

CONSEJO NACIONAL DE OPERACIÓN CNO

ACUERDO No. 172
Septiembre 21 de 2001

Por el cual se aprueba la actualización de las series hidrológicas del Sistema Eléctrico Colombiano

El Consejo Nacional de Operación en uso de sus facultades legales y reglamentarias, en especial las conferidas en el Artículo 36 de la Ley 143 de 1994, la Resolución 8-0103 del 2 de febrero de 1995 del Ministerio de Minas y Energía, el Anexo general de la Resolución CREG 025 de 1995, el Acuerdo 157 de 2001 y teniendo en cuenta que:

El Comité de Operación en su sesión No. 82 del 19 de septiembre de 2001, recomendó al C.N.O. aprobar las actualizaciones de las series hidrológicas y factores de serie menor asociadas con el Sector Eléctrico Colombiano, que fueron presentadas, revisadas y avaladas por el Subcomité Hidrológico y de Plantas Hidráulicas.

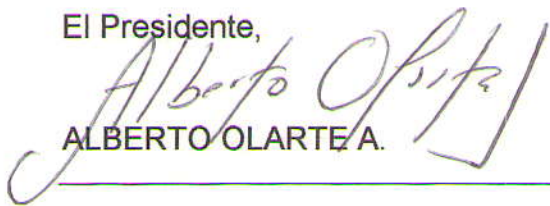
ACUERDA:

PRIMERO: Aprobar la actualización de las series hidrológicas de Nare, Guatapé, Guadalupe, Concepción, Tenche, Porce II, Riogrande II, San Carlos, San Lorenzo, Tafetanes, Calderas, Batá, Rucio, Negro, Tunjita Bogotá N.R. Saucio (Fagua Baraya), Sisga (Nutrias), Neusa, Tominé, Teusacá, Fagua Alicachín, Checua, Betania, Guavio, Chuza, Río Bñanco, Chinchina, Campoalegre, San Francisco, San Eugenio (Fagua Campoalegre), Estrella, Salvajina, Calima, Digua, Alto Anchicayá, Prado, Urrá, Río Mayo y Florida II, que está contenida en el Anexo 1 que forma parte integral del presente Acuerdo.

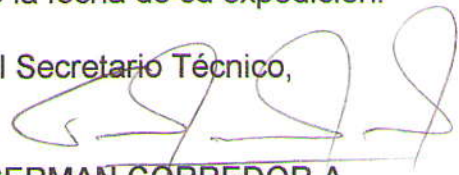
SEGUNDO: Aprobar los factores de Serie Menor para las series Nechí, Pajarito, Dolores, Quebradona, Rucio, Negro, Tunjita, Tafetanes, Calderas, Saucio (Fagua Baraya), Sisga (Nutrias), Neusa, Tominé, Teusacá, Fagua Alicachín y Checua que están contenidos en el Anexo 2 que forma parte integral del presente Acuerdo.

TERCERO: El presente Acuerdo rige a partir de la fecha de su expedición.

El Presidente,


ALBERTO OLARTE A.

El Secretario Técnico,


GERMAN CORREDOR A.

Consejo Nacional de Operación CNO

ANEXO 1

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Nare.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dici	Año
1955								47.90	59.40	79.00	88.40	69.00	
1956	65.20	56.60	52.40	48.90	87.00	73.80	53.60	59.50	65.20	90.00	79.60	59.10	65.91
1957	37.90	31.30	24.70	46.00	58.00	46.70	38.00	40.30	41.10	49.90	44.40	37.00	41.28
1958	22.70	20.70	27.40	29.90	47.30	28.80	23.40	43.40	29.00	40.50	37.00	33.80	31.99
1959	20.50	17.50	19.40	26.00	38.30	39.20	32.80	36.80	59.80	51.70	51.10	30.70	35.32
1960	25.10	23.00	27.50	32.90	46.40	43.90	52.50	36.40	56.40	51.10	48.00	54.80	41.50
1961	30.60	29.10	28.20	34.00	33.20	41.40	37.30	32.00	57.20	59.40	79.10	47.30	42.40
1962	29.40	25.50	37.60	46.20	85.70	84.70	52.90	57.20	59.00	80.60	67.70	43.60	55.84
1963	31.60	42.10	45.10	59.10	62.20	43.20	46.20	46.80	50.60	62.40	76.40	38.10	50.32
1964	27.60	21.80	21.60	41.80	36.80	54.30	55.50	54.60	60.30	57.50	61.60	43.20	44.72
1965	31.80	27.10	25.50	34.10	50.70	35.60	30.90	45.20	63.70	66.20	75.90	46.00	44.39
1966	30.60	25.50	25.20	30.50	36.20	55.10	45.60	57.10	49.90	55.50	69.10	66.00	45.53
1967	42.20	30.30	32.70	56.30	65.50	71.00	49.20	45.50	60.00	49.00	48.20	34.70	48.72
1968	26.40	23.80	28.20	48.40	44.00	65.40	66.70	47.00	73.40	71.90	68.30	46.90	50.87
1969	38.20	23.80	23.10	53.60	55.10	43.00	21.70	50.20	59.10	84.30	68.00	44.20	47.03
1970	36.10	25.00	26.40	34.20	75.90	51.70	49.00	42.40	59.80	93.00	106.30	61.40	55.10
1971	52.60	44.10	55.40	61.40	97.00	80.90	90.70	108.50	96.50	77.40	61.40	46.00	72.66
1972	39.09	32.64	33.76	45.11	95.72	67.96	48.20	45.40	45.54	52.54	55.21	38.81	50.00
1973	28.01	22.69	24.09	27.31	35.16	53.24	36.14	54.93	104.97	72.73	59.69	73.01	49.33
1974	52.40	48.20	41.19	58.57	61.23	63.62	55.21	62.92	92.91	96.70	84.78	49.46	63.93
1975	34.32	36.28	35.30	36.70	49.60	55.35	73.01	68.52	79.74	77.91	96.00	81.14	60.32
1976	49.60	38.81	33.20	66.42	74.83	64.88	35.44	29.56	30.26	58.99	57.73	32.08	47.65
1977	23.81	25.07	21.85	27.03	35.58	45.68	37.27	53.24	42.03	61.51	58.43	35.72	38.94
1978	34.02	30.84	43.85	95.74	76.75	68.69	67.00	41.29	46.26	58.38	54.92	46.64	55.37
1979	32.80	29.78	33.46	44.11	59.34	60.99	37.66	45.31	64.10	67.01	83.53	55.16	51.10
1980	35.32	29.83	25.52	31.53	36.35	42.60	32.18	33.36	32.72	62.04	60.78	45.44	38.97
1981	27.83	23.30	26.48	40.87	86.81	90.51	65.57	41.34	68.31	69.62	74.91	50.91	55.54
1982	50.50	46.96	40.93	71.81	95.75	47.46	32.98	32.31	34.44	51.88	53.33	35.11	49.46
1983	26.55	24.74	25.94	48.92	51.68	39.38	41.03	35.99	48.66	48.80	41.15	47.31	40.01
1984	43.24	33.02	28.44	30.04	59.10	83.02	66.94	56.95	61.96	84.14	82.33	45.64	56.24
1985	32.93	30.35	36.05	43.38	76.27	44.87	34.30	73.44	74.34	56.89	59.26	45.90	50.67
1986	31.95	37.70	41.63	53.24	47.90	52.62	38.92	37.67	40.15	75.37	56.14	38.24	45.96
1987	27.67	25.93	24.56	33.20	55.90	31.81	34.98	48.14	51.26	78.61	63.86	48.34	43.69
1988	32.88	31.13	30.32	36.77	42.54	57.87	61.45	82.77	91.94	87.39	104.95	76.64	61.39
1989	55.11	42.30	44.62	49.43	62.02	66.03	40.54	50.23	80.62	83.98	67.06	50.50	57.70
1990	35.13	35.16	30.06	43.37	55.75	49.68	44.81	33.01	47.51	82.79	62.19	44.27	46.98
1991	31.25	26.40	30.24	42.30	55.31	50.19	39.87	38.19	31.78	55.17	43.33	40.23	40.36
1992	28.01	24.40	24.03	27.54	39.89	35.28	25.00	35.15	49.23	40.87	38.01	49.63	34.75
1993	34.39	25.36	28.17	37.65	61.70	33.35	43.54	43.00	69.77	60.95	74.10	53.67	47.14
1994	35.67	31.26	31.27	51.36	55.91	47.27	38.66	33.33	41.57	72.40	67.77	39.92	45.53
1995	26.51	22.52	33.55	35.52	59.77	64.56	60.42	89.46	57.72	58.63	48.52	54.20	50.95
1996	41.99	37.77	54.45	52.15	87.80	79.72	79.74	58.30	59.16	77.02	49.92	41.84	59.99
1997	41.40	40.18	40.31	48.66	35.79	61.96	30.37	24.82	28.30	32.35	37.63	25.70	37.29
1998	18.78	18.67	18.87	24.80	44.73	43.95	48.77	47.87	71.16	62.94	58.91	74.23	44.47
1999	51.59	67.88	83.28	71.40	87.21	74.21	49.87	37.71	85.32	89.91	104.18	110.34	76.08
2000	50.22	51.62	52.78	50.85	88.92	108.15	87.40	80.27	107.83	88.76	73.81	45.10	73.81
Media	35.59	31.96	33.75	44.65	59.88	56.52	47.41	49.25	59.56	67.08	65.28	49.50	49.94
Max	65.20	67.88	83.28	95.74	97.00	108.15	90.70	108.50	107.83	96.70	106.30	110.34	76.08
Min	18.78	17.50	18.87	24.80	33.20	28.80	21.70	24.82	28.30	32.35	37.00	25.70	31.99

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Guatapé

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1959	20.39	12.77	12.79	19.22	32.13	28.45	19.76	23.27	34.19	39.72	34.40	29.89	25.58
1960	17.55	12.58	13.56	19.51	34.87	28.19	35.35	23.58	32.82	42.40	43.38	26.35	27.51
1961	14.06	11.90	20.19	23.82	19.89	26.68	24.27	20.13	35.93	34.82	48.21	36.34	26.35
1962	21.42	18.16	26.47	25.27	43.42	35.80	24.10	29.24	23.79	34.93	30.74	20.93	27.86
1963	19.26	14.45	20.29	30.71	34.38	20.66	24.53	28.05	35.56	43.05	47.87	30.39	29.10
1964	12.64	10.40	10.85	19.85	19.90	26.02	26.32	24.48	32.12	36.05	42.75	23.08	23.71
1965	21.59	18.19	14.68	23.40	43.60	21.91	15.53	25.10	47.43	38.50	45.94	27.12	28.58
1966	29.67	17.76	21.16	24.67	33.18	35.63	21.48	31.05	30.42	45.31	47.75	37.01	31.26
1967	28.18	20.84	24.04	45.73	41.48	31.48	34.56	26.48	31.91	35.95	30.31	22.97	31.16
1968	17.65	12.76	16.59	33.61	32.65	34.88	39.35	38.82	53.71	52.75	40.73	25.74	33.27
1969	24.67	14.89	14.36	30.20	30.84	25.63	13.29	30.74	50.09	49.03	44.67	30.63	29.92
1970	24.57	16.17	15.31	21.70	39.14	22.97	32.97	25.42	47.75	69.02	45.73	29.88	32.55
1971	34.03	27.76	46.79	37.33	73.60	34.14	34.14	41.08	45.94	47.11	42.10	32.87	41.41
1972	31.51	20.80	23.13	30.45	16.65	29.76	14.41	23.62	20.22	29.19	36.99	24.88	25.13
1973	15.79	10.62	13.83	22.22	26.13	36.30	18.36	37.53	45.22	39.25	57.47	21.57	28.69
1974	8.41	24.97	13.96	35.48	50.34	37.97	27.19	44.20	46.78	49.03	54.02	26.09	34.87
1975	19.14	18.24	24.65	43.16	43.36	38.23	43.83	30.91	44.72	48.23	40.41	39.44	36.19
1976	22.96	18.33	27.93	51.17	43.30	23.70	10.93	11.45	15.13	41.59	31.76	15.61	26.16
1977	12.93	13.35	16.84	18.26	30.38	27.14	27.28	33.90	33.18	35.02	38.61	17.72	25.38
1978	12.35	4.85	19.48	41.12	40.41	29.21	30.34	19.89	28.34	32.92	35.11	31.57	27.13
1979	14.69	13.90	15.67	20.79	32.33	28.98	19.70	26.41	31.50	49.12	37.57	22.49	26.10
1980	14.47	15.45	11.65	11.10	27.55	24.09	20.65	21.82	27.84	42.91	44.83	22.41	23.73
1981	11.81	14.96	13.56	30.49	49.70	42.73	26.95	22.31	30.16	44.36	35.64	22.89	28.80
1982	18.33	26.28	39.93	45.89	40.32	23.24	17.74	17.93	51.06	38.33	28.58	21.02	30.72
1983	16.71	7.51	7.39	24.18	33.33	22.29	25.81	21.65	37.24	40.68	34.05	37.35	25.68
1984	29.04	31.27	20.22	27.03	39.65	43.90	29.82	33.16	46.28	53.14	53.43	49.54	38.04
1985	23.88	20.78	27.47	32.68	44.88	26.69	20.44	37.02	38.12	31.68	26.57	25.93	29.68
1986	28.33	25.83	21.74	48.08	45.18	28.74	17.56	26.56	34.87	49.27	48.57	30.95	33.81
1987	19.66	16.29	28.90	28.21	45.33	29.42	40.95	48.01	66.44	71.78	53.57	25.24	39.48
1988	18.80	32.63	28.15	55.30	46.44	38.60	34.46	48.01	68.15	58.12	73.09	47.00	45.73
1989	59.00	33.07	47.23	50.24	45.69	45.38	24.40	38.49	63.65	57.68	52.67	31.75	45.77
1990	26.63	22.28	19.31	34.41	27.46	34.56	28.49	32.08	49.59	77.74	56.41	39.84	37.40
1991	24.95	21.87	22.93	32.76	40.07	52.74	23.43	16.36	21.72	32.40	44.99	32.61	30.57
1992	21.33	20.76	22.67	27.98	42.19	24.04	20.84	30.46	43.08	35.63	30.36	34.31	29.47
1993	28.91	14.12	23.56	36.20	34.88	15.57	24.20	25.44	59.80	53.75	37.05	30.90	32.03
1994	26.54	28.19	34.12	47.79	46.86	31.65	33.00	31.78	36.38	42.18	49.33	40.44	37.36
1995	38.19	30.47	36.50	57.67	52.81	53.27	36.75	46.16	46.90	51.28	53.15	44.29	45.62
1996	31.32	35.41	41.99	59.23	58.25	46.39	39.00	37.35	38.47	63.01	45.92	34.21	44.21
1997	27.38	28.32	34.92	42.35	26.06	30.10	16.41	17.00	40.73	31.32	32.70	18.53	28.82
1998	16.80	20.50	15.50	25.60	37.40	21.80	27.10	27.50	37.50	50.70	49.30	44.20	31.16
1999	42.90	42.50	34.20	46.20	41.70	44.10	32.50	33.10	49.90	58.50	46.70	39.20	42.63
2000	21.30	25.20	27.90	30.70	49.60	48.80	37.40	33.90	49.90	52.90	44.80	32.10	37.88
Media	23.09	20.18	23.15	33.61	38.98	32.19	26.56	29.56	40.58	45.96	43.29	30.41	32.30
Max	59.00	42.50	47.23	59.23	73.60	53.27	43.83	48.01	68.15	77.74	73.09	49.54	45.77
Min	8.41	4.85	7.39	11.10	16.65	15.57	10.93	11.45	15.13	29.19	26.57	15.61	23.71

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Guadalupe.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dici	Años
1937										20.88	22.88	22.69	
1938	12.68	10.68	13.25	27.74	30.60	37.08	33.56	41.56	31.27	29.36	28.03	22.12	26.49
1939	14.49	10.49	11.73	21.26	21.26	25.17	24.60	27.93	29.93	28.50	24.02	25.17	22.05
1940	12.87	13.16	12.11	12.39	16.02	21.83	12.30	17.54	23.83	18.59	18.02	16.40	16.26
1941	9.91	10.20	9.06	16.59	17.08	15.63	28.41	40.42	31.74	27.45	20.50	22.40	20.78
1942	12.39	14.20	15.44	25.45	32.32	23.83	27.36	31.36	26.79	28.88	26.03	19.35	23.62
1943	14.78	12.87	13.73	26.41	35.56	28.12	19.45	20.78	24.02	31.17	20.59	14.11	21.80
1944	11.25	10.87	11.34	11.34	29.27	28.50	17.83	19.18	27.93	30.31	27.65	17.64	20.26
1945	13.54	11.82	16.02	19.45	30.03	22.59	32.13	46.62	25.45	35.94	26.79	23.36	25.31
1946	17.64	13.82	18.11	31.94	28.79	24.50	22.69	27.55	31.84	25.55	22.50	18.49	23.62
1947	19.54	15.06	13.16	20.21	25.17	30.22	27.45	22.69	31.84	29.46	21.74	17.54	22.84
1948	16.78	11.63	12.11	22.40	24.60	29.27	19.45	22.50	23.64	23.45	21.74	16.49	20.34
1949	11.92	9.63	12.30	15.92	25.36	26.98	31.65	33.27	27.17	26.41	23.17	19.83	21.97
1950	16.02	15.73	15.06	13.44	24.98	35.08	32.03	41.85	27.65	31.08	28.98	25.93	25.65
1951	18.49	23.55	17.16	26.50	26.88	27.65	30.98	28.41	36.03	24.40	22.02	19.35	25.12
1952	12.68	10.96	9.34	15.06	23.07	24.50	31.17	35.27	32.51	30.60	26.31	20.50	22.66
1953	17.45	13.73	13.54	19.07	30.89	24.88	22.50	15.18	18.68	17.25	20.69	14.87	19.06
1954	14.91	11.79	12.24	26.47	30.14	34.15	36.82	28.14	31.81	41.05	30.14	20.36	26.50
1955	17.58	14.79	18.91	24.25	31.37	28.81	32.70	30.81	31.26	39.93	32.26	20.13	26.90
1956	16.80	17.13	18.02	23.92	40.16	45.38	28.37	37.71	31.59	35.82	33.82	22.25	29.25
1957	14.91	17.69	12.68	16.46	24.25	25.25	25.14	27.59	25.92	28.03	22.36	17.46	21.48
1958	11.68	10.01	11.12	10.46	22.02	14.35	13.01	23.58	14.35	18.24	14.02	14.13	14.75
1959	9.90	8.01	10.23	13.68	20.13	25.92	32.70	25.70	35.15	37.15	34.48	21.69	22.90
1960	16.02	13.24	10.57	18.58	23.25	28.48	27.92	28.03	33.48	31.15	27.25	19.55	23.13
1961	12.27	10.43	10.55	14.82	17.65	24.95	23.83	20.30	28.22	23.54	30.82	18.09	19.62
1962	13.59	11.77	12.67	15.71	31.91	31.16	29.53	30.42	34.29	26.14	24.92	14.81	23.08
1963	11.61	12.40	15.34	23.47	26.07	22.24	40.99	29.01	26.34	27.03	26.77	12.87	22.85
1964	10.80	10.37	11.31	21.42	18.22	18.85	33.03	25.05	31.57	28.19	23.23	15.94	20.67
1965	12.20	10.30	11.38	15.05	24.74	19.77	18.26	22.40	31.01	26.76	23.75	15.62	19.27
1966	15.22	11.00	11.99	16.08	13.83	24.18	17.98	21.19	21.52	21.51	19.48	18.24	17.69
1967	13.03	11.88	11.05	21.88	33.42	36.89	33.34	23.17	26.50	20.63	15.02	11.85	21.56
1968	10.01	8.62	12.53	15.07	20.56	26.30	27.58	25.98	30.99	26.63	23.99	15.22	20.29
1969	12.12	11.46	10.59	17.53	18.95	15.32	11.71	28.52	30.80	35.68	26.79	21.34	20.07
1970	22.33	18.12	20.03	25.58	32.61	30.49	28.01	26.46	37.73	43.72	35.18	27.07	28.94
1971	26.68	25.60	29.33	24.46	33.40	34.59	40.09	48.58	36.96	37.23	26.26	17.40	31.71
1972	18.11	13.75	13.93	22.55	37.58	33.52	25.57	32.08	32.08	25.02	21.35	17.45	24.42
1973	11.48	9.77	11.49	11.58	23.46	26.53	22.99	23.60	33.47	27.07	30.39	21.94	21.15
1974	14.49	12.98	13.36	17.09	31.09	23.53	25.50	30.99	37.76	35.58	31.34	16.72	24.20
1975	12.71	11.18	13.97	15.51	25.32	37.58	40.15	40.27	39.86	44.64	35.42	27.15	26.65
1976	17.60	13.87	16.07	26.23	32.25	26.72	21.22	27.06	25.15	29.01	21.77	13.04	22.50
1977	10.52	10.37	9.30	10.65	16.90	26.70	31.94	31.41	24.95	27.00	22.37	15.80	19.83
1978	13.27	12.34	12.22	23.43	23.80	32.57	27.07	20.33	25.25	26.66	21.29	19.61	21.49
1979	12.58	10.70	10.42	16.67	19.36	25.44	13.39	17.83	21.59	31.57	30.02	17.99	18.96
1980	13.19	11.16	10.07	10.19	18.84	24.99	26.69	26.07	20.75	29.21	29.40	17.73	19.86
1981	11.98	11.33	11.15	16.43	38.09	35.25	37.40	22.64	24.65	26.62	22.88	15.78	22.85
1982	12.84	14.63	13.99	22.83	31.48	22.27	23.66	24.46	24.68	33.72	20.52	15.52	21.72
1983	9.48	9.01	11.11	17.83	30.40	23.46	35.21	27.82	32.97	27.55	19.18	19.70	21.98
1984	14.15	15.15	9.70	11.99	19.05	30.33	25.35	23.18	34.46	36.14	33.30	20.16	22.75
1985	14.06	11.01	14.48	13.07	21.16	16.13	17.59	31.39	33.47	25.44	18.95	15.54	19.36
1986	12.68	12.80	12.45	18.98	19.47	24.85	17.43	19.14	17.82	28.27	17.06	12.53	17.79
1987	9.11	8.05	8.26	13.43	18.93	15.46	16.30	22.58	33.72	28.21	21.19	16.40	17.64
1988	11.09	10.90	9.40	11.91	17.46	15.85	18.24	28.42	28.27	29.13	28.84	18.75	19.02
1989	17.49	15.09	15.77	16.08	19.15	30.52	23.36	31.12	33.53	36.89	22.91	19.18	23.42
1990	13.34	14.18	13.70	17.09	25.18	26.63	25.19	17.19	21.59	33.57	25.68	17.17	20.88
1991	19.24	16.63	16.90	20.57	30.40	27.19	32.64	22.88	18.84	24.32	22.01	18.55	22.68
1992	14.36	13.06	12.91	14.20	20.05	17.65	20.79	27.40	31.92	24.92	21.35	15.73	19.53
1993	13.83	11.61	12.44	8.72	10.90	18.02	26.96	32.02	40.43	41.51	29.18	28.71	22.86
1994	16.70	16.51	15.15	26.10	33.98	36.19	24.13	51.71	36.11	23.11	34.82	20.42	27.91
1995	12.97	11.00	11.95	17.22	23.30	27.35	37.13	33.79	28.52	27.20	16.89	26.73	22.84
1996	16.79	18.13	19.86	24.48	41.07	29.32	35.16	32.40	33.87	31.79	28.93	20.10	27.66
1997	12.04	17.22	13.49	24.88	16.90	30.33	10.66	10.14	18.54	12.24	11.16	7.63	15.44
1998	6.33	6.71	7.07	14.20	16.61	29.00	37.80	25.55	37.89	24.92	21.98	24.10	21.01
1999	16.70	20.13	20.45	30.07	33.73	34.99	33.30	32.24	34.35	34.41	26.14	19.14	27.97
2000	13.40	13.95	12.67	14.66	26.08	31.65	38.17	35.60	36.10	27.50	21.19	20.13	24.26
Media	14.07	12.96	13.33	18.71	25.50	26.87	26.75	28.19	29.40	29.08	24.68	18.74	22.37
Max	26.66	25.60	29.33	31.94	41.07	45.38	40.99	51.71	40.43	44.64	35.42	28.71	31.71
Min	6.33	6.71	7.07	8.72	10.90	14.35	10.66	10.14	14.35	12.24	11.16	7.63	14.75

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Concepción.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1955	6.10	4.73	5.15	6.65	8.78	9.65	10.70	9.54	10.49	13.30	10.42	7.90	8.62
1956	7.25	6.86	6.11	7.24	10.06	12.13	8.54	11.01	9.46	11.17	10.98	6.70	8.96
1957	5.17	4.81	3.77	5.49	7.53	6.54	6.09	6.70	7.01	8.50	6.99	5.57	6.18
1958	3.93	3.17	3.52	3.21	5.78	4.08	3.80	6.10	3.96	4.66	3.79	3.79	4.15
1959	2.57	2.25	2.47	3.13	4.80	6.01	7.00	6.12	8.21	8.25	8.44	5.46	5.39
1960	4.53	3.94	3.39	5.22	5.94	7.37	7.64	7.68	8.79	7.71	6.97	7.54	6.39
1961	4.40	3.92	3.67	5.70	5.15	7.85	8.01	6.49	8.68	7.45	9.47	5.93	6.39
1962	4.66	3.97	4.23	4.44	8.58	7.88	7.96	9.04	8.68	8.32	8.94	5.55	6.85
1963	4.63	4.87	5.07	7.25	8.33	7.76	11.10	8.19	8.09	9.03	8.61	5.85	7.40
1964	4.36	4.16	4.17	5.88	6.20	7.90	9.13	8.77	8.95	8.08	7.75	5.79	6.76
1965	4.82	4.04	3.87	5.25	6.98	5.99	5.90	7.43	9.37	7.89	7.82	5.35	6.23
1966	4.95	3.71	3.95	4.74	5.82	8.73	7.14	8.85	9.19	8.67	8.53	7.23	6.79
1967	5.23	4.35	3.87	6.85	9.58	13.67	13.72	9.34	8.07	7.62	6.50	4.78	7.80
1968	4.28	3.72	3.88	4.85	6.39	9.23	8.34	9.65	9.77	9.10	7.96	5.85	6.92
1969	4.43	3.70	3.22	7.01	7.48	5.24	4.50	10.38	9.44	10.93	12.43	6.26	7.09
1970	5.45	4.33	4.15	6.09	9.48	8.10	7.72	7.66	11.70	13.62	11.88	8.80	8.25
1971	8.47	8.18	8.73	7.73	12.15	10.70	13.57	16.43	11.67	11.41	9.09	5.82	10.33
1972	5.97	4.95	4.63	7.04	11.40	9.96	8.04	8.93	8.17	9.92	6.70	5.86	7.63
1973	4.29	3.75	3.59	4.45	6.28	6.21	6.66	7.07	8.95	8.23	9.34	7.40	6.35
1974	5.92	5.20	4.94	6.05	7.88	6.68	7.94	9.04	10.63	10.45	10.04	6.55	7.61
1975	5.26	4.92	5.56	5.59	7.66	10.35	11.09	13.41	13.59	13.58	12.98	10.71	9.56
1976	6.47	5.71	5.84	8.16	10.02	9.29	6.62	9.37	6.70	10.39	8.07	4.76	7.62
1977	3.71	3.51	3.11	3.86	5.35	8.77	8.16	9.34	7.81	7.26	6.34	5.27	6.04
1978	3.78	3.43	3.67	8.19	6.09	9.17	8.57	6.87	7.54	8.23	8.03	6.86	6.70
1979	4.32	4.11	3.71	5.27	6.95	10.27	5.15	6.14	7.05	10.87	11.41	7.04	6.86
1980	5.03	4.75	4.27	4.83	6.29	9.08	8.39	7.43	6.22	9.29	9.04	5.72	6.70
1981	4.20	4.27	4.24	5.81	12.76	10.98	10.69	7.53	9.24	9.69	8.34	5.56	7.78
1982	4.57	5.59	5.72	10.13	12.32	8.48	9.33	7.88	7.32	9.97	8.12	7.01	8.04
1983	3.87	4.14	3.91	8.02	11.93	7.65	13.60	9.02	12.69	10.24	8.51	8.30	8.49
1984	5.27	5.14	3.37	4.70	8.95	13.30	9.46	12.00	17.82	14.26	14.53	8.90	9.81
1985	5.47	4.68	5.96	6.31	10.70	8.01	9.71	12.94	13.88	10.91	8.39	8.26	8.77
1986	5.96	5.34	5.00	9.22	7.08	9.72	7.40	6.75	6.21	12.06	6.91	5.95	7.30
1987	2.15	2.12	1.33	5.36	10.03	8.21	13.41	7.23	12.60	13.44	7.71	6.12	7.48
1988	4.36	5.50	4.15	3.84	5.12	7.96	9.64	16.95	10.03	4.84	7.95	3.49	6.99
1989	2.21	1.75	5.83	5.19	8.56	10.84	10.47	12.66	10.85	11.72	7.17	6.46	7.81
1990	4.24	4.53	3.81	5.08	9.08	8.50	8.50	5.97	5.51	11.29	10.28	6.51	6.94
1991	5.51	5.24	5.77	5.78	17.37	14.16	16.05	6.49	5.11	6.40	7.47	5.29	8.39
1992	2.19	2.28	4.11	2.94	4.78	3.48	4.34	6.40	8.94	6.02	4.89	5.03	4.62
1993	4.71	3.71	5.04	5.36	7.91	5.92	7.34	8.28	11.00	7.64	7.93	7.58	6.87
1994	8.65	7.15	5.07	9.19	10.01	13.15	10.17	17.50	12.33	12.85	12.30	8.35	10.56
1995	5.91	4.23	3.94	5.60	7.95	11.18	14.53	12.11	12.58	11.78	9.94	11.78	9.29
1996	6.00	7.09	8.57	9.06	15.35	11.81	15.78	14.06	12.22	13.94	13.02	8.48	11.28
1997	6.47	6.78	6.63	8.32	6.80	8.15	5.23	4.94	8.50	4.58	5.58	3.33	6.28
1998	2.82	3.36	4.02	5.83	6.84	8.35	13.91	10.77	12.46	9.37	9.09	8.76	7.97
1999	5.41	7.41	7.76	11.13	14.12	14.44	12.49	9.84	11.93	13.84	11.80	8.43	10.72
2000	5.68	6.23	4.63	4.78	9.00	10.23	15.54	12.96	16.93	13.61	9.95	8.76	9.86
Media	4.91	4.60	4.60	6.13	8.56	8.98	9.33	9.33	9.70	9.83	8.88	6.67	7.63
Max	8.65	8.18	8.73	11.13	17.37	14.44	16.05	17.50	17.82	14.26	14.53	11.78	11.28
Min	2.15	1.75	1.33	2.94	4.78	3.48	3.80	4.94	3.96	4.58	3.79	3.33	4.15

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Tenche.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1955	3.30	2.35	3.29	4.13	6.24	5.96	6.82	5.54	6.04	7.68	7.15	6.03	5.38
1956	4.43	4.34	3.70	4.41	6.12	6.66	5.47	7.70	5.31	7.67	8.14	6.33	5.86
1957	2.58	2.72	2.02	3.48	4.96	4.89	3.95	3.85	4.37	4.67	4.26	4.19	3.83
1958	1.93	1.64	1.85	1.83	4.06	2.59	2.43	3.78	2.29	2.94	2.59	2.09	2.50
1959	1.56	1.22	1.43	1.85	3.13	4.75	4.91	4.28	5.58	5.57	5.48	3.04	3.57
1960	2.48	2.10	1.74	3.46	3.87	5.50	4.91	5.44	7.04	5.50	4.88	5.55	4.37
1961	2.35	1.88	1.85	3.60	3.25	6.17	6.11	4.49	6.46	5.14	5.82	3.74	4.24
1962	2.60	2.20	2.49	2.65	5.76	5.17	5.10	6.00	6.64	5.30	5.12	3.46	4.37
1963	2.95	3.08	3.56	4.88	5.28	4.68	7.73	5.77	5.33	5.45	5.42	3.15	4.77
1964	2.82	2.75	2.90	4.54	4.02	4.11	6.43	5.14	6.19	5.63	4.84	3.65	4.42
1965	3.12	2.74	2.91	3.51	5.07	4.28	4.02	4.70	6.10	5.40	4.93	3.61	4.20
1966	2.39	1.72	2.14	2.36	3.44	5.73	4.72	5.19	5.11	5.27	4.38	5.60	4.00
1967	3.38	2.68	2.13	4.18	6.50	10.48	8.98	5.86	5.11	4.39	3.44	2.42	4.96
1968	3.17	2.59	2.37	3.19	3.80	5.40	4.80	5.77	4.64	5.75	4.47	3.43	4.12
1969	1.77	2.20	1.91	4.64	4.33	2.86	2.65	6.86	5.96	6.64	6.02	3.08	4.08
1970	2.46	2.89	3.22	4.13	5.91	4.80	4.18	4.40	6.17	8.71	7.23	4.82	4.91
1971	4.52	4.36	5.10	4.76	6.13	5.69	7.69	8.74	7.33	7.43	5.23	2.55	5.79
1972	3.44	2.09	2.17	3.39	8.39	7.70	5.41	6.09	5.94	5.38	4.36	3.46	4.82
1973	2.77	3.03	2.63	3.17	3.85	4.06	3.93	4.68	5.39	4.98	5.67	3.87	4.00
1974	3.44	2.80	2.88	4.01	6.13	4.44	5.09	6.54	6.65	7.00	6.73	3.37	4.92
1975	2.13	3.09	2.59	2.93	4.02	6.21	6.42	8.16	8.30	8.44	7.02	5.31	5.39
1976	2.70	2.67	3.13	4.15	4.93	4.42	3.58	5.28	3.91	4.97	3.78	2.55	3.84
1977	2.15	2.53	2.02	2.36	3.31	5.52	4.42	5.83	4.33	4.24	3.31	2.23	3.52
1978	2.29	2.64	2.86	4.74	3.54	5.85	5.43	4.22	4.70	4.51	4.92	4.36	4.17
1979	2.69	3.08	2.43	3.93	4.55	6.60	2.95	4.00	3.92	7.32	6.75	3.89	4.34
1980	2.85	4.58	4.01	3.68	4.59	6.13	6.10	4.96	3.60	6.27	6.14	3.86	4.73
1981	3.35	4.48	4.00	5.42	8.81	7.18	7.65	5.72	6.37	5.77	4.05	3.65	5.54
1982	3.42	4.48	4.20	6.00	7.26	5.72	5.39	4.56	5.19	5.83	4.24	3.90	5.02
1983	2.49	2.79	2.23	3.53	5.40	3.97	7.97	5.68	6.98	6.98	4.76	4.07	4.74
1984	3.49	3.62	2.46	3.80	3.97	5.65	4.05	5.32	8.01	6.37	6.85	4.64	4.85
1985	3.52	3.63	4.34	3.48	5.44	4.19	5.58	7.32	6.74	4.67	3.36	4.09	4.70
1986	3.67	4.04	3.57	6.18	4.75	5.50	3.94	4.10	3.50	5.98	3.04	3.10	4.28
1987	2.58	2.58	2.63	4.49	5.06	4.16	5.41	4.06	5.79	6.35	4.58	3.20	4.24
1988	2.82	2.97	2.12	2.91	3.48	4.36	4.09	6.19	6.63	5.36	6.08	3.95	4.25
1989	3.29	3.21	3.64	3.77	5.18	6.01	5.76	8.72	7.60	8.10	4.83	4.22	5.36
1990	2.75	2.84	3.33	3.55	6.39	5.33	5.40	4.03	3.96	7.58	5.72	4.64	4.63
1991	2.77	2.76	2.69	3.00	5.31	4.81	4.94	2.81	3.33	3.74	3.82	2.75	3.56
1992	1.75	1.77	1.28	1.78	3.14	2.05	2.14	3.16	4.85	2.96	2.56	2.68	2.51
1993	2.18	2.23	2.10	2.88	4.32	3.41	4.68	4.65	6.08	5.16	4.67	4.27	3.89
1994	2.44	2.82	3.36	4.60	4.84	6.91	4.35	9.53	7.87	6.60	6.84	3.21	5.28
1995	2.43	2.94	3.18	3.80	3.76	4.94	5.50	5.04	4.42	5.36	3.37	3.74	4.04
1996	2.68	3.25	3.98	4.60	7.24	6.52	8.07	6.32	5.47	6.10	4.94	2.79	5.16
1997	2.29	3.43	3.43	4.35	3.19	4.06	2.54	1.80	3.35	2.21	3.07	1.98	2.98
1998	1.66	2.55	1.59	4.74	4.08	6.66	7.66	5.07	5.67	4.27	3.63	4.35	4.33
1999	2.96	3.85	3.41	6.06	7.40	8.02	7.76	5.72	5.85	5.97	5.90	3.71	5.55
2000	2.36	2.53	2.69	2.94	5.05	6.44	7.04	6.95	6.53	5.31	3.61	3.45	4.58
Media	2.76	2.89	2.82	3.82	4.98	5.36	5.31	5.44	5.58	5.72	4.96	3.74	4.45
Max	4.52	4.58	5.10	6.18	8.81	10.48	8.98	9.53	8.30	8.71	8.14	6.33	5.86
Min	1.56	1.22	1.28	1.78	3.13	2.05	2.14	1.80	2.29	2.21	2.56	1.98	2.50

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Porce 2.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1972						143.10	107.00	108.70	98.94	126.80	130.20	89.62	
1973	62.85	45.00	52.43	71.07	104.70	124.40	97.41	126.90	178.20	149.40	145.50	136.80	107.89
1974	111.20	99.81	97.16	113.10	127.30	103.70	104.10	136.70	186.20	193.00	174.10	100.20	128.88
1975	75.97	90.23	96.90	86.82	122.70	121.50	166.50	161.30	163.00	171.50	186.00	155.90	133.19
1976	93.62	80.92	87.70	125.80	140.60	121.80	71.08	72.11	71.64	120.00	91.12	60.46	94.74
1977	67.11	66.23	67.59	74.62	90.16	116.00	100.50	98.18	107.70	115.60	111.60	69.87	90.43
1978	57.27	52.79	63.11	91.55	108.80	119.50	102.60	78.35	90.07	102.60	111.20	92.04	89.16
1979	63.02	60.94	65.42	83.10	136.70	123.60	69.87	72.17	94.51	133.10	155.60	92.32	95.86
1980	69.99	59.60	54.09	61.66	75.41	81.90	70.11	74.80	79.65	159.10	135.50	97.13	84.91
1981	60.19	58.79	66.02	100.80	190.20	177.00	153.10	109.80	135.00	165.30	122.60	84.58	118.62
1982	95.48	102.10	92.93	164.20	203.30	133.90	101.20	92.69	109.80	155.60	126.40	103.90	123.46
1983	67.78	53.62	61.10	99.45	123.80	85.70	102.70	85.87	121.70	113.70	113.20	111.30	94.99
1984	87.77	79.61	56.34	67.33	132.00	147.40	141.20	131.40	179.20	217.30	193.60	108.80	128.50
1985	78.58	66.69	70.10	77.96	120.40	85.57	76.34	128.50	167.20	143.60	119.70	93.29	102.33
1986	77.16	82.75	72.68	122.90	120.60	122.90	83.24	94.34	88.09	171.00	123.60	87.68	103.91
1987	64.53	57.34	57.90	75.86	119.20	72.60	102.20	97.48	127.10	167.90	117.80	98.43	96.53
1988	63.62	62.16	50.54	75.39	91.54	101.00	103.50	177.60	222.50	199.80	221.10	147.70	126.37
1989	121.50	97.02	100.03	95.51	131.10	131.90	91.73	127.80	192.40	171.10	139.50	98.67	124.86
1990	73.69	73.25	65.26	96.54	114.90	110.40	94.02	72.98	107.60	205.20	140.40	95.85	104.17
1991	66.65	54.50	68.87	77.63	110.50	99.80	94.64	69.74	64.99	111.40	118.50	92.54	85.81
1992	57.05	52.82	46.80	53.45	79.23	63.00	62.96	79.64	107.30	87.51	82.45	88.48	71.72
1993	68.17	50.73	58.63	82.32	123.00	65.10	86.84	87.34	151.30	142.60	168.10	140.60	102.06
1994	80.43	77.12	70.03	122.20	122.70	103.00	86.19	108.50	110.30	134.30	163.40	92.07	105.85
1995	61.13	52.96	59.39	73.95	107.90	125.20	133.10	199.10	144.70	175.20	125.00	124.10	115.14
1996	94.11	96.77	134.10	129.30	197.20	180.60	171.10	151.90	134.40	167.70	134.10	90.34	140.14
1997	86.75	87.58	74.23	104.30	80.85	133.20	62.23	50.00	71.19	66.03	84.76	53.41	79.54
1998	39.72	39.87	44.42	76.94	119.80	100.10	137.10	111.70	175.40	146.30	134.80	146.90	106.09
1999	108.70	140.10	142.90	146.10	180.10	192.00	145.50	116.70	180.00	221.90	182.50	147.50	158.67
2000	101.50	97.29	93.02	101.00	170.70	184.20	166.80	160.70	218.00	166.80	121.70	100.30	140.17
Media	76.98	72.81	73.92	94.67	126.62	119.66	106.37	109.76	133.73	151.77	137.04	103.48	109.07
Max	121.50	140.10	142.90	164.20	203.30	192.00	171.10	199.10	222.50	221.90	221.10	155.90	158.67
Min	39.72	39.87	44.42	53.45	75.41	63.00	62.23	50.00	64.99	66.03	82.45	53.41	71.72

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie RioGrande.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1942	16.73	17.68	25.95	46.66	55.79	38.49	30.89	36.89	32.12	54.55	53.51	37.73	37.23
1943	35.36	30.41	31.36	65.39	50.09	41.53	29.18	31.17	29.56	56.36	43.72	28.80	39.41
1944	21.86	21.57	22.43	22.52	59.12	64.72	32.31	29.94	40.87	53.22	40.77	25.28	36.22
1945	20.05	14.83	19.01	35.36	56.26	28.89	30.98	43.62	29.27	41.15	40.68	42.10	33.52
1946	37.45	22.14	29.37	45.05	40.87	25.95	21.19	25.76	25.19	32.69	32.79	33.36	30.98
1947	24.14	17.96	15.21	20.15	31.74	34.88	36.97	29.56	36.31	47.81	32.12	23.95	29.23
1948	17.68	15.11	16.44	35.64	40.11	35.93	44.76	25.47	23.38	24.90	43.24	24.62	28.94
1949	13.88	15.11	20.43	25.09	32.88	27.28	40.49	31.46	29.65	45.81	41.91	32.69	29.72
1950	19.10	22.71	24.33	22.43	38.78	59.88	40.30	61.87	35.93	49.04	42.20	43.05	38.30
1951	29.66	35.69	28.18	34.90	36.28	28.77	34.70	29.56	30.35	28.47	33.22	24.32	31.18
1952	19.48	17.10	19.58	26.60	30.45	27.98	31.44	48.94	46.96	40.14	49.73	25.21	31.97
1953	16.51	15.92	14.24	21.06	36.09	26.50	19.77	15.92	22.74	37.08	47.06	34.31	25.60
1954	16.12	17.99	14.43	27.88	33.91	41.62	53.49	39.05	30.49	53.50	47.27	38.92	34.56
1955	26.08	23.81	29.35	39.46	44.86	47.57	40.20	39.80	47.20	61.70	58.90	52.60	42.63
1956	42.90	54.30	38.20	45.80	56.20	56.60	44.10	49.90	46.50	67.10	44.50	41.00	48.93
1957	25.50	25.40	20.10	37.80	45.20	31.80	28.70	32.50	34.70	46.50	40.20	24.80	32.77
1958	18.80	14.70	19.00	20.00	34.90	22.60	15.00	26.90	16.10	27.80	26.10	26.40	22.36
1959	13.90	11.30	15.30	22.50	27.30	28.50	28.50	27.10	35.70	40.00	41.90	22.50	26.21
1960	21.10	19.50	19.60	34.60	35.20	29.20	34.50	32.10	39.40	39.80	39.00	35.30	31.61
1961	18.80	19.90	21.30	32.80	24.50	32.90	29.90	23.80	33.40	33.50	50.60	27.20	29.05
1962	21.20	18.20	23.90	29.10	54.80	40.60	33.10	39.70	39.10	46.90	43.80	30.30	35.06
1963	21.60	26.10	27.50	49.40	51.40	34.30	40.40	35.70	31.80	43.00	51.30	28.10	36.72
1964	20.20	21.40	19.00	37.70	30.70	42.80	40.20	38.00	44.10	41.20	44.80	30.10	34.18
1965	23.30	17.90	15.50	27.60	33.60	25.60	20.10	27.70	34.90	43.20	50.20	32.60	29.35
1966	27.10	16.40	17.90	22.50	27.90	36.50	27.40	32.40	33.40	47.40	47.40	40.00	31.36
1967	23.80	28.10	26.20	34.20	43.60	53.80	42.30	30.90	33.20	33.40	39.70	23.50	34.39
1968	18.80	19.40	18.30	32.90	39.40	45.00	40.40	32.80	45.60	51.40	47.90	31.30	35.27
1969	22.80	17.40	14.10	31.90	32.20	28.60	13.50	36.00	38.00	41.40	43.90	30.10	29.16
1970	24.20	21.10	17.30	32.10	49.60	37.80	29.80	32.80	47.30	67.10	68.40	46.70	39.52
1971	46.20	45.20	55.30	51.40	75.30	56.90	58.90	65.00	59.20	64.80	59.40	36.10	56.14
1972	33.00	28.10	30.10	39.60	60.60	45.00	34.20	35.10	30.70	40.10	40.70	27.20	37.03
1973	18.70	13.50	15.50	23.00	33.70	34.90	29.50	32.30	50.80	50.70	48.60	49.90	33.43
1974	38.80	36.80	33.30	39.10	41.90	33.00	36.20	43.20	61.00	66.20	59.30	31.80	43.38
1975	21.60	27.10	34.10	24.70	36.90	39.90	54.60	51.20	61.30	53.70	67.20	57.10	44.12
1976	29.40	26.10	33.00	42.50	51.60	42.90	26.60	24.30	24.60	51.70	36.90	21.70	34.28
1977	14.90	12.20	12.40	20.40	29.10	34.30	31.60	36.30	28.90	38.20	43.90	22.30	27.04
1978	14.90	13.40	22.20	48.00	33.90	42.30	31.40	23.20	30.60	40.10	44.10	33.30	31.45
1979	17.10	16.60	22.50	30.90	30.10	34.10	19.50	20.90	33.40	46.20	57.40	29.50	29.85
1980	21.10	20.30	14.80	23.80	27.50	35.10	26.20	24.80	27.80	42.60	38.80	31.20	27.83
1981	19.80	16.30	24.10	33.90	60.10	50.90	46.50	32.80	44.60	53.50	47.40	36.10	38.83
1982	35.90	39.80	35.50	56.80	64.20	41.80	31.90	27.10	29.40	45.10	37.30	33.50	39.86
1983	18.70	16.80	23.90	33.90	41.10	24.70	36.20	30.00	37.30	37.10	39.00	41.40	31.68
1984	31.40	30.80	19.80	24.90	44.40	44.50	41.30	38.80	50.00	65.10	57.50	36.60	40.43
1985	24.60	20.80	25.60	30.60	41.00	29.80	25.30	41.90	54.80	47.40	40.50	30.80	34.43
1986	24.40	29.50	24.90	42.70	32.60	40.20	26.40	23.40	23.90	52.40	37.20	23.90	31.79
1987	17.90	15.80	14.90	18.30	34.00	16.90	20.60	24.55	33.90	46.60	30.40	25.40	24.94
1988	15.60	15.80	11.50	23.60	25.90	29.00	28.40	48.94	51.12	54.45	62.05	49.07	34.62
1989	37.49	31.17	30.70	28.80	41.40	35.10	26.40	32.40	43.30	45.30	42.50	27.50	35.17
1990	23.10	25.50	24.20	33.50	36.40	28.90	25.10	19.80	27.60	55.00	35.00	24.80	29.91
1991	21.26	14.53	24.60	24.80	35.20	28.20	26.80	26.00	21.11	37.10	38.80	30.50	27.41
1992	17.00	16.60	19.30	17.30	25.86	19.82	18.98	22.74	28.18	22.60	26.60	31.12	22.18
1993	21.76	13.21	16.56	25.50	40.00	17.20	22.80	23.70	40.50	42.06	51.00	42.70	29.75
1994	22.33	25.02	33.93	41.49	35.93	35.35	26.99	32.63	29.57	40.05	44.66	23.81	32.65
1995	16.76	13.83	16.45	21.15	30.35	33.23	36.97	51.66	40.29	48.78	40.00	42.97	32.70
1996	29.80	29.11	47.65	37.43	59.07	59.11	68.09	41.10	36.65	46.04	40.07	27.13	43.44
1997	26.34	25.10	21.97	32.21	23.48	30.57	16.67	12.96	15.68	14.99	24.86	14.50	21.61
1998	10.87	10.70	12.93	27.64	33.93	31.56	38.10	31.22	48.61	40.03	40.03	42.43	30.67
1999	35.60	39.30	49.30	48.30	47.00	48.20	36.40	37.50	56.60	52.10	44.80	47.50	45.22
2000	28.50	31.00	29.10	33.80	45.60	47.10	42.60	41.90	56.10	40.90	38.70	27.90	38.60
Media	23.61	22.36	23.79	32.87	40.54	36.73	32.98	33.64	37.13	45.37	44.09	32.82	33.83
Max	46.20	54.30	55.30	65.39	75.30	64.72	68.09	65.00	61.30	67.10	68.40	57.10	56.14
Min	10.87	10.70	11.50	17.30	23.48	16.90	13.50	12.96	15.68	14.99	24.86	14.50	21.61

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie San Carlos.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1964									24.81	33.34	36.73	21.06	
1965	16.24	14.85	12.03	12.65	27.74	16.06	11.41	14.81	32.70	40.10	46.67	26.15	22.62
1966	23.91	13.75	16.44	18.33	24.17	26.68	18.62	20.03	19.81	32.46	38.12	32.72	23.75
1967	23.18	14.10	13.97	33.47	27.12	27.72	24.57	21.33	23.07	30.78	28.49	18.64	23.87
1968	13.59	10.22	11.48	24.17	24.59	22.41	28.36	27.72	45.19	43.83	36.91	20.65	25.76
1969	17.76	12.47	12.25	26.02	27.65	19.21	11.04	21.97	37.06	48.10	39.95	23.40	24.74
1970	17.61	10.99	10.27	16.17	35.45	21.86	30.74	26.90	38.27	54.97	40.52	25.80	27.46
1971	25.69	18.42	32.02	28.80	79.76	30.10	26.00	32.19	38.10	42.68	36.11	23.55	34.45
1972	26.64	14.50	15.84	23.82	30.74	29.79	18.11	23.40	18.13	28.01	29.77	24.46	23.60
1973	16.81	9.81	9.30	23.05	19.65	26.66	19.37	30.01	41.14	36.31	48.47	35.28	26.32
1974	28.93	19.63	17.89	30.30	38.30	30.78	22.63	27.52	39.18	41.82	41.34	19.74	29.84
1975	13.07	11.11	13.20	23.16	30.96	30.98	32.79	27.85	36.55	43.27	46.47	35.25	28.72
1976	19.24	16.33	26.29	36.40	24.52	19.70	11.19	11.92	19.37	42.66	40.56	18.27	23.87
1977	11.17	9.81	11.48	13.22	22.87	23.80	25.80	25.23	31.60	35.83	36.49	26.46	22.81
1978	13.20	12.49	15.05	28.09	27.10	20.58	24.88	14.72	29.06	27.56	38.63	21.33	22.72
1979	11.15	10.09	12.34	26.86	32.24	24.52	17.43	22.63	32.76	39.24	36.51	18.95	23.73
1980	16.83	11.35	11.74	24.66	22.30	21.90	17.21	16.64	23.40	39.62	42.17	28.89	23.06
1981	15.73	14.83	11.61	29.88	42.15	34.24	26.00	29.08	30.87	45.54	41.25	29.66	29.24
1982	14.37	19.32	25.36	35.21	40.70	20.12	10.49	9.52	17.54	34.06	20.49	32.10	23.27
1983	10.22	10.29	9.10	35.01	25.49	15.56	18.22	15.49	28.62	43.45	32.59	32.10	23.01
1984	17.83	26.44	16.70	24.92	35.74	43.05	33.91	27.92	36.16	45.54	58.39	33.23	33.32
1985	15.49	11.39	19.13	26.15	38.01	18.55	14.23	23.22	27.59	27.30	20.21	20.45	21.81
1986	18.09	14.56	11.68	37.99	29.11	25.41	14.52	24.94	26.15	39.31	38.25	22.14	25.18
1987	17.91	14.37	17.58	27.17	36.86	26.75	28.49	23.16	38.12	51.16	48.65	29.72	30.00
1988	12.56	18.00	13.77	44.07	52.33	35.83	67.34	44.11	64.89	68.90	74.08	62.91	46.57
1989	47.48	23.95	33.98	43.27	43.72	40.19	18.71	39.00	35.94	54.62	49.73	26.57	38.10
1990	20.67	25.78	18.42	41.38	34.40	36.29	33.32	34.95	46.23	45.54	42.53	32.10	34.30
1991	12.10	10.50	14.10	26.00	26.90	22.20	18.90	16.00	14.56	30.03	31.53	25.10	20.66
1992	14.26	11.63	19.74	20.38	36.82	28.12	16.59	27.63	39.60	41.42	40.15	42.39	28.23
1993	35.28	24.22	29.00	40.26	44.57	21.75	31.27	23.66	51.52	30.91	28.16	37.88	33.21
1994	19.46	16.55	18.57	41.40	37.08	19.15	20.45	22.72	22.43	35.98	28.86	19.61	25.19
1995	11.83	10.05	20.67	29.90	28.60	29.68	26.77	53.26	31.82	51.56	38.32	19.15	29.30
1996	15.18	19.13	21.84	34.88	35.10	29.06	25.89	22.87	19.37	47.09	38.58	13.97	26.91
1997	7.51	13.48	22.94	46.59	29.75	36.76	12.97	16.37	32.91	28.31	31.55	16.30	24.62
1998	15.84	17.87	14.87	21.58	37.20	16.66	30.53	29.01	44.65	49.95	57.40	48.75	32.03
1999	39.09	34.28	26.00	39.72	34.70	26.17	18.46	19.60	31.24	38.67	28.50	25.05	30.12
2000	9.14	14.89	13.07	17.53	24.24	37.45	20.27	22.68	47.32	37.61	30.75	26.97	25.16
Media	18.47	15.60	17.21	29.24	33.57	26.55	22.99	24.72	32.91	40.74	39.02	27.48	27.43
Max	47.48	34.28	33.98	46.59	79.76	43.05	67.34	53.26	64.89	68.90	74.08	62.91	46.57
Min	7.51	9.81	9.10	12.65	19.65	15.56	10.49	9.52	14.56	27.30	20.21	13.97	20.66

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie San Lorenzo.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1955								38.23	46.40	60.28	66.91	53.21	
1956	50.50	44.41	41.43	38.99	65.95	56.60	42.29	46.45	50.48	68.05	60.68	46.22	51.00
1957	31.17	26.57	21.93	37.01	45.44	37.47	31.45	33.04	33.62	39.73	35.80	30.64	33.66
1958	20.61	19.23	23.97	25.74	37.89	24.89	21.15	35.29	25.05	33.25	30.72	28.40	27.18
1959	19.08	16.94	18.32	22.97	31.58	32.25	27.80	30.64	46.73	40.92	40.53	26.28	29.50
1960	22.15	20.62	23.80	27.64	37.22	41.35	43.63	33.55	46.69	43.67	45.61	43.12	35.75
1961	26.05	24.97	24.29	28.44	34.24	39.59	37.08	34.86	56.54	55.12	60.52	39.03	38.39
1962	25.18	22.39	30.94	37.09	65.02	64.34	41.83	44.82	46.12	61.38	52.31	35.24	43.89
1963	26.69	34.14	36.27	46.21	48.39	34.97	37.07	37.47	40.16	48.53	58.47	31.32	39.97
1964	23.90	19.77	19.65	33.91	66.65	35.31	43.43	41.21	56.85	51.43	45.71	28.14	38.83
1965	29.50	22.20	20.20	27.90	47.20	38.00	28.70	41.80	54.50	48.00	58.70	33.80	37.54
1966	34.70	21.60	27.00	30.00	40.10	54.80	35.60	43.80	41.00	48.00	53.10	39.40	39.09
1967	31.50	25.30	26.30	47.30	56.10	57.00	54.50	34.30	54.10	42.80	35.70	26.88	40.98
1968	22.10	15.20	19.30	32.40	34.90	42.60	46.60	47.30	64.50	60.10	46.80	27.00	38.23
1969	27.40	23.50	23.40	32.20	35.40	32.80	19.40	48.90	56.80	53.90	50.20	32.70	36.38
1970	30.60	15.70	22.90	31.40	57.60	48.30	48.90	45.20	65.50	65.20	46.50	43.10	43.41
1971	44.70	40.70	60.20	51.30	66.10	58.30	45.30	63.70	69.80	80.90	72.20	38.80	57.67
1972	42.30	23.50	28.50	32.90	60.10	51.70	41.80	47.70	39.30	48.20	45.50	27.30	40.73
1973	20.50	14.20	19.60	24.60	34.50	54.70	38.40	54.70	92.40	64.60	60.70	40.30	43.27
1974	39.70	26.60	25.90	45.10	57.80	43.20	45.70	50.90	69.00	65.20	53.40	27.10	45.80
1975	27.30	24.40	32.30	44.20	58.40	53.30	63.60	52.50	54.00	60.20	47.10	36.30	46.13
1976	20.30	20.80	40.10	41.80	46.60	30.80	21.90	24.90	22.10	32.10	37.30	22.20	30.08
1977	17.40	15.70	16.57	18.51	29.49	25.35	31.90	35.47	21.55	32.17	25.11	23.11	24.36
1978	14.65	16.91	17.59	45.06	41.64	44.82	46.56	33.93	45.50	44.74	42.47	38.30	36.01
1979	30.68	25.58	28.48	36.13	42.88	44.65	31.54	43.33	52.82	59.49	51.64	26.06	39.44
1980	19.17	16.83	19.87	22.98	45.38	36.39	35.42	35.21	40.96	57.57	48.20	28.76	33.90
1981	16.80	17.84	16.61	37.72	58.47	38.86	35.68	30.28	39.86	48.02	34.14	25.17	33.29
1982	20.50	24.92	28.67	54.17	55.33	25.42	25.58	36.36	60.99	46.12	23.97	19.44	35.12
1983	16.93	14.41	16.36	41.15	46.44	29.25	35.93	31.05	53.35	45.78	31.40	27.56	32.47
1984	20.73	36.04	16.49	38.13	54.83	57.48	38.50	40.07	61.27	66.97	56.68	35.75	43.58
1985	17.41	19.20	29.62	25.13	50.46	22.98	25.72	61.13	54.44	35.55	26.42	22.09	32.51
1986	25.85	28.03	19.31	53.08	41.73	34.04	23.26	40.93	36.93	58.88	37.27	21.97	35.11
1987	19.61	16.36	11.90	19.10	21.40	18.00	23.60	21.50	31.40	34.30	29.80	21.70	22.39
1988	14.70	14.70	12.10	29.60	42.20	51.20	33.30	60.70	82.60	46.50	61.20	51.90	41.73
1989	49.80	24.70	21.80	31.00	33.80	40.30	26.10	41.00	63.80	61.70	57.30	31.10	40.20
1990	22.90	18.70	16.80	23.80	40.40	31.90	32.60	25.40	48.00	63.20	43.40	37.00	33.68
1991	17.20	14.90	16.80	19.80	24.00	33.40	25.60	19.00	20.50	27.20	29.40	17.10	22.08
1992	10.30	9.60	14.80	13.90	29.60	22.00	23.00	31.40	45.50	30.10	23.30	22.20	22.98
1993	21.62	14.59	23.98	26.20	29.47	17.54	30.25	37.66	56.34	51.43	43.12	32.75	32.08
1994	20.26	17.91	16.45	32.30	37.25	26.85	29.88	33.50	42.35	49.41	56.19	25.98	32.36
1995	19.87	14.90	21.80	40.71	41.83	59.60	52.84	47.44	45.86	35.15	29.80	22.98	36.07
1996	17.20	22.76	31.30	34.60	46.87	44.41	108.60	77.25	58.52	82.30	47.04	25.43	49.69
1997	18.64	35.47	31.66	41.43	23.20	40.62	17.60	17.94	25.41	20.84	25.23	12.94	25.92
1998	11.06	11.76	11.49	20.78	31.84	31.42	48.73	36.61	60.73	50.09	41.63	40.18	33.03
1999	26.40	34.30	27.91	38.82	46.29	51.72	38.40	34.92	50.80	54.21	43.03	35.46	40.19
2000	18.81	20.94	21.16	29.01	61.56	69.07	64.74	64.76	77.72	61.37	35.30	25.54	45.83
Media	24.54	22.00	23.91	33.60	44.52	40.66	37.81	40.61	50.19	50.75	44.51	31.02	36.92
Max	50.50	44.41	60.20	54.17	66.65	69.07	108.60	77.25	92.40	82.30	72.20	53.21	57.67
Min	10.30	9.60	11.49	13.90	21.40	17.54	17.60	17.94	20.50	20.84	23.30	12.94	22.08

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Tafetanes.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1991							1.95	1.90	3.09	3.73	3.38	2.21	
1992	1.65	1.86	1.86	2.98	3.60	2.29	1.61	3.05	3.49	3.64	2.84	3.06	2.66
1993	2.51	1.82	2.84	2.83	3.68	1.77	3.01	2.77	4.61	4.01	3.34	3.24	3.04
1994	1.88	2.12	3.22	4.14	3.28	2.46	2.30	2.58	2.79	3.16	4.18	3.04	2.93
1995	1.58	1.29	3.84	3.64	3.37	4.74	3.23	3.64	3.37	4.05	4.25	3.06	3.34
1996	2.00	3.13	2.62	5.50	5.32	4.73	3.08	4.89	3.40	4.93	3.40		3.91
1997	1.89	3.58	2.64	3.83	2.51	3.41	1.71	1.37	3.98	3.12	2.83	1.56	2.70
1998	1.42	1.20	1.32	2.15	2.78	2.60	2.68	2.17	3.22	3.79	3.54	3.48	2.53
1999	3.05	3.44	3.07	3.64	3.19	3.02	2.17	2.44	3.05	3.42	2.94	3.07	3.04
2000		1.58	2.77	2.81	3.36	3.28	3.12	2.25	3.87	4.06	2.90		3.00
Media	2.00	2.22	2.69	3.50	3.45	3.14	2.49	2.71	3.49	3.79	3.36	2.84	3.02
Max	3.05	3.58	3.84	5.50	5.32	4.74	3.23	4.89	4.61	4.93	4.25	3.48	3.91
Min	1.42	1.20	1.32	2.15	2.51	1.77	1.61	1.37	2.79	3.12	2.83	1.56	2.53

Caudal medio mensual, m³/seg. Serie Calderas.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1991							5.48	5.33	8.70	10.49	9.49	6.21	
1992	4.64	5.22	5.24	8.39	10.11	6.45	4.53	8.58	9.80	10.23	7.99	8.60	7.48
1993	7.06	5.11	7.99	7.95	10.35	4.97	8.46	7.78	12.96	11.26	9.40	9.10	8.53
1994	5.28	5.96	9.05	11.65	9.22	6.93	6.48	7.26	7.85	8.87	11.75	8.55	8.24
1995	4.45	3.62	10.81	10.24	9.47	13.33	9.07	10.25	9.48	11.39	11.94	8.62	9.39
1996	5.62	8.79	7.38	15.47	14.96	13.30	8.65	13.75	9.56	13.86	9.55		10.99
1997	5.32	10.05	7.44	10.76	7.06	9.59	4.81	3.85	11.19	8.78	7.96	4.40	7.60
1998	4.00	3.37	3.72	6.05	7.80	7.30	7.53	6.11	9.05	10.65	9.97	9.78	7.11
1999	8.57	9.68	8.63	10.24	8.97	8.50	6.10	6.85	8.58	9.62	8.26	8.63	8.55
2000		4.45	7.78	7.91	9.44	9.22	8.77	6.33	10.89	11.40	8.16		8.44
Media	5.62	6.25	7.56	9.85	9.71	8.84	6.99	7.61	9.81	10.66	9.45	7.99	8.48
Max	8.57	10.05	10.81	15.47	14.96	13.33	9.07	13.75	12.96	13.86	11.94	9.78	10.99
Min	4.00	3.37	3.72	6.05	7.06	4.97	4.53	3.85	7.85	8.78	7.96	4.40	7.11

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Batá.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1956	10.00	8.00	10.00	23.60	39.81	124.29	92.25	136.91	81.56	71.85	38.35	21.26	54.82
1957	10.01	7.24	10.19	20.55	117.85	138.74	205.79	133.65	88.54	79.75	60.57	25.00	74.82
1958	9.45	6.04	12.69	28.39	59.69	95.50	154.59	126.26	55.54	31.73	27.84	11.44	51.60
1959	6.74	5.31	8.93	19.37	61.80	116.60	202.25	279.99	124.36	103.94	63.87	23.30	84.71
1960	15.53	16.62	9.80	23.31	55.95	92.57	164.29	204.75	108.83	51.30	47.30	46.66	69.74
1961	11.85	7.89	9.68	30.97	29.87	100.93	122.40	124.63	44.70	57.40	63.98	17.71	51.83
1962	7.29	5.51	12.01	10.56	67.43	133.85	185.52	116.18	72.26	54.44	49.37	22.02	61.37
1963	10.02	11.29	8.24	40.95	128.24	126.80	140.49	170.01	87.03	34.38	44.81	18.70	68.41
1964	7.91	5.97	4.77	18.11	57.34	112.45	126.06	81.14	94.26	50.85	54.23	22.48	52.96
1965	10.97	7.48	6.93	36.29	110.17	119.33	162.46	140.09	79.15	71.22	81.40	31.89	71.45
1966	12.78	6.13	16.65	20.27	25.68	52.76	102.55	83.73	63.42	36.26	54.20	45.96	43.37
1967	14.66	8.25	9.16	38.93	74.82	165.01	137.93	212.73	92.20	47.13	39.26	24.28	72.03
1968	8.95	8.30	5.54	51.94	51.39	104.05	173.30	129.99	76.83	58.84	41.81	12.69	60.30
1969	17.31	10.87	7.86	37.01	71.64	90.38	144.32	105.85	45.50	85.99	43.00	20.26	56.67
1970	22.03	14.47	10.73	36.08	59.62	103.66	143.81	133.51	75.09	79.99	44.30	24.65	62.33
1971	17.83	11.45	23.06	37.51	117.86	111.57	182.00	111.38	94.42	52.48	39.74	26.08	68.78
1972	35.15	16.63	16.53	71.33	123.35	135.06	154.49	97.81	99.48	43.58	34.64	13.27	70.11
1973	7.35	5.81	6.35	13.42	66.51	76.39	107.59	106.55	136.94	73.86	79.91	31.98	59.39
1974	10.93	11.57	13.63	36.31	55.42	67.29	127.65	118.07	60.46	52.23	51.03	16.41	51.75
1975	7.26	6.31	10.52	16.16	38.56	109.24	78.42	113.65	61.63	59.27	57.09	47.43	50.46
1976	15.62	9.61	23.80	53.31	114.84	178.78	187.15	118.98	76.25	67.98	67.58	31.41	78.78
1977	9.76	8.39	7.84	24.42	50.82	96.42	113.76	93.97	107.32	62.56	65.37	15.27	54.66
1978	7.30	7.39	9.14	54.27	63.41	121.83	102.90	124.58	83.41	69.59	31.78	20.04	57.97
1979	7.07	5.68	7.56	42.86	57.84	140.30	126.42	107.52	53.99	83.33	95.48	59.49	65.63
1980	18.93	9.46	9.96	33.40	57.62	161.91	131.38	85.69	87.89	87.91	39.97	13.44	61.46
1981	10.09	12.58	14.74	44.68	113.59	121.92	109.46	83.16	69.65	73.38	52.91	26.35	61.04
1982	14.56	11.50	17.73	65.73	77.87	91.50	137.09	123.51	86.25	65.41	35.61	18.69	62.12
1983	14.09	15.13	23.90	62.52	64.70	70.99	97.01	126.38	56.98	53.83	25.20	18.58	52.44
1984	7.70	11.04	7.42	11.11	34.89	102.76	98.40	114.20	83.39	36.17	41.11	16.07	47.02
1985	8.45	4.99	6.56	23.06	52.12	146.36	102.01	95.55	79.33	55.45	53.37	42.99	55.85
1986	10.31	14.89	27.01	38.71	63.42	188.36	201.04	124.37	64.50	111.69	60.51	28.61	77.79
1987	11.39	13.20	12.88	25.21	70.39	101.23	147.91	133.24	64.13	75.74	43.83	27.07	60.52
1988	8.17	6.88	4.57	18.27	32.04	86.95	142.12	59.08	51.40	68.56	90.95	41.28	50.86
1989	14.44	12.17	35.88	25.87	91.82	100.18	144.45	67.23	46.67	48.95	44.56	23.10	54.61
1990	9.75	12.02	19.87	30.14	117.17	113.16	130.97	104.74	45.59	41.26	41.25	32.70	58.22
1991	9.09	6.90	19.15	26.52	45.82	69.15	191.11	165.69	93.65	48.61	54.15	16.30	62.18
1992	8.79	6.73	5.98	15.78	30.21	62.84	152.68	147.07	56.35	32.25	37.64	22.05	48.20
1993	9.87	8.95	14.81	36.59	73.42	128.49	129.93	100.86	65.20	44.82	53.09	33.18	58.27
1994	11.67	8.69	18.09	30.14	95.99	102.75	185.16	146.68	85.27	93.39	55.22	27.50	71.71
1995	11.82	7.91	12.26	43.27	54.15	103.31	89.93	59.60	40.44	45.54	36.82	21.01	43.84
1996	10.24	17.03	25.68	22.76	73.30	115.07	158.66	89.48	56.28	72.30	31.99	42.38	59.60
1997	20.43	15.21	10.95	19.26	56.55	49.44	241.73	141.31	42.52	29.83	26.12	9.41	55.23
1998	7.12	7.10	8.06	30.07	100.76	169.91	192.84	95.24	44.11	35.14	44.34	26.44	63.43
1999	14.40	19.53	18.27	66.83	56.02	87.50	84.37	73.93	86.38	85.88	43.40	21.83	54.86
2000	10.52	13.57	16.53	18.91	62.74	80.08	109.42	132.20	94.57	61.44	60.52	26.35	57.24
Media	11.90	9.95	13.15	32.77	69.43	110.39	142.58	120.91	74.75	61.06	49.99	25.89	60.23
Max	35.15	19.53	35.88	71.33	128.24	188.36	241.73	279.99	136.94	111.69	95.48	59.49	84.71
Min	6.74	4.99	4.57	10.56	25.68	49.44	78.42	59.08	40.44	29.83	25.20	9.41	43.37

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Rucio.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1963	0.31	0.52	0.37	2.71	4.33	4.96	4.64	5.11	3.39	1.67	1.77	1.04	2.57
1964	0.52	0.52	0.57	2.35	4.75	4.59	5.01	6.05	5.48	1.36	1.46	1.41	2.84
1965	1.46	1.20	0.42	1.41	5.79	4.44	8.14	6.05	2.71	1.67	2.92	0.94	3.10
1966	0.63	0.47	0.52	1.46	1.20	1.20	2.82	3.08	2.82	1.72	1.41	1.46	1.57
1967	1.36	0.73	0.89	2.61	3.39	6.52	8.04	8.40	4.44	1.83	1.46	1.41	3.42
1968	1.10	0.42	0.63	4.80	3.81	6.26	10.70	5.48	3.50	2.97	2.09	0.68	3.54
1969	0.57	0.63	0.52	2.09	4.28	4.64	6.42	5.17	3.03	2.77	2.35	1.62	2.84
1970	0.89	0.94	1.30	3.24	2.87	6.31	5.69	4.12	2.82	4.02	1.46	1.10	2.90
1971	0.73	0.78	1.36	2.19	3.55	5.43	6.84	4.70	3.50	1.98	1.92	0.91	2.82
1972	1.51	0.89	1.20	2.40	5.43	5.58	6.63	4.02	3.24	1.46	1.25	0.63	2.85
1973	0.37	0.31	1.30	0.94	3.03	4.23	4.44	3.97	3.13	2.19	1.88	0.83	2.22
1974	0.52	0.57	0.83	2.30	3.24	3.34	5.27	4.75	2.14	1.77	1.04	0.47	2.19
1975	0.42	0.31	0.99	1.41	2.50	8.14	3.97	4.17	1.98	1.85	1.51	0.93	2.35
1976	0.47	0.42	1.10	2.19	5.84	7.93	8.30	3.60	2.56	1.31	1.16	0.73	2.97
1977	0.26	0.37	0.52	0.99	2.04	4.80	6.78	2.71	3.46	1.97	1.75	0.52	2.18
1978	0.32	0.32	0.48	2.41	4.30	6.10	4.13	6.18	3.28	3.63	1.15	0.86	2.76
1979	0.53	0.22	0.42	1.80	2.37	5.68	7.07	5.30	2.26	2.23	2.14	2.59	2.72
1980	1.13	0.52	1.44	2.88	3.50	4.53	3.71	3.71	2.68	2.37	1.13	0.62	2.35
1981	0.52	0.62	1.13	1.55	3.30	4.22	4.33	3.09	2.16	2.37	1.44	1.13	2.16
1982	0.52	0.41	0.62	2.68	1.55	1.96	5.97	5.46	2.68	1.34	0.72	0.62	2.04
1983	0.52	0.82	1.85	2.58	2.88	3.71	4.84	5.15	2.99	2.68	1.24	2.83	2.67
1984	0.33	1.72	0.70	0.77	1.50	5.02	3.17	3.38	2.59	1.17	1.15	0.79	1.86
1985	0.38	0.33	0.33	0.49	2.57	6.07	5.99	4.40	3.59	2.59	1.44	1.01	2.43
1986	1.74	1.87	2.40	4.16	5.53	7.81	7.42	6.05	3.27	3.36	1.93	1.78	3.94
1987	0.85	1.50	1.76	3.30	4.73	6.67	7.31	3.38	2.07	1.54	0.74	0.72	2.88
1988	0.50	0.50	0.39	2.42	2.62	2.95	5.66	1.97	1.68	1.38	1.52	0.77	1.86
1989	0.57	0.56	0.93	1.14	2.30	1.06	1.21	4.85	6.40	3.73	2.16	1.06	2.16
1990	0.60	0.59	1.62	1.87	5.03	6.11	5.60	2.99	1.49	1.04	1.22	0.99	2.43
1991	0.48	0.51	0.72	1.21	2.65	4.55	8.36	6.79	4.88	2.39	1.55	0.80	2.91
1992	1.03	0.92	0.91	1.86	1.76	3.57	5.34	5.60	3.40	2.64	1.97	1.52	2.54
1993	1.61	1.40	2.15	3.09	3.52	3.11	2.79	3.70	4.14	2.90	2.47	2.77	2.80
1994	0.72	0.57	1.34	3.02	5.85	6.58	8.55	8.27	3.55	2.18	1.98	0.91	3.63
1995	1.35	1.17	1.25	2.08	5.98	1.34	2.18	2.14	0.61	2.00	2.73	1.71	2.05
1996	0.14	0.35	0.48	0.96	6.97	6.86	7.53	2.97	2.25	3.29	2.70	1.51	3.00
1997	1.05	1.48	1.34	3.20	2.34	5.43	6.64	5.54	1.79	1.97	1.17	0.69	2.72
1998	0.52	0.68	0.84	2.27	3.94	3.36	5.40	3.18	1.80	1.55	0.85	0.50	2.07
1999	0.59	0.86	0.85	5.91	2.90	3.69	2.83	3.07	2.02	4.55	3.32	0.84	2.62
2000	0.48	0.64	0.56	1.13	4.27	3.91	3.92	3.85	2.10	2.02	2.11	1.21	2.18
Media	0.73	0.73	0.97	2.26	3.64	4.81	5.62	4.54	2.94	2.25	1.69	1.13	2.61
Max	1.74	1.87	2.40	5.91	6.97	8.14	10.70	8.40	6.40	4.55	3.32	2.83	3.94
Min	0.14	0.22	0.33	0.49	1.20	1.06	1.21	1.97	0.61	1.04	0.72	0.47	1.57

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Negro.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1963	0.61	1.02	0.71	5.30	8.47	9.69	9.08	10.00	6.63	3.26	3.47	2.04	5.02
1964	1.02	1.02	1.12	4.59	9.28	8.98	9.79	11.83	10.71	2.65	2.86	2.75	5.55
1965	2.86	2.35	0.82	2.75	11.32	8.67	15.91	11.83	5.30	3.26	5.71	1.84	6.05
1966	1.22	0.92	1.02	2.86	2.35	2.35	5.51	6.02	5.51	3.37	2.75	2.86	3.06
1967	2.65	1.43	1.73	5.10	6.63	12.75	15.71	16.42	8.67	3.57	2.86	2.75	6.69
1968	2.14	0.82	1.22	9.38	7.45	12.24	20.91	10.71	6.83	5.81	4.08	1.33	6.91
1969	1.12	1.22	1.02	4.08	8.36	9.08	12.55	10.10	5.92	5.41	4.59	3.16	5.55
1970	1.73	1.84	2.55	6.32	5.61	12.34	11.12	8.06	5.51	7.85	2.86	2.14	5.66
1971	1.43	1.53	2.65	4.28	6.94	10.61	13.36	9.18	6.83	3.86	3.76	1.78	5.52
1972	2.96	1.73	2.35	4.69	10.61	10.91	12.95	7.85	6.32	2.86	2.45	1.22	5.58
1973	0.71	0.61	2.55	1.84	5.92	8.26	8.67	7.75	6.12	4.28	3.67	1.63	4.33
1974	1.02	1.12	1.63	4.49	6.32	6.53	10.30	9.28	4.18	3.47	2.04	0.92	4.28
1975	0.82	0.61	1.94	2.75	4.90	15.91	7.75	8.16	3.88	3.61	2.95	1.81	4.59
1976	0.92	0.82	2.14	4.28	11.42	15.50	16.22	7.04	5.00	2.56	2.27	1.42	5.80
1977	0.51	0.71	1.02	1.94	3.98	9.38	13.26	5.30	6.76	3.84	2.46	1.04	4.18
1978	0.51	0.51	0.71	3.47	7.34	10.40	7.24	8.06	4.94	4.35	1.15	1.25	4.16
1979	0.41	0.31	0.41	3.26	3.98	6.53	7.65	8.06	2.63	3.78	4.82	3.53	3.78
1980	1.22	0.41	1.33	2.04	1.53	6.53	8.26	5.10	7.24	7.14	4.49	1.33	3.89
1981	0.61	1.12	1.63	4.08	5.92	8.47	7.96	8.36	5.81	5.81	3.77	2.35	4.66
1982	1.33	1.22	1.94	1.84	5.41	7.14	16.63	6.99	6.82	4.24	3.44	2.20	4.93
1983	1.22	2.75	3.67	6.02	5.00	7.24	10.81	10.20	6.73	6.83	3.04	2.80	5.53
1984	0.81	2.15	1.20	1.80	4.85	15.02	9.72	8.29	4.80	1.75	3.34	0.84	4.55
1985	0.59	0.50	0.53	1.52	7.76	10.38	7.46	5.60	5.91	3.11	1.89	0.67	3.83
1986	0.39	0.72	1.50	2.51	6.01	15.52	14.27	7.02	3.17	3.37	1.95	1.38	4.82
1987	1.19	3.69	2.52	4.61	6.58	8.47	11.90	7.41	4.55	3.67	2.06	1.64	4.86
1988	0.97	0.99	0.76	4.73	5.13	5.77	11.06	3.86	3.29	2.70	2.98	1.51	3.65
1989	1.68	1.49	3.29	4.03	9.86	10.92	12.42	5.36	4.03	4.30	3.62	1.83	5.24
1990	1.17	1.14	3.17	3.66	9.84	11.94	10.94	5.85	2.91	2.02	2.38	1.94	4.75
1991	0.93	1.00	1.41	2.36	5.18	8.89	16.34	13.27	9.54	4.67	3.04	1.57	5.68
1992	1.23	0.68	0.57	3.52	4.55	10.24	13.23	9.40	5.48	3.28	2.68	1.51	4.70
1993	1.30	0.63	3.25	4.47	6.42	10.94	14.86	8.27	5.70	4.00	3.74	2.92	5.54
1994	1.40	1.12	2.61	5.90	11.44	12.87	16.72	16.17	6.95	4.27	3.88	1.78	7.09
1995	2.63	2.28	2.45	4.06	5.18	7.84	5.62	3.77	3.46	3.23	1.86	1.07	3.62
1996	0.68	2.48	2.17	3.81	8.55	9.72	10.46	5.69	4.84	4.78	2.79	3.19	4.93
1997	1.21	2.17	1.51	5.44	10.39	7.85	20.51	16.20	6.67	5.48	4.63	2.89	7.08
1998	2.48	1.96	1.31	3.21	7.76	10.39	11.31	4.43	2.29	2.90	2.51	1.95	4.38
1999	1.53	2.27	1.66	8.13	6.85	7.70	6.20	5.49	4.09	6.67	3.10	1.29	4.57
2000	0.94	1.26	1.10	2.21	8.35	7.64	7.65	7.52	4.11	3.94	4.12	2.37	4.27
Media	1.27	1.33	1.72	3.98	6.93	9.78	11.64	8.42	5.53	4.10	3.16	1.91	4.98
Max	2.96	3.69	3.67	9.38	11.44	15.91	20.91	16.42	10.71	7.85	5.71	3.53	7.09
Min	0.39	0.31	0.41	1.52	1.53	2.35	5.51	3.77	2.29	1.75	1.15	0.67	3.06

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Tunjita.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1977							18.89	19.31	20.06	11.99	10.10	1.33	
1978	0.75	0.73	3.19	18.33	18.82	21.66	14.27	31.59	14.59	13.45	7.93	3.44	12.40
1979	0.94	0.52	0.88	8.66	12.71	50.18	28.03	19.65	9.30	17.21	14.31	8.86	14.27
1980	1.71	0.88	2.01	9.28	17.22	29.37	29.21	24.32	14.50	10.78	4.69	2.06	12.17
1981	1.17	2.44	3.00	10.98	12.92	18.22	22.76	12.43	12.66	12.17	8.20	3.37	10.03
1982	2.71	2.09	3.88	14.39	18.19	20.90	18.98	24.28	12.62	12.55	5.49	2.50	11.55
1983	1.72	3.85	7.21	20.88	12.34	10.72	21.67	31.85	12.31	11.01	8.66	5.50	12.31
1984	1.40	7.13	1.16	2.08	6.86	15.92	27.39	25.56	10.64	5.87	8.67	2.39	9.59
1985	0.83	0.51	0.94	5.14	13.10	31.10	19.80	20.60	15.50	10.70	11.40	4.80	11.20
1986	1.00	3.90	5.50	10.10	13.50	35.08	29.76	15.08	10.80	15.60	6.94	4.85	12.68
1987	0.99	2.06	5.24	10.20	21.16	19.19	21.28	33.13	12.46	9.98	5.26	4.34	12.11
1988	3.57	3.53	2.95	6.11	10.46	21.62	27.60	15.63	12.58	13.10	13.48	6.69	11.44
1989	2.54	1.74	5.70	4.68	17.46	15.48	19.30	12.87	11.34	17.23	17.81	5.56	10.98
1990	2.53	3.39	5.78	9.18	24.62	19.24	23.02	23.41	14.95	18.88	16.17	10.47	14.30
1991	2.13	1.72	3.37	10.18	13.95	15.66	31.16	22.86	17.70	11.24	10.47	2.37	11.90
1992	2.35	2.66	2.35	6.02	10.40	18.14	39.91	23.94	12.20	10.37	11.54	7.07	12.25
1993	5.38	4.82	7.13	11.93	19.92	28.03	26.12	20.56	18.68	10.29	12.15	5.81	14.24
1994	3.58	3.49	7.23	10.18	22.66	18.88	27.64	30.19	29.14	13.62	13.45	7.55	15.63
1995	2.88	2.08	4.67	17.18	13.52	22.61	19.61	15.53	9.79	10.17	7.70	6.50	11.02
1996	0.87	4.43	7.25	5.28	26.98	23.72	23.90	16.90	26.27	13.15	6.04	5.94	13.39
1997	2.25	2.91	1.93	7.66	31.44	11.31	27.85	15.73	7.07	5.03	15.10	1.54	10.82
1998	0.75	0.98	3.37	19.70	22.02	30.88	22.88	13.40	9.06	10.57	6.52	4.72	12.07
1999	1.96	4.00	4.06	12.07	10.05	13.91	15.76	12.50	11.59	11.22	9.83	3.86	9.23
2000	0.87	1.99	1.98	3.32	15.35	17.03	31.53	20.46	14.37	12.14	8.67	2.77	10.87
Media	1.95	2.69	3.95	10.15	16.77	22.12	24.51	20.91	14.17	12.01	10.02	4.76	12.02
Max	5.38	7.13	7.25	20.88	31.44	50.18	39.91	33.13	29.14	18.88	17.81	10.47	15.63
Min	0.75	0.51	0.88	2.08	6.86	10.72	14.27	12.43	7.07	5.03	4.69	1.33	9.23

Consejo Nacional de Operación

CNO

Caudal medio mensual, m³/seg. Serie Bogotá N.R.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1934	34.98	14.80	6.98	11.50	19.00	30.71	36.81	42.90	14.70	23.71	38.00	28.90	25.25
1935	11.91	16.41	5.19	13.70	53.68	34.88	44.09	43.31	28.20	38.68	57.91	45.21	32.75
1936	7.69	3.31	3.70	10.69	24.79	34.68	27.22	32.59	16.28	26.81	34.76	13.81	19.69
1937	17.51	16.49	7.39	10.42	19.60	25.62	37.90	32.30	16.78	15.38	44.21	16.99	21.72
1938	7.69	5.29	7.39	45.91	88.90	41.01	38.19	39.50	21.10	37.00	57.79	60.71	37.54
1939	26.28	5.99	8.89	27.08	23.80	22.61	23.11	19.90	17.90	26.21	79.90	23.00	25.37
1940	7.80	2.69	2.39	7.22	12.69	20.29	29.61	29.91	8.68	25.20	49.61	33.71	19.15
1941	10.01	2.81	4.11	9.49	12.99	14.58	23.90	22.59	9.11	13.52	57.49	10.79	13.07
1942	2.32	3.89	3.51	11.81	36.89	25.89	33.12	19.42	11.19	21.58	57.49	35.99	21.93
1943	16.39	11.62	17.88	34.30	67.99	41.78	54.70	52.79	37.50	26.21	43.60	19.71	35.37
1944	12.92	9.22	8.10	18.63	84.86	75.81	57.53	35.92	27.86	30.91	55.75	15.91	36.12
1945	5.79	3.14	1.90	20.06	71.50	75.54	39.39	33.57	11.07	16.13	35.57	18.86	27.71
1946	12.73	2.85	5.68	17.94	23.04	13.62	27.55	36.59	13.74	8.03	9.76	8.33	14.99
1947	8.92	3.97	1.31	1.85	3.81	18.06	22.40	23.90	24.31	50.89	37.42	4.93	16.81
1948	1.31	1.57	2.17	23.77	21.43	22.11	27.07	18.18	7.87	7.65	12.65	15.79	13.46
1949	4.14	2.85	5.26	14.82	24.08	41.71	44.80	28.82	16.74	31.06	28.51	11.35	21.18
1950	6.38	39.73	31.14	20.10	74.15	88.35	53.99	44.62	16.59	47.34	43.60	39.73	42.14
1951	9.04	10.87	19.75	22.61	54.29	38.77	35.10	35.84	15.69	18.44	63.90	14.86	27.42
1952	4.59	0.54	3.06	19.48	48.87	35.53	55.93	42.23	17.71	9.48	50.04	41.56	27.42
1953	3.81	2.94	1.72	15.43	45.85	42.87	32.59	23.82	13.00	56.38	60.88	29.16	27.35
1954	2.91	2.81	2.32	8.60	24.16	42.75	33.49	35.58	11.84	73.96	110.88	32.74	31.84
1955	5.04	4.38	16.50	57.95	71.54	29.48	54.10	22.07	28.74	61.60	77.24	32.89	38.46
1956	24.87	7.52	24.38	21.30	22.92	47.15	45.62	38.12	29.48	70.56	71.99	30.88	36.23
1957	15.31	3.51	12.25	15.16	63.62	59.11	44.80	32.30	23.03	29.31	33.68	12.66	28.73
1958	3.66	1.69	5.64	7.68	16.54	16.71	26.73	28.30	13.01	13.66	28.36	9.37	14.28
1959	3.43	0.20	3.40	6.06	23.60	27.86	63.02	24.34	34.88	33.75	48.61	12.84	23.50
1960	4.78	6.20	4.89	18.52	17.17	20.02	29.08	34.01	21.26	15.01	20.06	25.01	18.00
1961	2.76	4.38	8.03	14.43	10.42	28.16	45.10	31.74	10.80	34.24	62.23	11.50	21.98
1962	3.88	4.63	7.39	8.22	32.88	50.04	46.97	45.10	20.95	28.00	55.86	18.00	26.83
1963	8.33	11.90	5.30	25.85	79.30	49.11	34.83	39.02	16.32	15.01	51.35	16.84	29.43
1964	1.34	0.70	0.20	11.34	20.31	60.19	45.74	27.40	17.94	12.25	12.58	16.35	18.66
1965	3.92	2.27	2.15	27.40	62.17	33.49	46.95	35.36	12.86	34.71	67.16	27.29	29.64
1966	2.65	4.61	11.37	9.87	11.04	17.40	22.24	25.84	15.28	24.18	38.93	78.94	21.86
1967	10.01	8.89	8.92	25.69	50.52	77.39	55.00	60.30	19.60	17.29	39.20	22.77	32.97
1968	4.67	7.73	5.68	42.09	27.59	72.38	73.07	46.37	23.77	39.80	45.49	18.18	33.90
1969	10.49	7.81	1.89	38.30	44.38	34.56	42.07	26.81	11.57	90.86	52.38	20.04	31.75
1970	10.72	11.82	8.25	10.19	24.90	37.20	31.30	27.30	24.50	64.70	68.90	16.10	27.99
1971	14.30	16.70	20.80	57.10	73.00	56.70	46.70	33.00	39.10	27.10	39.30	18.90	36.88
1972	31.59	16.76	12.28	52.93	93.15	41.72	54.86	19.95	12.87	13.48	31.48	5.93	32.25
1973	4.34	5.00	5.57	7.64	13.21	18.63	22.69	22.58	51.98	32.52	42.93	46.20	22.77
1974	8.70	22.10	21.90	28.70	48.90	20.50	35.10	24.60	21.00	26.20	53.00	16.90	27.30
1975	2.98	7.55	11.40	9.47	31.42	49.79	26.68	33.91	33.94	30.70	48.86	71.28	29.83
1976	17.03	11.39	15.48	58.44	74.73	82.60	110.50	35.82	17.87	46.98	53.75	14.92	44.96
1977	2.59	2.96	2.88	13.29	19.03	22.86	34.49	22.55	29.73	29.75	53.46	7.90	20.12
1978	4.60	3.90	5.80	33.00	24.80	52.20	34.20	25.00	18.30	24.40	14.70	8.30	20.77
1979	1.77	3.31	11.27	24.24	49.91	77.51	33.86	27.60	27.99	70.12	117.12	56.93	41.80
1980	15.20	12.14	4.85	16.85	15.32	55.09	32.27	17.04	20.01	29.72	12.16	7.41	19.82
1981	2.07	3.04	5.49	29.59	83.01	46.14	27.96	17.34	23.23	32.75	41.14	13.89	27.14
1982	14.52	11.40	17.69	88.64	79.06	29.49	43.26	35.92	25.85	30.16	18.98	12.94	33.99
1983	4.94	5.67	18.04	50.29	35.32	21.68	37.58	25.76	11.58	15.56	7.34	10.59	20.36
1984	13.13	11.60	5.35	9.51	24.88	47.36	25.55	38.84	37.29	22.58	42.42	13.16	24.31
1985	5.66	1.18	3.18	10.08	28.23	47.94	30.50	29.70	34.99	46.81	55.22	30.18	28.97
1986	5.50	17.06	33.52	16.37	18.86	74.57	76.85	38.35	14.82	79.51	61.02	15.88	37.86
1987	3.27	5.22	7.79	12.15	32.94	16.47	48.00	29.81	15.59	43.67	27.43	17.17	21.63
1988	11.70	7.24	6.50	12.46	10.11	25.67	44.22	22.21	28.68	42.34	58.56	40.53	25.85
1989	7.61	14.67	35.94	16.32	36.03	40.46	45.89	14.29	13.11	15.75	16.40	14.80	22.61
1990	5.05	9.65	8.51	21.33	65.24	38.03	25.54	27.82	6.29	29.68	25.47	32.36	24.58
1991	5.32	3.22	17.11	20.62	19.14	14.67	54.00	55.27	23.54	10.22	36.74	13.92	22.81
1992	4.31	8.10	4.07	10.17	6.23	7.63	35.51	26.58	8.95	5.38	20.64	16.66	12.85
1993	4.89	4.36	4.79	14.31	38.37	40.32	42.10	23.05	15.69	9.54	30.07	13.88	20.11
1994	4.92	6.54	11.73	18.15	38.05	35.74	54.19	32.97	19.13	38.48	35.09	10.79	25.48
1995	2.21	1.80	9.52	17.58	23.37	30.17	20.79	27.22	12.72	14.45	15.67	18.60	16.18
1996	5.72	11.32	31.52	14.83	34.74	28.88	58.36	29.44	10.47	34.23	13.67	14.59	23.98
1997	27.08	9.64	5.08	5.10	10.79	13.45	70.79	23.69	5.14	6.13	7.92	1.93	15.56
1998	2.11	2.91	3.27	11.41	41.26	49.45	59.81	30.25	12.99	23.61	27.23	35.48	24.98
1999	15.82	21.49	33.35	36.63	24.75	27.79	17.75	25.37	41.60	68.74	65.80	26.30	33.78
2000	9.52	16.28	9.54	15.09	26.06	30.13	34.59	32.40	25.94	18.13	23.34	11.10	21.01
Media	8.80	7.85	9.85	21.46	37.84	38.67	41.34	31.15	20.03	31.47	42.63	22.55	26.14
Max	34.98	39.73	35.94	88.64	93.15	88.35	110.50	60.30	51.98	90.86	117.12	78.94	44.96
Min	1.31	0.20	0.20	1.85	3.81	7.63	17.75	14.29	5.14	5.38	7.34	1.93	12.85

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie FaguaBaraya.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1940	3.55	0.87	0.77	1.09	2.24	5.30	9.49	6.57	2.16	4.36	5.07	2.28	3.64
1941	1.19	0.75	0.72	1.65	5.17	4.47	9.86	9.39	3.14	11.02	2.10	1.38	4.24
1942	0.48	0.71	0.80	0.98	4.80	7.33	6.52	3.95	2.44	3.64	9.67	1.48	3.57
1943	0.72	0.34	1.04	3.49	12.34	4.57	16.22	19.21	4.76	3.91	4.46	1.56	6.05
1944	0.68	0.48	0.60	2.80	10.31	8.68	8.66	3.71	2.33	2.14	2.33	0.78	3.63
1945	0.51	0.36	0.28	2.88	10.17	4.64	5.98	5.95	1.53	1.66	1.59	0.77	3.03
1946	0.67	0.27	0.40	0.65	2.97	5.14	10.69	13.29	3.51	1.15	1.04	0.87	3.39
1947	0.34	0.45	0.27	0.33	0.97	5.58	12.20	6.48	3.25	9.00	2.04	0.64	3.46
1948	0.36	0.38	0.33	1.38	2.80	4.80	6.46	3.55	2.73	1.25	3.54	0.94	2.38
1949	0.45	0.38	0.50	3.07	4.40	4.47	7.10	6.69	3.01	1.92	3.69	1.60	3.11
1950	0.87	1.14	2.68	0.90	5.85	5.78	6.62	4.56	2.26	3.24	3.35	2.60	3.32
1951	1.16	1.31	3.32	3.92	7.58	9.19	17.58	6.43	3.10	6.90	6.04	1.38	5.66
1952	0.56	0.34	0.36	2.82	4.83	5.13	9.80	7.53	3.28	2.57	5.54	2.36	3.76
1953	2.02	0.79	0.46	1.20	4.59	5.79	5.28	6.77	2.41	5.11	4.93	1.94	3.44
1954	0.56	0.64	0.21	1.54	5.16	6.67	7.17	6.99	1.50	7.38	9.13	2.04	4.08
1955	1.27	0.23	1.79	4.12	5.53	3.01	4.08	2.88	2.70	5.52	5.86	2.42	3.28
1956	1.53	1.08	3.99	1.41	1.40	4.41	6.72	7.63	3.28	8.79	6.15	2.86	4.10
1957	0.58	0.34	0.99	1.29	7.86	8.42	8.83	6.47	3.46	4.00	4.66	1.40	4.03
1958	0.73	0.37	0.53	0.85	2.11	3.37	6.44	5.05	2.94	1.35	2.07	0.65	2.21
1959	0.09	0.15	0.39	0.66	1.81	3.78	7.43	4.25	5.22	3.56	3.79	1.02	2.68
1960	0.36	0.32	0.32	1.03	1.51	2.09	3.81	7.12	4.87	1.93	1.48	2.05	2.24
1961	0.00	0.30	0.71	1.41	0.65	4.54	6.85	4.88	1.74	2.90	5.98	0.74	2.56
1962	0.00	0.06	0.14	0.23	2.16	4.21	6.48	5.07	2.00	1.74	1.93	0.90	2.08
1963	0.42	0.57	0.00	0.73	8.05	4.91	6.13	6.53	2.32	0.88	3.02	0.59	2.85
1964	0.16	0.26	0.11	0.99	2.48	5.47	4.93	2.74	2.73	1.76	2.07	1.36	2.09
1965	0.63	0.40	0.47	2.44	5.30	4.37	8.86	6.23	2.93	4.78	4.80	2.31	3.63
1966	0.11	2.04	1.04	1.18	0.78	1.67	2.92	3.49	1.16	1.12	2.57	4.09	1.85
1967	0.86	0.38	0.78	3.01	4.77	8.38	6.81	12.23	3.77	1.54	3.91	1.57	4.00
1968	0.01	0.38	0.00	3.21	1.33	6.22	11.18	8.48	1.75	2.97	2.32	0.77	3.22
1969	0.70	0.59	0.16	3.55	4.02	3.14	9.68	4.51	2.24	8.71	5.93	1.48	3.73
1970	0.31	0.68	0.18	0.44	2.78	4.58	4.14	3.79	1.26	5.94	2.45	0.45	2.25
1971	0.43	0.36	0.25	2.93	4.83	3.62	6.53	3.86	2.63	0.49	1.38	0.46	2.31
1972	1.67	0.98	0.12	4.81	6.78	6.86	9.38	6.44	1.78	0.52	1.52	0.54	3.45
1973	0.49	0.37	0.30	0.40	0.90	1.69	2.50	3.55	6.30	3.03	3.90	2.65	2.17
1974	0.06	1.66	0.69	1.99	2.58	1.54	5.12	3.56	2.36	1.73	2.89	0.74	2.08
1975	0.84	1.12	0.57	0.57	1.15	4.44	1.87	4.71	2.22	2.53	2.94	3.38	2.20
1976	0.00	0.00	0.32	2.98	6.24	11.03	14.48	6.71	4.54	5.45	4.43	0.72	4.74
1977	0.00	0.00	0.00	0.28	1.32	2.58	4.00	3.25	4.11	1.93	3.77	0.46	1.81
1978	0.11	0.24	0.09	2.09	1.53	6.42	4.38	5.54	2.40	2.06	0.47	0.35	2.14
1979	0.18	1.33	0.48	3.89	3.77	5.03	3.85	3.50	1.38	7.45	10.32	3.67	3.74
1980	0.33	0.55	0.45	6.30	0.61	5.05	5.29	2.48	3.07	4.11	0.58	0.11	2.41
1981	0.16	0.17	0.28	1.16	8.38	4.28	1.69	2.08	2.25	3.70	1.20	0.85	2.18
1982	0.95	0.88	0.57	6.46	5.82	3.30	8.79	8.52	4.46	1.38	0.77	0.18	3.51
1983	0.34	0.69	1.41	3.38	3.12	2.47	5.99	6.98	2.39	2.75	0.23	0.18	2.49
1984	0.65	0.85	0.18	0.20	1.05	5.08	4.43	5.10	5.38	1.88	3.22	1.10	2.43
1985	0.47	0.26	0.78	1.57	2.96	7.77	5.86	4.66	5.38	6.87	4.81	5.03	3.87
1986	0.00	0.00	2.84	4.12	0.00	8.68	15.04	10.95	1.12	6.94	9.16	3.52	5.20
1987	0.67	0.42	0.93	2.10	3.68	4.17	9.46	6.68	3.52	5.34	4.11	2.85	3.66
1988	0.00	0.00	0.00	0.00	0.70	1.06	2.13	0.85	0.36	0.79	1.34	1.14	0.70
1989	0.77	0.87	3.94	1.44	3.53	4.89	8.89	2.12	1.26	1.22	1.72	1.00	2.64
1990	0.30	0.70	1.21	1.90	6.13	5.77	5.09	7.29	2.16	2.67	2.75	2.52	3.21
1991	1.03	0.33	1.60	1.67	1.91	2.22	8.52	10.08	1.80	1.32	2.73	0.01	2.77
1992	0.00	0.00	0.00	0.00	0.01	1.45	6.37	5.94	1.48	0.94	1.99	1.46	1.64
1993	0.49	0.72	1.10	1.67	3.84	5.82	6.01	4.56	2.61	1.80	2.77	2.77	2.85
1994	0.55	0.35	0.69	1.27	3.21	4.04	8.62	6.53	4.11	6.68	3.52	1.04	3.38
1995	0.42	0.00	0.34	0.65	1.34	2.65	2.70	2.12	1.48	1.33	1.36	1.13	1.29
1996	0.39	0.82	1.99	0.99	2.91	3.12	6.28	0.00	4.32	3.96	1.24	1.30	2.28
1997	1.27	0.87	0.00	0.00	0.26	0.21	9.67	3.12	0.00	0.00	0.00	0.00	1.28
1998	0.00	0.00	0.00	0.00	1.01	2.72	4.97	1.03	0.00	0.24	0.00	0.11	0.84
1999	0.00	0.00	0.56	1.21	0.97	2.22	1.57	2.45	4.18	5.26	4.09	1.81	2.03
2000	0.84	0.81	1.75	1.38	2.89	3.96	4.28	5.29	5.06	3.08	5.14	1.73	3.02
Media	0.58	0.54	0.78	1.85	3.61	4.66	7.03	5.61	2.79	3.45	3.41	1.48	2.98
Max	3.55	2.04	3.99	6.46	12.34	11.03	17.58	19.21	6.30	11.02	10.32	5.03	6.05
Min	0.00	0.00	0.00	0.00	0.00	0.21	1.57	0.00	0.00	0.00	0.00	0.00	0.70

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Sisga.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1952	0.32	0.29	1.18	2.22	5.95	5.74	10.93	5.78	2.06	0.80	2.45	0.70	3.20
1953	0.21	0.35	0.78	1.29	4.55	5.09	6.84	5.01	1.99	2.10	1.42	0.59	2.52
1954	0.61	0.67	0.76	2.12	4.43	5.61	10.35	4.90	1.61	7.16	2.40	0.65	3.44
1955	0.96	0.60	1.72	2.04	3.03	2.13	6.56	1.94	3.44	4.00	2.28	1.41	2.51
1956	1.07	0.70	1.53	1.44	1.73	7.11	5.49	6.43	4.89	4.89	2.53	1.35	3.26
1957	0.67	0.71	1.02	1.76	7.66	5.71	8.07	6.69	3.85	2.90	2.39	0.61	3.50
1958	0.32	0.27	0.55	0.61	1.72	2.67	5.84	5.18	1.51	1.23	0.38	1.04	1.78
1959	0.34	0.28	0.29	0.58	1.75	3.91	9.29	4.68	5.08	3.19	2.57	0.83	2.73
1960	0.76	0.77	0.83	1.11	1.94	2.90	5.27	4.75	3.11	1.21	0.86	1.10	2.05
1961	0.42	0.36	0.62	2.02	0.94	6.88	5.11	5.07	1.79	3.09	3.52	0.55	2.53
1962	0.57	0.60	0.81	0.40	2.73	6.13	8.69	5.94	2.59	2.98	2.28	1.06	2.90
1963	0.98	1.05	0.83	1.42	6.74	5.07	6.74	6.21	3.50	1.81	2.95	1.00	3.19
1964	0.38	0.36	0.68	1.01	3.14	5.73	4.62	2.73	2.31	0.98	0.78	0.61	1.94
1965	0.67	0.50	0.67	2.11	5.12	5.17	9.21	7.69	2.75	1.83	2.66	0.67	3.25
1966	0.51	0.45	1.23	0.63	0.58	1.24	3.43	3.55	2.31	1.86	2.53	1.92	1.69
1967	1.13	0.68	0.87	2.38	4.04	8.14	6.29	10.18	2.87	1.78	1.37	1.40	3.43
1968	0.89	0.89	0.55	3.84	2.28	6.47	12.14	6.35	2.48	2.30	1.56	0.59	3.36
1969	1.25	0.51	0.45	2.08	3.45	3.87	6.90	3.88	1.64	6.42	2.94	1.21	2.88
1970	1.50	1.15	1.40	2.13	2.85	4.49	5.48	5.21	4.44	5.20	2.32	0.76	3.08
1971	0.52	0.35	0.65	2.18	4.16	4.87	7.74	4.92	3.73	1.35	1.16	0.94	2.71
1972	1.57	0.93	0.87	2.56	6.18	7.93	6.92	2.98	2.85	1.29	1.77	0.89	3.06
1973	0.34	0.67	0.14	0.66	3.06	3.71	5.76	4.10	4.78	1.98	3.41	1.29	2.49
1974	0.70	0.28	0.49	1.64	2.79	2.71	7.45	4.39	2.16	1.58	1.14	0.21	2.13
1975	0.24	0.64	0.86	0.86	1.87	7.52	2.37	5.27	3.74	3.24	1.88	2.97	2.62
1976	0.60	0.40	1.10	2.99	6.05	10.81	13.64	4.14	3.21	2.57	2.19	0.52	4.02
1977	0.17	0.11	0.73	0.54	0.95	3.27	6.59	4.36	4.25	1.44	1.58	0.38	2.03
1978	0.19	0.19	0.00	1.46	1.14	6.89	4.08	3.54	1.83	2.40	0.61	0.02	1.86
1979	0.03	0.05	0.09	2.01	3.28	7.31	4.35	3.56	1.40	6.27	4.14	3.24	2.98
1980	0.41	0.20	0.18	1.31	2.15	8.18	6.06	3.48	3.09	2.43	0.45	0.22	2.35
1981	0.11	0.47	0.89	2.61	7.10	4.56	3.42	2.36	2.53	3.30	1.88	0.54	2.48
1982	0.54	0.57	0.57	4.61	4.26	2.92	7.62	6.17	4.22	1.66	0.98	0.38	2.88
1983	0.50	0.65	0.72	1.73	1.92	3.60	6.60	5.25	2.86	2.73	0.97	0.61	2.35
1984	0.10	0.14	0.12	0.24	1.28	5.55	3.10	4.58	3.93	0.93	1.81	0.49	1.86
1985	0.13	0.24	0.31	1.07	3.21	7.92	4.38	3.78	4.04	2.75	3.41	2.24	2.79
1986	0.11	1.14	1.21	0.75	1.53	9.68	9.92	4.48	1.45	4.73	1.47	0.29	3.06
1987	0.14	1.15	1.02	1.31	2.12	3.10	8.32	3.84	1.91	2.80	1.73	0.59	2.34
1988	0.00	0.00	0.00	0.27	0.56	1.89	5.85	1.32	2.19	2.54	2.63	0.74	1.50
1989	0.00	0.00	1.13	0.87	4.51	5.39	8.09	1.92	0.82	0.86	0.32	0.12	2.00
1990	0.00	0.10	0.42	0.81	6.55	5.74	4.55	4.34	1.42	2.01	1.84	1.26	2.42
1991	0.35	0.29	0.73	0.78	1.41	2.42	9.79	8.09	2.82	1.11	1.59	0.49	2.49
1992	0.08	0.06	0.20	0.56	0.82	2.27	8.03	5.17	1.58	1.00	1.91	0.73	1.87
1993	0.00	0.00	0.00	0.72	2.36	7.50	7.51	4.22	2.20	0.81	1.36	0.10	2.23
1994	0.07	0.13	0.13	0.42	2.40	4.72	8.78	6.40	3.32	3.24	1.20	0.37	2.60
1995	0.13	0.03	0.26	0.62	1.51	2.51	3.75	1.91	0.65	0.37	0.24	0.14	1.01
1996	0.07	0.52	0.85	0.33	2.42	3.49	7.31	4.11	1.34	1.71	0.56	0.21	1.91
1997	0.38	0.40	0.26	0.47	1.36	1.77	12.65	4.90	0.65	0.63	0.16	0.17	1.98
1998	0.02	0.06	0.06	0.47	3.36	7.32	8.42	2.68	0.56	0.60	1.68	1.71	2.25
1999	0.13	0.50	0.87	2.57	1.44	3.19	2.49	2.79	3.89	4.38	0.92	0.40	1.95
2000	0.17	0.16	0.55	0.28	2.08	3.75	4.26	5.87	3.53	2.21	2.99	0.71	2.21
Media	0.44	0.44	0.66	1.41	3.03	5.03	6.88	4.63	2.67	2.46	1.80	0.84	2.52
Max	1.57	1.15	1.72	4.61	7.66	10.81	13.64	10.18	5.08	7.16	4.14	3.24	4.02
Min	0.00	0.00	0.00	0.24	0.56	1.24	2.37	1.32	0.56	0.37	0.16	0.02	1.01

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Neusa.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1953	0.92	0.37	0.51	0.79	2.14	1.97	0.72	0.92	1.28	3.47	3.25	1.02	1.45
1954	0.50	0.38	0.41	0.89	1.43	1.88	1.43	1.43	1.28	5.20	5.23	1.63	1.81
1955	1.12	0.92	1.63	6.61	2.96	2.96	2.55	1.12	2.37	6.22	4.34	1.61	2.87
1956	1.12	1.81	2.64	1.78	2.34	2.86	2.14	1.32	1.48	7.03	4.63	2.75	2.66
1957	0.92	1.01	1.22	1.48	5.20	1.58	0.72	0.61	0.40	2.04	2.76	1.63	1.63
1958	0.92	0.55	0.61	0.59	1.32	1.78	1.43	1.32	0.69	1.73	2.37	0.81	1.18
1959	0.21	0.46	1.12	1.38	2.45	1.18	1.94	0.92	0.99	3.06	1.40	1.12	1.35
1960	1.53	0.57	1.02	2.66	1.73	1.68	1.63	1.32	0.99	2.24	1.68	1.94	1.58
1961	0.72	0.46	1.22	1.68	0.81	0.89	0.92	0.61	0.59	1.94	3.35	0.72	1.16
1962	0.61	0.64	1.12	1.58	2.45	2.47	1.83	1.83	0.99	1.53	5.13	1.32	1.79
1963	1.02	1.10	1.12	1.88	5.20	1.88	1.12	1.22	0.99	1.22	3.65	1.12	1.79
1964	0.61	0.57	0.21	1.38	1.32	3.25	1.43	0.72	0.59	0.72	1.08	1.22	1.09
1965	0.81	0.74	0.61	2.56	1.16	0.79	0.92	1.53	0.69	4.69	7.10	1.83	1.95
1966	1.22	0.64	1.32	1.08	2.05	1.88	1.22	1.53	1.48	2.64	4.24	4.49	1.98
1967	1.44	1.52	0.89	1.54	2.23	3.31	3.41	1.77	0.95	1.35	2.82	1.77	1.92
1968	0.73	0.61	0.57	3.86	3.19	4.56	2.49	2.79	2.48	2.81	2.96	0.80	2.32
1969	1.54	1.07	0.92	2.72	3.13	1.67	1.98	1.23	1.91	5.30	2.02	1.29	2.07
1970	1.05	1.01	0.84	0.98	1.78	1.25	1.25	0.82	1.70	3.98	3.83	1.25	1.65
1971	1.66	1.70	2.49	3.19	5.06	2.97	1.74	1.73	2.79	2.52	3.87	2.01	2.64
1972	3.18	1.35	1.44	4.67	4.46	4.18	3.62	1.29	2.08	1.49	2.70	1.22	2.64
1973	1.70	1.66	2.00	2.11	1.04	1.10	1.17	1.28	4.04	2.25	3.51	2.41	2.02
1974	1.45	1.31	1.47	2.19	2.55	0.97	0.98	0.89	2.60	2.36	4.02	1.91	1.89
1975	1.68	0.83	1.08	1.36	1.51	1.48	2.50	1.58	1.81	2.72	3.60	4.57	2.06
1976	1.00	1.73	1.57	3.32	2.98	2.64	2.66	2.23	1.91	3.80	3.74	1.88	2.46
1977	1.59	1.16	1.15	2.05	1.65	2.25	1.53	1.27	2.25	1.67	3.99	1.69	1.85
1978	1.01	1.20	0.86	3.42	1.80	2.04	1.27	0.88	1.01	1.89	0.95	0.82	1.43
1979	0.45	0.48	1.21	2.70	3.18	3.91	1.95	2.25	1.98	6.12	5.92	2.62	2.73
1980	1.65	1.95	1.23	1.39	1.32	1.90	1.13	0.72	0.69	2.21	1.31	0.46	1.33
1981	0.50	0.61	1.40	2.75	6.57	2.35	1.11	1.03	1.24	1.97	3.28	1.85	2.06
1982	1.58	2.54	1.88	4.06	4.33	1.89	1.44	1.49	1.66	2.96	2.28	1.76	2.32
1983	1.19	1.20	1.23	2.99	1.82	0.91	1.40	1.11	0.95	1.26	1.26	1.81	1.43
1984	1.25	1.32	1.11	1.60	2.08	1.50	0.76	1.15	1.63	2.02	2.16	0.87	1.45
1985	0.64	0.51	1.08	1.13	1.68	1.09	1.29	0.84	1.96	3.14	3.00	0.99	1.45
1986	0.86	0.93	0.97	0.80	0.96	2.71	2.36	1.72	1.62	5.80	3.44	1.17	1.95
1987	1.07	1.14	2.24	1.20	1.97	1.05	1.18	0.97	1.32	3.62	1.89	1.68	1.61
1988	0.70	0.67	0.77	1.06	0.62	1.45	1.38	1.11	1.41	2.78	3.71	2.29	1.50
1989	1.08	0.71	2.00	0.89	3.12	1.77	2.15	1.29	2.39	2.09	1.13	0.73	1.61
1990	0.28	1.31	1.61	2.53	4.21	1.61	1.20	1.21	1.03	2.82	2.22	3.22	1.94
1991	0.80	0.76	1.55	0.92	1.25	0.40	1.20	1.94	1.19	0.65	3.44	1.23	1.28
1992	0.69	0.83	0.44	0.62	0.35	0.36	0.73	0.63	0.28	0.12	0.86	1.17	0.59
1993	0.27	0.15	0.38	0.74	3.17	1.71	1.40	1.00	1.21	1.10	2.44	0.92	1.21
1994	1.15	1.01	0.87	1.91	2.30	1.15	2.32	0.95	1.11	2.47	2.87	0.67	1.57
1995	0.45	0.66	1.08	1.15	0.91	0.56	0.49	2.02	1.02	1.19	1.54	1.49	1.05
1996	0.68	0.58	2.95	1.33	1.29	1.24	2.49	1.48	1.10	2.69	1.27	1.61	1.56
1997	1.85	1.30	1.14	1.85	1.60	2.09	1.83	1.23	0.66	2.37	0.72	0.35	1.42
1998	1.13	1.12	1.21	2.09	2.47	1.95	1.64	1.34	1.63	2.56	2.99	1.71	1.82
1999	0.57	1.37	1.56	1.88	0.61	0.50	0.39	0.65	2.90	5.48	3.12	2.41	1.79
2000	1.31	1.22	1.71	1.25	0.70	0.94	0.90	0.97	1.91	1.28	1.69	0.68	1.21
Media	1.05	0.99	1.24	1.97	2.30	1.84	1.57	1.28	1.48	2.76	2.93	1.59	1.75
Max	3.18	2.54	2.95	6.61	6.57	4.56	3.62	2.79	4.04	7.03	7.10	4.57	2.87
Min	0.21	0.15	0.21	0.59	0.35	0.36	0.39	0.61	0.28	0.12	0.72	0.35	0.59

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Tominé.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1947	0.80	0.53	0.34	0.85	0.91	4.36	6.48	4.56	2.98	5.62	1.35	0.80	2.47
1948	0.70	0.69	0.54	2.53	3.03	4.33	3.90	3.08	1.89	1.19	2.37	1.09	2.11
1949	0.88	0.85	0.96	2.37	4.35	5.72	7.95	5.12	3.30	3.27	3.52	2.14	3.37
1950	1.11	0.95	4.13	1.98	4.98	4.50	8.21	4.42	3.04	3.42	2.46	2.13	3.44
1951	1.09	1.73	3.38	3.19	7.87	7.69	10.16	6.60	2.76	2.84	3.94	0.80	4.34
1952	0.80	0.79	0.70	3.54	6.61	4.85	10.03	6.87	2.49	1.34	3.68	2.19	3.66
1953	0.51	0.43	1.26	1.67	4.71	4.96	5.53	5.26	2.36	2.85	2.16	1.75	2.79
1954	0.66	0.56	0.54	1.98	4.41	4.22	9.74	6.82	2.27	7.93	5.25	1.69	3.84
1955	1.93	0.81	2.56	3.07	3.74	3.34	10.16	3.72	4.90	7.46	5.80	3.29	4.23
1956	3.35	1.09	2.33	1.26	4.68	9.76	8.41	6.67	5.14	6.35	2.93	2.90	4.57
1957	0.70	0.33	2.76	3.20	10.08	7.33	9.69	7.54	3.86	3.76	3.00	1.76	4.50
1958	0.49	0.26	1.14	0.73	2.90	3.15	6.30	5.11	1.61	0.88	1.00	0.47	2.00
1959	0.29	0.17	0.21	0.56	2.70	4.55	10.53	5.16	5.98	5.52	4.46	1.66	3.48
1960	0.92	0.79	0.80	2.08	2.69	4.36	6.65	5.93	2.92	1.63	1.18	2.76	2.73
1961	0.60	0.54	0.71	3.12	1.57	7.93	8.23	7.10	2.34	3.84	3.32	0.80	3.34
1962	0.40	0.38	0.89	0.99	4.31	7.23	8.87	7.44	4.54	3.71	4.39	1.96	3.76
1963	0.00	0.69	0.10	3.10	10.63	7.02	7.14	6.03	2.95	2.58	5.22	2.33	3.98
1964	0.00	0.00	0.00	1.87	5.53	8.49	6.42	3.90	2.61	2.30	1.58	2.29	2.92
1965	0.46	0.00	0.00	4.62	9.44	6.99	14.11	8.98	1.38	3.59	6.33	0.44	4.70
1966	0.70	1.06	3.67	1.99	1.82	2.35	5.58	5.72	2.69	2.03	6.05	6.47	3.34
1967	1.16	0.46	2.70	4.21	6.21	11.61	9.17	11.19	2.84	3.35	4.93	2.75	5.05
1968	0.00	0.89	0.00	7.06	2.68	11.31	16.14	8.64	2.53	4.90	2.56	0.00	4.73
1969	0.48	0.00	0.00	4.10	2.96	3.72	3.35	4.38	1.73	10.00	2.44	0.50	2.81
1970	0.76	2.13	1.18	0.69	3.04	9.55	6.18	5.75	5.30	8.59	7.29	0.13	4.22
1971	0.76	0.11	1.63	5.36	6.50	7.18	9.23	4.88	5.28	1.40	1.10	0.53	3.66
1972	3.21	0.00	1.39	9.90	11.81	11.43	18.34	5.83	3.68	2.85	3.07	1.30	6.07
1973	1.60	2.18	2.97	3.58	4.56	6.03	5.60	3.30	7.82	5.15	6.26	5.27	4.53
1974	0.46	0.61	1.98	4.03	6.88	3.88	8.88	5.67	3.00	3.39	3.38	0.43	3.55
1975	0.00	0.24	1.10	0.99	3.97	11.28	3.05	6.45	5.59	5.29	3.29	6.80	4.00
1976	0.63	0.69	2.56	7.32	7.71	13.48	17.94	5.91	2.98	6.68	6.13	1.17	6.10
1977	0.00	0.00	0.71	3.46	2.23	4.92	8.32	3.91	4.48	2.34	2.74	0.01	2.76
1978	0.00	0.36	0.75	4.66	2.80	8.22	6.03	3.83	2.67	2.50	0.96	0.21	2.75
1979	0.01	0.20	1.76	4.93	5.22	11.86	4.49	4.22	2.06	15.02	12.05	3.26	5.42
1980	0.46	0.01	0.20	3.34	2.84	10.50	5.96	3.61	2.84	4.67	1.66	0.27	3.03
1981	0.53	0.53	1.89	8.44	13.91	5.01	4.77	4.22	5.54	5.79	4.30	0.74	4.64
1982	0.87	1.14	2.76	10.18	8.45	3.54	9.66	6.76	4.57	3.95	1.80	0.92	4.55
1983	1.39	1.20	3.21	6.00	3.23	4.23	8.39	6.21	3.20	2.32	0.91	1.11	3.45
1984	1.07	1.04	0.87	0.72	3.17	10.42	4.75	8.04	6.33	1.96	6.34	0.15	3.74
1985	0.17	0.03	0.00	2.42	6.80	9.96	7.04	5.36	4.12	6.40	5.47	2.11	4.16
1986	0.63	3.94	5.02	1.58	2.82	13.45	11.24	5.44	2.16	5.94	3.38	1.00	4.72
1987	0.00	0.23	0.33	1.52	3.29	3.30	8.79	4.73	2.01	6.62	3.25	0.92	2.92
1988	0.00	0.00	0.00	0.00	0.80	3.49	9.05	2.75	3.04	3.85	6.18	4.16	2.78
1989	0.00	0.00	4.39	1.89	4.22	8.39	8.04	2.49	0.72	0.00	1.03	0.65	2.65
1990	0.00	1.07	1.10	1.29	9.61	7.65	4.52	4.58	0.24	1.92	1.72	1.68	2.95
1991	0.00	0.00	0.78	1.28	0.97	2.04	11.75	9.07	2.57	1.09	3.88	0.00	2.79
1992	0.00	0.00	1.45	2.68	1.49	1.62	8.79	4.06	2.30	1.32	4.16	2.33	2.52
1993	0.45	0.04	0.00	0.90	5.11	7.94	9.14	5.19	2.87	1.66	2.12	0.43	2.99
1994	0.56	0.50	1.02	0.78	4.76	7.07	14.96	7.54	5.42	9.74	2.89	1.30	4.71
1995	0.89	0.67	1.07	1.43	3.48	4.19	4.13	5.16	1.27	1.44	1.16	1.72	2.20
1996	4.07	2.83	5.03	3.20	5.28	4.60	12.51	4.79	0.45	3.56	1.96	1.40	4.14
1997	3.03	0.77	0.35	1.32	4.05	3.05	17.94	5.00	2.45	1.32	1.54	0.69	3.46
1998	0.21	0.89	0.83	0.79	7.08	9.82	11.26	1.31	3.64	1.75	2.68	2.85	3.59
1999	1.26	2.51	2.58	5.18	2.64	5.08	3.04	4.83	5.39	9.59	5.93	2.16	4.18
2000	1.63	1.34	1.78	3.45	4.20	6.16	7.45	6.02	5.42	3.60	4.52	2.14	3.98
Media	0.79	0.73	1.49	3.03	4.85	6.65	8.59	5.50	3.31	4.11	3.58	1.68	3.69
Max	4.07	3.94	5.03	10.18	13.91	13.48	18.34	11.19	7.82	15.02	12.05	6.80	6.10
Min	0.00	0.00	0.00	0.00	0.80	1.62	3.04	1.31	0.24	0.00	0.91	0.00	2.00

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Teusacá.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1947	0.89	0.41	0.29	0.26	0.85	2.81	5.24	3.08	2.58	3.17	3.20	0.86	1.97
1948	0.12	0.28	0.30	3.67	2.98	4.01	3.94	2.58	1.10	2.10	3.81	1.05	2.16
1949	0.21	0.30	0.75	1.35	3.55	3.21	5.75	2.68	1.56	2.48	3.61	1.52	2.25
1950	0.81	2.80	2.62	1.59	6.38	4.56	5.40	3.19	1.51	2.65	3.93	2.64	3.17
1951	0.44	1.33	6.18	2.96	7.14	4.19	6.94	3.39	1.34	3.07	6.01	1.47	3.71
1952	0.77	0.72	1.28	2.37	6.72	3.98	9.22	5.07	2.11	2.44	8.02	4.12	3.90
1953	0.35	0.41	0.39	0.56	3.99	3.91	4.94	3.70	1.48	4.15	4.32	2.28	2.54
1954	0.35	0.35	0.22	2.85	3.94	4.73	7.53	5.44	3.35	4.57	6.44	3.42	3.60
1955	0.88	0.70	1.61	3.06	3.68	3.63	6.35	2.18	2.74	4.57	5.71	3.07	3.18
1956	4.02	2.04	4.20	1.31	1.84	5.95	4.28	4.08	3.91	6.06	3.60	7.26	4.05
1957	1.08	0.40	3.02	1.40	8.96	4.14	6.08	3.50	2.31	4.48	5.54	3.50	3.70
1958	0.22	0.30	0.28	0.26	1.26	1.67	2.98	2.77	0.92	2.30	4.21	1.11	1.52
1959	0.11	0.15	0.13	0.11	1.59	2.47	7.37	2.60	3.45	2.79	3.78	1.17	2.14
1960	0.16	0.60	0.74	0.48	1.19	2.36	3.36	4.52	2.13	2.04	3.04	2.04	1.89
1961	0.06	0.28	0.63	1.09	1.03	3.40	4.88	4.19	1.31	3.91	5.88	1.14	2.32
1962	0.09	0.22	0.42	0.46	2.97	5.79	5.89	4.28	1.66	2.65	5.37	1.27	2.59
1963	0.64	0.96	0.33	2.09	8.89	4.80	5.54	3.54	1.61	2.03	5.23	1.19	3.07
1964	0.09	0.17	0.08	0.35	0.89	4.32	8.73	3.46	0.92	1.79	0.82	3.07	2.06
1965	0.56	0.04	0.05	1.69	4.38	2.85	4.71	2.61	0.82	2.98	6.23	1.65	2.38
1966	0.11	0.12	1.01	0.95	0.27	0.45	2.09	2.69	1.42	2.02	5.42	8.34	2.07
1967	0.82	0.23	1.79	3.69	5.97	9.13	6.23	5.94	1.60	1.45	6.21	2.92	3.83
1968	0.65	0.90	0.43	4.34	2.32	6.09	7.78	4.75	1.78	3.44	4.87	1.26	3.22
1969	2.37	0.76	0.16	3.19	3.55	2.80	5.12	3.78	1.50	9.58	6.98	1.68	3.46
1970	0.86	0.88	0.54	0.54	1.35	3.35	3.66	3.36	2.04	7.16	6.98	1.66	2.70
1971	0.72	0.66	1.11	5.05	5.63	4.30	5.89	3.58	4.81	3.30	3.60	1.85	3.38
1972	3.21	1.44	1.34	4.00	8.09	6.63	7.22	2.49	1.87	2.28	4.89	0.80	3.69
1973	0.21	0.12	0.16	0.18	0.82	1.60	1.65	1.93	4.95	4.59	3.78	7.89	2.32
1974	0.89	1.77	2.12	2.15	3.57	1.68	2.87	1.93	1.43	2.31	4.12	1.18	2.17
1975	0.22	0.66	0.90	0.66	2.68	4.38	2.56	3.72	2.87	1.61	5.19	6.07	2.63
1976	2.16	0.74	1.17	5.41	7.11	6.23	8.63	3.22	3.21	8.49	6.96	2.40	4.64
1977	0.47	0.24	0.23	0.84	1.53	2.67	3.34	3.09	3.09	3.87	4.50	0.51	2.03
1978	0.25	0.72	0.60	1.60	2.50	3.30	1.25	1.36	2.10	2.50	1.72	0.90	1.57
1979	0.51	0.57	0.72	1.74	1.79	4.96	2.13	2.07	1.40	9.19	10.13	4.28	3.29
1980	0.98	1.02	0.85	1.60	0.94	4.10	2.18	1.61	1.33	1.65	1.58	0.77	1.55
1981	0.58	0.43	0.46	1.86	4.32	4.08	8.11	3.71	3.81	4.71	3.90	1.97	3.16
1982	3.28	1.61	2.22	8.31	7.60	4.35	7.73	6.08	3.99	3.00	4.98	2.64	4.65
1983	0.86	1.83	1.74	10.00	3.38	3.04	4.49	1.77	0.12	1.49	2.13	1.74	2.72
1984	0.95	0.79	0.49	0.46	1.12	5.85	2.88	2.89	2.23	0.78	11.19	0.37	2.50
1985	0.28	0.08	0.09	0.00	1.63	16.30	5.47	4.93	3.51	5.76	0.63	5.10	3.65
1986	1.34	1.15	2.67	0.00	0.00	0.07	2.78	1.18	0.34	0.70	0.45	0.45	0.93
1987	0.44	0.34	0.72	0.00	0.00	0.29	4.23	2.86	1.27	2.96	3.23	2.02	1.53
1988	0.95	0.52	0.54	0.00	0.59	2.00	10.43	6.13	1.96	2.52	3.10	0.00	2.40
1989	0.48	0.94	1.40	2.31	2.31	1.86	2.34	1.78	1.66	1.74	2.21	2.18	1.77
1990	0.00	0.00	2.04	1.91	4.55	2.60	2.53	2.66	1.44	1.83	2.07	1.85	1.96
1991	2.05	1.84	1.68	2.09	1.84	2.30	4.53	8.44	2.27	1.45	3.49	1.73	2.81
1992	1.40	1.63	1.98	2.15	1.55	1.93	7.54	2.07	0.68	1.01	1.83	1.94	2.14
1993	1.12	1.00	0.80	1.60	2.61	4.12	5.19	6.22	3.40	2.39	3.46	1.96	2.82
1994	0.92	0.83	0.78	1.10	3.51	3.09	8.63	7.33	3.64	4.76	2.77	1.41	3.23
1995	0.52	0.45	0.49	1.02	1.92	2.76	1.97	1.92	1.29	1.48	1.39	0.90	1.34
1996	0.50	0.52	0.69	0.68	1.76	2.49	4.98	1.97	1.31	2.15	1.96	2.80	1.82
1997	4.77	4.95	3.33	0.57	0.69	0.57	3.79	2.36	0.88	0.47	0.53	0.53	1.95
1998	0.57	0.83	1.17	1.11	2.57	2.46	10.31	4.01	0.71	1.34	1.13	5.56	2.65
1999	3.51	2.60	3.03	5.32	5.82	5.59	9.49	4.94	4.20	4.84	4.92	3.83	4.84
2000	3.33	3.38	2.17	2.60	4.42	5.33	4.31	4.90	6.62	2.20	3.94	1.03	3.69
Media	1.00	0.91	1.21	1.98	3.20	3.81	5.25	3.53	2.18	3.17	4.17	2.34	2.73
Max	4.77	4.95	6.18	10.00	8.96	16.30	10.43	8.44	6.62	9.58	11.19	8.34	4.84
Min	0.00	0.00	0.05	0.00	0.00	0.07	1.25	1.18	0.12	0.47	0.45	0.00	0.93

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie FaguaAlicachin.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1965	0.15	0.00	0.00	9.88	30.61	11.18	9.14	7.28	0.00	11.64	30.71	17.38	10.66
1966	0.00	0.00	3.10	2.85	3.88	7.52	6.60	8.81	2.58	10.02	14.73	47.38	8.96
1967	3.95	4.68	1.89	9.27	23.76	34.22	22.70	18.97	6.34	5.70	12.96	10.74	12.93
1968	2.39	4.06	4.13	16.89	12.91	33.52	22.56	14.66	12.76	21.26	26.38	12.66	15.35
1969	4.15	4.69	0.00	20.12	24.04	17.17	14.21	8.36	1.72	45.17	27.51	12.53	14.97
1970	6.07	5.51	4.03	3.33	10.36	12.30	10.12	7.69	8.02	29.02	40.15	10.52	12.26
1971	10.21	13.24	14.47	34.33	42.69	32.29	15.41	14.03	18.31	16.09	24.40	11.93	20.62
1972	16.89	11.25	7.12	24.36	49.72	0.76	9.22	0.00	0.00	3.11	14.01	0.00	11.37
1973	0.00	0.00	0.00	0.00	1.11	2.79	5.42	7.85	21.57	12.40	17.67	24.38	7.77
1974	5.09	14.99	14.32	13.52	26.17	7.77	9.01	7.67	6.80	10.97	31.29	10.76	13.20
1975	0.00	2.79	5.81	1.53	16.64	18.51	13.02	11.19	15.23	11.84	26.49	42.83	13.82
1976	12.55	7.83	8.72	33.13	41.35	35.86	50.93	13.06	0.00	16.24	25.02	6.15	20.90
1977	0.00	1.17	0.00	3.37	8.57	4.32	9.56	4.74	8.30	14.07	29.47	3.23	7.23
1978	2.27	0.89	2.14	14.90	10.67	19.34	13.80	6.80	4.52	6.42	5.23	3.54	7.71
1979	0.53	0.00	3.77	3.07	22.99	33.25	9.75	4.73	13.01	10.50	57.50	34.60	16.14
1980	9.84	7.04	0.87	0.00	3.81	21.19	8.26	2.43	6.80	8.35	3.16	4.45	6.35
1981	0.00	0.57	0.00	6.58	31.29	15.13	1.09	0.00	4.02	6.42	18.14	5.92	7.60
1982	4.85	2.49	6.54	44.84	38.86	9.54	4.16	5.08	4.23	11.00	3.50	3.85	11.58
1983	0.00	0.00	8.99	22.26	21.21	6.89	9.56	2.30	2.06	4.36	0.49	5.01	6.93
1984	9.11	6.80	2.17	4.67	13.38	13.54	6.40	12.52	10.11	11.89	13.39	8.48	9.37
1985	2.90	0.06	0.92	3.51	8.75	0.00	2.96	7.14	12.05	18.19	27.91	10.05	7.87
1986	1.35	0.00	12.22	9.12	7.44	33.82	32.42	14.59	0.00	43.04	42.13	9.24	17.11
1987	0.95	0.52	0.00	0.66	19.33	3.91	14.96	10.73	5.55	20.73	11.87	6.64	7.99
1988	0.00	2.09	0.00	4.25	6.84	15.79	15.36	9.39	15.77	24.29	36.19	29.73	13.31
1989	5.28	11.61	21.35	8.34	15.13	16.90	15.14	4.63	5.57	8.16	8.55	8.64	10.78
1990	4.47	6.43	2.13	12.89	33.83	14.66	7.65	7.74	0.00	18.36	14.81	21.76	12.06
1991	1.09	0.00	10.38	13.88	11.76	5.29	17.56	16.97	12.33	3.79	17.62	7.53	9.85
1992	0.00	0.00	0.00	3.57	1.90	0.00	4.05	8.41	2.63	0.98	8.83	7.55	3.16
1993	2.25	2.45	2.51	8.52	19.73	13.23	12.85	0.93	3.40	1.79	17.82	7.70	7.77
1994	1.68	3.72	8.18	12.42	20.77	15.60	10.89	4.22	1.49	9.57	20.06	5.79	9.53
1995	0.00	0.00	5.83	12.16	14.06	17.10	7.43	12.43	6.70	8.08	9.63	11.69	8.76
1996	0.00	4.97	17.50	6.95	19.06	11.90	22.90	17.10	1.95	17.68	6.68	7.28	11.16
1997	13.95	1.36	0.00	0.89	2.83	5.38	22.13	5.57	0.00	0.15	3.47	0.00	4.64
1998	0.00	0.00	0.00	5.97	20.22	22.87	20.54	17.46	6.45	13.36	17.41	21.45	12.14
1999	9.81	14.50	23.46	19.23	12.66	10.79	0.04	8.89	18.83	32.25	41.58	15.02	17.26
2000	2.25	9.36	0.00	4.99	11.43	9.81	12.79	9.34	0.00	2.42	1.25	4.50	5.68
Media	3.72	4.03	5.35	11.06	18.33	14.84	13.07	8.71	6.64	13.65	19.67	12.53	10.97
Max	16.89	14.99	23.46	44.84	49.72	35.86	50.93	18.97	21.57	45.17	57.50	47.38	20.90
Min	0.00	0.00	0.00	0.00	1.11	0.00	0.04	0.00	0.00	0.15	0.49	0.00	3.16

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Checua.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1965	0.64	0.59	0.35	4.09	6.16	2.14	0.00	1.04	4.28	5.20	9.33	3.02	3.07
1966	0.00	0.30	0.00	1.20	1.66	2.29	0.40	0.06	3.64	4.49	3.39	6.25	1.97
1967	0.65	0.94	0.00	1.59	3.54	2.60	0.39	0.02	1.23	2.12	7.00	1.62	1.81
1968	0.00	0.00	0.00	2.88	2.88	4.20	0.79	0.69	0.00	2.11	4.84	2.10	1.71
1969	0.00	0.19	0.00	2.54	3.23	2.19	0.83	0.66	0.83	5.68	4.56	1.35	1.84
1970	0.17	0.46	0.08	2.08	2.74	1.68	0.47	0.68	1.74	4.81	5.88	1.33	1.84
1971	0.00	0.28	0.00	4.06	4.13	1.47	0.16	0.00	1.55	1.95	3.79	1.18	1.55
1972	1.86	0.81	0.00	2.63	6.12	3.94	0.16	0.91	0.61	1.95	3.52	1.18	1.97
1973	0.00	0.00	0.00	0.71	1.73	1.71	0.59	0.57	2.53	3.12	4.40	2.31	1.47
1974	0.05	1.48	0.83	3.18	4.36	1.95	0.79	0.49	2.65	3.86	6.16	1.67	2.29
1975	0.00	1.27	1.08	3.50	3.60	2.18	1.21	0.99	2.49	3.47	5.46	4.67	2.49
1976	0.09	0.00	0.04	3.29	3.29	2.56	2.22	0.55	2.02	3.74	5.29	2.08	2.10
1977	0.36	0.28	0.06	2.75	2.78	2.86	1.16	1.92	3.25	4.43	7.41	1.62	2.41
1978	0.77	0.31	1.36	4.86	4.36	6.00	3.39	3.05	3.77	4.64	4.77	2.46	3.31
1979	0.06	0.68	3.24	5.90	9.67	11.19	7.34	7.27	6.75	15.57	17.06	5.26	7.50
1980	1.53	1.37	0.87	2.91	3.66	4.17	3.40	2.71	2.19	6.30	3.44	1.13	2.81
1981	0.19	0.26	0.57	4.18	11.46	10.73	7.78	3.94	3.85	6.86	8.44	2.01	5.02
1982	2.45	2.17	3.15	10.18	9.74	3.95	3.86	1.82	2.72	6.21	4.67	3.21	4.51
1983	0.66	0.10	0.74	3.92	0.65	0.52	1.15	2.14	0.00	0.65	1.35	0.13	1.00
1984	0.00	0.66	0.41	1.62	2.80	5.42	3.23	4.56	7.68	3.12	4.31	1.70	2.96
1985	1.07	0.00	0.00	0.39	3.20	4.90	3.50	2.99	3.93	3.71	9.99	4.67	3.20
1986	1.22	9.91	8.58	0.00	6.11	6.17	2.88	0.00	8.12	12.36	0.98	0.00	4.69
1987	0.00	1.42	2.56	5.36	2.55	0.65	1.06	0.00	0.00	1.60	1.35	2.46	1.58
1988	10.05	3.96	5.19	6.88	0.00	0.00	0.00	0.66	3.95	5.58	5.41	2.47	3.68
1989	0.00	0.54	1.74	0.59	3.21	1.26	1.25	0.06	0.69	1.69	1.44	1.48	1.16
1990	0.00	0.04	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.06	0.07	0.07	0.05
1991	0.00	0.00	0.39	0.00	0.00	0.00	0.65	0.69	0.57	0.81	3.98	2.93	0.84
1992	2.14	5.58	0.00	0.59	0.12	0.00	0.00	0.30	0.00	0.02	1.05	1.47	0.94
1993	0.31	0.00	0.00	0.16	1.56	0.00	0.00	0.94	0.00	0.00	0.10	0.00	0.26
1994	0.00	0.00	0.06	0.25	1.11	0.07	0.00	0.00	0.06	2.02	1.79	0.21	0.46
1995	0.00	0.00	0.45	0.56	0.15	0.40	0.31	1.66	0.32	0.56	0.36	1.52	0.52
1996	0.01	1.08	2.52	1.35	2.03	2.04	1.90	0.00	0.00	2.47	0.00	0.00	1.12
1997	1.83	0.00	0.00	0.00	0.00	0.38	2.78	1.51	0.51	1.20	1.49	0.18	0.82
1998	0.18	0.00	0.00	0.98	4.57	2.30	2.67	2.43	0.00	3.76	1.34	2.09	1.69
1999	0.53	0.00	1.28	1.24	0.61	0.42	0.72	0.81	2.40	6.94	5.23	0.67	1.74
2000	0.00	0.00	1.59	1.14	0.33	0.19	0.61	0.00	3.40	3.33	3.83	0.31	1.23
Media	0.75	0.96	1.03	2.43	3.18	2.57	1.60	1.28	2.16	3.79	4.26	1.86	2.16
Max	10.05	9.91	8.58	10.18	11.46	11.19	7.78	7.27	8.12	15.57	17.06	6.25	7.50
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Betania.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1961	254.10	256.20	373.60	571.45	460.70	599.10	656.00	417.50	242.60	360.20	565.90	286.00	420.28
1962	209.30	243.20	280.00	329.25	623.20	846.50	782.30	642.60	317.20	492.00	427.50	329.10	460.18
1963	293.00	422.10	282.30	479.35	512.70	457.40	469.30	444.90	255.70	184.10	483.10	334.50	384.87
1964	155.40	127.00	109.70	400.25	378.80	663.20	579.70	508.40	401.70	265.70	335.90	300.70	352.20
1965	208.80	109.30	183.40	496.70	577.00	516.70	539.30	446.80	283.60	354.50	502.90	407.10	385.51
1966	198.10	134.90	287.40	290.30	263.00	245.40	509.50	426.20	262.40	289.00	387.40	635.00	327.38
1967	255.70	303.30	334.70	331.70	416.70	817.60	608.30	516.20	232.20	270.00	434.50	347.00	405.66
1968	343.10	326.10	493.00	329.60	511.70	730.00	1390.40	633.30	369.00	424.50	393.10	374.10	526.49
1969	242.70	233.70	178.00	598.90	483.60	604.70	531.70	566.70	238.70	547.50	504.90	546.10	439.77
1970	351.80	356.50	379.20	373.60	577.20	659.90	464.30	517.30	500.80	480.90	600.40	383.40	470.44
1971	536.20	461.80	489.60	607.10	578.40	484.10	742.10	442.00	343.70	492.20	538.90	394.40	509.21
1972	465.00	344.30	392.60	504.20	589.70	524.90	752.50	351.90	394.00	243.10	493.90	327.70	448.65
1973	160.60	171.50	198.80	247.10	361.10	374.60	508.40	519.50	509.10	392.30	494.40	561.90	374.94
1974	381.10	662.40	580.30	530.40	502.80	495.40	669.70	512.90	423.30	474.60	637.40	398.60	522.41
1975	263.60	349.70	463.40	351.30	555.50	703.70	546.60	576.90	477.40	490.50	662.50	642.70	506.98
1976	343.10	416.20	596.40	713.00	793.80	752.40	998.15	662.20	521.70	476.00	476.00	376.20	593.76
1977	182.60	217.35	239.60	410.30	495.00	542.90	527.00	415.20	536.00	526.30	556.00	275.20	410.29
1978	210.90	199.50	254.60	579.80	406.80	516.80	478.25	465.40	334.10	347.50	265.80	324.30	365.31
1979	179.00	160.30	412.10	538.80	495.10	659.00	519.15	369.80	366.50	344.50	559.30	349.20	412.73
1980	283.60	337.30	324.40	529.20	484.50	652.90	530.00	394.70	330.20	462.10	291.60	300.80	410.11
1981	215.70	298.40	322.00	451.70	726.70	514.40	587.20	347.90	345.30	346.10	545.60	346.00	420.58
1982	602.45	474.40	500.30	597.10	624.40	495.40	727.20	552.20	473.40	457.70	383.20	464.50	529.35
1983	325.00	296.40	389.00	646.85	595.20	381.30	424.80	572.10	309.60	373.90	330.30	420.00	422.04
1984	524.05	466.40	297.90	456.45	510.00	565.10	610.25	488.80	400.00	566.50	635.80	508.60	502.49
1985	308.85	209.70	207.20	314.40	447.80	730.70	666.40	600.10	377.00	362.50	374.40	297.90	408.08
1986	287.05	410.40	572.60	484.50	405.80	748.90	1018.90	448.50	417.70	803.40	555.50	276.30	535.80
1987	206.60	223.90	226.20	467.00	517.60	456.60	525.60	611.50	321.80	448.90	317.50	290.40	384.47
1988	152.90	213.00	171.70	293.10	355.00	630.10	782.80	362.80	307.70	348.60	633.10	470.80	393.47
1989	360.00	343.80	570.60	357.70	618.00	620.20	679.80	404.50	346.00	448.00	447.20	263.30	454.93
1990	269.00	315.80	347.80	419.80	669.80	688.70	647.20	525.20	333.20	339.20	332.90	369.30	438.16
1991	196.70	189.50	294.10	341.90	390.00	453.90	771.00	710.00	516.10	304.70	412.70	348.10	410.73
1992	216.40	204.00	184.40	330.20	251.00	376.30	648.30	539.50	254.30	222.69	288.40	301.50	318.08
1993	197.80	237.60	444.50	469.20	503.30	651.60	574.40	452.30	329.10	290.70	548.80	472.80	431.01
1994	326.10	336.10	484.50	714.30	750.20	854.50	701.70	621.80	437.20	408.60	435.40	365.70	536.34
1995	189.20	148.10	283.00	476.90	441.30	446.60	482.00	265.20	248.90	320.86	350.95	253.43	325.54
1996	265.72	455.53	529.85	398.48	482.19	503.05	723.32	403.25	302.28	478.05	300.94	350.24	432.74
1997	442.46	348.85	285.34	328.72	636.80	375.40	840.94	451.63	230.03	205.32	256.41	172.36	381.19
1998	98.23	162.43	171.37	346.37	392.86	709.90	599.31	356.16	256.75	315.81	393.11	295.47	341.48
1999	488.22	640.60	388.31	696.96	528.37	504.25	418.50	412.48	372.45	335.71	365.10	559.01	475.83
2000	347.47	442.80	500.51	433.59	847.78	503.57	399.20	547.45	371.14	339.95	368.28	285.28	448.92
Media	288.44	306.26	350.61	455.94	519.04	576.44	640.79	487.59	357.25	390.87	447.17	375.12	432.96
Max	602.45	662.40	596.40	714.30	847.78	854.50	1390.40	710.00	536.00	803.40	662.50	642.70	593.76
Min	98.23	109.30	109.70	247.10	251.00	245.40	399.20	265.20	230.03	184.10	256.41	172.36	318.08

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Guavio.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1963	13.30	19.30	15.70	60.60	113.80	110.30	105.50	104.70	79.30	36.30	43.60	28.20	60.88
1964	10.70	11.00	21.10	56.40	104.90	131.60	100.70	101.20	97.80	63.60	54.00	43.50	66.38
1965	39.20	13.40	14.50	68.00	131.60	114.20	144.90	111.20	59.90	71.60	71.70	42.30	73.54
1966	21.80	12.60	37.60	37.70	37.50	47.50	90.90	103.30	67.80	42.70	62.40	51.80	51.13
1967	35.70	25.10	21.60	64.50	92.50	144.20	129.00	138.60	84.80	44.70	40.70	34.00	71.28
1968	13.30	14.20	22.80	101.10	72.70	143.20	206.00	101.10	72.10	72.00	58.80	20.60	74.83
1969	15.60	18.40	18.60	60.70	86.00	86.60	114.00	99.40	58.70	92.60	53.10	35.30	61.58
1970	33.40	21.10	45.70	99.90	104.00	163.90	134.00	128.70	98.10	87.40	62.50	35.10	84.48
1971	24.30	29.90	56.70	87.60	120.20	154.80	174.10	132.40	99.00	70.60	48.20	28.20	85.50
1972	55.50	27.40	38.00	87.50	157.50	157.50	171.80	129.30	90.10	46.00	46.50	21.60	85.73
1973	13.60	10.90	12.50	30.40	98.70	137.90	130.90	106.90	118.60	71.10	66.90	33.72	69.34
1974	16.80	21.10	31.80	80.50	118.80	110.20	145.80	126.10	62.60	52.60	43.60	17.00	68.91
1975	11.50	9.60	40.80	46.30	96.70	197.60	96.20	114.70	75.40	73.10	50.50	44.70	71.43
1976	20.20	17.60	45.50	72.70	162.70	203.20	213.60	107.00	74.50	59.40	48.10	30.70	87.93
1977	11.30	15.90	19.10	38.00	65.60	124.90	172.00	89.50	83.30	63.30	50.90	16.40	62.52
1978	9.70	14.60	13.90	63.50	86.90	148.80	117.80	90.90	66.30	77.30	28.00	26.30	62.00
1979	11.10	8.40	23.00	67.60	72.30	125.30	102.40	90.70	55.90	95.30	78.50	51.70	65.18
1980	20.00	11.70	19.40	70.00	71.00	167.80	108.30	79.90	77.60	75.80	32.10	20.90	62.88
1981	10.50	16.40	22.50	59.80	107.60	131.30	106.70	77.90	86.00	78.90	57.70	28.80	65.34
1982	15.70	19.10	27.90	114.00	106.20	88.40	159.20	116.90	95.90	77.80	45.90	30.40	74.78
1983	32.10	45.40	71.60	103.60	102.90	115.80	160.00	115.60	102.00	75.30	35.90	40.90	83.43
1984	21.50	70.60	32.00	40.20	89.70	232.00	139.00	139.60	92.60	48.30	53.90	20.70	81.68
1985	12.90	9.20	14.20	42.50	107.60	157.00	115.20	105.80	96.20	76.90	55.60	40.10	69.43
1986	14.40	28.20	39.70	50.70	80.80	187.10	240.00	145.60	66.00	98.90	54.80	30.50	86.39
1987	13.90	31.00	22.20	41.70	71.80	78.00	221.00	178.10	63.20	68.00	47.90	36.20	72.75
1988	13.90	12.20	10.60	35.40	70.40	102.80	157.30	79.40	80.90	70.50	87.00	43.90	63.69
1989	25.40	27.90	56.00	65.00	137.40	160.50	155.90	83.90	63.50	54.10	42.40	23.30	74.61
1990	19.20	25.00	68.50	76.00	167.70	169.40	124.60	100.40	51.50	42.40	41.10	36.80	76.88
1991	15.70	16.80	27.00	51.10	92.60	127.10	225.20	163.60	86.70	57.70	49.20	18.50	77.60
1992	12.73	13.06	13.29	41.44	48.82	85.93	160.09	122.64	71.14	56.51	47.90	22.92	58.04
1993	13.86	15.97	38.42	90.09	98.57	149.57	183.39	108.91	78.53	60.35	54.53	32.06	77.02
1994	15.17	13.09	31.71	67.57	151.83	175.75	206.69	135.38	94.18	77.43	55.55	31.22	87.96
1995	16.83	10.26	27.94	39.42	85.94	106.89	87.94	61.70	46.35	47.23	38.59	20.79	49.16
1996	11.55	39.94	31.40	60.47	127.53	110.75	166.68	91.21	48.28	66.42	37.11	40.28	69.30
1997	16.74	31.07	17.90	54.09	131.74	96.71	208.38	98.37	48.17	32.94	29.45	14.46	65.00
1998	9.33	13.41	16.08	51.98	128.73	190.56	209.55	105.02	50.48	51.79	45.10	38.28	75.86
1999	23.32	33.19	29.46	127.77	104.96	159.01	87.50	86.14	72.35	113.03	46.71	28.72	76.01
2000	23.02	24.51	25.85	41.95	146.27	139.62	118.32	129.14	85.60	62.67	72.31	40.97	75.85
Media	18.81	21.01	29.54	64.42	104.01	137.73	149.75	110.55	76.35	66.12	51.02	31.63	71.75
Max	55.50	70.60	71.60	127.77	167.70	232.00	240.00	178.10	118.60	113.03	87.00	51.80	87.96
Min	9.33	8.40	10.60	30.40	37.50	47.50	87.50	61.70	46.35	32.94	28.00	14.46	49.16

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Chuza.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1967	5.48	2.22	7.42	13.00	18.90	35.97	29.26	31.27	11.06	16.99	10.70	3.97	15.52
1968	1.63	1.58	1.84	23.18	8.08	28.93	40.43	17.56	13.47	12.55	8.91	4.56	13.56
1969	3.65	3.84	3.89	14.57	13.88	15.64	15.42	17.41	9.77	14.96	11.59	6.30	10.91
1970	8.24	3.48	11.01	17.66	18.05	31.29	21.75	20.50	17.12	17.70	13.33	6.20	15.53
1971	3.37	4.76	12.86	16.10	19.56	25.67	30.60	20.07	15.55	11.39	9.47	5.44	14.57
1972	11.90	5.46	8.37	16.91	23.43	26.63	27.61	18.88	15.23	8.93	8.77	4.25	14.70
1973	2.18	1.70	2.15	5.31	20.82	26.16	21.14	19.62	23.71	12.91	14.13	9.75	13.30
1974	3.89	3.51	4.75	13.01	17.89	17.68	23.00	18.25	12.33	9.29	8.54	2.23	11.20
1975	1.74	1.60	8.35	7.81	22.85	31.19	14.07	16.27	11.95	13.92	8.43	9.93	12.34
1976	4.91	2.39	5.65	18.17	29.72	31.12	33.80	19.14	13.59	12.63	9.52	5.74	15.53
1977	1.63	3.47	4.61	7.57	14.14	20.79	23.97	20.10	16.32	14.31	13.09	5.99	12.17
1978	1.57	3.22	3.43	13.88	16.26	25.75	17.64	15.03	11.63	12.65	4.12	3.64	10.74
1979	1.44	1.10	3.97	11.81	10.11	20.19	13.73	12.63	8.56	16.24	12.82	7.30	9.99
1980	3.18	2.05	4.36	12.17	9.10	25.62	17.25	14.53	11.82	13.79	5.83	2.78	10.21
1981	1.49	4.07	4.85	12.83	22.09	20.54	16.36	11.49	11.75	14.23	6.97	3.56	10.85
1982	1.73	2.89	3.72	17.25	16.65	12.95	31.40	20.78	13.36	16.10	8.55	3.33	12.39
1983	4.74	4.89	13.82	15.62	13.08	25.64	29.03	29.42	23.22	12.16	5.18	5.42	15.19
1984	1.61	10.97	2.36	5.22	16.31	23.82	20.89	15.90	17.68	7.73	9.74	2.88	11.26
1985	2.36	1.21	1.56	5.74	11.82	24.29	19.71	23.99	18.46	20.06	14.53	5.96	12.47
1986	1.27	6.33	6.77	8.76	12.31	30.54	30.54	16.71	7.45	13.36	7.12	3.93	12.09
1987	2.78	4.09	4.23	10.49	13.09	12.91	28.47	18.99	9.48	9.88	7.33	6.31	10.67
1988	1.56	2.44	2.25	7.58	13.80	19.52	27.55	12.48	12.37	8.04	14.42	7.26	10.77
1989	3.56	4.81	7.09	10.81	20.22	28.44	23.81	13.56	9.39	14.38	8.38	4.82	12.44
1990	5.44	4.49	12.94	12.36	27.01	22.71	19.17	15.12	9.99	8.15	7.56	7.08	12.67
1991	2.14	3.55	4.28	8.66	14.51	19.70	38.20	24.49	9.15	7.39	10.73	1.90	12.06
1992	1.21	1.45	2.58	8.70	8.94	15.28	29.91	18.53	11.89	7.67	9.30	3.61	9.92
1993	3.25	4.00	7.90	18.87	16.02	24.11	27.88	16.64	10.15	11.49	10.47	4.35	12.93
1994	1.78	2.12	5.09	12.45	24.23	28.52	28.75	19.58	14.53	10.68	8.22	5.42	13.45
1995	2.40	1.02	5.45	8.58	16.01	19.02	16.91	9.18	9.14	8.18	6.29	2.71	8.74
1996	2.07	10.52	6.58	11.83	23.56	18.75	27.26	15.13	8.14	10.65	6.86	7.19	12.38
1997	4.15	9.66	4.01	11.71	19.54	26.70	23.98	13.36	6.93	5.68	3.78	1.48	10.92
1998	0.66	0.51	2.26	9.47	22.55	28.95	30.97	17.70	6.37	9.07	6.79	8.08	11.95
1999	5.21	8.23	6.70	20.55	12.76	21.73	10.05	9.05	11.16	13.34	5.90	3.81	10.71
2000	4.50	5.15	5.25	10.70	26.85	20.64	15.32	13.69	10.04	9.02	9.98	6.55	11.47
Media	3.20	3.91	5.66	12.33	17.47	23.75	24.29	17.56	12.43	11.93	9.04	5.11	12.22
Max	11.90	10.97	13.82	23.18	29.72	35.97	40.43	31.27	23.71	20.06	14.53	9.93	15.53
Min	0.66	0.51	1.56	5.22	8.08	12.91	10.05	9.05	6.37	5.68	3.78	1.48	8.74

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Río Blanco.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	Año
1972	1.35	0.88	1.25	2.09	3.22	2.74	3.32	2.17	2.87	1.80	1.67	1.04	2.03
1973	0.45	0.45	0.42	0.45	1.69	2.62	3.09	2.02	3.92	2.29	1.97	2.02	1.78
1974	1.08	1.11	1.65	1.45	4.11	2.82	3.84	2.48	2.78	2.50	2.47	0.87	2.26
1975	0.44	0.45	1.15	1.28	2.18	3.97	2.73	3.52	2.76	2.35	1.86	1.80	2.04
1976	0.64	0.35	1.74	2.78	3.27	3.48	4.26	2.21	1.83	2.30	1.85	0.70	2.12
1977	0.43	0.31	0.99	1.19	2.16	2.60	3.09	2.07	1.72	2.21	2.65	1.70	1.76
1978	0.55	0.43	1.23	1.82	2.11	4.39	2.98	2.48	1.91	1.83	1.25	0.62	1.80
1979	0.24	0.18	0.97	1.99	2.26	3.20	2.38	2.32	2.03	2.53	2.24	1.62	1.83
1980	0.30	0.25	0.24	1.57	1.68	3.16	2.07	1.53	1.31	1.27	0.57	0.20	1.18
1981	0.16	0.14	0.15	1.76	3.08	1.98	2.25	1.67	1.80	1.85	1.20	0.44	1.37
1982	0.29	0.45	0.99	2.35	1.92	1.48	2.38	1.78	1.33	1.39	0.82	0.47	1.30
1983	0.36	0.56	0.68	1.96	1.44	1.70	2.80	2.22	1.28	1.17	0.68	0.67	1.29
1984	0.95	1.02	0.50	0.62	1.41	4.52	3.16	3.41	2.27	1.33	3.22	0.55	1.91
1985	0.51	0.41	0.39	0.53	1.61	2.41	2.97	2.10	3.07	2.75	2.62	0.86	1.69
1986	0.53	1.32	1.36	1.35	2.30	7.62	6.87	2.53	2.32	2.75	2.86	0.72	2.71
1987	0.48	0.51	0.84	1.46	2.47	2.77	3.67	3.91	1.85	2.57	1.69	0.95	1.93
1988	0.44	0.38	0.67	1.49	2.15	3.03	3.96	2.64	2.34	1.91	2.47	1.56	1.92
1989	0.94	0.91	1.84	1.23	2.56	2.52	2.80	1.56	1.76	1.43	1.40	1.20	1.68
1990	0.56	0.72	1.24	1.16	5.08	3.32	3.52	3.52	1.08	2.00	1.28	1.08	2.05
1991	0.45	0.63	1.01	1.70	2.27	2.62	4.30	2.88	2.53	1.84	1.63	1.57	1.95
1992	0.85	0.97	0.78	1.39	2.35	2.93	4.93	2.57	2.43	1.92	1.96	1.95	2.09
1993	1.26	1.26	0.59	2.63	2.77	2.99	3.15	1.98	1.69	1.53	1.58	1.28	1.89
1994	0.60	0.57	0.56	0.61	1.55	2.20	1.14	0.26	0.00	0.74	0.98	0.60	0.82
1995	0.28	0.16	0.44	0.77	1.36	2.08	2.48	2.11	0.82	0.97	0.60	0.27	1.03
1996	0.27	0.75	0.38	0.38	0.92	1.15	1.26	1.39	0.41	0.22	0.26	0.47	0.66
1997	0.16	0.00	0.00	0.00	3.72	3.91	7.40	3.36	0.87	0.39	0.00	0.00	1.65
1998	0.00	0.00	0.00	0.00	1.66	1.80	2.09	0.21	0.00	0.06	0.00	0.74	0.55
1999	0.41	0.00	0.12	3.18	1.03	0.13	0.00	0.00	0.00	0.00	0.00	0.33	0.43
2000	0.08	0.07	0.10	0.54	0.44	0.18	0.10	0.10	0.02	0.32	0.48	0.51	0.25
Media	0.52	0.53	0.77	1.37	2.23	2.77	3.07	2.10	1.69	1.59	1.46	0.92	1.59
Max	1.35	1.32	1.84	3.18	5.08	7.62	7.40	3.91	3.92	2.75	3.22	2.02	2.71
Min	0.00	0.00	0.00	0.00	0.44	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.25

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Chinchiná.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1960				14.18	17.16	15.24	14.97	10.27	9.65	14.33	20.91	27.78	
1961	12.95	11.61	12.10	17.44	14.07	14.65	14.19	8.84	9.88	14.35	30.37	13.52	14.50
1962	10.83	9.67	11.24	14.21	20.02	17.00	11.26	9.70	10.20	21.43	20.28	22.37	14.85
1963	16.14	19.58	18.58	28.34	27.61	18.78	13.74	11.17	8.87	14.21	27.12	14.22	18.20
1964	9.81	9.39	8.51	14.29	13.38	21.22	15.53	13.26	12.58	21.33	19.23	18.14	14.72
1965	12.92	11.23	9.61	14.69	20.57	10.70	8.35	7.75	9.22	15.56	25.29	25.73	14.30
1966	13.74	12.76	11.50	19.49	24.66	27.51	17.00	17.82	14.84	21.17	31.35	33.32	20.43
1967	14.56	14.29	13.38	18.82	24.53	20.82	12.64	11.58	10.92	17.23	28.92	17.80	17.12
1968	12.69	14.19	11.49	18.80	18.69	19.42	13.92	9.32	15.31	18.99	22.95	19.20	16.25
1969	26.71	18.04	15.73	49.71	38.03	31.56	19.77	19.23	21.93	56.39	44.07	19.68	30.07
1970	18.07	18.30	15.29	25.97	34.50	20.51	15.54	14.95	16.10	33.67	23.44	16.95	21.11
1971	22.92	26.54	40.42	35.93	34.15	22.64	22.25	22.92	29.31	36.43	29.01	23.31	28.82
1972	17.40	17.39	17.30	28.38	33.34	10.41	11.30	10.66	10.27	10.96	34.58	29.67	19.31
1973	25.41	22.00	24.89	25.94	27.51	30.18	28.97	30.90	42.53	39.19	38.53	42.05	31.51
1974	39.08	43.26	44.76	19.35	23.24	18.01	14.68	14.07	17.13	20.18	28.42	15.63	24.82
1975	12.36	20.76	15.05	12.76	18.97	17.04	20.73	16.42	17.75	16.95	33.48	42.75	20.42
1976	31.18	83.97	33.71	89.03	83.98	65.27	13.25	11.80	13.34	17.81	27.40	12.48	40.27
1977	10.41	9.13	11.59	15.10	16.47	14.82	11.75	10.52	11.42	18.66	21.32	11.70	13.57
1978	10.84	10.06	12.64	27.43	19.46	17.84	11.25	9.33	10.25	14.15	24.25	22.79	15.86
1979	7.68	7.69	9.25	16.25	13.48	18.51	8.74	9.34	14.23	22.28	27.25	21.35	14.67
1980	17.17	18.38	25.19	12.96	15.91	17.65	11.02	9.30	10.44	15.97	13.60	16.10	15.31
1981	8.49	8.56	12.40	19.83	26.27	24.85	17.94	15.27	17.72	19.33	18.78	15.70	17.10
1982	19.61	18.02	18.85	28.43	33.28	21.46	15.78	10.73	12.39	18.24	22.45	18.96	19.85
1983	5.32	3.38	10.79	21.76	17.36	15.58	9.71	7.82	8.15	12.18	16.95	22.49	12.62
1984	21.80	14.34	11.37	14.50	26.55	21.59	13.98	15.58	19.93	26.10	37.04	18.58	20.11
1985	27.42	19.35	14.48	18.17	20.73	14.97	11.46	13.24	15.61	24.76	20.90	25.54	18.89
1986	18.16	14.00	11.34	14.91	18.93	14.06	11.47	15.42	13.99	23.71	20.28	20.35	16.39
1987	8.90	8.65	8.19	11.64	17.13	13.16	11.48	13.91	12.38	22.66	19.67	15.16	13.58
1988	10.91	10.50	10.93	13.34	13.19	16.62	17.80	15.94	22.09	23.85	27.89	22.87	17.16
1989	17.57	17.88	21.97	17.03	21.69	18.29	15.20	14.19	15.70	19.23	22.44	23.01	18.68
1990	19.67	22.44	22.48	27.09	25.77	20.86	21.79	16.58	16.47	28.23	21.32	20.30	21.92
1991	20.49	19.30	27.82	19.05	8.66	9.87	8.70	8.07	8.92	13.13	17.98	19.28	15.11
1992	11.15	11.22	13.95	12.42	13.61	11.90	11.39	10.13	7.24	12.95	18.72	19.92	12.88
1993	20.01	11.16	10.03	16.87	29.67	16.67	12.65	13.19	21.82	15.25	14.67	17.75	16.65
1994	12.02	13.08	15.15	25.59	29.23	16.30	12.91	9.62	11.77	32.79	10.63	10.68	16.65
1995	8.01	9.32	11.23	11.33	14.07	15.53	14.69	16.67	15.11	20.20	22.03	22.45	15.05
1996	15.05	14.85	25.33	18.09	17.75	20.93	17.69	14.13	13.70	20.93	17.45	13.14	17.42
1997	18.22	13.57	14.79	18.81	7.63	12.31	8.41	7.11	8.82	12.56	12.90	19.03	12.85
1998	7.90	9.84	10.92	19.49	24.22	15.91	14.01	12.76	13.55	18.04	26.51	20.70	16.15
1999	19.12	25.98	22.72	21.65	23.69	19.07	15.93	13.33	20.83	23.54	34.08	23.42	21.95
2000	22.20	15.72	42.50	22.49	19.69	24.13	29.96	31.69	21.39	25.31	27.70	33.44	26.35
Media	16.37	16.99	17.49	21.75	23.14	19.36	14.73	13.53	14.97	21.32	24.44	21.20	18.84
Max	39.08	83.97	44.76	89.03	83.98	65.27	29.96	31.69	42.53	56.39	44.07	42.75	40.27
Min	5.32	3.38	8.19	11.33	7.63	9.87	8.35	7.11	7.24	10.96	10.63	10.68	12.62

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Campoalegre.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	año
1979									10.66	11.25	11.45	8.10	
1980	7.12	8.39	5.33	6.41	8.17	9.22	4.38	3.96	4.87	8.45	7.01	6.09	6.62
1981	3.53	4.39	5.34	8.49	11.34	10.16	7.02	3.75	4.69	7.78	9.29	7.65	6.95
1982	10.29	8.57	7.89	14.08	11.12	5.81	4.80	4.47	3.60	7.04	9.35	5.97	7.75
1983	3.81	3.16	4.74	10.77	8.35	7.17	3.85	3.16	3.15	5.18	5.70	7.22	5.52
1984	7.13	7.21	4.75	6.64	10.91	7.80	6.09	8.33	7.39	10.19	10.76	7.70	7.91
1985	7.56	5.21	6.16	7.25	7.48	6.11	4.16	5.27	5.31	8.08	8.05	6.14	6.40
1986	6.53	7.92	7.41	9.01	7.79	7.01	4.91	4.08	4.65	9.64	7.67	5.41	6.84
1987	4.60	4.10	4.43	5.21	7.98	5.79	5.42	5.67	5.53	9.15	7.97	3.82	5.81
1988	3.27	4.17	3.82	6.21	4.97	5.45	6.01	6.28	8.37	8.56	10.85	8.86	6.40
1989	7.30	6.16	7.54	5.91	7.60	5.07	4.30	3.59	4.56	5.93	7.61	6.41	6.00
1990	5.06	5.66	6.24	7.88	7.57	4.54	4.33	3.01	2.62	7.44	6.52	5.48	5.53
1991	5.21	3.46	6.33	7.05	6.17	4.64	3.88	5.93	3.78	5.87	7.25	8.37	5.66
1992	4.26	3.94	3.15	4.06	4.25	3.61	3.00	3.35	4.27	3.49	5.93	8.37	4.31
1993	5.08	3.76	4.67	5.89	5.56	4.13	3.10	3.24	5.35	6.16	9.32	8.60	5.41
1994	4.56	4.89	5.43	6.41	6.35	4.56	3.92	2.78	3.83	7.06	7.23	4.72	5.15
1995	2.68	2.63	3.81	8.25	6.74	7.04	4.94	5.54	4.37	6.33	5.95	7.38	5.47
1996	6.10	8.24	8.77	6.08	6.48	6.49	6.79	4.76	4.58	7.60	7.12	5.38	6.53
1997	6.58	5.69	5.61	6.11	5.33	6.30	3.42	2.43	3.32	4.35	7.39	3.68	5.02
1998	2.67	3.16	3.65	6.22	6.27	5.17	5.55	4.25	7.85	9.94	10.69	9.80	6.27
1999	7.45	9.44	7.94	8.67	7.47	6.52	5.59	4.80	8.33	9.67	10.38	8.38	7.89
2000	7.01	8.37	8.66	6.56	7.82	10.49	6.90	5.42	9.48	9.09	9.50	6.78	8.01
Media	5.61	5.64	5.80	7.29	7.42	6.34	4.87	4.48	5.48	7.65	8.32	6.83	6.26
Max	10.29	9.44	8.77	14.08	11.34	10.49	7.02	8.33	10.66	11.25	11.45	9.80	8.01
Min	2.67	2.63	3.15	4.06	4.25	3.61	3.00	2.43	2.62	3.49	5.70	3.68	4.31

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie San Francisco.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1980	2.45	1.18	1.43	2.31	5.38	7.13	2.11	2.63	3.10	4.27	5.55	4.13	3.47
1981	2.58	2.23	2.67	3.83	4.99	5.07	3.37	1.86	3.06	2.79	3.36	3.31	3.26
1982	3.80	1.58	1.45	3.96	9.35	3.98	1.52	1.37	1.53	3.88	3.35	3.98	3.31
1983	2.53	2.20	2.35	9.30	6.74	2.69	1.90	1.70	1.99	2.70	2.63	4.50	3.44
1984	4.59	4.30	2.11	2.75	4.71	3.30	2.78	4.55	3.88	1.77	1.62	2.81	3.26
1985	1.85	1.70	2.21	2.89	4.69	3.48	1.70	1.92	1.83	2.14	2.23	3.56	2.52
1986	2.50	2.34	2.76	4.09	3.13	3.24	2.31	1.99	1.95	2.73	3.23	2.08	2.70
1987	2.39	1.82	1.74	1.90	4.04	2.44	3.08	4.34	2.54	4.13	3.69	1.87	2.83
1988	1.67	1.79	1.27	2.52	4.70	5.14	5.83	4.32	4.14	4.66	6.04	5.04	3.93
1989	5.72	4.72	4.76	3.33	3.73	4.27	2.53	2.20	2.52	3.17	3.04	2.68	3.55
1990	2.50	1.56	1.62	4.47	5.28	4.28	3.74	2.17	1.95	3.81	3.67	2.92	3.16
1991	2.93	2.29	2.73	2.72	5.14	4.96	2.98	2.26	2.99	2.53	3.25	3.01	3.15
1992	2.99	2.24	1.99	1.68	1.32	2.16	1.90	1.64	1.93	1.56	2.01	2.39	1.98
1993	1.41	1.01	1.81	2.11	4.55	3.57	3.79	2.58	2.04	3.38	3.73	2.80	2.73
1994	3.30	2.68	2.87	4.56	4.12	2.85	2.53	1.97	2.34	3.36	4.71	3.14	3.20
1995	1.79	1.67	1.79	4.33	8.25	5.99	5.57	5.40	7.52	5.33	5.81	6.80	5.02
1996	3.08	4.50	5.46	3.53	3.84	4.10	5.60	2.65	2.64	3.97	3.12	3.20	3.81
1997	3.19	3.99	3.05	3.33	2.97	4.09	2.13	1.33	1.34	1.35	3.71	2.25	2.73
1998	1.00	1.12	0.94	2.38	3.48	3.62	5.00	6.11	7.30	5.10	5.13	3.81	3.75
1999	3.16	4.69	4.47	4.67	3.93	2.69	2.25	1.98	4.39	5.26	5.36	6.26	4.09
2000	2.60	3.00	4.82	4.77	4.72	0.38	4.16	2.51	2.12	1.83	3.08	1.65	2.97
Media	2.76	2.50	2.59	3.59	4.72	3.78	3.18	2.74	3.00	3.32	3.73	3.44	3.28
Max	5.72	4.72	5.46	9.30	9.35	7.13	5.83	6.11	7.52	5.33	6.04	6.80	5.02
Min	1.00	1.01	0.94	1.68	1.32	0.38	1.52	1.33	1.34	1.35	1.62	1.65	1.98

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Fagua Campoalegre (San Eugenio).

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1979									14.08	14.85	15.12	10.69	
1980	9.40	11.08	7.05	8.46	10.79	12.18	5.78	5.23	6.43	11.16	9.25	8.05	8.74
1981	4.67	5.80	7.05	11.21	14.97	13.42	9.28	4.95	6.20	10.27	12.27	10.10	9.18
1982	13.59	11.32	10.42	18.59	14.68	7.67	6.33	5.90	4.75	9.29	12.35	7.89	10.23
1983	5.04	4.18	6.26	14.23	11.03	9.47	5.08	4.17	4.15	6.84	7.52	9.54	7.29
1984	9.41	9.52	6.28	8.77	14.41	10.29	8.04	11.01	9.76	13.46	14.21	10.17	10.44
1985	9.98	6.88	8.13	9.57	9.87	8.07	5.49	6.96	7.02	10.67	10.63	8.11	8.45
1986	8.62	10.46	9.79	11.90	10.29	9.26	6.48	5.39	6.15	12.73	10.13	7.15	9.03
1987	6.07	5.42	5.85	6.88	10.54	7.64	7.16	7.49	7.30	12.08	10.53	5.04	7.67
1988	4.32	5.50	5.05	8.20	6.57	7.20	7.94	8.30	11.05	11.31	14.33	11.70	8.46
1989	9.64	8.14	9.96	7.80	10.03	6.70	5.68	4.74	6.03	7.83	10.05	8.47	7.92
1990	6.68	7.47	8.24	10.41	10.00	6.00	5.72	3.98	3.46	9.82	8.61	7.24	7.30
1991	6.89	4.57	8.36	9.31	8.15	6.12	5.12	7.83	4.99	7.75	9.58	11.06	7.48
1992	5.63	5.20	4.16	5.36	5.61	4.76	3.96	4.42	5.64	4.61	7.84	11.05	5.69
1993	6.71	4.97	6.17	7.77	7.34	5.45	4.09	4.28	7.07	8.13	12.31	11.36	7.14
1994	6.03	6.46	7.18	8.46	8.39	6.02	5.18	3.67	5.06	9.33	9.55	6.24	6.80
1995	3.54	3.47	5.03	10.89	8.90	9.30	6.52	7.32	5.76	8.36	7.86	9.75	7.23
1996	8.06	10.89	11.58	8.02	8.56	8.57	8.96	6.29	6.04	10.04	9.41	7.11	8.63
1997	8.89	7.51	7.41	8.07	7.04	8.32	4.52	3.21	4.38	5.74	9.76	4.87	6.63
1998	3.52	4.17	4.83	8.21	8.28	6.82	7.32	5.62	10.37	13.13	14.12	12.95	8.28
1999	9.84	12.47	10.49	11.45	9.86	8.61	7.38	6.34	11.00	12.77	13.70	11.06	10.41
2000	9.25	11.05	11.43	8.66	10.32	13.85	9.12	7.16	12.52	12.00	12.54	8.95	10.57
Media	7.41	7.45	7.65	9.63	9.79	8.37	6.44	5.92	7.24	10.10	10.98	9.02	8.26
Max	13.59	12.47	11.58	18.59	14.97	13.85	9.28	11.01	14.08	14.85	15.12	12.95	10.57
Min	3.52	3.47	4.16	5.36	5.61	4.76	3.96	3.21	3.46	4.61	7.52	4.87	5.69

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Estrella.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	año
1972			1.77	1.43	2.55	2.66	1.68	1.81	2.17	2.42	3.59	2.39	2.25
1973	2.08	1.31	1.24	1.38	1.61	2.01	2.16	2.72	3.33	2.65	3.03	2.75	2.19
1974	3.79	3.99	1.52	2.05	2.30	2.41	1.79	2.20	3.00	2.83	2.84	2.94	2.64
1975	2.59	2.96	1.13	1.78	2.10	2.18	1.93	2.49	2.67	3.01	2.81	2.10	2.31
1976	1.40	1.92	2.35	3.94	1.97	2.81	1.56	1.00	0.95	1.39	1.83	1.26	1.86
1977	0.80	0.66	0.70	1.43	2.48	2.71	1.78	3.28	1.66	2.44	2.89	1.51	1.86
1978	1.27	1.07	1.08	2.26	2.55	2.26	1.99	1.76	1.28	1.46	2.49	2.28	1.81
1979	1.47	0.94	1.06	1.52	1.96	2.04	1.59	1.22	1.46	1.54	1.82	1.68	1.53
1980	1.63	1.79	1.33	1.27	1.52	4.60	1.45	1.18	1.40	2.53	2.63	1.99	1.94
1981	1.41	1.30	1.94	2.45	2.90	3.24	2.82	2.28	1.99	2.58	5.23	2.13	2.52
1982	2.75	2.56	2.59	2.92	3.00	2.53	1.39	1.05	0.91	2.22	2.74	2.12	2.23
1983	1.52	1.34	1.51	2.46	2.69	2.68	1.79	1.39	1.62	1.78	1.99	2.26	1.92
1984	2.64	2.71	2.20	2.53	2.67	2.47	2.31	2.55	2.31	2.61	2.61	2.14	2.48
1985	2.17	1.91	1.82	1.89	2.09	2.05	1.90	1.83	1.97	2.06	2.31	1.97	2.00
1986	1.42	1.50	1.70	1.99	2.23	2.17	1.99	2.18	1.72	2.27	2.32	2.04	1.96
1987	1.58	1.07	1.02	1.11	1.93	1.84	1.65	2.08	1.68	2.36	2.38	2.05	1.73
1988	1.51	1.50	1.17	2.10	2.17	2.19	2.28	2.08	2.32	2.25	2.15	2.34	2.00
1989	2.24	2.05	2.36	2.20	2.37	2.35	2.15	1.74	2.07	2.28	2.25	2.12	2.18
1990	1.92	1.63	1.80	2.32	1.79	2.30	2.27	1.66	1.43	2.27	2.43	1.79	1.97
1991	1.80	1.33	1.78	1.94	2.22	2.23	2.64	3.55	3.46	3.22	3.34	2.39	2.49
1992	1.74	2.01	1.68	1.89	1.75	1.76	1.37	1.41	1.96	2.01	2.07	2.62	1.86
1993	2.10	1.92	2.15	2.32	5.05	2.31	2.21	1.87	2.31	2.53	2.66	2.74	2.51
1994	2.41	1.89	2.43	2.54	2.38	1.99	1.94	1.55	1.58	2.28	2.56	2.37	2.16
1995	1.45	1.16	1.05	2.04	2.43	2.58	2.44	2.21	1.96	2.57	2.38	6.06	2.36
1996	2.57	3.38	6.29	4.21	3.50	4.42	5.89	1.94	1.71	2.20	2.97	1.96	3.42
1997	2.10	2.23	2.16	1.95	1.84	2.49	1.22	0.71	0.67	0.84	1.81	1.04	1.59
1998	0.77	0.61	0.67	1.62	1.62	2.29	3.23	2.33	2.33	2.07	2.72	2.19	1.87
1999	1.50	1.65	1.66	1.51	1.60	1.43	1.40	1.13	1.42	1.58	1.53	1.57	1.50
2000	1.19	1.23	1.49	1.56	1.50	1.61	1.50	1.32	1.43	1.42	0.96	0.91	1.34
Media	1.85	1.77	1.78	2.09	2.30	2.44	2.08	1.88	1.89	2.20	2.53	2.20	2.09
Max	3.79	3.99	6.29	4.21	5.05	4.60	5.89	3.55	3.46	3.22	5.23	6.06	3.42
Min	0.77	0.61	0.67	1.11	1.50	1.43	1.22	0.71	0.67	0.84	0.96	0.91	1.34

Consejo Nacional de Operación

CNO

Caudal medio mensual, m³/seg. Serie Salvajina.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	año
1946										52.00	121.00	144.00	
1947	129.00	106.00	75.00	61.00	72.00	95.00	94.00	78.00	74.00	212.00	255.00	139.00	115.83
1948	95.00	77.00	144.00	201.00	135.00	117.00	72.00	60.00	39.00	93.00	135.00	123.00	107.58
1949	149.00	151.00	120.00	127.00	160.00	121.00	98.00	79.00	64.00	122.00	288.00	256.00	144.58
1950	197.00	379.00	373.00	317.00	375.00	294.00	202.00	129.00	80.00	127.00	269.00	336.00	256.50
1951	224.00	208.00	184.00	135.00	170.00	125.00	119.00	73.00	65.00	90.00	202.00	197.00	149.33
1952	161.00	159.00	125.00	125.00	173.00	116.00	92.00	72.00	50.00	62.00	147.00	241.00	126.92
1953	151.00	125.00	100.00	127.00	128.00	107.00	82.00	59.00	54.00	160.00	284.00	332.00	142.42
1954	154.00	143.00	125.00	219.00	144.00	124.00	135.00	119.00	52.00	164.00	257.00	344.00	165.00
1955	234.00	123.00	210.00	214.00	193.00	165.00	147.00	93.00	84.00	181.00	259.00	340.00	186.92
1956	311.00	206.00	172.00	122.00	148.00	200.00	118.00	98.00	89.00	168.00	187.00	238.00	171.42
1957	184.00	96.00	131.00	136.00	196.00	165.00	90.00	64.00	46.00	65.00	104.00	182.00	121.58
1958	112.00	85.00	68.00	94.00	109.00	91.00	75.00	71.00	42.00	56.00	133.00	161.00	91.42
1959	139.00	84.00	63.00	78.00	120.00	128.00	108.00	59.00	52.00	88.00	129.00	177.00	102.08
1960	241.00	193.00	121.00	130.00	120.00	87.00	88.00	65.00	52.00	80.00	173.00	230.00	131.67
1961	111.00	91.00	78.00	142.00	89.00	119.00	101.00	72.00	42.00	62.00	206.00	149.00	105.17
1962	118.00	130.00	146.00	109.00	147.00	162.00	88.00	74.00	53.00	94.00	162.00	267.00	129.17
1963	121.00	218.00	152.00	228.00	209.00	132.00	94.00	82.00	49.00	60.00	213.00	153.00	142.58
1964	130.00	92.00	70.00	142.00	141.00	188.00	117.00	98.00	88.00	121.00	190.00	226.00	133.58
1965	163.00	106.00	78.00	126.00	142.00	74.00	77.00	55.00	45.00	95.00	208.00	240.00	117.42
1966	127.00	77.00	81.00	89.00	130.00	108.00	103.00	76.00	59.00	113.00	274.00	606.00	153.58
1967	195.00	199.00	188.00	132.00	137.00	160.00	121.00	92.00	50.00	77.00	246.00	164.00	146.75
1968	116.00	156.00	135.00	177.00	125.00	133.00	137.00	74.00	68.00	149.00	203.00	159.00	136.00
1969	126.00	141.00	88.00	207.00	180.00	127.00	92.00	62.00	47.00	161.00	194.00	175.00	133.33
1970	111.00	178.00	198.00	105.00	146.00	135.00	79.00	80.00	73.00	165.00	366.00	258.00	157.83
1971	310.00	235.00	229.00	238.00	212.00	137.00	123.00	83.00	86.00	137.00	216.00	180.00	182.17
1972	220.00	188.00	144.00	145.00	146.00	138.00	115.00	58.00	59.00	68.00	146.00	157.00	132.00
1973	71.00	50.00	53.00	81.00	104.00	111.00	107.00	122.00	150.00	197.00	288.00	287.00	135.08
1974	252.00	284.00	245.00	146.00	147.00	109.00	114.00	74.00	75.00	159.00	288.00	211.00	175.33
1975	126.00	188.00	188.00	131.00	185.00	145.00	141.00	109.00	110.00	156.00	307.00	398.00	182.00
1976	190.00	177.00	191.00	202.00	165.00	124.00	132.00	74.00	58.00	81.00	126.00	123.00	136.92
1977	75.00	59.00	52.00	82.00	116.00	100.00	74.00	57.00	80.00	158.00	208.00	126.00	98.92
1978	147.00	63.00	62.00	141.00	139.00	104.00	74.00	61.00	50.00	76.00	124.00	240.00	106.75
1979	136.00	84.00	145.00	142.00	148.00	161.00	83.00	63.00	91.00	129.00	207.00	146.00	127.92
1980	134.00	177.00	128.00	103.00	105.00	103.00	71.00	49.00	49.00	100.00	143.00	205.00	113.92
1981	124.00	116.00	154.00	216.00	242.00	149.00	122.00	63.00	55.00	66.00	207.00	195.00	142.42
1982	241.00	185.00	235.00	234.00	229.00	129.00	114.00	73.00	64.00	112.00	173.00	194.00	165.25
1983	122.00	114.00	117.00	232.00	176.00	116.00	71.00	74.00	46.00	74.00	119.00	201.00	121.83
1984	237.00	195.00	152.00	173.00	213.00	174.00	119.00	82.00	100.00	211.00	279.00	264.00	183.25
1985	259.00	124.00	88.00	131.00	163.00	129.00	102.00	83.00	78.00	133.00	206.00	180.00	139.67
1986	169.00	202.00	198.00	161.00	144.00	147.00	126.00	59.00	58.00	160.00	187.00	140.00	145.92
1987	93.00	63.00	60.00	84.00	130.00	82.00	74.00	69.00	46.00	115.00	142.00	124.00	90.17
1988	72.00	73.00	71.00	106.00	101.00	121.00	168.00	73.00	94.00	113.00	354.00	324.00	139.17
1989	249.00	223.00	223.00	128.00	172.00	122.00	107.00	58.00	64.00	96.00	128.00	148.00	143.17
1990	196.00	150.00	132.00	167.00	185.00	105.00	88.00	76.00	49.00	84.00	123.00	152.00	125.58
1991	147.00	80.00	125.00	144.00	126.00	97.00	114.00	97.00	69.00	67.00	150.00	176.00	116.00
1992	121.00	104.00	69.00	82.00	74.00	67.00	92.00	63.00	40.00	42.00	103.00	175.00	86.00
1993	160.00	127.00	139.00	165.00	166.00	109.00	86.00	61.00	52.00	62.00	180.00	239.00	128.83
1994	211.00	157.00	153.00	186.00	149.00	117.00	95.00	85.00	56.00	97.00	180.00	192.00	139.83
1995	112.00	77.00	89.00	146.00	148.00	107.00	94.00	83.00	59.00	134.00	164.00	196.00	117.42
1996	186.00	205.00	206.00	164.00	144.00	127.00	145.00	73.00	51.00	125.00	148.00	187.00	146.75
1997	319.00	201.00	137.00	136.00	125.00	125.00	141.00	58.00	42.00	55.00	114.00	88.00	128.42
1998	44.00	61.00	55.00	113.00	129.00	134.00	89.00	60.00	49.00	95.00	269.00	210.00	109.00
1999	273.00	307.00	234.00	252.00	160.00	119.00	97.00	71.00	98.00	137.00	291.00	389.00	202.33
2000	329.00	261.00	261.00	211.00	198.00	157.00	112.00	108.00	92.00	86.00	165.00	136.00	176.33
Media	168.96	149.13	140.00	151.57	154.26	128.48	105.91	75.98	64.57	111.67	198.91	214.91	139.02
Max	329.00	379.00	373.00	317.00	375.00	294.00	202.00	129.00	150.00	212.00	366.00	606.00	256.50
Min	44.00	50.00	52.00	61.00	72.00	67.00	71.00	49.00	39.00	42.00	103.00	88.00	86.00

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Calima.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic	año
1946	12.90	7.70	9.70	20.90	30.50	11.40	6.40	4.60	3.50	9.40	19.00	17.00	12.75
1947	13.50	11.60	9.00	12.40	16.30	20.20	18.60	12.80	15.70	27.50	18.90	12.40	15.74
1948	7.80	7.20	7.80	15.00	23.70	22.60	11.60	5.20	8.60	16.80	23.00	13.10	13.53
1949	12.20	13.70	13.70	13.20	24.00	18.60	15.50	10.10	9.70	25.30	32.30	17.60	17.16
1950	13.20	23.00	28.20	28.90	39.80	35.70	16.40	13.90	8.60	17.70	29.90	25.80	23.43
1951	14.80	18.40	11.80	10.60	16.00	15.90	12.60	7.60	8.20	10.90	22.60	17.40	13.90
1952	14.10	14.80	9.50	10.30	20.30	13.50	10.50	10.30	6.70	10.30	18.70	20.10	13.26
1953	13.30	11.20	8.30	13.10	15.80	10.20	6.40	4.20	6.50	24.20	27.40	20.30	13.41
1954	11.70	8.60	8.70	18.30	21.60	15.10	12.80	10.90	6.50	17.90	22.40	29.20	15.31
1955	17.20	11.20	14.60	22.50	18.60	17.90	14.10	12.60	12.20	30.30	29.00	32.60	19.40
1956	22.60	17.60	13.20	15.10	16.80	19.30	9.50	6.10	5.90	15.40	18.70	16.70	14.74
1957	11.90	8.30	8.80	11.70	12.80	9.80	5.70	4.40	4.10	8.60	13.80	13.90	9.48
1958	7.60	5.90	6.00	8.70	14.20	11.40	6.80	7.60	4.60	7.50	11.60	11.90	8.65
1959	9.30	5.50	5.00	10.20	14.90	17.80	11.10	8.50	6.20	14.80	14.90	19.20	11.45
1960	22.50	18.70	8.40	14.00	15.10	14.30	13.70	8.60	6.70	15.40	21.40	26.10	15.41
1961	11.60	8.80	6.80	17.90	12.20	14.00	9.50	5.10	5.90	8.20	24.90	15.30	11.68
1962	11.90	10.50	10.20	19.90	19.70	19.00	11.40	8.80	6.50	15.00	21.10	15.80	14.15
1963	9.70	15.20	12.90	15.40	20.40	13.90	10.00	7.90	7.00	12.20	31.90	12.10	14.05
1964	6.90	5.10	5.00	22.80	18.00	23.00	15.00	12.60	10.60	18.30	16.70	14.70	14.06
1965	13.00	7.60	6.00	12.00	13.30	5.60	4.10	5.40	9.20	15.90	19.50	12.40	10.33
1966	7.80	5.50	5.40	6.90	13.20	14.10	12.80	8.90	6.20	11.60	22.50	9.50	10.37
1967	9.60	10.50	10.30	4.90	11.50	11.20	6.50	6.10	4.80	12.60	19.40	13.50	10.08
1968	7.80	8.70	8.30	16.30	11.80	14.90	9.50	5.70	11.60	19.60	18.60	12.70	12.13
1969	7.50	6.20	6.10	13.50	15.60	12.30	4.10	4.50	6.60	18.90	13.80	10.30	9.95
1970	7.60	7.60	11.10	12.70	14.80	14.00	8.50	5.50	8.00	17.00	28.00	20.70	12.96
1971	23.90	21.30	22.60	18.10	24.30	13.10	8.20	10.80	15.40	21.10	26.90	12.70	18.20
1972	16.70	11.80	9.60	9.40	14.00	10.70	5.10	3.40	4.50	8.30	17.10	10.70	10.11
1973	3.70	0.60	3.50	6.70	12.30	16.80	9.10	18.40	24.90	27.40	29.50	20.50	14.45
1974	20.50	22.50	15.80	12.90	15.80	14.70	7.90	6.50	11.10	20.10	26.20	15.80	15.82
1975	7.90	11.20	12.70	9.70	15.90	11.00	13.00	10.80	14.80	16.60	35.40	31.10	15.84
1976	9.60	7.30	9.60	8.60	16.70	9.50	2.80	1.00	1.50	6.20	9.30	8.00	7.51
1977	4.10	3.10	2.30	4.30	10.60	9.10	5.80	10.70	7.60	22.40	22.70	11.80	9.54
1978	7.90	3.90	6.20	19.60	18.10	10.00	9.20	5.20	7.70	17.30	18.10	21.10	12.03
1979	8.00	5.10	8.30	16.50	16.50	15.00	6.90	7.70	13.10	13.20	19.80	15.00	12.09
1980	8.30	9.30	5.30	5.30	9.20	8.90	3.10	2.40	2.70	11.70	15.50	15.90	8.13
1981	8.30	7.50	7.60	15.60	25.70	16.50	13.60	7.80	7.90	13.30	26.90	17.60	14.03
1982	15.10	12.00	10.70	15.20	26.10	12.80	4.90	1.20	3.10	10.80	14.60	10.80	11.44
1983	4.90	1.30	4.80	14.70	14.00	8.60	3.10	0.20	1.50	7.40	8.60	14.90	7.00
1984	13.30	13.70	8.00	13.00	13.80	11.00	11.10	7.80	12.50	22.50	24.40	14.40	13.79
1985	17.30	9.20	5.40	6.20	9.50	9.50	2.40	6.60	11.30	17.30	17.40	13.10	10.43
1986	10.95	12.15	12.35	17.60	12.88	12.08	4.56	4.07	3.13	18.20	15.94	7.21	10.93
1987	4.80	2.59	5.70	5.57	8.73	4.73	3.72	5.70	4.87	14.20	9.90	8.28	6.57
1988	3.81	4.48	4.76	13.54	13.94	11.90	12.03	8.60	14.15	18.36	32.75	22.16	13.37
1989	16.77	12.53	13.58	6.63	11.24	9.30	5.88	5.70	10.91	15.14	17.92	21.17	12.23
1990	14.15	8.34	6.40	8.50	8.80	6.25	4.70	2.56	4.20	11.46	13.20	13.16	8.48
1991	8.53	5.70	6.25	6.71	13.25	11.09	8.99	4.74	5.30	6.27	9.07	7.33	7.77
1992	5.55	5.96	6.00	6.71	6.86	4.72	2.89	1.55	3.60	5.20	6.90	10.60	5.55
1993	9.60	6.30	7.80	12.40	17.00	7.20	3.90	2.00	6.07	8.40	15.80	17.50	9.50
1994	10.46	12.60	18.38	21.98	19.71	15.42	5.75	2.96	4.06	10.67	17.10	12.10	12.60
1995	3.90	1.90	2.60	11.50	9.30	9.80	7.80	8.50	4.70	16.60	16.40	14.90	8.99
1996	9.80	12.80	12.50	9.48	14.23	14.09	11.75	6.41	7.61	13.26	15.23	13.54	11.73
1997	17.35	11.56	11.95	10.33	8.86	12.26	4.66	3.72	3.59	3.63	12.18	5.02	8.76
1998	3.40	3.70	4.07	9.11	9.90	11.00	7.20	7.60	11.70	7.87	19.79	13.20	9.05
1999	12.26	20.27	22.28	17.58	14.08	10.03	5.99	4.91	17.50	17.46	29.09	25.08	16.38
2000	18.43	11.75	19.31	22.97	25.75	15.13	8.90	4.97	8.22	9.49	24.37	8.27	14.80
Media	11.22	9.85	9.66	13.16	16.14	13.23	8.51	6.77	7.99	14.78	20.15	15.69	12.26
Max	23.90	23.00	28.20	28.90	39.80	35.70	18.60	18.40	24.90	30.30	35.40	32.60	23.43
Min	3.40	0.60	2.30	4.30	6.86	4.72	2.40	0.20	1.50	3.63	6.90	5.02	5.55

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Digua.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1975				15.40				23.70	36.80	36.90	62.90	73.10	
1976	38.20	40.90	54.10	34.10	43.70	30.40	12.00	5.80	8.20	18.10	35.90	19.30	28.39
1977	12.60	10.20	9.50	16.20	51.40	35.00	19.40	26.50	26.20	44.80	43.40	22.00	26.43
1978	16.70	6.90	14.40	43.20	41.80	28.00	21.90	18.10	21.90	46.00	40.10	42.30	28.44
1979	20.30	12.20	18.00	17.00	22.20	29.70	19.30	19.60	41.00	43.00	42.30	37.70	26.86
1980	18.90	22.70	17.70	14.70	29.30	22.20	20.90	21.90	25.60	39.50	45.20	40.80	26.62
1981	26.90	21.60	18.50	32.80	43.00	34.40	29.70	29.20	26.40	34.10	59.00	26.60	31.85
1982	38.20	33.70	30.30	49.80	38.10	20.60	16.40	10.10	20.20	40.90	39.80	21.40	29.96
1983	10.70	7.80	8.30	22.50	25.40	21.70	6.80	5.50	8.30	21.40	37.00	45.10	18.38
1984	28.20	23.80	19.50	20.60	29.80	23.90	26.80	24.80	39.70	52.20	50.60	46.60	32.21
1985	33.00	17.70	18.50	24.30	27.30	31.10	17.90	29.00	28.50	51.50	57.00	39.00	31.23
1986	27.70	35.70	21.00	34.40	40.80	31.00	20.80	13.30	13.90	65.60	47.30	26.30	31.48
1987	21.10	18.70	14.50	19.10	35.50	29.60	19.90	25.50	23.80	53.00	35.90	32.00	27.38
1988	25.80	23.80	16.30	29.40	31.80	36.80	36.60	30.70	35.80	51.90	67.60	35.30	35.15
1989	34.90	37.40	25.00	16.50	38.40	32.40	24.10	21.90	31.10	43.10	52.00	41.50	33.19
1990	30.80	26.00	21.90	28.70	26.30	20.00	14.90	15.20	23.60	51.20	48.70	36.30	28.63
1991	28.30	17.40	22.00	27.50	41.10	32.20	19.80	15.00	25.20	33.90	42.50	36.90	28.48
1992	21.10	23.99	16.33	13.28	20.51	19.98	14.50	13.40	25.80	33.20	33.90	42.90	23.24
1993	35.80	27.90	25.00	31.00	35.70	25.87	23.50	16.70	27.55	44.80	49.90	35.27	31.58
1994	30.72	32.12	33.56	53.61	52.85	34.23	15.37	18.09	21.40	65.40	65.24	31.57	37.85
1995	11.77	10.94	17.05	36.69	38.63	38.99	27.99	27.07	32.70	51.13	34.72	41.64	30.78
1996	24.10	25.00	25.40	36.27	30.58	32.32	30.18	34.93	37.78	48.96	35.62	36.84	33.17
1997	48.86	24.39	30.90	30.03	24.17	27.85	9.67	5.57	12.26	14.66	41.87	17.57	23.98
1998	9.60	19.90	14.79	27.03	25.74	22.40	15.20	21.50	30.20	29.21	57.57	33.80	25.58
1999	37.68	48.86	23.49	31.10	24.27	23.23	22.32	30.30	35.38	35.70	45.88	47.75	33.83
2000	28.56	19.86	25.66	27.02	26.42	32.50	39.07	27.08	29.98	31.16	31.16	28.25	28.89
Media	26.42	23.58	21.67	28.16	33.79	28.65	21.00	20.40	26.51	41.59	46.27	36.07	29.34
Max	48.86	48.86	54.10	53.61	52.85	38.99	39.07	34.93	41.00	65.60	67.60	73.10	37.85
Min	9.60	6.90	8.30	13.28	20.51	19.98	6.80	5.50	8.20	14.66	31.16	17.57	18.38

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Alto Anchicayá.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1975				41.20				56.60	62.50	70.90	69.20	73.80	
1976	48.00	53.60	46.50	49.80	58.50	38.20	16.30	11.90	19.40	43.40	56.80	39.20	40.13
1977	24.30	22.80	26.20	35.50	73.00	45.70	34.90	40.40	48.10	81.70	64.50	48.30	45.45
1978	43.50	20.00	32.60	78.60	62.10	42.30	39.20	23.30	37.50	58.90	61.50	73.00	47.71
1979	39.40	25.60	45.60	51.90	57.10	51.10	32.10	38.30	54.30	57.70	53.20	46.90	46.10
1980	35.10	47.00	29.10	31.50	51.70	48.30	26.80	26.70	32.20	59.30	53.60	59.10	41.70
1981	36.00	55.00	46.80	73.10	78.00	53.50	47.80	37.30	32.90	68.60	53.60	55.90	53.21
1982	59.50	59.00	51.90	80.20	70.80	46.90	23.40	12.50	23.80	52.40	55.20	40.10	47.98
1983	20.90	15.60	30.50	54.00	48.20	34.80	16.90	12.00	18.40	39.90	41.50	56.20	32.41
1984	44.00	50.60	33.60	49.40	60.50	47.90	42.10	44.40	64.40	81.90	56.80	62.20	53.15
1985	59.10	24.20	28.40	30.80	34.40	33.60	16.70	37.20	37.70	55.50	56.70	42.30	38.05
1986	53.70	49.00	27.90	56.10	55.80	38.10	23.40	14.30	22.40	68.70	64.00	27.10	41.71
1987	31.40	28.00	17.70	27.70	51.90	32.00	23.10	32.70	33.50	68.90	50.50	40.70	36.51
1988	27.60	33.80	20.00	53.80	44.90	48.60	49.20	42.90	49.20	68.00	99.10	57.90	49.58
1989	57.30	44.70	34.60	24.10	50.70	44.50	28.30	29.20	47.30	68.00	62.40	51.50	45.22
1990	46.40	43.20	40.40	48.70	38.80	29.00	25.80	18.80	31.30	46.20	62.00	40.30	39.24
1991	29.60	23.10	30.40	36.30	58.30	54.40	24.20	17.90	27.40	36.40	45.30	46.90	35.85
1992	29.60	27.50	24.00	24.40	30.80	24.10	15.70	16.52	28.80	36.80	45.60	54.90	29.89
1993	47.30	36.80	31.20	50.80	59.70	32.00	23.80	15.50	34.35	62.30	74.80	59.00	43.96
1994	52.02	43.87	57.23	74.12	60.37	50.91	29.67	29.59	30.37	57.96	62.07	52.46	50.05
1995	25.30	17.80	26.50	53.90	61.40	62.50	46.40	37.70	39.40	65.90	58.40	64.40	46.63
1996	35.50	41.00	52.80	48.66	69.13	56.27	46.94	46.74	50.26	65.38	67.61	47.32	52.30
1997	69.54	38.14	39.12	47.82	37.12	45.27	15.84	10.18	20.93	26.69	60.19	22.89	36.14
1998	16.70	27.70	30.00	63.51	48.98	39.70	33.90	33.30	46.80	43.90	71.91	49.60	42.17
1999	60.63	77.54	51.57	57.50	48.47	53.09	32.53	37.85	52.09	64.57	72.23	65.80	56.16
2000	51.71	48.83	44.35	50.16	53.87	56.60	39.47	33.35	44.64	61.55	59.21	39.82	48.63
Media	41.76	38.18	35.96	49.75	54.58	44.37	30.18	29.12	38.07	58.13	60.69	50.68	44.00
Max	69.54	77.54	57.23	80.20	78.00	62.50	49.20	56.60	64.40	81.90	99.10	73.80	56.16
Min	16.70	15.60	17.70	24.10	30.80	24.10	15.70	10.18	18.40	26.69	41.50	22.89	29.89

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Prado.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1955	41.20	68.10	74.60	73.40	36.00	47.10	39.30	22.40	23.60	87.60	76.10	114.60	58.67
1956	62.50	77.00	56.30	72.70	55.90	57.40	24.30	9.40	40.30	107.10	79.40	89.90	61.02
1957	25.70	37.50	62.20	70.00	83.60	41.80	10.40	15.00	14.70	77.60	87.30	32.60	48.53
1958	15.90	19.70	30.10	44.90	40.70	14.40	17.50	9.60	7.20	37.80	55.40	72.40	30.47
1959	49.10	53.30	18.10	32.40	63.70	43.00	22.80	19.90	10.80	64.00	97.20	62.50	44.73
1960	69.20	68.50	40.00	48.20	57.20	37.20	30.70	15.60	14.50	71.50	95.60	135.00	56.93
1961	31.40	33.40	30.90	104.00	33.60	38.70	24.10	8.20	9.00	32.40	80.60	30.00	38.03
1962	25.00	24.60	55.70	54.30	88.70	66.20	18.30	17.40	7.80	70.70	97.40	47.60	47.81
1963	37.70	72.00	41.80	100.00	115.00	28.10	17.90	13.30	7.10	43.60	130.00	36.10	53.55
1964	14.40	14.60	7.40	51.70	37.70	57.30	32.00	21.90	17.00	24.80	49.20	38.40	30.53
1965	22.00	5.90	13.50	104.00	58.50	15.40	4.70	3.00	8.60	41.40	216.00	102.50	49.63
1966	34.60	14.20	43.00	44.40	51.70	47.40	22.80	16.90	11.60	71.60	156.00	116.40	52.55
1967	34.10	44.90	54.80	80.60	74.80	45.90	23.90	13.50	10.60	48.40	100.00	52.00	48.63
1968	40.10	64.90	50.10	151.00	77.40	61.30	26.80	11.60	20.80	146.10	111.30	51.60	67.75
1969	23.80	23.50	18.70	87.40	92.10	37.00	12.40	10.90	18.00	142.70	107.70	53.80	52.42
1970	23.20	34.60	19.40	41.00	77.10	26.90	16.90	12.10	20.00	70.60	126.00	79.60	45.62
1971	123.50	81.00	134.00	127.00	138.70	32.00	17.80	29.30	25.60	52.40	64.00	47.30	72.72
1972	101.80	30.70	82.80	53.00	75.80	50.20	87.10	44.50	45.10	34.30	78.00	51.90	61.27
1973	17.20	17.80	22.00	22.30	34.20	36.20	31.50	33.60	33.20	31.30	94.20	137.70	42.60
1974	59.00	216.70	116.70	101.00	102.00	63.40	85.40	67.80	62.60	56.30	54.70	49.40	86.25
1975	57.30	66.80	66.20	66.90	71.70	59.10	61.70	70.50	72.40	69.10	63.90	116.10	70.14
1976	78.60	79.10	76.60	81.30	120.60	75.90	82.50	54.90	22.40	18.70	34.50	27.90	62.75
1977	39.30	27.40	27.70	54.50	41.40	29.00	20.40	12.20	15.10	36.30	62.30	42.70	34.03
1978	36.10	34.90	45.00	76.90	51.50	64.90	43.80	43.10	45.00	52.10	38.30	26.90	46.54
1979	47.50	58.00	59.40	82.80	36.10	39.30	45.40	45.70	49.30	52.00	90.50	83.90	57.49
1980	52.40	62.50	80.30	50.20	45.20	37.10	25.40	17.00	20.10	27.70	37.50	43.20	41.55
1981	37.00	37.50	55.80	49.20	56.90	103.00	70.50	46.30	45.20	50.30	45.80	46.00	53.63
1982	84.30	94.00	94.00	139.00	119.90	97.60	64.90	44.20	36.80	24.90	60.40	50.40	75.87
1983	80.90	60.30	49.90	49.60	65.90	51.40	38.70	31.00	19.10	19.60	21.80	27.60	42.98
1984	57.20	64.90	68.60	74.90	47.60	52.80	47.10	58.30	54.50	50.90	82.40	58.60	59.82
1985	68.60	53.80	44.80	33.60	40.60	42.30	30.90	334.90	51.20	69.60	61.00	60.00	74.28
1986	54.00	61.10	89.70	117.30	94.30	74.00	61.40	52.70	33.50	59.00	73.40	57.40	68.98
1987	45.40	52.30	52.80	41.20	51.00	33.60	25.40	26.40	19.50	19.70	28.00	68.20	38.63
1988	80.61	54.48	53.84	41.23	38.03	38.73	40.26	43.90	46.37	43.71	66.48	169.28	59.74
1989	57.35	96.71	161.11	76.92	66.81	56.75	56.30	54.99	41.09	60.69	54.37	61.11	70.35
1990	57.31	58.11	65.32	70.13	78.76	57.63	51.66	36.81	19.89	24.79	41.14	63.68	52.10
1991	43.25	41.93	56.64	85.09	65.37	47.12	31.53	23.76	22.16	36.74	37.33	60.85	45.98
1992	45.20	41.00	5.00	28.50	43.00	14.70	7.80	7.10	8.70	9.30	77.50	86.30	31.18
1993	37.42	66.28	65.82	78.47	94.31	25.56	11.00	7.57	17.75	27.15	115.97	72.50	51.65
1994	55.45	49.10	79.74	103.20	80.24	37.96	13.22	9.29	18.51	90.45	123.80	37.30	58.19
1995	10.45	20.23	61.65	93.96	71.70	37.34	22.86	40.38	12.65	79.98	89.99	53.44	49.55
1996	62.05	61.41	102.06	65.65	97.93	60.61	26.85	78.10	20.68	69.11	59.80	53.67	63.16
1997	88.63	54.50	45.41	45.25	29.61	31.47	12.31	4.86	10.47	16.39	33.90	16.03	32.40
1998	6.98	13.65	22.66	74.27	65.45	30.13	22.60	16.76	21.53	48.71	112.36	101.42	44.71
1999	76.01	120.05	80.19	88.43	60.22	53.87	30.90	10.34	29.55	89.01	108.59	99.56	70.56
2000	48.10	70.66	95.99	62.64	64.04	47.55	25.22	15.64	27.89	42.37	68.44	29.52	49.84
Media	49.10	54.43	58.22	71.62	67.23	46.66	33.42	34.40	25.88	54.36	79.25	65.54	53.34
Max	123.50	216.70	161.11	151.00	138.70	103.00	87.10	334.90	72.40	146.10	216.00	169.28	86.25
Min	6.98	5.90	5.00	22.30	29.61	14.40	4.70	3.00	7.10	9.30	21.80	16.03	30.47

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie URRÁ.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1960	312.00	212.00	168.00	345.00	511.00	507.00	526.00	485.00	508.00	552.00	367.00	334.00	402.25
1961	255.00	139.00	129.00	209.00	400.00	542.00	634.00	558.00	487.00	480.00	459.00	393.00	390.42
1962	243.00	172.00	188.00	258.00	606.00	567.00	626.00	625.00	570.00	549.00	491.00	360.00	437.92
1963	430.00	257.00	216.00	401.00	631.00	823.00	650.00	404.00	368.00	260.00	264.00	225.00	410.75
1964	128.00	116.00	135.00	213.00	194.00	363.00	394.00	390.00	286.00	350.00	313.00	188.00	255.83
1965	178.00	143.00	128.00	161.00	233.00	212.00	175.00	250.00	365.00	375.00	290.00	205.00	226.25
1966	295.00	141.00	76.00	157.00	402.00	512.00	597.00	547.00	554.00	525.00	419.00	346.00	380.92
1967	108.00	109.00	79.00	137.00	341.00	586.00	639.00	558.00	426.00	364.00	335.00	341.00	335.25
1968	237.00	140.00	149.00	201.00	458.00	552.00	635.00	546.00	493.00	610.00	433.00	219.00	389.42
1969	138.00	115.00	134.00	162.00	251.00	499.00	454.00	537.00	468.00	379.00	337.00	351.00	318.75
1970	301.00	197.00	105.00	330.00	562.00	632.00	527.00	495.00	556.00	520.00	454.00	502.00	431.75
1971	385.00	207.00	363.00	262.00	508.00	489.00	599.00	508.00	483.00	524.00	453.00	203.00	415.33
1972	234.00	119.00	99.00	211.00	538.00	497.00	372.00	421.00	493.00	494.00	384.00	223.00	340.42
1973	103.00	59.00	116.00	91.00	229.00	367.00	513.00	453.00	432.00	450.00	670.00	327.00	317.50
1974	241.00	116.00	109.00	257.00	523.00	487.00	369.00	427.00	454.00	587.00	568.00	186.00	360.33
1975	85.00	65.00	69.00	68.00	236.00	396.00	618.00	623.00	533.00	622.00	602.00	446.00	363.58
1976	142.00	127.00	96.00	150.00	335.00	585.00	493.00	348.00	350.00	451.00	399.00	149.00	302.08
1977	96.00	66.00	82.00	144.00	391.00	520.00	494.00	519.00	390.00	542.00	483.00	298.00	335.42
1978	109.00	116.00	149.00	387.00	518.00	633.00	393.00	478.00	397.00	530.00	461.00	301.00	372.67
1979	101.00	73.00	76.00	160.00	373.00	516.00	439.00	421.00	485.00	459.00	358.00	266.00	310.58
1980	164.00	138.00	63.00	80.00	258.00	347.00	439.00	418.00	354.00	561.00	373.00	348.00	295.25
1981	202.00	253.00	405.00	375.00	557.00	665.00	486.00	450.00	518.00	448.00	428.00	290.00	423.08
1982	166.00	226.00	115.00	266.00	520.00	422.00	509.00	392.00	468.00	449.00	334.00	156.00	335.25
1983	123.00	74.00	97.00	230.00	388.00	495.00	433.00	419.00	460.00	483.00	456.00	310.00	330.67
1984	205.00	169.00	142.00	126.00	295.00	403.00	534.00	537.00	488.00	502.00	488.00	285.00	347.83
1985	106.00	80.00	80.00	115.00	184.00	388.00	376.00	445.00	472.00	523.00	402.00	238.00	284.08
1986	136.00	146.00	89.00	491.00	381.00	455.00	520.00	225.00	296.00	379.00	328.00	201.00	303.92
1987	114.00	142.00	71.00	412.00	562.00	310.00	577.00	593.00	379.00	583.00	401.00	314.00	371.50
1988	107.00	78.00	53.00	239.00	366.00	380.00	613.00	812.00	390.00	605.00	429.00	295.00	363.92
1989	229.00	120.00	174.00	162.00	436.00	493.00	497.00	449.00	397.00	371.00	322.00	252.00	325.17
1990	146.00	93.00	99.00	171.00	538.00	377.00	381.00	424.00	322.00	388.00	481.00	239.00	304.92
1991	103.00	92.00	112.00	100.00	305.00	472.00	396.00	365.00	390.00	466.00	335.00	224.00	280.00
1992	105.00	57.00	56.00	87.00	329.00	302.00	369.00	411.00	414.00	412.00	334.00	287.00	263.58
1993	161.00	116.00	121.00	270.00	516.00	417.00	470.00	282.00	330.00	364.00	404.00	334.00	315.42
1994	123.00	71.00	92.00	224.00	472.00	331.00	404.00	435.00	431.00	382.00	487.00	246.00	308.17
1995	98.00	59.00	57.00	167.00	366.00	516.00	546.00	410.00	432.00	440.00	362.00	367.00	318.33
1996	258.00	196.00	319.00	288.00	516.00	533.00	637.00	438.00	492.00	410.00	323.00	191.00	383.42
1997	113.00	215.00	105.00	151.00	320.00	389.00	400.00	337.00	300.00	368.00	355.00	192.00	270.42
1998	78.00	132.00	85.00	170.00	348.00	508.00	585.00	425.00	392.00	412.00	442.00	349.00	327.17
1999	185.00	267.00	237.00	469.00	516.00	472.00	488.00	547.00	505.00	530.00	352.00	389.00	413.08
2000	166.00	209.00	204.00	241.00	484.00	502.00	539.00	460.00	475.00	450.00	319.00	343.00	366.00
Media	175.83	137.12	132.73	222.88	412.12	474.68	496.24	460.17	434.22	467.05	407.20	285.68	342.16
Max	430.00	267.00	405.00	491.00	631.00	823.00	650.00	812.00	570.00	622.00	670.00	502.00	437.92
Min	78.00	57.00	53.00	68.00	184.00	212.00	175.00	225.00	286.00	260.00	264.00	149.00	226.25

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Río Mayo.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	Año
1979													
1980	16.43	16.14	18.08	21.77	13.90	16.09	15.73	10.42	10.46	11.01	10.40	9.68	14.18
1981	9.85	9.33	10.29	11.78	15.00	12.40	15.60	10.04	9.17	7.95	17.62	14.85	11.99
1982	18.09	14.54	15.65	20.09	13.13	14.06	24.69	14.91	9.20	7.57	9.10	11.57	14.38
1983	9.90	12.18	14.00	16.78	18.35	11.31	13.10	13.96	9.27	9.64	7.94	13.37	12.48
1984	12.79	14.95	9.71	13.68	13.99	13.03	14.20	10.41	10.19	16.36	15.91	10.86	13.01
1985	15.83	11.57	7.23	8.13	12.25	15.92	19.77	11.47	7.91	6.01	8.96	11.13	11.35
1986	9.76	12.04	17.38	11.88	9.16	19.02	20.42	9.05	7.53	7.95	10.47	11.75	12.20
1987	7.52	8.96	7.55	12.33	15.47	13.65	14.17	13.75	8.29	9.80	9.55	10.69	10.98
1988	8.52	8.98	9.22	9.08	10.84	12.14	18.36	7.60	5.60	6.44	21.22	17.09	11.26
1989	14.74	14.83	14.05	11.14	19.05	18.53	17.23	9.51	5.70	6.84	8.21	7.71	12.29
1990	13.28	13.81	15.25	12.26	18.48	18.89	15.91	15.26	5.55	4.04	4.91	9.79	12.29
1991	9.10	8.27	11.49	12.94	12.43	13.88	19.11	18.46	10.41	9.00	12.88	13.23	12.60
1992	10.35	10.26	9.85	13.54	9.56	15.24	26.36	16.73	9.85	7.30	8.44	13.27	12.56
1993	11.95	11.88	17.78	16.75	13.70	20.25	17.45	15.52	9.34	8.06	12.92	16.16	14.31
1994	16.91	14.75	12.64	21.21	16.63	19.82	20.83	19.41	11.70	9.04	18.84	15.87	16.47
1995	11.15	6.88	9.06	12.03	12.97	11.89	12.48	6.38	7.16	7.00	10.63	10.59	9.85
1996	14.39	17.94	17.89	15.42	14.21	16.63	25.85	11.01	8.28	8.70	10.40	12.73	14.45
1997	32.27	19.50	13.72	9.91	19.95	12.01	26.75	14.20	6.59	6.29	9.09	8.53	14.90
1998	5.67	6.06	6.71	9.52	15.01	25.25	17.16	11.83	7.09	7.89	19.34	13.32	12.07
1999			26.10	30.00	13.90	11.40	15.60	13.00	8.70	9.70	22.90	46.30	
2000	26.40	20.90	21.10	18.50	23.60	16.80	17.60	21.50	10.60	13.50	13.30	11.60	17.95
Media	13.74	12.69	13.56	14.70	14.84	15.63	18.49	13.07	8.50	8.58	12.52	13.81	13.08
Max	32.27	20.90	26.10	30.00	23.60	25.25	26.75	21.50	11.70	16.36	22.90	46.30	17.95
Min	5.67	6.06	6.71	8.13	9.16	11.31	12.48	6.38	5.55	4.04	4.91	7.71	9.85

Consejo Nacional de Operación CNO

Caudal medio mensual, m³/seg. Serie Florida II.

Año	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	díc	año
1976	11.40	11.32	11.81	15.08	15.60	16.94	19.92	15.71	14.20	12.44	12.36	9.62	13.87
1977	6.72	7.51	7.88	9.67	11.08	13.33	15.16	12.03	13.55	11.14	11.31	8.47	10.65
1978	8.61	6.24	6.67	10.47	9.44	12.66	11.80	13.20	9.72	9.12	8.14	10.18	9.69
1979	6.74	5.37	8.96	11.60	11.09	14.89	13.56	12.36	10.19	10.72	13.32	12.43	10.94
1980	7.67	5.72	7.87	12.12	12.51	13.62	14.03	11.19	10.73	11.45	8.78	7.05	10.23
1981	6.08	6.18	6.23	9.35	11.98	10.70	13.73	9.33	9.11	8.21	11.88	9.78	9.38
1982	12.27	8.49	11.40	13.16	12.00	12.02	16.47	18.79	12.87	10.28	10.29	11.84	12.49
1983	9.43	10.08	10.77	13.82	12.46	9.99	13.51	16.52	12.04	13.43	10.87	16.85	12.48
1984	15.12	11.45	8.51	11.86	15.25	15.90	15.71	13.69	10.23	15.84	16.04	9.50	13.26
1985	10.35	8.00	7.27	8.01	12.27	15.81	14.93	15.61	10.75	12.09	13.15	11.16	11.62
1986	9.86	10.73	12.54	11.10	10.01	15.96	17.40	13.15	12.07	12.86	12.06	10.32	12.34
1987	6.43	8.08	6.84	10.74	13.49	13.09	15.54	15.51	9.04	11.53	8.64	9.62	10.71
1988	6.25	5.83	5.81	8.35	9.67	12.41	18.41	11.28	9.61	10.15	15.69	13.99	10.62
1989	10.93	11.08	13.01	9.58	11.83	12.85	14.11	12.81	10.13	11.75	10.46	9.00	11.46
1990	8.91	9.68	10.96	9.51	13.89	14.13	14.48	15.30	9.89	9.61	10.00	9.66	11.34
1991	7.61	7.56	8.48	9.52	9.81	11.10	18.32	18.50	12.57	9.12	11.73	10.81	11.26
1992	8.20	7.95	7.56	11.64	9.05	11.63	18.05	15.14	8.87	7.02	7.53	9.85	10.21
1993	8.07	8.21	10.84	10.19	12.64	15.13	13.90	12.50	10.50	9.17	12.57	12.07	11.32
1994	9.95	10.31	9.66	12.62	14.55	18.27	13.90	18.02	13.78	12.27	13.41	13.61	13.36
1995	8.24	6.53	8.49	10.34	12.29	11.58	10.29	7.74	8.47	8.98	8.26	7.72	9.08
1996	10.32	13.65	13.33	11.63	12.10	13.66	16.55	13.35	9.73	12.72	8.87	8.93	12.07
1997	15.61	13.55	9.79	8.61	15.67	11.21	21.06	14.18	7.73	7.87	8.46	7.42	11.76
1998	4.99	6.51	5.82	8.79	10.33	18.57	17.96	13.51	9.44	10.46	13.37	10.94	10.89
1999	14.35	17.88	14.68	17.28	12.99	12.09	13.13	12.04	7.74	8.67	14.88	18.65	13.70
2000	14.39	10.43	14.02	12.14	14.77	14.05	12.68	16.66	12.69	11.67	8.89	7.77	12.51
Media	9.54	9.13	9.57	11.09	12.27	13.66	15.38	13.92	10.63	10.74	11.24	10.69	11.49
Max	15.61	17.88	14.68	17.28	15.67	18.57	21.06	18.79	14.20	15.84	16.04	18.65	13.87
Min	4.99	5.37	5.81	8.01	9.05	9.99	10.29	7.74	7.73	7.02	7.53	7.05	9.08

Consejo Nacional de Operación

CNO

ANEXO 2

Consejo Nacional de Operación CNO

FACTORES DE SERIE MENOR, SISTEMA HIDROELECTRICO EPPM

serie menor	serie principal	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic
Nechi	Concepción	0.53	0.54	0.57	0.61	0.67	0.51	0.50	0.44	0.43	0.52	0.50	0.54
Pajarito	Concepción	0.38	0.34	0.39	0.39	0.45	0.36	0.35	0.38	0.40	0.44	0.41	0.39
Dolores	Concepción	0.65	0.58	0.59	0.56	0.56	0.58	0.59	0.56	0.59	0.56	0.59	0.59
Quebradona	Río Grande	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143

FACTORES DE SERIE MENOR, SISTEMA HIDROELECTRICO CHIVOR

serie menor	serie principal	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic
Rucio	Batá	0.063	0.073	0.082	0.071	0.054	0.046	0.041	0.040	0.042	0.039	0.036	0.047
Negro	Batá	0.110	0.131	0.139	0.129	0.104	0.093	0.084	0.074	0.078	0.072	0.068	0.082
Tunjita	Batá	0.183	0.252	0.280	0.303	0.261	0.204	0.185	0.198	0.214	0.210	0.224	0.184

FACTORES DE SERIE MENOR, SISTEMA HIDROELECTRICO ISAGEN

serie menor	serie principal	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic
Tafetanes	Calderas	0.356	0.356	0.356	0.356	0.356	0.356	0.356	0.356	0.356	0.356	0.356	0.356
Calderas	San Carlos	0.30	0.35	0.36	0.30	0.28	0.33	0.31	0.30	0.29	0.27	0.27	0.29

FACTORES DE SERIE MENOR, SISTEMA HIDROELECTRICO EMGESA

serie menor	serie principal	ene	feb	mar	abr	may	jun	jul	ago	sep	oct	nov	dic
Sisga	Bogotá N.R.	0.05	0.05	0.05	0.06	0.08	0.13	0.16	0.15	0.12	0.07	0.04	0.04
Tominé	Bogotá N.R.	0.09	0.09	0.14	0.14	0.13	0.18	0.21	0.18	0.16	0.13	0.10	0.07
Neusa	Bogotá N.R.	0.13	0.12	0.11	0.08	0.06	0.05	0.04	0.04	0.08	0.08	0.07	0.07
FaguaBaraya (Saucio)	Bogotá N.R.	0.05	0.06	0.06	0.08	0.08	0.11	0.15	0.17	0.13	0.09	0.08	0.07
Chequa	Bogotá N.R.	0.09	0.11	0.09	0.10	0.09	0.07	0.04	0.04	0.10	0.11	0.11	0.08
Teusacá	Bogotá N.R.	0.14	0.12	0.10	0.09	0.08	0.10	0.12	0.12	0.11	0.10	0.10	0.10
FaguaAlicachín	Bogotá N.R.	0.45	0.46	0.46	0.45	0.49	0.38	0.30	0.29	0.31	0.41	0.50	0.56
Total		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00