún Lag. Maule Bullileo Digua 8.6 2.7 6.1 2.0 3.4 3.0 Tutuvén Coihueco 6.6 3.9 Lago Laja (&)

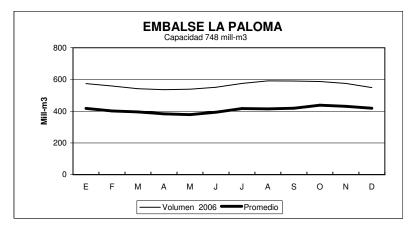
(&): Volumen sobre cota 1300 msnm

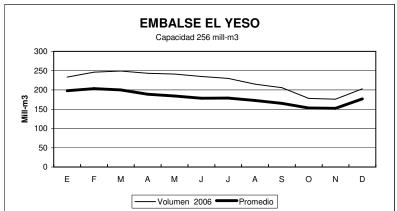
ESTADO DE EMBALSES

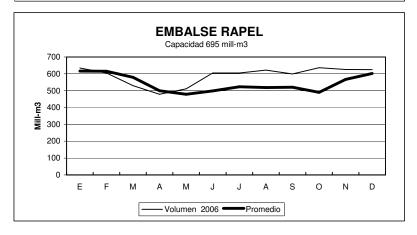


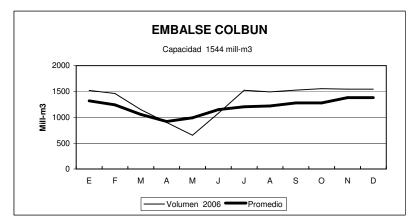


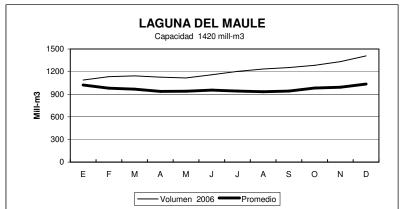


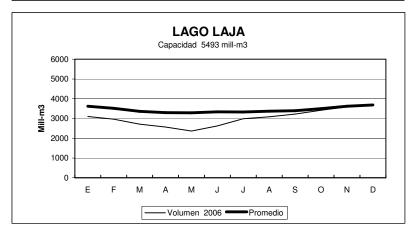








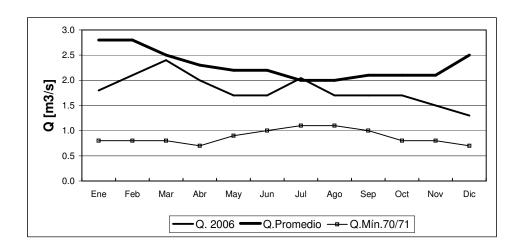




INFORME FLUVIOMETRICO

Caudales medios mensuales en m3/seg

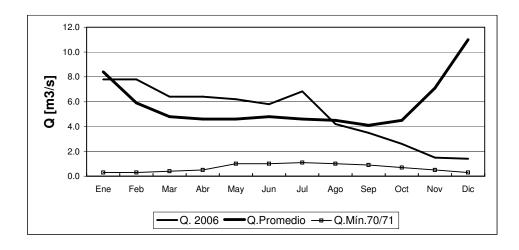
RIO COPIAPO EN LA PUERTA



Q. 2006 Q.Promedio Q.Mín.70/71

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
1.8	2.1	2.4	2.0	1.7	1.7	2.0	1.7	1.7	1.7	1.5	1.3
2.8	2.8	2.5	2.3	2.2	2.2	2.0	2.0	2.1	2.1	2.1	2.5
8.0	8.0	8.0	0.7	0.9	1.0	1.1	1.1	1.0	8.0	8.0	0.7

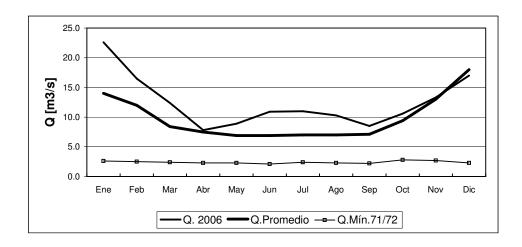
RIO HUASCO EN ALGODONES



	Ene	Feb	Mar	Abr	Мау	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Q. 2006	7.8	7.8	6.4	6.4	6.2	5.8	6.8	4.2	3.5	2.6	1.5	1.4
Q.Promedio	8.4	5.9	4.8	4.6	4.6	4.8	4.6	4.5	4.1	4.5	7.1	11.0
Q.Mín.70/71	0.3	0.3	0.4	0.5	1.0	1.0	1.1	1.0	0.9	0.7	0.5	0.3

Dic-06

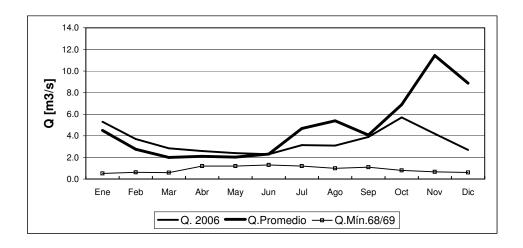
RIO ELQUI EN ALGARROBAL



Q. 2006 Q.Promedio Q.Mín.71/72

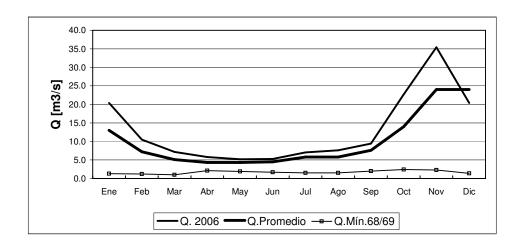
Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
22.6	16.5	12.4	7.8	8.9	10.9	11.0	10.3	8.5	10.6	13.3	17.0
14.0	12.0	8.4	7.5	6.9	6.9	7.0	7.0	7.1	9.4	13.0	18.0
2.6	2.5	2.4	2.3	2.3	2.1	2.4	2.3	2.2	2.8	2.7	2.3

RIO GRANDE EN LAS RAMADAS



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Q. 2006	5.3	3.7	2.9	2.6	2.4	2.3	3.1	3.1	3.9	5.7	4.2	2.7
Q.Promedio	4.5	2.8	2.0	2.1	2.0	2.3	4.7	5.4	4.1	6.9	11.4	8.9
Q.Mín.68/69	0.5	0.6	0.6	1.2	1.2	1.3	1.2	1.0	1.1	8.0	0.7	0.6

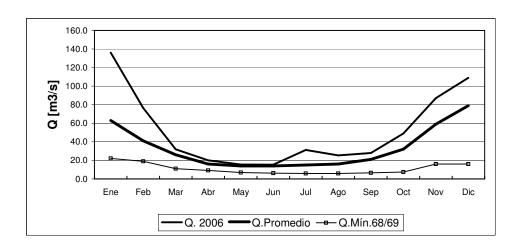
RIO CHOAPA EN CUNCUMEN



Q. 2006 Q.Promedio Q.Mín.68/69

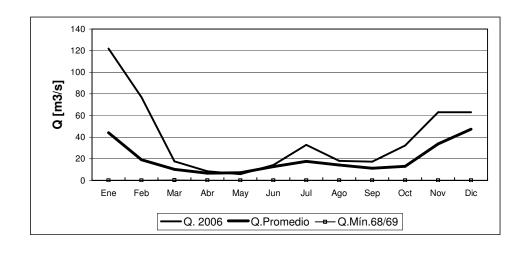
Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
20.4	10.5	7.2	5.8	5.2	5.3	7.1	7.6	9.4	22.7	35.4	20.4
13.0	7.2	5.1	4.3	4.3	4.5	5.8	5.8	7.6	14.0	24.0	24.0
1.3	1.2	1.0	2.1	1.9	1.7	1.5	1.5	2.0	2.4	2.3	1.4

RIO ACONCAGUA EN CHACABUQUITO



	⊏ne	reb	war	ADI	way	Jun	Jui	Ago	Sep	OCI	NOV	DIC
Q. 2006	136.0	76.3	31.9	20.0	15.5	15.4	31.2	25.4	28.0	49.0	87.0	109.0
Q.Promedio	63.0	41.0	26.0	16.0	14.0	14.0	15.0	16.0	21.0	32.0	59.0	79.0
Q.Mín.68/69	22.0	19.0	11.0	9.1	6.9	6.2	5.9	5.9	6.6	7.4	16.0	16.0

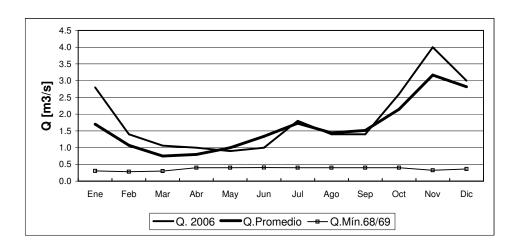
RIO ACONCAGUA EN SAN FELIPE



Q. 2006 Q.Promedio Q.Mín.68/69

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
122	77	17.6	8.5	5.8	14.2	32.8	18.1	17.3	32.3	63.0	63.0
44.1	19.1	10.2	6.7	7.1	12.7	17.6	14.2	11.3	13.0	33.8	47.3
0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

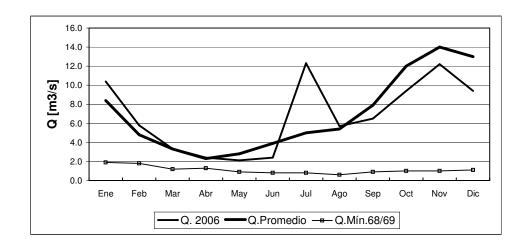
ESTERO ARRAYAN EN LA MONTOSA



Q. 2006 Q.Promedio Q.Mín.68/69

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2.8	1.4	1.1	1.0	0.9	1.0	1.8	1.4	1.4	2.6	4.0	3.0
1.7	1.1	8.0	8.0	1.0	1.3	1.7	1.4	1.5	2.1	3.2	2.8
0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4

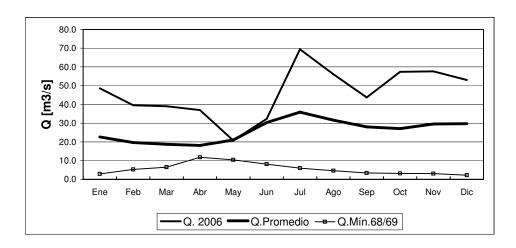
RIO MAPOCHO EN LOS ALMENDROS



Q. 2006 Q.Promedio Q.Mín.68/69

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
10.4	5.8	3.3	2.4	2.1	2.4	12.3	5.7	6.5	9.4	12.2	9.4
8.4	4.8	3.3	2.3	2.8	3.9	5.0	5.4	7.9	12.0	14.0	13.0
1.9	1.8	1.2	1.3	0.9	0.8	0.8	0.6	0.9	1.0	1.0	1.1

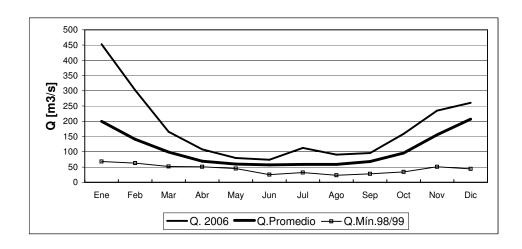
RIO MAPOCHO EN RINCONADA DE MAIPU



Q. 2006 Q.Promedio Q.Mín.68/69

Ene	Feb	Mar	Abr	мау	Jun	Jul	Ago	Sep	Oct	Nov	Dic
48.6	39.5	39.0	37.0	20.8	32.3	69.4	56.1	43.7	57.4	57.6	53.0
22.6	19.6	18.7	18.1	21.0	30.3	35.9	31.6	28.0	27.1	29.5	29.7
2.9	5.3	6.5	11.8	10.4	8.1	6.0	4.6	3.4	3.2	3.1	2.2

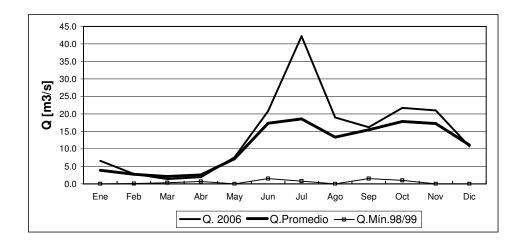
RIO MAIPO EN EL MANZANO



Q. 2006 Q.Promedio Q.Mín.98/99

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
453	302	166	108	80	74	113	91	96	159	235	261
200	141	99	69	60	57	59	59	68	96	156	207
68	63	52	51	45	25	32	23	28	34	51	44

RIO CLARO EN EL VALLE 2

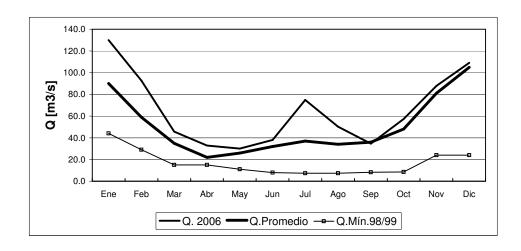


Q. 2006
Q.Promedio
Q.Mín.98/99

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
6.6	2.8	1.4	1.9	7.6	20.8	42.2	19.0	16.2	21.7	21.0	10.7 *
3.9	2.7	2.1	2.6	7.2	17.3	18.6	13.4	15.5	17.9	17.2	11.1
0.0	0.1	0.3	0.7	0.0	1.5	8.0	0.0	1.5	1.0	0.0	0.0

*Aforo

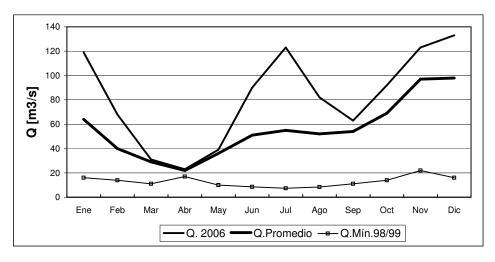
RIO TINGUIRIRICA BAJO BRIONES



Q. 2006 Q.Promedio Q.Mín.98/99

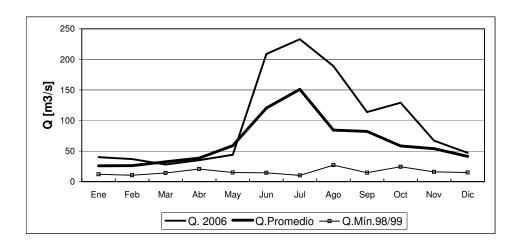
Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
130.0	92.7	45.7	32.9	30.0	38.0	74.9	50.3	34.7	57.3	87.9	109.0
90.0	59.0	35.0	22.0	26.0	32.0	37.0	34.0	36.0	48.0	81.0	105.0
44.0	29.0	15.0	15.0	11.0	8.0	7.4	7.4	8.2	8.5	24.0	24.0

RIO TENO DESPUES DE JUNTA



	⊏ne	reb	iviar	ADr	iviay	Jun	Jui	Ago	Sep	OCI	NOV	DIC
Q. 2006	119	68	31	23	39	90	123	82	63	92	123	133
Q.Promedio	64	40	29	22	36	51	55	52	54	69	97	98
Q.Mín.98/99	16	14	11	17	10	8.6	7.4	8.4	11	14	22	16

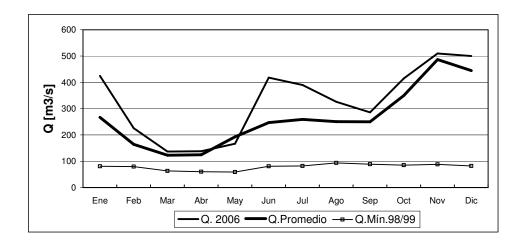
RIO CLARO EN RAUQUEN



Q. 2006
Q.Promedio
Q.Min.98/99

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
40	37	28	35	44	209	233	189	114	129	67	47
26	26	33	39	59	121	151	84	82	58	54	41
12	10	14	21	15	15	10	27	15	24	16	15

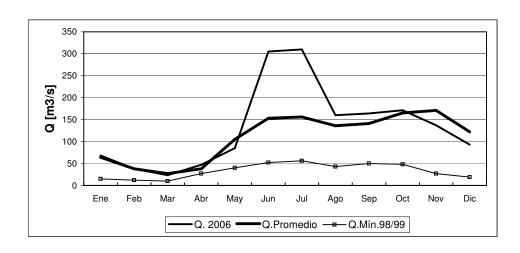
RIO MAULE EN ARMERILLO (R. N.)



	⊏ne	reb	war	ADr	iviay	Jun	Jui	Ago	Sep	OCI	NOV	DIC
Q. 2006	425	226	137	138	167	418	390	326	286	415	510	500
Q.Promedio	267	164	123	125	193	247	259	251	250	350	487	445
Q.Mín.98/99	81	80	63	60	59	81	82	94	89	85	88	82

nota: caudal julio 2006 corresponde a últimos 15 días

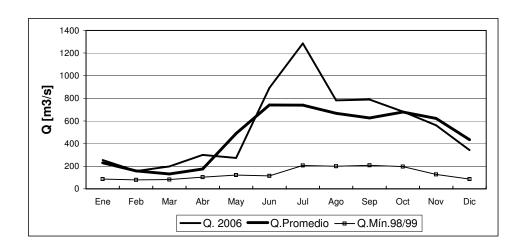
RIO ÑUBLE EN SAN FABIAN



Q. 2006 Q.Promedio Q.Mín.98/99

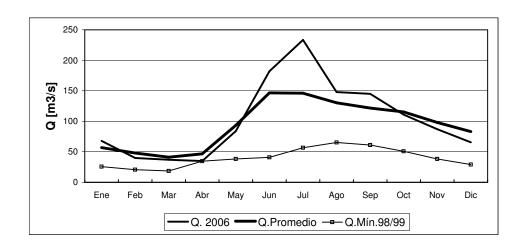
Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
68	38	23	47	85	305	310	160	164	171	137	93
64	38	27	38	105	153	156	136	141	165	171	122
15	12	10	27	40	52	56	43	50	48	27	19

RIO BIO-BIO EN RUCALHUE



	⊨ne	Feb	Mar	Abr	мау	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Q. 2006	255	157	198	300	273	892	1285	782	789	683	561	342
Q.Promedio	231	158	132	176	489	741	740	668	627	679	622	434
Q.Mín.98/99	86	79	82	103	122	114	207	200	208	197	127	86

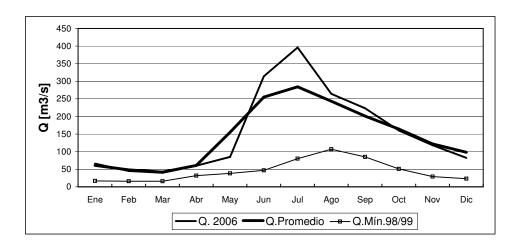
RIO CAUTIN EN RARI-RUCA



Q. 2006 Q.Promedio Q.Mín.98/99

Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
68	40	37	35	84	182	233	148	145	111	87	66
57	48	41	47	93	147	146	131	122	116	98	83
26	21	19	35	38	41	57	65	61	51	38	29

RIO CAUTIN EN CAJON

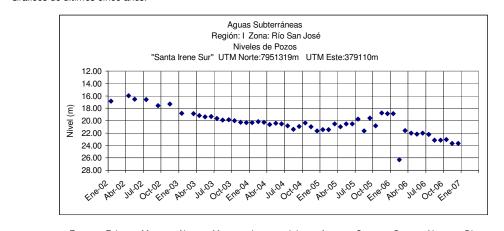


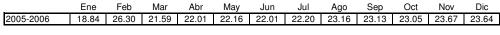
	Ene	Feb	Mar	Abr	мау	Jun	Jul	Ago	Sep	Oct	Nov	Dic
Q. 2006	66	45	40	60	85	314	396	264	223	160	118	82
Q.Promedio	61	48	42	61	155	255	284	243	201	164	122	98
Q.Mín.98/99	17	16	16	32	38	47	80	107	85	51	29	23

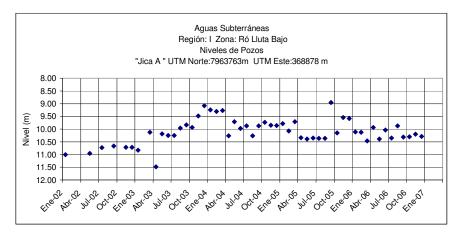
Informe de Aguas Subterráneas

Niveles de Pozos en metros

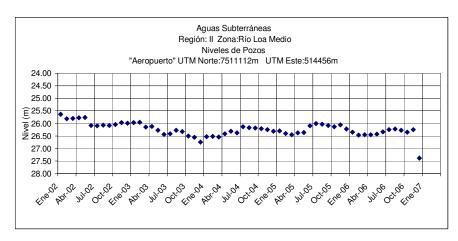
*Gráficos de últimos cinco años.



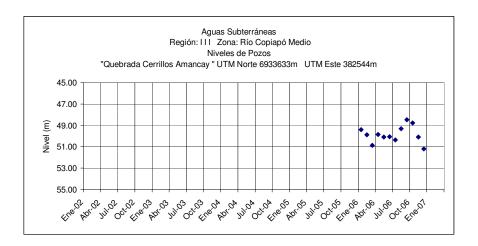




	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	10.11	10.13	10.46	9.94	10.39	10.04	10.35	9.87	10.32	10.30	10.20	10.29

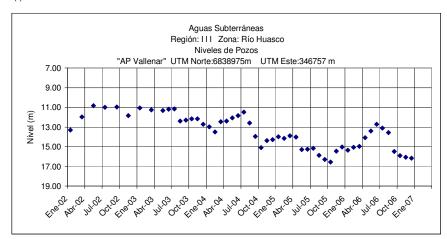


	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	26.35	26.47	26.46	26.45	26.43	26.34	26.25	26.22	26.28	26.35	26.25	27.39

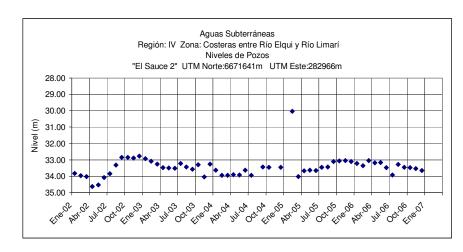


	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	49.40	49.89	50.87	49.85	50.08	50.06	50.36	49.30	48.47	48.77	50.09	51.21

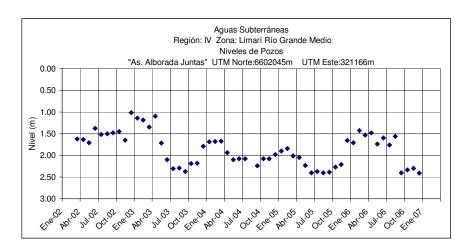
(.) Embancado



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	15.37	15.07	14.97	14.09	13.42	12.73	13.11	13.57	15.50	15.92	16.07	16.17



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	33.23	33.36	33.04	33.18	33.17		33.92	33.27	33.45	33.47	33.54	33.65



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	1 71	1 43	1.53	1 48	1.54	1.60		1.56	2 40	2 34	2 30	2 41

Мау

Jun

Ago

10.96 | 11.58 | 12.08 | 12.26 | 12.00 | 11.40 |

Sep

Oct

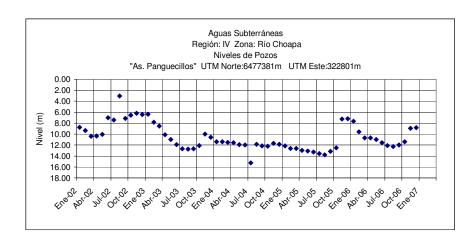
8.93 8.85

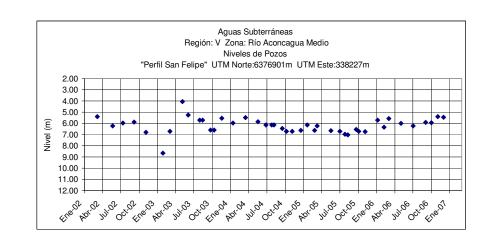
Mar

10.72 10.68

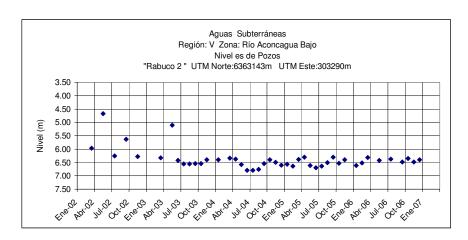
7.68 9.61

2005-2006

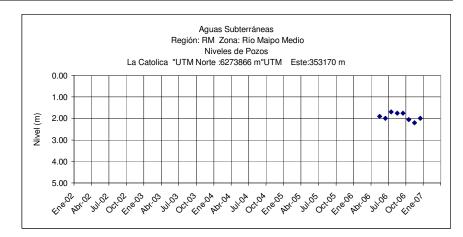




	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	5.71		5.57		5.89		6.22		5.91	5.95	5.39	5.45

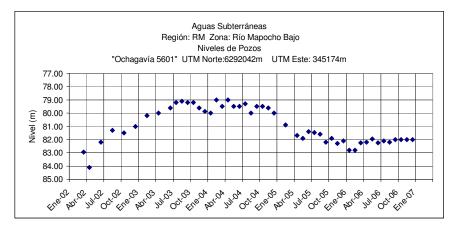


	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	6.61		6.32		6.42		6.37		6.48	6.35	6.48	6.40

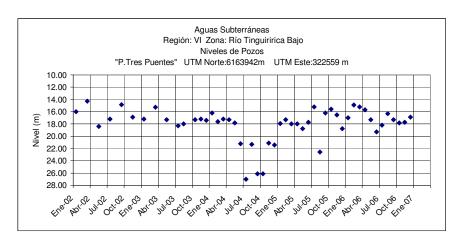


	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	
2005-2006					1.90	2.00	1.70	1.75	1.75	2.05	2.20	2.00	1

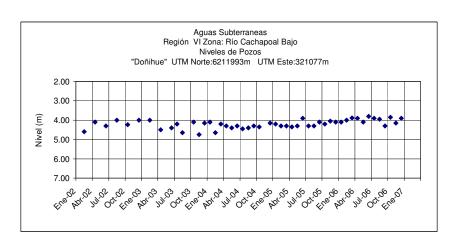
(.) Embancado



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	82.80	82.80	82.25	82.20	81.95	82.25	82.10	82.20	82.00	82.00	82.00	82.00



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
2005-2006	17.00	14.90	15.20	15.70	17.30	19.30	18.20	16.30	17.30	17.80	17.70	16.90



	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	
2005-2006	4.10	4.00	3.88	3.90	4.10	3.80	3.90	3.95	4.30	3.85	4.15	3.90	