



**SUBDIRECCIÓN GENERAL TÉCNICA  
GERENCIA AGUAS SUPERFICIALES E INGENIERÍA DE RÍOS**

***ESTUDIO HIDROLÓGICO COMPLEMENTARIO SOBRE EL APROVECHAMIENTO Y  
CRECIENTES PARA EL DISEÑO DE LA PRESA DE ALMACENAMIENTO EL ZAPOTILLO,  
RÍO VERDE, JALISCO***

## **Anexo A**

**Escorrentamiento anual actual (Caso 0) y futuro  
(Casos 1, 2 y 3)**

AÑO	SUBCUENCA												TOTAL	Incremento
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12		
1945	5.35	0.93	30.51	8.71	20.82	5.52	0.63	12.55	3.52	1.49	0.70	4.15	94.9	2.00
1946	5.45	0.95	31.12	8.89	21.23	5.63	0.64	12.81	3.59	1.52	0.71	4.23	96.8	2.00
1947	5.56	0.97	31.74	9.07	21.66	5.74	0.66	13.06	3.66	1.55	0.72	4.32	98.7	2.00
1948	5.67	0.98	32.38	9.25	22.09	5.86	0.67	13.32	3.74	1.58	0.74	4.40	100.7	2.00
1949	5.79	1.00	33.02	9.43	22.53	5.98	0.68	13.59	3.81	1.61	0.75	4.49	102.7	2.00
1950	5.90	1.02	33.68	9.62	22.98	6.10	0.70	13.86	3.89	1.64	0.77	4.58	104.7	2.00
1951	6.02	1.04	34.36	9.81	23.44	6.22	0.71	14.14	3.96	1.68	0.78	4.67	106.8	2.00
1952	6.14	1.07	35.05	10.01	23.91	6.34	0.72	14.42	4.04	1.71	0.80	4.77	109.0	2.00
1953	6.26	1.09	35.75	10.21	24.39	6.47	0.74	14.71	4.12	1.74	0.82	4.86	111.2	2.00
1954	6.39	1.11	36.46	10.41	24.88	6.60	0.75	15.00	4.21	1.78	0.83	4.96	113.4	2.00
1955	6.52	1.13	37.19	10.62	25.38	6.73	0.77	15.30	4.29	1.81	0.85	5.06	115.6	2.00
1956	6.65	1.15	37.93	10.83	25.88	6.86	0.78	15.61	4.38	1.85	0.87	5.16	118.0	2.00
1957	6.78	1.18	38.69	11.05	26.40	7.00	0.80	15.92	4.46	1.89	0.88	5.26	120.3	2.00
1958	6.92	1.20	39.47	11.27	26.93	7.14	0.82	16.24	4.55	1.92	0.90	5.37	122.7	2.00
1959	7.05	1.22	40.26	11.50	27.47	7.28	0.83	16.57	4.64	1.96	0.92	5.47	125.2	2.00
1960	7.20	1.25	41.06	11.73	28.02	7.43	0.85	16.90	4.74	2.00	0.94	5.58	127.7	2.00
1961	7.34	1.27	41.88	11.96	28.58	7.58	0.87	17.23	4.83	2.04	0.96	5.70	130.2	2.00
1962	7.49	1.30	42.72	12.20	29.15	7.73	0.88	17.58	4.93	2.08	0.98	5.81	132.8	2.00
1963	7.64	1.33	43.57	12.45	29.73	7.89	0.90	17.93	5.03	2.13	1.00	5.93	135.5	2.00
1964	7.79	1.35	44.45	12.69	30.33	8.04	0.92	18.29	5.13	2.17	1.01	6.04	138.2	2.00
1965	7.94	1.38	45.33	12.95	30.93	8.20	0.94	18.66	5.23	2.21	1.04	6.16	141.0	2.00
1966	8.10	1.41	46.24	13.21	31.55	8.37	0.96	19.03	5.34	2.26	1.06	6.29	143.8	2.00
1967	8.26	1.43	47.17	13.47	32.18	8.54	0.97	19.41	5.44	2.30	1.08	6.41	146.7	2.00
1968	8.43	1.46	48.11	13.74	32.83	8.71	0.99	19.80	5.55	2.35	1.10	6.54	149.6	2.00
1969	8.60	1.49	49.07	14.02	33.48	8.88	1.01	20.19	5.66	2.39	1.12	6.67	152.6	2.00
1970	8.77	1.52	50.05	14.30	34.15	9.06	1.03	20.60	5.77	2.44	1.14	6.81	155.6	2.00
1971	8.95	1.55	51.05	14.58	34.84	9.24	1.05	21.01	5.89	2.49	1.17	6.94	158.8	2.00
1972	9.13	1.58	52.08	14.87	35.53	9.42	1.08	21.43	6.01	2.54	1.19	7.08	161.9	2.00
1973	9.31	1.62	53.12	15.17	36.24	9.61	1.10	21.86	6.13	2.59	1.21	7.22	165.2	2.00
1974	9.49	1.65	54.18	15.47	36.97	9.80	1.12	22.29	6.25	2.64	1.24	7.37	168.5	2.00
1975	9.68	1.68	55.26	15.78	37.71	10.00	1.14	22.74	6.38	2.70	1.26	7.51	171.8	2.00
1976	9.88	1.71	56.37	16.10	38.46	10.20	1.16	23.20	6.50	2.75	1.29	7.67	175.3	2.00
1977	10.07	1.75	57.50	16.42	39.23	10.40	1.19	23.66	6.63	2.80	1.31	7.82	178.8	2.00
1978	10.28	1.78	58.65	16.75	40.01	10.61	1.21	24.13	6.77	2.86	1.34	7.97	182.4	2.00
1979	10.48	1.82	59.82	17.09	40.82	10.83	1.24	24.62	6.90	2.92	1.37	8.13	186.0	2.00
1980	10.69	1.86	61.01	17.43	41.63	11.04	1.26	25.11	7.04	2.98	1.39	8.30	189.7	2.00
1981	10.91	1.89	62.23	17.78	42.46	11.26	1.29	25.61	7.18	3.04	1.42	8.46	193.5	2.00

Tabla A.1 Usos anuales históricos del agua (Mm<sup>3</sup>) por subcuenca

AÑO	SUBCUENCA												TOTAL	Incremento
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12		
1982	11.12	1.93	63.48	18.13	43.31	11.49	1.31	26.12	7.32	3.10	1.45	8.63	197.4	2.00
1983	11.35	1.97	64.75	18.49	44.18	11.72	1.34	26.64	7.47	3.16	1.48	8.80	201.3	2.00
1984	11.57	2.01	66.04	18.86	45.06	11.95	1.36	27.18	7.62	3.22	1.51	8.98	205.4	2.00
1985	11.80	2.05	67.37	19.24	45.96	12.19	1.39	27.72	7.77	3.29	1.54	9.16	209.5	2.00
1986	12.04	2.09	68.71	19.63	46.88	12.43	1.42	28.28	7.93	3.35	1.57	9.34	213.7	2.00
1987	12.28	2.13	70.09	20.02	47.82	12.68	1.45	28.84	8.09	3.42	1.60	9.53	217.9	2.00
1988	12.53	2.17	71.49	20.42	48.78	12.94	1.48	29.42	8.25	3.49	1.63	9.72	222.3	2.00
1989	12.78	2.22	72.92	20.83	49.75	13.20	1.51	30.01	8.41	3.56	1.67	9.92	226.8	2.00
1990	13.03	2.26	74.38	21.24	50.75	13.46	1.54	30.61	8.58	3.63	1.70	10.11	231.3	2.00
1991	13.29	2.31	75.86	21.67	51.76	13.73	1.57	31.22	8.75	3.70	1.73	10.32	235.9	2.00
1992	13.56	2.35	77.38	22.10	52.80	14.00	1.60	31.84	8.93	3.77	1.77	10.52	240.6	2.00
1993	13.83	2.40	78.93	22.54	53.85	14.28	1.63	32.48	9.11	3.85	1.80	10.73	245.4	2.00
1994	14.11	2.45	80.51	22.99	54.93	14.57	1.66	33.13	9.29	3.93	1.84	10.95	250.4	1.03
1995	14.24	2.50	81.19	23.20	55.42	14.70	1.68	33.43	9.37	3.97	1.86	11.05	252.6	1.02
1996	14.37	2.55	81.86	23.40	55.92	14.83	1.70	33.72	9.46	4.00	1.88	11.16	254.8	1.01
1997	14.51	2.60	82.54	23.61	56.41	14.96	1.71	34.02	9.54	4.04	1.89	11.27	257.1	1.00
1998	14.64	2.65	83.22	23.81	56.90	15.08	1.73	34.32	9.63	4.08	1.91	11.37	259.4	0.99
1999	14.77	2.71	83.90	24.01	57.39	15.21	1.75	34.62	9.71	4.12	1.93	11.48	261.6	0.98
2000	14.91	2.76	84.57	24.22	57.89	15.34	1.76	34.91	9.80	4.16	1.95	11.58	263.9	0.97
2001	15.04	2.81	85.25	24.42	58.38	15.47	1.78	35.21	9.89	4.20	1.97	11.69	266.1	1.00
2002	15.18	2.87	85.95	24.63	58.89	15.60	1.80	35.52	9.98	4.24	1.99	11.80	268.5	1.00
2003	15.32	2.92	86.66	24.84	59.40	15.74	1.81	35.83	10.07	4.28	2.01	11.91	270.9	1.00
2004	15.46	2.98	87.37	25.06	59.92	15.87	1.83	36.14	10.16	4.32	2.03	12.02	273.2	

Tabla A.1 Usos anuales históricos del agua (Mm<sup>3</sup>) por subcuenca. Continuación

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Suma
1945	0.02	0.01	0.01	0.01	0.01	0.14	0.03	0.33	0.40	0.02	0.01	0.01	1.0
1946	0.02	0.01	0.01	0.01	0.01	0.14	0.03	0.33	0.40	0.02	0.01	0.01	1.0
1947	0.02	0.01	0.01	0.01	0.01	0.14	0.03	0.33	0.40	0.02	0.01	0.01	1.0
1948	0.01	0.01	0.00	0.00	0.01	0.16	0.45	0.21	0.11	0.02	0.01	0.01	1.0
1949	0.01	0.01	0.01	0.01	0.01	0.15	0.47	0.21	0.07	0.03	0.01	0.01	1.0
1950	0.01	0.01	0.01	0.01	0.01	0.17	0.44	0.13	0.17	0.03	0.01	0.01	1.0
1951	0.01	0.01	0.01	0.01	0.01	0.16	0.42	0.18	0.15	0.02	0.02	0.01	1.0
1952	0.01	0.01	0.01	0.01	0.00	0.13	0.25	0.29	0.18	0.09	0.02	0.01	1.0
1953	0.01	0.01	0.01	0.00	0.00	0.08	0.15	0.34	0.31	0.03	0.03	0.02	1.0
1954	0.02	0.01	0.01	0.01	0.01	0.17	0.29	0.26	0.07	0.10	0.03	0.02	1.0
1955	0.00	0.00	0.00	0.00	0.00	0.01	0.15	0.46	0.21	0.13	0.01	0.01	1.0
1956	0.01	0.01	0.01	0.01	0.04	0.12	0.40	0.29	0.09	0.01	0.01	0.01	1.0
1957	0.03	0.02	0.02	0.02	0.01	0.07	0.11	0.17	0.35	0.12	0.04	0.03	1.0
1958	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.13	0.23	0.15	0.17	0.01	1.0
1959	0.03	0.01	0.01	0.01	0.01	0.09	0.23	0.36	0.13	0.07	0.03	0.01	1.0
1960	0.02	0.01	0.01	0.01	0.01	0.01	0.18	0.47	0.23	0.02	0.01	0.01	1.0
1961	0.01	0.01	0.01	0.01	0.01	0.08	0.60	0.15	0.07	0.02	0.02	0.01	1.0
1962	0.01	0.01	0.01	0.01	0.00	0.12	0.29	0.07	0.31	0.13	0.02	0.02	1.0
1963	0.01	0.00	0.00	0.00	0.00	0.07	0.45	0.30	0.12	0.02	0.01	0.01	1.0
1964	0.02	0.01	0.01	0.00	0.01	0.08	0.17	0.22	0.34	0.11	0.02	0.01	1.0
1965	0.01	0.00	0.00	0.00	0.00	0.01	0.05	0.50	0.23	0.17	0.01	0.01	1.0
1966	0.01	0.01	0.01	0.01	0.01	0.07	0.11	0.41	0.25	0.08	0.01	0.01	1.0
1967	0.01	0.00	0.00	0.00	0.00	0.03	0.07	0.24	0.54	0.08	0.01	0.01	1.0
1968	0.02	0.01	0.03	0.01	0.01	0.02	0.30	0.22	0.33	0.03	0.01	0.01	1.0
1969	0.04	0.03	0.02	0.01	0.01	0.03	0.35	0.13	0.27	0.07	0.02	0.02	1.0
1970	0.01	0.01	0.00	0.00	0.00	0.11	0.19	0.17	0.36	0.11	0.01	0.01	1.0
1971	0.01	0.00	0.00	0.00	0.00	0.08	0.11	0.39	0.27	0.11	0.01	0.01	1.0
1972	0.03	0.02	0.02	0.01	0.02	0.15	0.21	0.26	0.20	0.04	0.02	0.02	1.0
1973	0.00	0.00	0.00	0.00	0.00	0.01	0.26	0.60	0.08	0.03	0.01	0.00	1.0
1974	0.02	0.02	0.02	0.01	0.01	0.01	0.32	0.32	0.21	0.03	0.02	0.02	1.0
1975	0.01	0.01	0.01	0.00	0.00	0.04	0.30	0.51	0.10	0.01	0.01	0.01	1.0
1976	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.09	0.07	0.18	0.03	0.01	1.0
1977	0.01	0.01	0.01	0.01	0.00	0.11	0.18	0.11	0.52	0.02	0.01	0.01	1.0
1978	0.01	0.01	0.01	0.01	0.00	0.03	0.08	0.17	0.32	0.33	0.02	0.02	1.0

Tabla A.2 Factores mensuales de distribución del escurrimiento en la Cuña

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Suma
1979	0.03	0.02	0.02	0.01	0.01	0.02	0.08	0.45	0.29	0.02	0.02	0.03	1.0
1980	0.02	0.02	0.01	0.01	0.01	0.01	0.15	0.48	0.21	0.03	0.03	0.02	1.0
1981	0.02	0.02	0.01	0.01	0.00	0.12	0.32	0.21	0.22	0.04	0.02	0.02	1.0
1982	0.03	0.03	0.02	0.01	0.01	0.01	0.41	0.24	0.08	0.08	0.03	0.04	1.0
1983	0.01	0.01	0.00	0.00	0.00	0.02	0.34	0.32	0.26	0.02	0.01	0.01	1.0
1984	0.01	0.01	0.01	0.00	0.00	0.07	0.41	0.30	0.15	0.02	0.01	0.01	1.0
1985	0.01	0.01	0.01	0.01	0.00	0.14	0.36	0.34	0.07	0.04	0.01	0.01	1.0
1986	0.01	0.00	0.00	0.00	0.00	0.18	0.41	0.08	0.15	0.13	0.01	0.01	1.0
1987	0.02	0.02	0.02	0.01	0.01	0.02	0.33	0.36	0.14	0.05	0.02	0.02	1.0
1988	0.00	0.00	0.00	0.00	0.00	0.01	0.33	0.51	0.11	0.02	0.01	0.01	1.0
1989	0.02	0.02	0.02	0.01	0.00	0.03	0.12	0.41	0.30	0.03	0.02	0.03	1.0
1990	0.01	0.00	0.00	0.00	0.00	0.02	0.10	0.53	0.21	0.09	0.02	0.01	1.0
1991	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.09	0.11	0.02	0.01	0.00	1.0
1992	0.33	0.09	0.01	0.01	0.00	0.02	0.05	0.14	0.08	0.23	0.02	0.01	1.0
1993	0.02	0.02	0.01	0.01	0.01	0.04	0.53	0.08	0.20	0.04	0.02	0.02	1.0
1994	0.03	0.02	0.02	0.01	0.01	0.17	0.10	0.16	0.36	0.07	0.03	0.02	1.0
1995	0.01	0.01	0.01	0.01	0.00	0.01	0.14	0.38	0.38	0.03	0.01	0.01	1.0
1996	0.01	0.01	0.01	0.01	0.01	0.03	0.04	0.10	0.18	0.20	0.39	0.01	1.0
1997	0.03	0.03	0.02	0.03	0.02	0.14	0.30	0.13	0.16	0.08	0.03	0.03	1.0
1998	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.17	0.33	0.34	0.03	0.01	1.0
1999	0.01	0.01	0.01	0.01	0.00	0.03	0.29	0.28	0.30	0.03	0.01	0.01	1.0
2000	0.03	0.03	0.02	0.02	0.01	0.29	0.20	0.16	0.10	0.08	0.05	0.03	1.0
2001	0.01	0.01	0.01	0.00	0.00	0.07	0.27	0.20	0.32	0.05	0.02	0.02	1.0
2002	0.01	0.01	0.01	0.00	0.00	0.02	0.22	0.36	0.23	0.07	0.06	0.01	1.0
2003	0.00	0.00	0.00	0.00	0.00	0.02	0.16	0.19	0.48	0.10	0.02	0.01	1.0
2004	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.11	0.55	0.16	0.03	0.01	1.0

Tabla A.2 Factores mensuales de distribución del escurrimiento en la Cuña (Continuación)

Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				Cp	Escurrimiento (Mm <sup>3</sup> )							Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )
	Ab (Cuña)	Ex	Ev tot	Uc tot	Ar	Im	R tot	Δ V		CP+ Ar	CP+Ar- Uc actual	Excedente	S Total	déficit	derrames	Δ V'	Uc real	R real	
1945	473.6		4.0	6.3	210.8		1.8		271.3	362.1	339.8	339.8	113.1	0.0	0.0	0.0	18.4	5.3	345.1
1946	454.6		4.0	6.5	198.9		1.9		264.3	356.2	333.8	333.8	113.1	0.0	333.8	0.0	18.4	5.3	339.1
1947	565.2		4.1	6.6	268.1		1.9		305.9	475.8	453.4	453.4	113.1	0.0	453.4	0.0	18.4	5.3	458.7
1948	757.5		4.2	6.7	384.4		1.9		382.1	671.6	649.0	649.0	113.1	0.0	649.0	0.0	18.4	5.3	654.3
1949	388.0		4.3	6.9	175.6		2.0		221.6	284.8	262.1	262.1	113.1	0.0	262.1	0.0	18.4	5.3	267.4
1950	413.2		4.4	7.0	212.3		2.0		210.3	332.8	310.0	310.0	113.1	0.0	310.0	0.0	18.4	5.3	315.3
1951	437.7		4.5	7.1	208.6		2.1		238.5	341.1	318.3	318.3	113.1	0.0	318.3	0.0	18.4	5.3	323.6
1952	549.0		4.5	7.3	234.0		2.1		324.7	457.6	434.7	434.7	113.1	0.0	434.7	0.0	18.4	5.3	440.0
1953	518.7		4.6	7.4	263.8		2.1		264.7	445.4	422.4	422.4	113.1	0.0	422.4	0.0	18.4	5.3	427.7
1954	302.7		4.7	7.6	177.7		2.2		135.1	202.9	179.8	179.8	113.1	0.0	179.8	0.0	18.4	5.3	185.1
1955	973.1		4.8	7.7	490.8		2.2		492.6	917.3	894.1	894.1	113.1	0.0	894.1	0.0	18.4	5.3	899.4
1956	492.6		4.9	7.9	228.9		2.3		274.2	405.1	381.8	381.8	113.1	0.0	381.8	0.0	18.4	5.3	387.1
1957	171.6		5.0	8.0	115.0		2.3		67.3	93.2	69.8	69.8	113.1	0.0	69.8	0.0	18.4	5.3	75.1
1958	1,570.2		5.1	8.2	946.5		2.4		634.6	1,503.3	1,479.8	1,479.8	113.1	0.0	1,479.8	0.0	18.4	5.3	1,485.1
1959	527.7		5.2	8.4	245.4		2.4		293.5	438.2	414.6	414.6	113.1	0.0	414.6	0.0	18.4	5.3	419.9
1960	325.3		5.3	8.5	151.8		2.5		185.0	271.1	247.4	247.4	113.1	0.0	247.4	0.0	18.4	5.3	252.7
1961	358.3		5.4	8.7	103.5		2.5		266.4	311.7	287.9	287.9	113.1	0.0	287.9	0.0	18.4	5.3	293.2
1962	437.5		5.5	8.9	206.3		2.6		243.0	362.5	338.6	338.6	113.1	0.0	338.6	0.0	18.4	5.3	343.9
1963	922.1		5.7	9.0	246.7		2.6		687.5	848.8	824.8	824.8	113.1	0.0	824.8	0.0	18.4	5.3	830.1
1964	410.2		5.8	9.2	185.7		2.7		236.8	353.6	329.5	329.5	113.1	0.0	329.5	0.0	18.4	5.3	334.8
1965	1,241.0		5.9	9.4	589.8		2.7		663.8	1,195.4	1,171.1	1,171.1	113.1	0.0	1,171.1	0.0	18.4	5.3	1,176.4
1966	602.3		6.0	9.6	341.1		2.8		274.0	556.6	532.3	532.3	113.1	0.0	532.3	0.0	18.4	5.3	537.6
1967	1,899.3		6.1	9.8	939.6		2.8		972.7	1,820.9	1,796.4	1,796.4	113.1	0.0	1,796.4	0.0	18.4	5.3	1,801.7
1968	593.1		6.2	10.0	215.9		2.9		390.5	547.1	522.4	522.4	113.1	0.0	522.4	0.0	18.4	5.3	527.7
1969	195.8		6.4	10.2	82.3		2.9		127.0	170.7	146.0	146.0	113.1	0.0	146.0	0.0	18.4	5.3	151.3
1970	873.0		6.5	10.4	403.3		3.0		483.6	818.0	793.1	793.1	113.1	0.0	793.1	0.0	18.4	5.3	798.4
1971	1,366.1		6.6	10.6	910.1		3.1		470.1	1,327.9	1,302.9	1,302.9	113.1	0.0	1,302.9	0.0	18.4	5.3	1,308.2
1972	274.7		6.8	10.8	116.1		3.1		173.0	222.3	197.2	197.2	113.1	0.0	197.2	0.0	18.4	5.3	202.5
1973	1,969.9		6.9	11.0	1,043.8		3.2		940.8	1,911.0	1,885.8	1,885.8	113.1	0.0	1,885.8	0.0	18.4	5.3	1,891.1

Tabla A.3. Cálculo del volumen disponible para el Caso 0, hasta la estación hidrométrica la Cuña (cuenca V12)

Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				Cp	Escurrimiento (Mm <sup>3</sup> )							Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )
	Ab (Cuña)	Ex	Ev tot	Uc tot	Ar	Im	R tot	Δ V		CP+ Ar	CP+Ar- Uc actual	Excedente	S Total	déficit	derrames	Δ V'	Uc real	R real	
1974	364.5		7.0	11.2	140.7		3.2		238.8	296.3	270.9	270.9	113.1	0.0	270.9	0.0	18.4	5.3	276.2
1975	864.5		7.2	11.5	401.7		3.3		478.1	839.4	813.8	813.8	113.1	0.0	813.8	0.0	18.4	5.3	819.1
1976	1448.5		7.3	11.7	1,023.2		3.4		440.9	1,386.8	1,361.1	1,361.1	113.1	0.0	1,361.1	0.0	18.4	5.3	1,366.4
1977	570.0		7.5	11.9	231.5		3.4		354.5	541.2	515.3	515.3	113.1	0.0	515.3	0.0	18.4	5.3	520.6
1978	462.1		7.6	12.2	234.4		3.5		244.0	430.7	404.7	404.7	113.1	0.0	404.7	0.0	18.4	5.3	410.0
1979	216.7		7.8	12.4	84.9		3.6		148.4	167.4	141.3	141.3	113.1	0.0	141.3	0.0	18.4	5.3	146.6
1980	285.6		7.9	12.7	224.2		3.7		78.3	213.3	187.0	187.0	113.1	0.0	187.0	0.0	18.4	5.3	192.3
1981	270.9		8.1	12.9	88.7		3.7		199.4	227.2	200.7	200.7	113.1	0.0	200.7	0.0	18.4	5.3	206.0
1982	143.9		8.2	13.2	66.7		3.8		94.9	116.6	90.0	90.0	113.1	0.0	90.0	0.0	18.4	5.3	95.3
1983	392.3		8.4	13.4	219.2		3.9		463.8	607.5	580.8	580.8	113.1	0.0	580.8	0.0	18.4	5.3	586.1
1984	403.8		8.6	13.7	196.8		4.0		392.8	559.8	532.8	532.8	113.1	0.0	532.8	0.0	18.4	5.3	538.1
1985	217.1		8.7	14.0	135.5		4.0		296.5	395.8	368.7	368.7	113.1	0.0	368.7	0.0	18.4	5.3	374.0
1986	814.7		8.9	14.3	258.4		4.1		575.4	792.5	765.3	765.3	113.1	0.0	765.3	0.0	18.4	5.3	770.6
1987	252.0		9.1	14.5	209.4		4.2		62.1	245.0	217.5	217.5	113.1	0.0	217.5	0.0	18.4	5.3	222.8
1988	704.4		9.3	14.8	345.2		4.3		379.0	677.4	649.8	649.8	113.1	0.0	649.8	0.0	18.4	5.3	655.1
1989	226.3		9.5	15.1	100.6		4.4		145.9	208.1	180.2	180.2	113.1	0.0	180.2	0.0	18.4	5.3	185.5
1990	806.2		9.6	15.4	350.7		4.5		476.1	759.7	731.7	731.7	113.1	0.0	731.7	0.0	18.4	5.3	737.0
1991	1723.0		9.8	15.7	1,087.1		4.5		657.0	1,711.1	1,682.9	1,682.9	113.1	0.0	1,682.9	0.0	18.4	5.3	1,688.2
1992	946.1		10.0	16.1	435.2		4.6		532.3	945.6	917.2	917.2	113.1	0.0	917.2	0.0	18.4	5.3	922.5
1993	325.7		10.2	16.4	149.1		4.7		198.4	322.5	293.9	293.9	113.1	0.0	293.9	0.0	18.4	5.3	299.2
1994	243.1		10.4	16.7	106.9		4.8		158.5	226.5	197.7	197.7	113.1	0.0	197.7	0.0	18.4	5.3	203.0
1995	454.6		10.5	16.9	158.5		4.9		318.7	462.9	433.9	433.9	113.1	0.0	433.9	0.0	18.4	5.3	439.2
1996	352.9		10.7	17.0	103.8		4.9		271.9	338.8	309.8	309.8	113.1	0.0	309.8	0.0	18.4	5.3	315.1
1997	128.0		10.8	17.2	94.7		5.0		56.2	113.1	83.9	83.9	113.1	0.0	83.9	0.0	18.4	5.3	89.2
1998	344.7		10.9	17.4	352.5		5.0		15.4	345.8	316.5	316.5	113.1	0.0	316.5	0.0	18.4	5.3	321.8
1999	254.6		11.0	17.5	186.1		5.1		91.9	245.4	216.1	216.1	113.1	0.0	216.1	0.0	18.4	5.3	221.4
2000	119.0		11.1	17.7	76.3		5.1		66.4	134.6	105.1	105.1	113.1	0.0	105.1	0.0	18.4	5.3	110.4
2001	330.2		11.2	17.9	179.5		5.2		174.6	345.3	315.7	315.7	113.1	0.0	315.7	0.0	18.4	5.3	321.0
2002	571.2		11.3	18.0	332.7		5.2		262.6	565.8	536.2	536.2	113.1	0.0	536.2	0.0	18.4	5.3	541.5
2003	1019.3		11.4	18.2	826.6		5.3		217.0	1,009.5	979.7	979.7	113.1	0.0	979.7	0.0	18.4	5.3	985.0
2004	1028.4		11.5	18.4	640.8		5.3		412.2	1,051.8	1,021.9	1,021.9	113.1	0.0	1,021.9	0.0	18.4	5.3	1,027.2

Escurrimiento medio anual = 551 Mm<sup>3</sup>

Tabla A.3. Calculo del volumen disponible para el Caso 0, hasta la estación hidrométrica la Cuña (cuenca V12). Continuación

Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				CP	Escorrentamiento (Mm <sup>3</sup> )							Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )	
	Ab (Cuña)	Ex	Ev tot	Uc tot	Ar	Im	R tot	Δ V		CP+ Ar	Uc proy	CP+Ar- Usos	Exce- dente	S Total	déficit	derrames	Δ V'	Uc real		R real
2005	473.6		4.0	6.3	210.8		1.8		271.3	360.2	18.4	337.9	337.9	113.1	0.0	0.0	0.0	18.4	5.3	343.2
2006	454.6		4.0	6.5	198.9		1.9		264.3	354.1	18.6	331.5	331.5	113.1	0.0	331.5	0.0	18.6	5.4	336.9
2007	565.2		4.1	6.6	268.1		1.9		305.9	463.3	18.7	440.4	440.4	113.1	0.0	440.4	0.0	18.7	5.4	445.8
2008	757.5		4.2	6.7	384.4		1.9		382.1	658.3	18.9	635.1	635.1	113.1	0.0	635.1	0.0	18.9	5.5	640.6
2009	388.0		4.3	6.9	175.6		2.0		221.6	278.2	19.1	254.8	254.8	113.1	0.0	254.8	0.0	19.1	5.5	260.3
2010	413.2		4.4	7.0	212.3		2.0		210.3	321.9	19.3	298.2	298.2	113.1	0.0	298.2	0.0	19.3	5.6	303.8
2011	437.7		4.5	7.1	208.6		2.1		238.5	331.6	19.5	307.7	307.7	113.1	0.0	307.7	0.0	19.5	5.6	313.3
2012	549.0		4.5	7.3	234.0		2.1		324.7	439.6	19.6	415.5	415.5	113.1	0.0	415.5	0.0	19.6	5.7	421.1
2013	518.7		4.6	7.4	263.8		2.1		264.7	429.4	19.8	404.9	404.9	113.1	0.0	404.9	0.0	19.8	5.7	410.7
2014	302.7		4.7	7.6	177.7		2.2		135.1	202.6	20.0	177.8	177.8	113.1	0.0	177.8	0.0	20.0	5.8	183.6
2015	973.1		4.8	7.7	490.8		2.2		492.6	865.8	20.2	840.8	840.8	113.1	0.0	840.8	0.0	20.2	5.8	846.6
2016	492.6		4.9	7.9	228.9		2.3		274.2	384.4	20.4	359.1	359.1	113.1	0.0	359.1	0.0	20.4	5.9	364.9
2017	171.6		5.0	8.0	115.0		2.3		67.3	94.8	20.6	69.2	69.2	113.1	0.0	69.2	0.0	20.6	5.9	75.2
2018	1570.2		5.1	8.2	946.5		2.4		634.6	1441.0	20.8	1415.1	1415.1	113.1	0.0	1415.1	0.0	20.8	6.0	1421.1
2019	527.7		5.2	8.4	245.4		2.4		293.5	420.9	21.0	394.7	394.7	113.1	0.0	394.7	0.0	21.0	6.1	400.8
2020	325.3		5.3	8.5	151.8		2.5		185.0	268.5	21.2	241.9	241.9	113.1	0.0	241.9	0.0	21.2	6.1	248.1
2021	358.3		5.4	8.7	103.5		2.5		266.4	307.6	21.4	280.8	280.8	113.1	0.0	280.8	0.0	21.4	6.2	286.9
2022	437.5		5.5	8.9	206.3		2.6		243.0	339.2	21.6	312.1	312.1	113.1	0.0	312.1	0.0	21.6	6.2	318.3
2023	922.1		5.7	9.0	246.7		2.6		687.5	786.0	21.8	758.6	758.6	113.1	0.0	758.6	0.0	21.8	6.3	764.9
2024	410.2		5.8	9.2	185.7		2.7		236.8	325.5	22.0	297.7	297.7	113.1	0.0	297.7	0.0	22.0	6.3	304.1
2025	1241.0		5.9	9.4	589.8		2.7		663.8	1167.1	22.2	1139.0	1139.0	113.1	0.0	1139.0	0.0	22.2	6.4	1145.5
2026	602.3		6.0	9.6	341.1		2.8		274.0	518.2	22.4	489.7	489.7	113.1	0.0	489.7	0.0	22.4	6.5	496.2
2027	1899.3		6.1	9.8	939.6		2.8		972.7	1781.6	22.6	1752.8	1752.8	113.1	0.0	1752.8	0.0	22.6	6.5	1759.4
2028	593.1		6.2	10.0	215.9		2.9		390.5	518.2	22.9	489.1	489.1	113.1	0.0	489.1	0.0	22.9	6.6	495.7
2029	195.8		6.4	10.2	82.3		2.9		127.0	166.0	23.1	136.5	136.5	113.1	0.0	136.5	0.0	23.1	6.7	143.2
2030	873.0		6.5	10.4	403.3		3.0		483.6	750.6	23.3	720.8	720.8	113.1	0.0	720.8	0.0	23.3	6.7	727.5
2031	1366.1		6.6	10.6	910.1		3.1		470.1	1269.7	23.5	1239.5	1239.5	113.1	0.0	1239.5	0.0	23.5	6.8	1246.3
2032	274.7		6.8	10.8	116.1		3.1		173.0	204.4	23.7	173.9	173.9	113.1	0.0	173.9	0.0	23.7	6.8	180.8

Tabla A.4. Cálculo del volumen disponible para el Caso 1, hasta la estación hidrométrica la Cuña (cuenca V12).



Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				CP	Escurrimiento (Mm <sup>3</sup> )							Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )	
	Ab (Cuña)	Ex	Ev tot	Uc tot	Ar	Im	R tot	$\Delta V$		CP+ Ar	Uc proy	CP+Ar- Usos	Exce- dente	S Total	déficit	derrames	$\Delta V'$	Uc real		R real
2033	1969.9		6.9	11.0	1043.8		3.2		940.8	1820.4	24.0	1789.6	1789.6	113.1	0.0	1789.6	0.0	24.0	6.9	1796.5
2034	364.5		7.0	11.2	140.7		3.2		238.8	272.1	24.2	240.8	240.8	113.1	0.0	240.8	0.0	24.2	7.0	247.8
2035	864.5		7.2	11.5	401.7		3.3		478.1	766.9	24.4	735.3	735.3	113.1	0.0	735.3	0.0	24.4	7.0	742.3
2036	1448.5		7.3	11.7	1023.2		3.4		440.9	1326.2	24.7	1294.2	1294.2	113.1	0.0	1294.2	0.0	24.7	7.1	1301.4
2037	570.0		7.5	11.9	231.5		3.4		354.5	499.8	24.9	467.5	467.5	113.1	0.0	467.5	0.0	24.9	7.2	474.6
2038	462.1		7.6	12.2	234.4		3.5		244.0	368.1	25.1	335.4	335.4	113.1	0.0	335.4	0.0	25.1	7.3	342.6
2039	216.7		7.8	12.4	84.9		3.6		148.4	180.3	25.4	147.1	147.1	113.1	0.0	147.1	0.0	25.4	7.3	154.4
2040	285.6		7.9	12.7	224.2		3.7		78.3	151.7	25.6	118.2	118.2	113.1	0.0	118.2	0.0	25.6	7.4	125.6
2041	270.9		8.1	12.9	88.7		3.7		199.4	227.9	25.9	194.0	194.0	113.1	0.0	194.0	0.0	25.9	7.5	201.4
2042	143.9		8.2	13.2	66.7		3.8		94.9	118.5	26.1	84.1	84.1	113.1	0.0	84.1	0.0	26.1	7.5	91.6
2043	392.3		8.4	13.4	219.2		3.9		191.0	265.8	26.4	231.1	231.1	113.1	0.0	231.1	0.0	26.4	7.6	238.7
2044	403.8		8.6	13.7	196.8		4.0		225.3	328.2	26.6	293.1	293.1	113.1	0.0	293.1	0.0	26.6	7.7	300.7
2045	217.1		8.7	14.0	135.5		4.0		100.2	148.2	26.9	112.6	112.6	113.1	0.0	112.6	0.0	26.9	7.7	120.3
2046	814.7		8.9	14.3	258.4		4.1		575.4	711.0	27.1	674.9	674.9	113.1	0.0	674.9	0.0	27.1	7.8	682.7
2047	252.0		9.1	14.5	209.4		4.2		62.1	176.8	27.4	140.3	140.3	113.1	0.0	140.3	0.0	27.4	7.9	148.2
2048	704.4		9.3	14.8	345.2		4.3		379.0	610.1	27.6	573.2	573.2	113.1	0.0	573.2	0.0	27.6	8.0	581.2
2049	226.3		9.5	15.1	100.6		4.4		145.9	182.3	27.9	145.0	145.0	113.1	0.0	145.0	0.0	27.9	8.0	153.0
2050	806.2		9.6	15.4	350.7		4.5		476.1	671.1	28.2	633.3	633.3	113.1	0.0	633.3	0.0	28.2	8.1	641.4
2051	1723.0		9.8	15.7	1087.1		4.5		657.0	1579.8	28.4	1541.5	1541.5	113.1	0.0	1541.5	0.0	28.4	8.2	1549.7
2052	946.1		10.0	16.1	435.2		4.6		532.3	849.1	28.7	810.3	810.3	113.1	0.0	810.3	0.0	28.7	8.3	818.6
2053	325.7		10.2	16.4	149.1		4.7		198.4	260.5	29.0	221.3	221.3	113.1	0.0	221.3	0.0	29.0	8.4	229.7
2054	243.1		10.4	16.7	106.9		4.8		158.5	194.2	29.3	154.5	154.5	113.1	0.0	154.5	0.0	29.3	8.4	163.0
2055	454.6		10.5	16.9	158.5		4.9		318.7	364.1	29.5	324.0	324.0	113.1	0.0	324.0	0.0	29.5	8.5	332.5
2056	352.9		10.7	17.0	103.8		4.9		271.9	308.2	29.5	268.0	268.0	113.1	0.0	268.0	0.0	29.5	8.5	276.6
2057	128.0		10.8	17.2	94.7		5.0		56.2	92.6	29.5	52.3	52.3	113.1	0.0	52.3	0.0	29.5	8.5	60.8
2058	344.7		10.9	17.4	352.5		5.0		15.4	203.2	29.5	162.8	162.8	113.1	0.0	162.8	0.0	29.5	8.5	171.3
2059	254.6		11.0	17.5	186.1		5.1		91.9	211.5	29.5	171.0	171.0	113.1	0.0	171.0	0.0	29.5	8.5	179.6
2060	119.0		11.1	17.7	76.3		5.1		66.4	107.3	29.5	66.7	66.7	113.1	0.0	66.7	0.0	29.5	8.5	75.2
2061	330.2		11.2	17.9	179.5		5.2		174.6	271.3	29.5	230.5	230.5	113.1	0.0	230.5	0.0	29.5	8.5	239.1
2062	571.2		10.5	18.0	332.7		5.2		261.8	441.9	29.5	401.8	401.8	113.1	0.0	401.8	0.0	29.5	8.5	410.4
2063	1019.3		10.5	18.2	826.6		5.3		216.2	944.5	29.5	904.4	904.4	113.1	0.0	904.4	0.0	29.5	8.5	912.9
2064	1028.4		10.5	18.4	640.8		5.3		411.2	943.9	29.5	903.8	903.8	113.1	0.0	903.8	0.0	29.5	8.5	912.3

Escurrimiento medio anual =493 Mm<sup>3</sup>

Tabla A.4. Calculo del volumen disponible para el Caso 1, hasta la estación hidrométrica la Cuña (cuenca V12). Continuación

Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				CP	Escorrimento (Mm <sup>3</sup> )							Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )	
	Ab (Cuña)	Ex	Ev tot	Uc tot	Ar	Im	R tot	Δ V		CP+ Ar	Uc proy	CP+Ar- Usos	Exce- dente	S Total	déficit	derram es	Δ V'	Uc real		R real
2005	473.6		4.0	6.3	210.8		1.8		271.3	357.2	18.3	335.0	335.0	113.1	-	-	-	18.3	5.3	340.2
2006	454.6		4.0	6.5	198.9		1.9		264.3	351.0	18.4	328.6	328.6	113.1	-	328.6	-	18.4	5.3	333.9
2007	565.2		4.1	6.6	268.1		1.9		305.9	461.0	18.5	438.3	438.3	113.1	-	438.3	-	18.5	5.3	443.7
2008	757.5		4.2	6.7	384.4		1.9		382.1	656.8	18.7	633.9	633.9	113.1	-	633.9	-	18.7	5.4	639.3
2009	388.0		4.3	6.9	175.6		2.0		221.6	283.2	18.8	260.1	260.1	113.1	-	260.1	-	18.8	5.4	265.5
2010	413.2		4.4	7.0	212.3		2.0		210.3	324.0	18.9	300.7	300.7	113.1	-	300.7	-	18.9	5.5	306.1
2011	437.7		4.5	7.1	208.6		2.1		238.5	328.5	19.1	305.0	305.0	113.1	-	305.0	-	19.1	5.5	310.5
2012	549.0		4.5	7.3	234.0		2.1		324.7	450.4	19.2	426.6	426.6	113.1	-	426.6	-	19.2	5.5	432.2
2013	518.7		4.6	7.4	263.8		2.1		264.7	434.4	19.3	410.5	410.5	113.1	-	410.5	-	19.3	5.6	416.1
2014	302.7		4.7	7.6	177.7		2.2		135.1	200.9	19.5	176.7	176.7	113.1	-	176.7	-	19.5	5.6	182.3
2015	973.1		4.8	7.7	490.8		2.2		492.6	878.6	19.6	854.2	854.2	113.1	-	854.2	-	19.6	5.7	859.8
2016	492.6		4.9	7.9	228.9		2.3		274.2	397.1	19.7	372.4	372.4	113.1	-	372.4	-	19.7	5.7	378.1
2017	171.6		5.0	8.0	115.0		2.3		67.3	90.3	19.9	65.4	65.4	113.1	-	65.4	-	19.9	5.7	71.2
2018	1570.2		5.1	8.2	946.5		2.4		634.6	1,462.1	20.0	1,437.0	1,437.0	113.1	-	1,437.0	-	20.0	5.8	1,442.8
2019	527.7		5.2	8.4	245.4		2.4		293.5	435.9	20.2	410.5	410.5	113.1	-	410.5	-	20.2	5.8	416.3
2020	325.3		5.3	8.5	151.8		2.5		185.0	268.6	20.3	243.0	243.0	113.1	-	243.0	-	20.3	5.9	248.8
2021	358.3		5.4	8.7	103.5		2.5		266.4	308.7	20.5	282.8	282.8	113.1	-	282.8	-	20.5	5.9	288.7
2022	437.5		5.5	8.9	206.3		2.6		243.0	346.9	20.7	320.7	320.7	113.1	-	320.7	-	20.7	6.0	326.7
2023	922.1		5.7	9.0	246.7		2.6		687.5	837.5	20.8	811.0	811.0	113.1	-	811.0	-	20.8	6.0	817.0
2024	410.2		5.8	9.2	185.7		2.7		236.8	343.3	21.0	316.5	316.5	113.1	-	316.5	-	21.0	6.1	322.6
2025	1241.0		5.9	9.4	589.8		2.7		663.8	1,186.1	21.2	1,159.1	1,159.1	113.1	-	1,159.1	-	21.2	6.1	1,165.2
2026	602.3		6.0	9.6	341.1		2.8		274.0	534.1	21.3	506.8	506.8	113.1	-	506.8	-	21.3	6.2	512.9
2027	1899.3		6.1	9.8	939.6		2.8		972.7	1,824.0	21.5	1,796.4	1,796.4	113.1	-	1,796.4	-	21.5	6.2	1,802.6
2028	593.1		6.2	10.0	215.9		2.9		390.5	540.3	21.7	512.4	512.4	113.1	-	512.4	-	21.7	6.3	518.6
2029	195.8		6.4	10.2	82.3		2.9		127.0	170.3	21.9	142.0	142.0	113.1	-	142.0	-	21.9	6.3	148.3
2030	873.0		6.5	10.4	403.3		3.0		483.6	787.7	22.1	759.2	759.2	113.1	-	759.2	-	22.1	6.4	765.5
2031	1366.1		6.6	10.6	910.1		3.1		470.1	1,328.2	22.3	1,299.3	1,299.3	113.1	-	1,299.3	-	22.3	6.4	1,305.7
2032	274.7		6.8	10.8	116.1		3.1		173.0	205.3	22.5	176.1	176.1	113.1	-	176.1	-	22.5	6.5	182.6

Tabla A.5. Calculo del volumen disponible para el Caso 2, hasta la estación hidrométrica la Cuña (cuenca V12).

Año	Salidas históricas (Mm <sup>3</sup> )				Entradas históricas (Mm <sup>3</sup> )				CP	Escorrentía (Mm <sup>3</sup> )								Usos actuales (Mm <sup>3</sup> )		Ed (Mm <sup>3</sup> )
	Ab (Cuña)	Ex	Ev	Uc tot	Ar	Im	R tot	Δ V		CP+ Ar	Uc proy	CP+Ar-Usos	Exce-dente	S Total	déficit	derrames	Δ V'	Uc real	R real	
2033	6.9	11.0	1,043.8		3.2		940.8	1,896.2	22.7	1,866.6	1,866.6	113.1	-	1,866.6	-	22.7	6.5	1,873.1	6.0	1877.6
2034	7.0	11.2	140.7		3.2		238.8	285.4	22.9	255.5	255.5	113.1	-	255.5	-	22.9	6.6	262.0	6.1	264.0
2035	7.2	11.5	401.7		3.3		478.1	816.8	23.1	786.5	786.5	113.1	-	786.5	-	23.1	6.7	793.2	6.1	797.3
2036	7.3	11.7	1,023.2		3.4		440.9	1,375.3	23.3	1,344.7	1,344.7	113.1	-	1,344.7	-	23.3	6.7	1,351.4	6.2	1356.2
2037	7.5	11.9	231.5		3.4		354.5	533.0	23.5	502.1	502.1	113.1	-	502.1	-	23.5	6.8	508.8	6.2	511.8
2038	7.6	12.2	234.4		3.5		244.0	404.3	23.7	372.9	372.9	113.1	-	372.9	-	23.7	6.8	379.8	6.3	382.8
2039	7.8	12.4	84.9		3.6		148.4	172.1	24.0	140.4	140.4	113.1	-	140.4	-	24.0	6.9	147.3	6.3	146.5
2040	7.9	12.7	224.2		3.7		78.3	198.2	24.2	166.1	166.1	113.1	-	166.1	-	24.2	7.0	173.1	6.4	176.1
2041	8.1	12.9	88.7		3.7		199.4	223.7	24.4	191.2	191.2	113.1	-	191.2	-	24.4	7.0	198.2	6.4	198.6
2042	8.2	13.2	66.7		3.8		94.9	119.1	24.7	86.2	86.2	113.1	-	86.2	-	24.7	7.1	93.3	6.5	92.7
2043	8.4	13.4	219.2		3.9		191.0	310.6	24.9	277.3	277.3	113.1	-	277.3	-	24.9	7.2	284.5	6.5	293.3
2044	8.6	13.7	196.8		4.0		225.3	381.6	25.2	347.9	347.9	113.1	-	347.9	-	25.2	7.3	355.1	6.6	359.8
2045	8.7	14.0	135.5		4.0		100.2	185.1	25.4	150.9	150.9	113.1	-	150.9	-	25.4	7.3	158.3	6.7	164.9
2046	8.9	14.3	258.4		4.1		575.4	781.8	25.7	747.2	747.2	113.1	-	747.2	-	25.7	7.4	754.6	6.7	758.7
2047	9.1	14.5	209.4		4.2		62.1	227.9	25.9	192.8	192.8	113.1	-	192.8	-	25.9	7.5	200.3	6.8	204.2
2048	9.3	14.8	345.2		4.3		379.0	668.6	26.2	633.2	633.2	113.1	-	633.2	-	26.2	7.6	640.7	6.8	644.4
2049	9.5	15.1	100.6		4.4		145.9	194.4	26.5	158.5	158.5	113.1	-	158.5	-	26.5	7.6	166.1	6.9	170.5
2050	9.6	15.4	350.7		4.5		476.1	751.6	26.8	715.2	715.2	113.1	-	715.2	-	26.8	7.7	722.9	7.0	725.8
2051	9.8	15.7	1,087.1		4.5		657.0	1,683.6	27.1	1,646.7	1,646.7	113.1	-	1,646.7	-	27.1	7.8	1,654.5	7.0	1664.4
2052	10.0	16.1	435.2		4.6		532.3	927.0	27.4	889.6	889.6	113.1	-	889.6	-	27.4	7.9	897.5	7.1	904.1
2053	10.2	16.4	149.1		4.7		198.4	310.4	27.7	272.5	272.5	113.1	-	272.5	-	27.7	8.0	280.5	7.2	284.8
2054	10.4	16.7	106.9		4.8		158.5	217.1	28.0	178.7	178.7	113.1	-	178.7	-	28.0	8.1	186.8	7.3	188.3
2055	10.5	16.9	158.5		4.9		318.7	447.5	28.0	409.0	409.0	113.1	-	409.0	-	28.0	8.1	417.0	7.3	423.9
2056	10.7	17.0	103.8		4.9		271.9	329.7	28.0	291.1	291.1	113.1	-	291.1	-	28.0	8.1	299.1	7.4	300.4
2057	10.8	17.2	94.7		5.0		56.2	99.2	28.0	60.5	60.5	113.1	-	60.5	-	28.0	8.1	68.5	7.5	72.3
2058	10.9	17.4	352.5		5.0		15.4	331.7	28.0	292.9	292.9	113.1	-	292.9	-	28.0	8.1	301.0	7.6	305.4
2059	11.0	17.5	186.1		5.1		91.9	234.5	28.0	195.6	195.6	113.1	-	195.6	-	28.0	8.1	203.7	7.6	206.0
2060	11.1	17.7	76.3		5.1		66.4	127.6	28.0	88.5	88.5	113.1	-	88.5	-	28.0	8.1	96.6	7.7	97.4
2061	11.2	17.9	179.5		5.2		174.6	327.1	28.0	287.9	287.9	113.1	-	287.9	-	28.0	8.1	296.0	7.8	298.5
2062	11.2	18.0	332.7		5.2		262.5	552.1	28.0	513.0	513.0	113.1	-	513.0	-	28.0	8.1	521.1	7.9	521.7
2063	11.2	18.2	826.6		5.3		216.8	1,000.5	28.0	961.4	961.4	113.1	-	961.4	-	28.0	8.1	969.5	8.0	969.8
2064	11.2	18.4	640.8		5.3		411.9	1,031.1	28.0	991.9	991.9	113.1	-	991.9	-	28.0	8.1	1,000.0	8.1	1001.2

Escorrentía medio anual = 525 Mm<sup>3</sup>

Tabla A.5. Cálculo del volumen disponible para el Caso 2, hasta la estación hidrométrica la Cuña (cuenca V12). Continuación