



Cálculo del escurrimiento disponible en la subcuenca V1 San Francisco de los Romo

Demandas actuales (Mm³): 15.462

Capacidad de almacenamiento (Mm³): 11

$$\text{Esc disp} = \text{Cp} + \text{Ar disp} + \text{R} + \text{Im} - (\text{Uc} + \text{Ev} + \text{Ex} + \text{DV})$$

Año	Año proyectado	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escorrentimiento (Mm³)						Δ V'	Usos actuales (Mm³)		Escorrentimiento disponible (Mm³)	
		Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar'	menos usos actuales (Uc+Ev)	excedente	almacenado	deficit	derrames		Uc real=Uc total actual-deficit	R real		
1945	2005	0.921		0.700	5.346			1.518		5.449	5.449	-10.713	0.000	0.000	-10.713	0.000	-11.000	4.749	1.348	0.921	
1946	2006	0.072		0.700	5.453			1.548		4.677	4.677	-11.485	0.000	0.000	-11.485	0.000	0.000	3.977	1.129	0.072	
1947	2007	4.076		0.700	5.562			1.579		8.759	8.759	-7.403	0.000	0.000	-7.403	0.000	0.000	8.059	2.288	2.288	
1948	2008	13.047		0.700	5.673			1.611		17.810	17.810	1.648	1.648	1.648	0.000	1.648	15.462	4.390	4.390		
1949	2009	2.280		0.700	5.787			1.643		7.124	7.124	-9.038	0.000	0.000	-7.390	0.000	-1.648	8.072	2.291	2.280	
1950	2010	2.276		0.700	5.902			1.676		7.203	7.203	-8.959	0.000	0.000	-8.959	0.000	0.000	6.503	1.846	1.846	
1951	2011	10.048		0.700	6.020			1.709		15.059	15.059	-1.103	0.000	0.000	-1.103	0.000	0.000	14.359	4.076	4.076	
1952	2012	4.608		0.700	6.141			1.743		9.706	9.706	-6.456	0.000	0.000	-6.456	0.000	0.000	9.006	2.557	2.557	
1953	2013	7.323		0.700	6.264			1.778		12.509	12.509	-3.653	0.000	0.000	-3.653	0.000	0.000	11.809	3.352	3.352	
1954	2014	21.213		0.700	6.389			1.814		26.488	26.488	10.326	10.326	10.326	0.000	10.326	15.462	4.390	4.390		
1955	2015	8.828		0.700	6.517			1.850		14.195	14.195	-1.967	0.000	0.000	-1.967	0.000	-1.967	15.462	4.390	4.390	
1956	2016	17.910		0.700	6.647			1.887		23.370	23.370	7.208	7.208	7.208	0.000	4.567	2.641	15.462	4.390	8.956	
1957	2017	8.102		0.700	6.780			1.925		13.657	13.657	-2.505	0.000	0.000	8.495	0.000	0.000	-2.505	15.462	4.390	4.390
1958	2018	9.892		0.700	6.916			1.963		15.544	15.544	-0.618	0.000	0.000	7.878	0.000	0.000	-0.618	15.462	4.390	4.390
1959	2019	9.683		0.700	7.054			2.003		15.435	15.435	-0.727	0.000	0.000	7.150	0.000	0.000	-0.727	15.462	4.390	4.390
1960	2020	11.597		0.700	7.195			2.043		17.450	17.450	1.288	1.288	1.288	0.000	0.000	1.288	15.462	4.390	4.390	
1961	2021	6.340		0.700	7.339			2.083		12.295	12.295	-3.867	0.000	0.000	4.571	0.000	-3.867	15.462	4.390	4.390	
1962	2022	3.808		0.700	7.486			2.125		9.868	9.868	-6.294	0.000	0.000	0.000	-1.723	0.000	-4.571	13.739	3.900	3.808
1963	2023	4.641		0.700	7.635			2.168		10.809	10.809	-5.353	0.000	0.000	0.000	-5.353	0.000	0.000	10.109	2.870	2.870
1964	2024	6.007		0.700	7.788			2.211		12.284	12.284	-3.878	0.000	0.000	0.000	-3.878	0.000	0.000	11.584	3.289	3.289
1965	2025	2.123		0.700	7.944			2.255		8.512	8.512	-7.650	0.000	0.000	-7.650	0.000	0.000	7.812	2.218	2.123	
1966	2026	6.072		0.700	8.103			2.300		12.574	12.574	-3.588	0.000	0.000	0.000	-3.588	0.000	0.000	11.874	3.371	3.371
1967	2027	9.658		0.700	8.265			2.346		16.277	16.277	0.115	0.115	0.115	0.115	0.000	0.115	15.462	4.390	4.390	
1968	2028	11.140		0.700	8.430			2.393		17.877	17.877	1.715	1.715	1.715	1.830	0.000	0.000	1.715	15.462	4.390	4.390
1969	2029	19.067		0.700	8.599			2.441		25.925	25.925	9.763	9.763	9.763	11.000	0.000	0.593	9.170	15.462	4.390	4.982
1970	2030	8.092		0.700	8.771			2.490		15.073	15.073	-1.089	0.000	0.000	9.911	0.000	0.000	-1.089	15.462	4.390	4.390
1971	2031	10.743		0.700	8.946			2.540		17.849	17.849	1.687	1.687	1.687	11.000	0.000	0.598	1.089	15.462	4.390	4.987
1972	2032	17.121		0.700	9.125			2.591		24.355	24.355	8.193	8.193	8.193	11.000	0.000	8.193	0.000	15.462	4.390	12.583
1973	2033	17.995		0.700	9.308			2.642		25.360	25.360	9.198	9.198	9.198	11.000	0.000	9.198	0.000	15.462	4.390	13.588
1974	2034	10.226		0.700	9.494			2.695		17.725	17.725	1.563	1.563	1.563	11.000	0.000	1.563	0.000	15.462	4.390	5.952
1975	2035	17.314		0.700	9.684			2.749		24.948	24.948	8.786	8.786	8.786	11.000	0.000	8.786	0.000	15.462	4.390	13.176
1976	2036	17.319		0.700	9.877			2.804		25.092	25.092	8.930	8.930	8.930	11.000	0.000	8.930	0.000	15.462	4.390	13.320
1977	2037	19.645		0.700	10.075			2.860		27.560	27.560	11.398	11.398	11.398	11.000	0.000	11.398	0.000	15.462	4.390	15.787
1978	2038	18.947		0.700	10.276			2.917		27.005	27.005	10.843	10.843	10.843	11.000	0.000	10.843	0.000	15.462	4.390	15.233
1979	2039	18.404		0.700	10.482			2.976		26.610	26.610	10.448	10.448	10.448	11.000	0.000	10.448	0.000	15.462	4.390	14.838
1980	2040	13.888		0.700	10.691			3.035		22.244	22.244	6.082	6.082	6.082	11.000	0.000	6.082	0.000	15.462	4.390	10.471
1981	2041	10.226		0.700	10.905			3.096		18.735	18.735	2.573	2.573	2.573	11.000	0.000	2.573	0.000	15.462	4.390	6.963
1982	2042	10.226		0.700	11.123			3.158		18.892	18.892	2.730	2.730	2.730	11.000	0.000	2.730	0.000	15.462	4.390	7.119
1983	2043	10.226		0.700	11.346			3.221		19.051	19.051	2.889	2.889	2.889	11.000	0.000	2.889	0.000	15.462	4.390	7.278
1984	2044	4.183		0.700	11.573			3.285		13.171	13.171	-2.991	0.000	0.000	8.009	0.000	0.000	-2.991	15.462	4.390	4.183
1985	2045	13.969		0.700	11.804			3.351		23.122	23.122	6.960	6.960	6.960	11.000	0.000	3.969	2.991	15.462	4.390	8.359
1986	2046	13.101		0.700	12.040			3.418		22.423	22.423	6.261	6.261	6.261	11.000	0.000	6.261	0.000	15.462	4.390	10.651
1987	2047	13.262		0.700	12.281			3.486		22.756	22.756	6.594	6.594	6.594	11.000	0.000	6.594	0.000	15.462	4.390	10.984
1988	2048	13.021		0.700	12.527			3.556		22.692	22.692	6.530	6.530	6.530	11.000	0.000	6.530	0.000	15.462	4.390	10.919
1989	2049	13.192		0.700	12.777			3.627		23.042	23.042	6.880	6.880	6.880	11.000	0.000	6.880	0.000	15.462	4.390	11.269
1990	2050	12.815		0.700	13.033			3.700		22.848	22.848	6.686	6.686	6.686	11.000	0.000	6.686	0.000	15.462	4.390	11.076
1991	2051	10.745		0.700	13.293			3.774		20.965	20.965	4.803	4.803	4.803	11.000	0.000	4.803	0.000	15.462	4.390	9.193
1992	2052	12.766		0.700	13.559			3.849		23.176	23.176	7.014	7.014	7.014	11.000	0.000	7.014	0.000	15.462	4.390	11.404
1993	2053	13.141		0.700	13.831			3.926		23.745	23.745	7.583	7.583	7.583	11.000	0.000	7.583	0.000	15.462	4.390	11.973
1994	2054	13.140		0.700	14.107			4.005		23.942	23.942	7.780	7.780	7.780	11.000	0.000	7.780	0.000	15.462	4.390	12.170
1995	2055	10.689		0.700	14.240			4.043		21.586	21.586	5.424	5.424	5.424	11.000	0.000	5.424	0.000	15.462	4.390	9.814
1996	2056	10.689		0.700	14.374			4.081		21.682	21.682	5.520	5.520	5.520	11.000	0.000	5.520	0.000	15.462	4.390	9.909
1997	2057	10.689		0.700	14.507			4.118		21.777	21.777	5.615	5.615	5.615	11.000	0.000	5.615	0.000	15.462	4.390	10.005
1998	2058	10.689		0.700	14.640			4.156		21.873	21.873	5.711	5.711	5.711	11.000	0.000	5.711	0.000	15.462	4.390	10.100
1999	2059	10.689		0.700	14.773			4.194		21.968	21.968	5.806	5.806	5.806	11.000	0.000	5.806	0.000	15.462	4.390	10.196
2000	2060	10.689		0.700	14.907			4.232		22.064	22.064	5.902	5.902	5.902	11.000	0.000	5.902	0.000	15.462	4.390	10.291
2001	2061	10.689		0.700	15.040			4.270		22.159	22.159	5.997	5.997	5.997	11.000	0.000	5.997	0.000	15.462	4.390	10.387
2002	2062	10.689		0.700	15.182			4.310		22.261	22.261	6.099	6.099	6.099	11.000	0.000	6.099	0.000	15.462	4.390	10.488
2003	2063	10.689		0.700	15.322			4.350		22.361	22.361	6.199	6.199	6.199	11.000						

**Cálculo del escurrimiento disponible en la subcuenca V2 Presa Calles**

Demandas actuales (Mm³):				R=	0
riego	pecuario	urbano	total		
2.27	0.34	0.2	2.965		

Capacidad de almacenamiento (Mm³):	
mínima	máxima
0	364.1

Año	Año proyectado	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escurrimiento (Mm³)							Usos actuales (Mm³)		Escurrimiento disponible (Mm³)
		Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar*	menos usos actuales (Uc+Ev+Im)	excedente	almacenado	deficit	derrames	Δ V'	Uc real=Uc total actual-deficit	R real	
1945	2005	31.040	0.000	10.010	0.928	0.000	1.158	0.147	-27.540	13.132	13.132	1.315	1.315	364.100	0.000		0.000	2.965	0.471	0.628
1946	2006	22.645	0.000	3.343	0.946	0.000	0.358	0.150	-13.620	12.806	12.806	6.856	6.856	364.100	0.000	6.856	0.000	2.965	0.471	6.969
1947	2007	4.990	0.000	4.226	0.965	0.000	10.036	0.153	27.190	27.182	27.182	30.027	30.027	364.100	0.000	30.027	0.000	2.965	0.471	4.990
1948	2008	31.789	0.000	8.538	0.985	0.000	15.720	0.156	-0.406	25.029	25.029	29.246	29.246	364.100	0.000	29.246	0.000	2.965	0.471	13.997
1949	2009	33.014	0.000	7.133	1.004	0.000	2.951	0.160	-21.270	16.771	16.771	9.624	9.624	364.100	0.000	9.624	0.000	2.965	0.471	7.144
1950	2010	14.824	0.000	4.623	1.024	0.000	6.386	0.163	5.837	19.760	19.760	18.558	18.558	364.100	0.000	18.558	0.000	2.965	0.471	12.643
1951	2011	15.511	0.000	5.581	1.045	0.000	12.731	0.166	5.479	14.719	14.719	18.904	18.904	364.100	0.000	18.904	0.000	2.965	0.471	6.644
1952	2012	24.250	0.000	5.096	1.066	0.000	3.192	0.169	-13.640	13.410	13.410	8.541	8.541	364.100	0.000	8.541	0.000	2.965	0.471	5.820
1953	2013	6.675	0.000	2.777	1.087	0.000	8.715	0.173	8.513	10.164	10.164	13.137	13.137	364.100	0.000	13.137	0.000	2.965	0.471	4.893
1954	2014	14.086	0.000	5.273	1.109	0.000	2.850	0.176	-6.081	11.361	11.361	5.973	5.973	364.100	0.000	5.973	0.000	2.965	0.471	3.594
1955	2015	10.757	0.000	6.093	1.131	0.000	30.977	0.180	53.640	40.464	40.464	62.383	62.383	364.100	0.000	62.383	0.000	2.965	0.471	10.757
1956	2016	51.675	0.000	12.270	1.154	0.000	17.539	0.183	-18.740	28.636	28.636	30.940	30.940	364.100	0.000	30.940	0.000	2.965	0.471	13.872
1957	2017	41.182	0.000	7.696	1.177	0.000	3.965	0.187	-30.840	15.063	15.063	8.367	8.367	364.100	0.000	8.367	0.000	2.965	0.471	4.873
1958	2018	7.420	0.000	7.817	1.200	0.000	37.962	0.191	108.500	86.784	86.784	113.964	113.964	364.100	0.000	113.964	0.000	2.965	0.471	7.420
1959	2019	40.726	0.000	19.700	1.224	0.000	13.087	0.194	-26.960	21.409	21.409	11.831	11.831	364.100	0.000	11.831	0.000	2.965	0.471	0.000
1960	2020	48.606	0.000	16.898	1.249	0.000	3.406	0.198	-51.053	12.095	12.095	-4.362	0.000	359.738	0.000	0.000	-4.362	2.965	0.471	0.000
1961	2021	26.663	0.000	10.031	1.274	0.000	2.785	0.202	-24.718	10.262	10.262	0.051	0.051	359.789	0.000	0.000	0.051	2.965	0.471	0.000
1962	2022	16.016	0.000	6.148	1.299	0.000	6.239	0.206	4.394	21.412	21.412	18.538	18.538	364.100	0.000	14.227	4.311	2.965	0.471	8.459
1963	2023	19.520	0.000	6.895	1.325	0.000	8.092	0.211	1.960	21.398	21.398	19.630	19.630	364.100	0.000	19.630	0.000	2.965	0.471	12.009
1964	2024	25.266	0.000	5.857	1.352	0.000	6.230	0.215	-9.786	16.244	16.244	13.652	13.652	364.100	0.000	13.652	0.000	2.965	0.471	7.893
1965	2025	8.930	0.000	5.515	1.379	0.000	21.257	0.219	22.319	16.667	16.667	29.444	29.444	364.100	0.000	29.444	0.000	2.965	0.471	8.658
1966	2026	25.538	0.000	9.945	1.406	0.000	25.569	0.223	47.414	58.511	58.511	71.170	71.170	364.100	0.000	71.170	0.000	2.965	0.471	25.538
1967	2027	40.623	0.000	14.641	1.434	0.000	39.884	0.228	76.966	93.552	93.552	115.830	115.830	364.100	0.000	115.830	0.000	2.965	0.471	40.623
1968	2028	46.854	0.000	21.580	1.463	0.000	26.308	0.232	15.604	58.961	58.961	60.724	60.724	364.100	0.000	60.724	0.000	2.965	0.471	34.887
1969	2029	80.194	0.000	23.706	1.492	0.000	0.813	0.237	92.466	196.808	196.808	170.950	170.950	364.100	0.000	170.950	0.000	2.965	0.471	80.194
1970	2030	34.034	0.000	16.806	1.522	0.000	27.324	0.242	30.792	55.588	55.588	63.141	63.141	364.100	0.000	63.141	0.000	2.965	0.471	34.034
1971	2031	45.183	0.000	20.251	1.553	0.000	56.206	0.247	102.732	113.266	113.266	146.256	146.256	364.100	0.000	146.256	0.000	2.965	0.471	45.183
1972	2032	72.007	0.000	25.628	1.584	0.000	18.800	0.252	-43.869	36.298	36.298	26.505	26.505	364.100	0.000	26.505	0.000	2.965	0.471	8.176
1973	2033	75.686	0.000	25.485	1.615	0.000	41.900	0.257	60.613	121.243	121.243	134.693	134.693	364.100	0.000	134.693	0.000	2.965	0.471	75.686
1974	2034	77.393	0.000	26.870	1.648	0.000	8.680	0.262	-74.734	22.235	22.235	1.080	1.080	364.100	0.000	1.080	0.000	2.965	0.471	0.000
1975	2035	72.820	0.000	21.634	1.681	0.000	18.800	0.267	-34.360	42.708	42.708	36.908	36.908	364.100	0.000	36.908	0.000	2.965	0.471	18.580
1976	2036	72.843	0.000	18.620	1.714	0.000	29.700	0.272	75.828	139.033	139.033	147.148	147.148	364.100	0.000	147.148	0.000	2.965	0.471	72.843
1977	2037	82.626	0.000	23.134	1.748	0.000	4.020	0.278	-68.370	34.841	34.841	12.762	12.762	364.100	0.000	12.762	0.000	2.965	0.471	9.213
1978	2038	79.689	0.000	12.851	1.783	0.000	26.900	0.283	0.000	67.140	67.140	78.224	78.224	364.100	0.000	78.224	0.000	2.965	0.471	51.795
1979	2039	77.407	0.000	12.851	1.819	0.000	0.840	0.289	0.000	90.948	90.948	75.972	75.972	364.100	0.000	75.972	0.000	2.965	0.471	75.603
1980	2040	57.605	0.000	12.851	1.855	0.000	0.000	0.295	0.000	72.017	72.017	56.201	56.201	364.100	0.000	56.201	0.000	2.965	0.471	56.672
1981	2041	56.887	0.000	4.600	1.893	0.000	0.000	0.301	1.760	64.838	64.838	57.273	57.273	364.100	0.000	57.273	0.000	2.965	0.471	56.887
1982	2042	56.922	0.000	7.582	1.930	0.000	0.000	0.307	0.000	66.128	66.128	55.581	55.581	364.100	0.000	55.581	0.000	2.965	0.471	56.052
1983	2043	58.061	0.000	6.875	1.969	0.000	0.000	0.313	38.880	105.473	105.473	95.633	95.633	364.100	0.000	95.633	0.000	2.965	0.471	58.061
1984	2044	17.595	0.000	10.299	2.008	0.000	0.000	0.319	2.805	32.388	32.388	19.124	19.124	364.100	0.000	19.124	0.000	2.965	0.471	17.595
1985	2045	58.754	0.000	12.851	2.049	0.000	0.000	0.325	0.000	73.328	73.328	57.512	57.512	364.100	0.000	57.512	0.000	2.965	0.471	57.983
1986	2046	57.885	0.000	14.870	2.090	0.000	0.000	0.332	19.935	94.448	94.448	76.613	76.613	364.100	0.000	76.613	0.000	2.965	0.471	57.885
1987	2047	58.825	0.000	15.848	2.131	0.000	0.000	0.339	-16.095	60.370	60.370	41.557	41.557	364.100	0.000	41.557	0.000	2.965	0.471	42.028
1988	2048	57.419	0.000	14.947	2.174	0.000	0.000	0.345	-5.280	68.915	68.915	51.003	51.003	364.100	0.000	51.003	0.000	2.965	0.471	51.474
1989	2049	58.415	0.000	12.730	2.217	0.000	0.000	0.352	-39.515	33.496	33.496	17.801	17.801	364.100	0.000	17.801	0.000	2.965	0.471	18.272
1990	2050	56.217	0.000	10.652	2.262	0.000	0.000	0.359	65.640	134.411	134.411	120.794	120.794	364.100	0.000	120.794	0.000	2.965	0.471	56.217
1991	2051	44.127	0.000	20.585	2.307	0.000	0.000	0.367	155.075	221.728	221.728	198.177	198.177	364.100	0.000	198.177	0.000	2.965	0.471	44.127
1992	2052	55.932	0.000	27.680	2.353	0.000	0.000	0.374	7.200	92.791	92.791	62.146	62.146	364.100	0.000	62.146	0.000	2.965	0.471	55.932
1993	2053	58.120	0.000	26.635	2.400	0.000	0.000	0.381	-63.275	23.499	23.499	-6.101	0.000	357.999	0.000	0.000	-6.101	2.965	0.471	0.471
1994	2054	58.113	0.000	20.871	2.448	0.000	0.000	0.389	-69.525	11.518	11.518	-12.318	0.000	345.681	0.000	-12.318	2.965	0.471	0.471	
1995	2055	47.947	0.000	12.017	2.500	0.000	0.000	0.397	247.540	309.606	309.606	294.625	294.625	364.100	0.000	276.206	18.419	2.965	0.471	47.947
1996	2056	64.017	0.000	12.971	2.552	0.000	0.000	0.405	-173.860	-94.726	-94.726	-110.662	0.000	253.438	0.000	0.000	-110.662	2.965	0.471	0.471
1997	2057	62.458	0.000	18.912	2.603	0.000	0.000	0												

**Cálculo del escurrimiento disponible en la subcuenca V3 Presa Niagara**

Demandas actuales (Mm³):

riego	pecuario	urbano	total
			87.385

Capacidad de almacenamiento (Mm³):

mínima	máxima
0	46.4

Año	Año proyectado	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escorrimento (Mm³)							Usos actuales (Mm³)		Escorrimento disponible (Mm³)	
		Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar'	menos usos actuales	excedente	almacenado	deficit	derrames	Δ V'	Uc real=Uc total actual-deficit	R real		
1945	2005	59.011	1.158	7.308	30.509	31.961	0.000	10.648	-0.010	55.366	56.916	-38.936	0.000	46.400	-38.936	0.000	0.000	0.000	48.449	16.910	18.068
1946	2006	59.773	0.358	7.079	31.119	22.717	0.000	10.861	0.133	64.884	71.924	-22.897	0.000	23.503	0.000	0.000	-22.897	87.385	30.500	30.858	
1947	2007	61.376	10.036	7.109	31.742	9.066	0.000	11.079	0.553	90.672	97.949	-6.581	0.000	16.922	0.000	0.000	-6.581	87.385	30.500	40.536	
1948	2008	58.943	15.720	7.258	32.376	44.836	0.000	11.300	0.269	58.430	76.816	-33.546	0.000	0.000	-16.624	0.000	-16.922	70.761	24.697	40.417	
1949	2009	58.831	2.951	7.209	33.024	35.294	0.000	11.526	0.054	55.250	64.673	-32.872	0.000	0.000	-32.872	0.000	0.000	54.513	19.026	21.977	
1950	2010	60.483	6.386	7.123	33.684	17.100	0.000	11.757	0.334	79.153	93.642	-7.252	0.000	0.000	-7.252	0.000	0.000	80.133	27.968	34.354	
1951	2011	60.421	12.731	7.156	34.358	25.559	0.000	11.992	0.330	77.445	88.165	-19.107	0.000	0.000	-19.107	0.000	0.000	68.278	23.831	36.562	
1952	2012	59.627	3.192	7.139	35.045	28.858	0.000	12.232	0.133	64.047	72.424	-25.292	0.000	0.000	-25.292	0.000	0.000	62.093	21.672	24.864	
1953	2013	61.223	8.715	7.059	35.746	13.998	0.000	12.476	0.361	86.630	94.876	-8.283	0.000	0.000	-8.283	0.000	0.000	79.102	27.608	36.323	
1954	2014	60.550	2.850	7.145	36.461	35.299	0.000	12.726	0.211	59.192	67.175	-30.205	0.000	0.000	-30.205	0.000	0.000	57.180	19.957	22.807	
1955	2015	60.852	30.977	7.173	37.190	19.585	0.000	12.980	0.826	104.454	119.600	-5.935	0.000	0.000	-5.935	0.000	0.000	81.450	28.428	59.405	
1956	2016	57.137	17.539	7.386	37.934	69.585	0.000	13.240	0.080	37.252	60.080	-52.230	0.000	0.000	-52.230	0.000	0.000	35.155	12.270	29.809	
1957	2017	58.090	3.965	7.229	38.693	49.284	0.000	13.505	-0.044	45.143	54.405	-44.173	0.000	0.000	-44.173	0.000	0.000	43.212	15.082	19.047	
1958	2018	61.155	37.962	7.233	39.467	17.312	0.000	13.775	1.391	116.121	127.930	-4.649	0.000	0.000	-4.649	0.000	0.000	82.736	28.877	61.155	
1959	2019	58.131	13.087	7.642	40.256	50.409	0.000	14.050	-0.004	54.652	59.402	-49.072	0.000	0.000	-49.072	0.000	0.000	38.313	13.372	26.459	
1960	2020	6.530	3.406	7.546	41.061	60.203	0.000	14.331	23.593	7.602	11.991	-86.346	0.000	0.000	-86.346	0.000	0.000	1.039	0.363	3.769	
1961	2021	4.380	2.785	7.309	41.882	33.003	0.000	14.618	1.000	9.736	14.125	-83.354	0.000	0.000	-83.354	0.000	0.000	4.031	1.407	4.192	
1962	2022	9.662	6.239	7.175	42.720	19.824	0.000	14.910	0.319	31.380	43.647	-57.152	0.000	0.000	-57.152	0.000	0.000	30.233	10.552	9.662	
1963	2023	60.057	8.092	7.201	43.574	24.161	0.000	15.209	0.294	79.848	94.726	-7.952	0.000	0.000	-7.952	0.000	0.000	79.433	27.724	35.816	
1964	2024	62.464	6.230	5.059	44.446	31.273	0.000	15.513	8.689	80.102	91.283	-7.391	0.000	0.000	-7.391	0.000	0.000	79.994	27.920	34.150	
1965	2025	32.573	21.257	8.417	45.335	11.053	0.000	15.823	2.154	82.859	93.640	-23.419	0.000	0.000	-23.419	0.000	0.000	63.966	22.326	32.573	
1966	2026	47.069	25.569	8.484	46.242	31.610	0.000	16.139	-0.270	79.344	108.253	-13.185	0.000	0.000	-13.185	0.000	0.000	74.200	25.898	47.069	
1967	2027	119.050	39.884	8.215	47.166	50.281	0.000	16.462	0.513	148.085	193.097	57.613	57.613	46.400	0.000	11.213	46.400	87.385	30.500	81.597	
1968	2028	20.349	26.308	8.165	48.110	57.994	0.000	16.791	-0.270	27.876	67.152	-54.706	0.000	0.000	-8.306	0.000	-46.400	79.079	27.601	20.349	
1969	2029	3.965	0.813	9.160	49.072	99.261	0.000	17.127	57.994	4.616	89.792	-7.566	0.000	0.000	-7.566	0.000	0.000	79.819	27.859	3.965	
1970	2030	48.117	27.324	8.366	50.053	42.126	0.000	17.470	3.626	77.891	116.314	-6.761	0.000	0.000	-6.761	0.000	0.000	80.624	28.140	48.117	
1971	2031	94.115	56.206	9.076	51.054	55.926	0.000	17.819	-0.162	136.544	186.715	34.048	34.048	34.048	0.000	0.000	34.048	87.385	30.500	86.706	
1972	2032	55.813	18.800	8.849	52.075	89.128	0.000	18.176	-0.864	27.371	48.129	-66.905	0.000	0.000	-32.857	0.000	-34.048	54.528	19.031	37.831	
1973	2033	98.406	41.900	9.385	53.117	93.681	0.000	18.539	0.783	91.371	180.644	41.975	41.975	41.975	0.000	0.000	41.975	87.385	30.500	72.400	
1974	2034	56.972	8.680	8.123	54.179	87.619	0.000	18.910	-1.359	20.066	26.018	-78.170	0.000	0.000	-36.195	0.000	-41.975	51.190	17.867	26.547	
1975	2035	31.947	18.800	8.182	55.263	90.134	0.000	19.288	33.091	37.861	69.616	-44.751	0.000	0.000	-44.751	0.000	0.000	42.634	14.880	31.947	
1976	2036	99.165	29.700	7.535	56.368	90.162	0.000	19.674	2.043	84.975	171.138	46.518	46.518	46.400	0.000	0.118	46.400	87.385	30.500	60.317	
1977	2037	11.136	4.020	7.522	57.496	102.271	0.000	20.067	55.129	12.964	37.964	-60.963	0.000	0.000	-14.563	0.000	-46.400	72.822	25.417	11.136	
1978	2038	57.657	26.900	7.235	58.645	98.636	0.000	20.469	-0.189	31.144	98.172	-23.348	0.000	0.000	-23.348	0.000	0.000	64.037	22.351	49.251	
1979	2039	62.418	0.840	6.957	59.818	95.811	0.000	20.878	-1.882	11.462	101.903	6.721	6.721	6.721	0.000	0.000	6.721	87.385	30.500	31.340	
1980	2040	61.367	0.000	6.812	61.015	71.493	0.000	21.296	1.470	37.876	105.019	10.821	10.821	17.542	0.000	0.000	10.821	87.385	30.500	30.500	
1981	2041	65.757	0.000	6.642	62.235	67.113	0.000	21.722	-2.520	43.280	107.130	13.102	13.102	30.645	0.000	0.000	13.102	87.385	30.500	30.500	
1982	2042	65.041	0.000	5.958	63.480	67.148	0.000	22.156	-1.865	43.309	106.480	13.137	13.137	43.782	0.000	0.000	13.137	87.385	30.500	30.500	
1983	2043	41.976	0.000	6.907	64.749	68.287	0.000	22.599	4.865	27.611	92.950	-1.341	0.000	42.441	0.000	0.000	-1.341	87.385	30.500	30.500	
1984	2044	30.353	0.000	7.379	66.044	21.778	0.000	23.051	-0.420	58.527	80.306	-14.459	0.000	27.982	0.000	0.000	-14.459	87.385	30.500	30.353	
1985	2045	38.674	0.000	7.879	67.365	72.723	0.000	23.512	1.020	18.703	85.045	-10.220	0.000	17.762	0.000	0.000	-10.220	87.385	30.500	30.500	
1986	2046	45.543	0.000	7.552	68.712	70.986	0.000	23.982	-0.340	26.499	95.034	0.098	0.098	17.860	0.000	0.000	0.098	87.385	30.500	30.500	
1987	2047	26.526	0.000	7.781	70.087	72.086	0.000	24.462	-1.250	6.595	59.607	-35.558	0.000	0.000	-17.698	0.000	-17.860	69.687	24.322	24.322	
1988	2048	54.971	0.000	6.854	71.488	70.441	0.000	24.951	0.600	38.522	100.915	6.676	6.676	6.676	0.000	0.000	6.676	87.385	30.500	30.500	
1989	2049	34.809	0.000	6.886	72.918	71.607	0.000	25.450	0.970	18.526	48.066	-46.205	0.000	0.000	-39.529	0.000	-6.676	47.856	16.703	16.703	
1990	2050	79.311	0.000	7.094	74.377	69.032	0.000	25.959	-0.240	65.550	132.843	38.364	38.364	38.364	0.000	0.000	38.364	87.385	30.500	30.500	
1991	2051	324.048	0.000	7.476	75.864	54.872	0.000	26.478	0.360	326.397	379.717	284.856	284.856	46.400	0.000	276.819	8.036	87.385	30.500	307.319	
1992	2052	85.083	0.000	6.554	77.381	68.698	0.000	27.008	0.020	73.332	140.668	46.729	46.729	46.400	0.000	46.729	0.000	87.385	30.500	77.228	
1993	2053	40.787	0.000	7.092	78.929	71.261	0.000	27.548	-0.240	27.758	40.202	-54.275	0.000	0.000	-7.875	0.000	-46.400	79.510	27.751	27.751	
1994	2054	40.932	0.000	7.688	80.508	71.253	0.000	28.099	-0.780	28.996	41.636	-53.437	0.000	0.000	-53.437	0.000	0.000	33.948	11.849	11.849	
1995	2055	35.817	0.000	7.688	81.185	58.636	0.000	28.336	-0.780	36.939	94.700	-0.373	0.000	0.000	-0.373	0.000	0.000	87.012	30.369	30.369	
1996	2056	39.015	0.000	7.688	81.863	74.706	0.000	28.572	0.600	25.883	36.268	-58.805	0.000	0.000	-58.805	0.000	0.000	28.580	9.975	9.975	
1997	2057	42.400	0.000	7.688	82.540	73.147															

**Cálculo del escurrimiento disponible en la subcuenca V4 Presa El Cuarenta**

Demandas actuales (Mm³):

riego	pecuario	urbano	total
			25.063

Capacidad de almacenamiento (Mm³):

mínima	máxima
0	42.1

Año	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escurrimiento (Mm³)						Δ V'	Usos actuales (Mm³)		Escurrimiento disponible (Mm³)	
	Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar	menos usos actuales	excedente	almacenado	deficit	derrames		Uc real	R real		
1945	13.214		1.386	8.714			1.193		22.122	22.122	(4.328)	-	42.100	-	3.685		-	21.378	2.926	2.283
1946	15.658		1.414	8.888			1.217		24.744	24.744	-1.733	0.000	41.010	0.000	0.000	0.000	-1.090	25.063	3.431	2.788
1947	32.404		1.442	9.066			1.241		41.671	41.671	15.166	15.166	42.100	0.000	14.719	1.090	25.063	3.431	17.506	
1948	29.289		1.471	9.247			1.266		38.742	38.742	12.208	12.208	42.100	0.000	12.851	0.000	25.063	3.431	15.638	
1949	7.093		1.501	9.432			1.291		16.735	16.735	-9.829	0.000	32.914	0.000	0.000	-9.186	25.063	3.431	2.788	
1950	7.926		4.403	9.621			1.317	10.964	31.597	31.597	2.131	2.131	35.688	0.000	0.000	2.774	25.063	3.431	2.788	
1951	2.107		5.179	9.813			1.343	-8.516	7.240	7.240	-23.002	0.000	13.329	0.000	0.000	-22.359	25.063	3.431	2.107	
1952	0.202		5.016	10.010			1.370	6.372	20.229	20.229	-9.850	0.000	4.123	0.000	0.000	-9.207	25.063	3.431	0.202	
1953	3.622		4.896	10.210			1.398	13.485	30.816	30.816	0.856	0.856	5.622	0.000	0.000	1.499	25.063	3.431	2.788	
1954	1.383		5.240	10.414			1.425	-11.160	4.451	4.451	-25.852	0.000	0.000	-19.587	0.000	-5.622	5.476	0.750	0.107	
1955	39.923		4.278	10.622			1.454	14.795	68.164	68.164	38.823	38.823	39.466	0.000	0.000	39.466	25.063	3.431	2.788	
1956	4.460		5.515	10.835			1.483	-1.965	17.361	17.361	-13.216	0.000	26.893	0.000	0.000	-12.573	25.063	3.431	2.788	
1957	0.726		5.352	11.051			1.513	-10.011	5.606	5.606	-24.809	0.000	2.727	0.000	0.000	-24.166	25.063	3.431	0.726	
1958	82.042		4.428	11.272			1.543	16.331	112.531	112.531	83.039	83.039	42.100	0.000	44.309	39.373	25.063	3.431	47.097	
1959	29.496		6.186	11.498			1.574	-3.485	42.121	42.121	10.872	10.872	42.100	0.000	11.515	0.000	25.063	3.431	14.303	
1960	0.232		5.081	11.728			1.605	-14.761	0.674	0.674	-29.469	0.000	13.274	0.000	0.000	-28.826	25.063	3.431	0.232	
1961	0.208		4.191	11.962			1.637	-5.015	9.709	9.709	-19.545	0.000	0.000	-5.629	0.000	-13.274	19.434	2.660	0.208	
1962	3.569		3.781	12.202			1.670	1.800	19.682	19.682	-9.162	0.000	0.000	-8.519	0.000	0.000	16.544	2.265	1.622	
1963	3.716		3.861	12.446			1.704	-0.165	18.154	18.154	-10.770	0.000	0.000	-10.127	0.000	0.000	14.936	2.044	1.401	
1964	0.803		4.336	12.695			1.738	19.123	35.219	35.219	5.820	5.820	6.463	0.000	0.000	6.463	25.063	3.431	0.803	
1965	81.282		5.529	12.948			1.772	0.245	98.232	98.232	67.640	67.640	42.100	0.000	32.646	35.637	25.063	3.431	35.434	
1966	52.826		5.512	13.207			1.808	-1.248	68.490	68.490	37.915	37.915	42.100	0.000	38.558	0.000	25.063	3.431	41.345	
1967	133.125		5.369	13.472			1.844	1.949	152.071	152.071	121.639	121.639	42.100	0.000	122.282	0.000	25.063	3.431	125.069	
1968	20.071		5.410	13.741			1.881	-4.707	32.635	32.635	2.162	2.162	42.100	0.000	2.805	0.000	25.063	3.431	5.592	
1969	21.710		4.873	14.016			1.919	-18.996	19.684	19.684	-10.252	0.000	32.491	0.000	0.000	-9.609	25.063	3.431	2.788	
1970	31.787		4.348	14.296			1.957	16.811	65.285	65.285	35.875	35.875	42.100	0.000	26.909	9.609	25.063	3.431	29.696	
1971	132.783		5.332	14.582			1.996	5.669	156.370	156.370	125.975	125.975	42.100	0.000	126.618	0.000	25.063	3.431	129.406	
1972	2.368		5.693	14.874			2.036	0.360	21.259	21.259	-9.497	0.000	33.246	0.000	0.000	-8.854	25.063	3.431	2.368	
1973	278.113		5.857	15.171			2.077	0.116	297.181	297.181	266.261	266.261	42.100	0.000	258.050	8.854	25.063	3.431	260.837	
1974	1.678		5.676	15.475			2.118	-6.536	14.174	14.174	-16.565	0.000	26.178	0.000	0.000	-15.922	25.063	3.431	1.678	
1975	56.874		5.557	15.784			2.161	4.333	80.388	80.388	49.768	49.768	42.100	0.000	34.489	15.922	25.063	3.431	37.277	
1976	194.458		5.568	16.100			2.204	4.819	218.742	218.742	188.110	188.110	42.100	0.000	188.753	0.000	25.063	3.431	191.541	
1977	0.793		5.643	16.422			2.248	-3.140	17.470	17.470	-13.236	0.000	29.507	0.000	0.000	-12.593	25.063	3.431	0.793	
1978	4.184		5.676	16.750			2.293	0.744	25.061	25.061	-5.678	0.000	24.472	0.000	0.000	-5.035	25.063	3.431	2.788	
1979	0.279		5.610	17.085			2.339	-17.939	2.697	2.697	-27.976	0.000	0.000	-2.861	0.000	-24.472	22.202	3.039	0.279	
1980	0.170		2.773	17.427			2.385		17.984	17.984	-9.851	0.000	0.000	-9.208	0.000	0.000	15.855	2.170	0.170	
1981	0.175		2.828	17.776			2.433		18.345	18.345	-9.546	0.000	0.000	-8.903	0.000	0.000	16.160	2.212	0.175	
1982	0.204		2.885	18.131			2.482		18.738	18.738	-9.210	0.000	0.000	-8.567	0.000	0.000	16.496	2.258	0.204	
1983	0.176		2.942	18.494			2.531		19.081	19.081	-8.925	0.000	0.000	-8.282	0.000	0.000	16.781	2.297	0.176	
1984	11.617		3.001	18.864			2.582		30.900	30.900	2.835	2.835	3.478	0.000	0.000	3.478	25.063	3.431	2.788	
1985	21.237		3.061	19.241			2.634		40.905	40.905	12.781	12.781	16.902	0.000	0.000	13.424	25.063	3.431	2.788	
1986	43.806		3.122	19.626			2.686		63.868	63.868	35.682	35.682	42.100	0.000	11.128	25.198	25.063	3.431	13.915	
1987	0.869		3.185	20.018			2.740		21.332	21.332	-6.916	0.000	35.827	0.000	0.000	-6.273	25.063	3.431	0.869	
1988	25.929		3.249	20.418			2.795		46.801	46.801	18.490	18.490	42.100	0.000	12.860	6.273	25.063	3.431	15.647	
1989	6.194		3.314	20.827			2.851		27.484	27.484	-0.893	0.000	41.850	0.000	0.000	-0.250	25.063	3.431	2.788	
1990	60.447		3.380	21.243			2.908		82.163	82.163	53.720	53.720	42.100	0.000	54.113	0.250	25.063	3.431	56.901	
1991	137.999		3.447	21.668			2.966		160.149	160.149	131.638	131.638	42.100	0.000	132.281	0.000	25.063	3.431	135.069	
1992	58.935		3.516	22.102			3.025		81.528	81.528	52.948	52.948	42.100	0.000	53.591	0.000	25.063	3.431	56.379	
1993	2.667		3.587	22.544			3.086		25.712	25.712	-2.938	0.000	39.805	0.000	0.000	-2.295	25.063	3.431	2.667	
1994	2.214		3.658	22.995			3.148		25.719	25.719	-3.002	0.000	37.446	0.000	0.000	-2.359	25.063	3.431	2.214	
1995	33.261		3.691	23.198			3.175		56.974	56.974	28.221	28.221	42.100	0.000	24.209	4.654	25.063	3.431	26.997	
1996	33.261		3.723	23.402			3.203		57.183	57.183	28.396	28.396	42.100	0.000	29.039	0.000	25.063	3.431	31.827	
1997	33.261		3.756	23.605			3.231		57.391	57.391	28.572	28.572	42.100	0.000	29.215	0.000	25.063	3.431	32.003	
1998	33.261		3.788	23.809			3.259		57.599	57.599	28.748	28.748	42.100	0.000	29.391	0.000	25.063	3.431	32.179	
1999	33.261		3.820	24.013			3.287		57.807	57.807	28.924	28.924	42.100	0.000	29.567	0.000	25.063	3.431	32.354	
2000	33.261		3.853	24.216			3.315		58.015	58.015	29.099	29.099	42.100	0.000	29.742	0.000	25.063	3.431	32.530	
2001	33.261		3.885	24.420			3.343		58.223	58.223	29.275	29.275	42.100	0.000	29.918	0.000	25.063	3.431	32.706	
2002	33.261		3.920	24.636			3.372		58.444	58.444	29.462	29.462	42.100	0.000	0.000	0.000	25.063	3.431	32.892	
2003	33.261		3.953	24.849			3.401		58.662	58.662	29.645	29.645	42.100	0.000	0.000	0.000	25.063	3.431	33.076	
2004	33.261		3.988	25.063			3.431		58.881	58.881	29.830	29.830	42.100	0.000	0.000	0.000	25.063	3.431	33.261	

**Cálculo del escurrimiento disponible en la subcuenca V5 San Gaspar. Los usos contempla la cuenca V4**  
 Ar=0 debido a que se considero una sola cuenca

Demandas actuales (Mm³): 58.38

Capacidad de almacenamiento (Mm³):

riego	pecuario	urbano	total
			85.000

mínima	máxima
0	62.6

Año	Año proyectado	Salidas históricas (Mm³)					Entradas históricas (Mm³)					Cp	Escurrimiento (Mm³)					Usos actuales (Mm³)		Escurrimiento disponible (Mm³)			
		Ab	Ex	Ev	Ev (V4+V5)	Uc	Uc V4+V5	Ar	Im	R	R (V4+V5)		Δ V (V4+V5)	CP+Esc. disp. Ar	menos usos actuales	excedente	almacenado	deficit	derrames		D V'	Uc real	R real
1945	2005	66.399		1.204	2.591	20.817	29.531	0.000		3.166	4.358	0.000	94.162	94.162	6.571	6.571	62.600	0.000	0.000	0.000	85.000	12.926	19.497
1946	2006	62.513		1.228	2.643	21.233	30.121	0.000		3.229	4.446	0.000	90.831	90.831	4.603	4.603	62.600	0.000	4.603	0.000	85.000	12.926	16.115
1947	2007	127.474		1.253	2.695	21.658	30.724	0.000		3.293	4.534	0.000	156.359	156.359	70.106	70.106	62.600	0.000	70.106	0.000	85.000	12.926	81.589
1948	2008	161.338		1.278	2.749	22.091	31.338	0.000		3.359	4.625	0.000	190.801	190.801	104.522	104.522	62.600	0.000	104.522	0.000	85.000	12.926	115.977
1949	2009	64.429		1.304	2.804	22.533	31.965	0.000		3.427	4.718	0.000	94.481	94.481	8.177	8.177	62.600	0.000	8.177	0.000	85.000	12.926	19.602
1950	2010	66.850		1.330	2.858	22.984	32.604	0.000		3.495	4.812	10.964	111.339	111.339	25.009	25.009	62.600	0.000	25.009	0.000	85.000	12.926	33.532
1951	2011	63.737		1.356	2.914	23.443	33.257	0.000		3.565	4.908	-8.516	90.105	90.105	3.749	3.749	62.600	0.000	3.749	0.000	85.000	12.926	11.495
1952	2012	99.048		1.383	2.979	23.912	33.922	0.000		3.636	5.006	6.372	140.734	140.734	54.351	54.351	62.600	0.000	54.351	0.000	85.000	12.926	62.261
1953	2013	122.532		1.411	3.037	24.390	34.600	0.000		3.709	5.107	13.485	171.818	171.818	85.407	85.407	62.600	0.000	85.407	0.000	85.000	12.926	93.436
1954	2014	51.084		1.439	3.099	24.878	35.292	0.000		3.783	5.209	-11.160	76.686	76.686	-9.753	0.000	62.600	0.000	0.000	-9.753	85.000	12.926	7.686
1955	2015	230.962		1.468	3.162	25.376	35.998	0.000		3.859	5.313	14.795	282.188	282.188	195.720	195.720	62.600	0.000	185.967	9.753	85.000	12.926	194.615
1956	2016	88.955		1.497	3.225	25.883	36.718	0.000		3.936	5.419	-1.965	125.301	125.301	38.804	38.804	62.600	0.000	38.804	0.000	85.000	12.926	46.215
1957	2017	30.086		1.527	3.288	26.401	37.452	0.000		4.015	5.527	-10.011	58.879	58.879	-27.648	0.000	34.952	0.000	0.000	-27.648	85.000	12.926	7.574
1958	2018	499.553		1.558	3.351	26.929	38.201	0.000		4.095	5.638	16.331	554.434	554.434	467.876	467.876	62.600	0.000	440.228	27.648	85.000	12.926	448.725
1959	2019	123.453		1.589	3.414	27.467	38.965	0.000		4.177	5.751	-3.485	160.958	160.958	74.369	74.369	62.600	0.000	74.369	0.000	85.000	12.926	81.108
1960	2020	44.485		1.621	3.477	28.017	39.745	0.000		4.260	5.866	-14.761	70.305	70.305	-16.316	0.000	46.284	0.000	0.000	-16.316	85.000	12.926	7.845
1961	2021	41.027		1.653	3.540	28.577	40.540	0.000		4.346	5.983	-5.015	76.413	76.413	-10.240	0.000	36.043	0.000	0.000	-10.240	85.000	12.926	8.735
1962	2022	90.944		1.686	3.603	29.149	41.350	0.000		4.433	6.103	1.800	133.459	133.459	46.773	46.773	62.600	0.000	20.216	26.557	85.000	12.926	29.361
1963	2023	131.465		1.720	3.666	29.732	42.177	0.000		4.521	6.225	-0.165	172.834	172.834	86.114	86.114	62.600	0.000	86.114	0.000	85.000	12.926	95.178
1964	2024	93.959		1.754	3.729	30.326	43.021	0.000		4.612	6.349	19.123	155.844	155.844	69.089	69.089	62.600	0.000	69.089	0.000	85.000	12.926	77.679
1965	2025	401.440		1.790	3.792	30.933	43.881	0.000		4.704	6.476	0.245	446.409	446.409	359.619	359.619	62.600	0.000	359.619	0.000	85.000	12.926	367.016
1966	2026	161.890		1.825	3.855	31.551	44.759	0.000		4.798	6.606	-1.248	206.133	206.133	119.307	119.307	62.600	0.000	119.307	0.000	85.000	12.926	126.721
1967	2027	418.481		1.862	3.918	32.182	45.654	0.000		4.894	6.738	1.949	466.577	466.577	379.715	379.715	62.600	0.000	379.715	0.000	85.000	12.926	387.272
1968	2028	82.414		1.899	3.981	32.826	46.567	0.000		4.992	6.873	-4.707	124.711	124.711	37.812	37.812	62.600	0.000	37.812	0.000	85.000	12.926	45.327
1969	2029	24.942		1.937	4.044	33.483	47.499	0.000		5.092	7.010	-18.996	53.244	53.244	-33.693	0.000	28.907	0.000	0.000	-33.693	85.000	12.926	8.053
1970	2030	192.787		1.976	4.107	34.152	48.448	0.000		5.193	7.150	16.811	257.219	257.219	170.244	170.244	62.600	0.000	136.551	33.693	85.000	12.926	145.129
1971	2031	518.085		2.015	4.170	34.835	49.417	0.000		5.297	7.293	5.669	573.225	573.225	486.210	486.210	62.600	0.000	486.210	0.000	85.000	12.926	493.804
1972	2032	48.771		2.056	4.233	35.532	50.406	0.000		5.403	7.439	0.360	99.847	99.847	12.791	12.791	62.600	0.000	12.791	0.000	85.000	12.926	20.023
1973	2033	476.342		2.097	4.296	36.243	51.414	0.000		5.511	7.588	0.116	528.237	528.237	441.141	441.141	62.600	0.000	441.141	0.000	85.000	12.926	448.210
1974	2034	73.337		2.139	4.359	36.968	52.442	0.000		5.622	7.740	-6.536	119.318	119.318	32.179	32.179	62.600	0.000	32.179	0.000	85.000	12.926	39.429
1975	2035	209.683		2.181	4.422	37.707	53.491	0.000		5.734	7.895	4.333	267.351	267.351	180.170	180.170	62.600	0.000	180.170	0.000	85.000	12.926	187.538
1976	2036	552.821		2.225	4.485	38.461	54.561	0.000		5.849	8.052	4.819	611.942	611.942	524.717	524.717	62.600	0.000	524.717	0.000	85.000	12.926	532.074
1977	2037	108.217		2.270	4.548	39.230	55.652	0.000		5.966	8.214	-3.140	160.428	160.428	73.158	73.158	62.600	0.000	73.158	0.000	85.000	12.926	80.441
1978	2038	86.812		2.315	4.611	40.015	56.765	0.000		6.085	8.378	0.744	143.934	143.934	56.619	56.619	62.600	0.000	56.619	0.000	85.000	12.926	63.869
1979	2039	35.371		2.361	4.674	40.815	57.900	0.000		6.207	8.545	-17.939	74.759	74.759	-12.603	0.000	49.997	0.000	0.000	-12.603	85.000	12.926	7.316
1980	2040	155.951		2.409	4.737	41.631	59.058	0.000		6.331	8.716	0.000	211.475	211.475	124.066	124.066	62.600	0.000	111.464	12.603	85.000	12.926	121.617
1981	2041	36.760		2.457	4.800	42.464	60.240	0.000		6.457	8.891	0.000	93.394	93.394	5.937	5.937	62.600	0.000	5.937	0.000	85.000	12.926	16.035
1982	2042	12.300		2.506	4.863	43.313	61.444	0.000		6.587	9.068	0.000	70.066	70.066	-17.439	0.000	45.161	0.000	0.000	-17.439	85.000	12.926	10.041
1983	2043	92.105		2.556	4.926	44.180	62.673	0.000		6.718	9.250	0.000	151.027	151.027	63.471	63.471	62.600	0.000	46.031	17.439	85.000	12.926	56.015
1984	2044	72.499		2.607	4.989	45.063	63.927	0.000		6.853	9.435	0.000	132.599	132.599	44.992	44.992	62.600	0.000	44.992	0.000	85.000	12.926	54.917
1985	2045	58.416		2.659	5.052	45.965	65.205	0.000		6.990	9.623	0.000	119.718	119.718	32.059	32.059	62.600	0.000	32.059	0.000	85.000	12.926	41.924
1986	2046	90.852		2.712	5.115	46.884	66.509	0.000		7.130	9.816	0.000	153.380	153.380	65.668	65.668	62.600	0.000	65.668	0.000	85.000	12.926	75.471
1987	2047	155.951		2.767	5.178	47.821	67.840	0.000		7.272	10.012	0.000	219.730	219.730	131.964	131.964	62.600	0.000	131.964	0.000	85.000	12.926	141.705
1988	2048	191.152		2.822	5.241	48.778	69.196	0.000		7.418	10.213	0.000	256.206	256.206	168.384	168.384	62.600	0.000	168.384	0.000	85.000	12.926	178.062
1989	2049	49.138		2.878	5.304	49.753	70.580	0.000		7.566	10.417	0.000	115.494	115.494	27.615	27.615	62.600	0.000	27.615	0.000	85.000	12.926	37.227
1990	2050	198.775		2.936	5.367	50.749	71.992	0.000		7.717	10.625	0.000	266.458	266.458	178.522	178.522	62.600	0.000	178.522	0.000	85.000	12.926	188.068
1991	2051	582.616		2.995	5.430	51.764	73.432	0.000		7.872	10.838	0.000	651.652	651.652	563.658	563.658	62.600	0.000	563.658	0.000	85.000	12.926	573.136
1992	2052	176.791		3.055	5.																		









Demandas actuales (Mm³): 9.89 CP

62.35

Capacidad de almacenamiento (Mm³) Total:

riego	pecuario	urbano	total
			64.019

mínima	máxima
0	23.9

**Cálculo del escurrimiento disponible en la subcuenca V9 Paso del Sabino, incluyendo los usos y almacenamientos de las subcuencas V6, V7 y V8**

Año	Año proyectado	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escorrimento (Mm³)						Δ V'	Usos actuales (Mm³)		Escorrimento disponible (Mm³)
		Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar'	menos usos actuales (Uc+Ev+Im)	excedente	almacenado	deficit	derrames		Uc real=Uc total actual-deficit	R real	
1945	2005	144.396		1.894	24.735	59.011		4.514	0.000	107.501	125.569	59.656	59.656	23.900	0.000	0.000	0.000	64.019	11.683	71.339
1946	2006	136.419		1.929	25.152	59.773		4.590	0.000	99.138	129.995	64.047	64.047	23.900	0.000	64.047	0.000	64.019	11.684	75.730
1947	2007	140.645		1.965	25.577	61.376		4.668	0.000	102.143	142.679	76.694	76.694	23.900	0.000	76.694	0.000	64.019	11.685	88.379
1948	2008	223.098		2.002	26.011	58.943		4.748	0.000	187.421	227.838	161.817	161.817	23.900	0.000	161.817	0.000	64.019	11.686	173.503
1949	2009	111.167		2.039	26.454	58.831		4.829	0.000	76.000	97.977	31.919	31.919	23.900	0.000	31.919	0.000	64.019	11.687	43.606
1950	2010	145.457		2.078	26.905	60.483		4.912	0.000	109.044	143.399	77.302	77.302	23.900	0.000	77.302	0.000	64.019	11.688	88.990
1951	2011	144.904		2.117	27.365	60.421		4.997	0.000	108.968	145.530	79.394	79.394	23.900	0.000	79.394	0.000	64.019	11.689	91.084
1952	2012	134.942		2.156	27.835	59.627		5.083	0.000	100.223	125.087	58.911	58.911	23.900	0.000	58.911	0.000	64.019	11.691	70.602
1953	2013	141.313		2.197	28.314	61.223		5.171	0.000	105.430	141.753	75.537	75.537	23.900	0.000	75.537	0.000	64.019	11.692	87.229
1954	2014	126.625		2.238	28.802	60.550		5.261	0.000	91.855	114.663	48.405	48.405	23.900	0.000	48.405	0.000	64.019	11.693	60.098
1955	2015	259.882		2.280	29.300	60.852		5.352	0.000	225.258	284.663	218.364	218.364	23.900	0.000	218.364	0.000	64.019	11.694	230.058
1956	2016	139.945		2.323	29.809	57.137		5.445	0.000	109.495	139.304	72.961	72.961	23.900	0.000	72.961	0.000	64.019	11.695	84.656
1957	2017	84.948		2.367	30.327	58.090		5.540	0.000	54.012	73.059	6.673	6.673	23.900	0.000	6.673	0.000	64.019	11.696	18.368
1958	2018	446.994		2.412	30.856	61.155		5.638	0.000	413.469	474.624	408.193	408.193	23.900	0.000	408.193	0.000	64.019	11.697	419.890
1959	2019	121.918		2.458	31.395	58.131		5.737	0.000	91.903	118.362	51.886	51.886	23.900	0.000	51.886	0.000	64.019	11.698	63.583
1960	2020	107.272		2.504	31.945	6.530		5.838	0.000	129.354	133.123	66.599	66.599	23.900	0.000	66.599	0.000	64.019	11.699	78.298
1961	2021	62.454		2.552	32.506	4.380		5.941	0.000	87.192	91.384	24.813	24.813	23.900	0.000	24.813	0.000	64.019	11.700	36.513
1962	2022	115.380		2.600	33.078	9.662		6.046	0.000	135.351	145.013	78.394	78.394	23.900	0.000	78.394	0.000	64.019	11.701	90.094
1963	2023	115.200		2.650	33.662	60.057		6.153	0.000	85.303	121.119	54.450	54.450	23.900	0.000	54.450	0.000	64.019	11.701	66.152
1964	2024	91.761		2.700	34.258	62.464		6.262	0.000	59.993	94.143	27.423	27.423	23.900	0.000	27.423	0.000	64.019	11.702	39.126
1965	2025	188.407		2.751	34.865	32.573		6.374	0.000	187.077	219.650	152.879	152.879	23.900	0.000	152.879	0.000	64.019	11.703	164.583
1966	2026	179.213		2.804	35.485	47.069		6.487	0.000	163.945	211.014	144.191	144.191	23.900	0.000	144.191	0.000	64.019	11.704	155.895
1967	2027	521.148		2.857	36.116	119.050		6.603	0.000	434.468	516.065	449.189	449.189	23.900	0.000	449.189	0.000	64.019	11.705	460.894
1968	2028	133.528		2.912	36.761	20.349		6.722	0.000	146.130	166.479	99.548	99.548	23.900	0.000	99.548	0.000	64.019	11.706	111.254
1969	2029	57.397		2.968	37.418	3.965		6.842	0.000	86.976	90.941	23.954	23.954	23.900	0.000	23.954	0.000	64.019	11.707	35.661
1970	2030	210.490		3.024	38.089	48.117		6.966	0.000	196.521	244.638	177.594	177.594	23.900	0.000	177.594	0.000	64.019	11.708	189.302
1971	2031	392.054		3.082	38.773	94.115		7.091	0.000	332.703	419.409	352.307	352.307	23.900	0.000	352.307	0.000	64.019	11.708	364.016
1972	2032	67.332		3.141	39.471	55.813		7.219	0.000	46.912	84.743	17.583	17.583	23.900	0.000	17.583	0.000	64.019	11.709	29.292
1973	2033	567.498		3.202	40.182	98.406		7.350	0.000	505.126	577.525	510.305	510.305	23.900	0.000	510.305	0.000	64.019	11.710	522.015
1974	2034	67.371		3.263	40.908	56.972		7.483	0.000	47.087	73.634	6.351	6.351	23.900	0.000	6.351	0.000	64.019	11.711	18.062
1975	2035	192.049		3.326	41.649	31.947		7.619	0.000	197.457	229.404	162.059	162.059	23.900	0.000	162.059	0.000	64.019	11.712	173.771
1976	2036	470.418		3.390	42.404	99.165		7.758	0.000	409.288	469.606	402.197	402.197	23.900	0.000	402.197	0.000	64.019	11.712	413.910
1977	2037	123.295		3.455	43.174	11.136		7.899	0.000	150.889	162.025	94.551	94.551	23.900	0.000	94.551	0.000	64.019	11.713	106.264
1978	2038	147.636		3.521	43.960	57.657		8.043	0.000	129.416	178.667	111.127	111.127	23.900	0.000	111.127	0.000	64.019	11.714	122.841
1979	2039	49.557		3.589	44.761	62.418		8.191	0.000	27.299	58.638	-8.970	0.000	14.930	0.000	0.000	-8.970	64.019	11.715	11.715
1980	2040	68.215		3.658	45.578	61.367		8.341	0.000	47.744	78.244	10.566	10.566	23.900	0.000	1.596	8.970	64.019	11.715	13.312
1981	2041	51.947		3.729	46.412	65.757		8.494	0.000	27.837	58.337	-9.411	0.000	14.489	0.000	0.000	-9.411	64.019	11.716	11.716
1982	2042	54.359		3.801	47.263	65.041		8.650	0.000	31.732	62.232	-5.588	0.000	8.901	0.000	0.000	-5.588	64.019	11.717	11.717
1983	2043	127.126		3.874	48.130	41.976		8.809	0.000	128.345	158.844	90.951	90.951	23.900	0.000	75.952	14.999	64.019	11.717	87.669
1984	2044	124.291		3.949	49.015	30.353		8.972	0.000	137.931	168.284	100.316	100.316	23.900	0.000	100.316	0.000	64.019	11.718	112.034
1985	2045	77.109		4.026	49.917	38.674		9.137	0.000	83.241	113.740	45.696	45.696	23.900	0.000	45.696	0.000	64.019	11.719	57.414
1986	2046	167.521		4.104	50.838	45.543		9.306	0.000	167.613	198.113	129.990	129.990	23.900	0.000	129.990	0.000	64.019	11.719	141.709
1987	2047	53.409		4.183	51.777	26.526		9.479	0.000	73.364	97.687	29.485	29.485	23.900	0.000	29.485	0.000	64.019	11.720	41.204
1988	2048	154.089		4.264	52.735	54.971		9.655	0.000	146.462	176.962	108.679	108.679	23.900	0.000	108.679	0.000	64.019	11.720	120.399
1989	2049	51.498		4.347	53.712	34.809		9.834	0.000	64.913	81.616	13.250	13.250	23.900	0.000	13.250	0.000	64.019	11.721	24.972
1990	2050	151.943		4.431	54.708	79.311		10.017	0.000	121.755	152.254	83.804	83.804	23.900	0.000	83.804	0.000	64.019	11.722	95.526
1991	2051	504.443		4.517	55.724	324.048		10.204	0.000	230.433	537.752	469.216	469.216	23.900	0.000	469.216	0.000	64.019	11.722	480.938
1992	2052	258.449		4.605	56.761	85.083		10.394	0.000	224.338	301.566	232.943	232.943	23.900	0.000	232.943	0.000	64.019	11.723	244.665
1993	2053	59.949		4.694	57.819	40.787		10.588	0.000	71.087	98.838	30.125	30.125	23.900	0.000	30.125	0.000	64.019	11.723	41.848
1994	2054	50.636		4.786	58.897	40.932		10.786	0.000	62.601	74.450	5.645	5.645	23.900	0.000	5.645	0.000	64.019	11.724	17.369
1995	2055	78.646		4.827	59.390	35.817		10.876	0.000	96.170	126.539	57.693	57.693	23.900	0.000	57.693	0.000	64.019	11.724	69.417
1996	2056	49.559		4.869	59.884	39.015		10.967	0.000	64.330	74.305	5.417	5.417	23.900	0.000	5.417	0.000	64.019	11.724	17.141
1997	2057	72.428		4.910	60.377	42.400		11.057	0.000	84.258	95.612	26.683	26.683	23.900	0.000	26.683	0.000	64.019	11.724	38.407
1998	2058	158.029		4.951	60.871	39.913		11.147	0.000	172.790	196.425	127.455	127.455	23.900	0.000	127.455	0.000	6		

**Cálculo del escurrimiento disponible en la subcuenca V10 San Miguel**

Demandas actuales (Mm³):

riego	pecuario	urbano	total
2.6	1.6	0	4.324

mínima
0

Año	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Eskurrimiento (Mm³)						Δ V	Usos actuales (Mm³)	
	Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar	menos usos actuales	excedente	almacenado	deficit	derrames		Uc real	R real
1945	70.262		0.112	1.488		-	0.408		71.454	71.454	67.018	67.018	91.500	-		-	4.324	1.185
1946	68.155		0.114	1.518			0.416		69.371	69.371	64.932	64.932	91.500	0.000	65.056	0.000	4.324	1.185
1947	69.234		0.117	1.548			0.424		70.474	70.474	66.034	66.034	91.500	0.000	66.158	0.000	4.324	1.185
1948	90.746		0.119	1.579			0.433		92.011	92.011	87.568	87.568	91.500	0.000	87.692	0.000	4.324	1.185
1949	61.485		0.121	1.611			0.441		62.775	62.775	58.330	58.330	91.500	0.000	58.454	0.000	4.324	1.185
1950	70.415		0.124	1.643			0.450		71.731	71.731	67.284	67.284	91.500	0.000	67.408	0.000	4.324	1.185
1951	70.244		0.126	1.676			0.459		71.587	71.587	67.137	67.137	91.500	0.000	67.261	0.000	4.324	1.185
1952	67.615		0.129	1.709			0.469		68.985	68.985	64.532	64.532	91.500	0.000	64.656	0.000	4.324	1.185
1953	69.252		0.131	1.743			0.478		70.649	70.649	66.194	66.194	91.500	0.000	66.318	0.000	4.324	1.185
1954	65.388		0.134	1.778			0.487		66.813	66.813	62.355	62.355	91.500	0.000	62.479	0.000	4.324	1.185
1955	100.166		0.137	1.814			0.497		101.619	101.619	97.159	97.159	91.500	0.000	97.283	0.000	4.324	1.185
1956	68.809		0.139	1.850			0.507		70.292	70.292	65.828	65.828	91.500	0.000	65.952	0.000	4.324	1.185
1957	54.415		0.142	1.887			0.517		55.926	55.926	51.460	51.460	91.500	0.000	51.584	0.000	4.324	1.185
1958	148.951		0.145	1.925			0.528		150.493	150.493	146.024	146.024	91.500	0.000	146.148	0.000	4.324	1.185
1959	64.010		0.148	1.963			0.538		65.583	65.583	61.111	61.111	91.500	0.000	61.235	0.000	4.324	1.185
1960	60.153		0.151	2.003			0.549		61.758	61.758	57.283	57.283	91.500	0.000	57.407	0.000	4.324	1.185
1961	23.454		0.154	2.043			0.560		25.090	25.090	20.613	20.613	91.500	0.000	20.737	0.000	4.324	1.185
1962	95.077		0.157	2.083			0.571		96.746	96.746	92.265	92.265	91.500	0.000	92.389	0.000	4.324	1.185
1963	137.269		0.160	2.125			0.583		138.971	138.971	134.487	134.487	91.500	0.000	134.611	0.000	4.324	1.185
1964	72.769		0.163	2.168			0.594		74.505	74.505	70.018	70.018	91.500	0.000	70.142	0.000	4.324	1.185
1965	88.065		0.166	2.211			0.606		89.836	89.836	85.346	85.346	91.500	0.000	85.470	0.000	4.324	1.185
1966	34.543		0.170	2.255			0.618		36.350	36.350	31.856	31.856	91.500	0.000	31.980	0.000	4.324	1.185
1967	229.948		0.173	2.300			0.631		231.791	231.791	227.294	227.294	91.500	0.000	227.418	0.000	4.324	1.185
1968	90.712		0.177	2.346			0.643		92.592	92.592	88.091	88.091	91.500	0.000	88.215	0.000	4.324	1.185
1969	75.119		0.180	2.393			0.656		77.036	77.036	72.532	72.532	91.500	0.000	72.656	0.000	4.324	1.185
1970	72.439		0.184	2.441			0.669		74.395	74.395	69.887	69.887	91.500	0.000	70.011	0.000	4.324	1.185
1971	95.011		0.187	2.490			0.683		97.006	97.006	92.495	92.495	91.500	0.000	92.619	0.000	4.324	1.185
1972	27.508		0.191	2.540			0.696		29.543	29.543	25.028	25.028	91.500	0.000	25.152	0.000	4.324	1.185
1973	204.406		0.195	2.591			0.710		206.481	206.481	201.962	201.962	91.500	0.000	202.086	0.000	4.324	1.185
1974	17.148		0.199	2.642			0.724		19.265	19.265	14.742	14.742	91.500	0.000	14.866	0.000	4.324	1.185
1975	19.295		0.203	2.695			0.739		21.455	21.455	16.928	16.928	91.500	0.000	17.052	0.000	4.324	1.185
1976	77.745		0.207	2.749			0.754		79.948	79.948	75.417	75.417	91.500	0.000	75.541	0.000	4.324	1.185
1977	71.710		0.211	2.804			0.769		73.957	73.957	69.422	69.422	91.500	0.000	69.546	0.000	4.324	1.185
1978	38.308		0.215	2.860			0.784		40.599	40.599	36.060	36.060	91.500	0.000	36.184	0.000	4.324	1.185
1979	44.345		0.220	2.917			0.800		46.682	46.682	42.139	42.139	91.500	0.000	42.263	0.000	4.324	1.185
1980	74.652		0.224	2.976			0.816		77.036	77.036	72.488	72.488	91.500	0.000	72.612	0.000	4.324	1.185
1981	0.543		0.229	3.035			0.832		2.974	2.974	-1.578	0.000	90.046	0.000	0.000	-1.454	4.324	1.185
1982	74.556		0.233	3.096			0.849		77.036	77.036	72.479	72.479	91.500	0.000	71.149	1.454	4.324	1.185
1983	83.486		0.238	3.158			0.866		86.016	86.016	81.454	81.454	91.500	0.000	81.578	0.000	4.324	1.185
1984	73.395		0.243	3.221			0.883		75.976	75.976	71.409	71.409	91.500	0.000	71.533	0.000	4.324	1.185
1985	44.645		0.247	3.285			0.901		47.278	47.278	42.706	42.706	91.500	0.000	42.830	0.000	4.324	1.185
1986	167.855		0.252	3.351			0.919		170.540	170.540	165.964	165.964	91.500	0.000	166.088	0.000	4.324	1.185
1987	34.188		0.257	3.418			0.937		36.927	36.927	32.345	32.345	91.500	0.000	32.469	0.000	4.324	1.185
1988	71.193		0.263	3.486			0.956		73.986	73.986	69.400	69.400	91.500	0.000	69.524	0.000	4.324	1.185
1989	44.340		0.268	3.556			0.975		47.189	47.189	42.597	42.597	91.500	0.000	42.721	0.000	4.324	1.185
1990	70.520		0.273	3.627			0.994		73.426	73.426	68.829	68.829	91.500	0.000	68.953	0.000	4.324	1.185
1991	162.534		0.279	3.700			1.014		165.498	165.498	160.896	160.896	91.500	0.000	161.020	0.000	4.324	1.185
1992	98.221		0.284	3.774			1.034		101.245	101.245	96.637	96.637	91.500	0.000	96.761	0.000	4.324	1.185
1993	46.313		0.290	3.849			1.055		49.397	49.397	44.783	44.783	91.500	0.000	44.907	0.000	4.324	1.185
1994	43.818		0.296	3.926			1.076		46.964	46.964	42.344	42.344	91.500	0.000	42.468	0.000	4.324	1.185
1995	51.072		0.299	3.965			1.087		54.249	54.249	49.626	49.626	91.500	0.000	49.750	0.000	4.324	1.185
1996	43.419		0.302	4.005			1.098		46.627	46.627	42.001	42.001	91.500	0.000	42.125	0.000	4.324	1.185
1997	46.069		0.304	4.044			1.108		49.309	49.309	44.680	44.680	91.500	0.000	44.804	0.000	4.324	1.185
1998	74.434		0.307	4.083			1.119		77.705	77.705	73.073	73.073	91.500	0.000	73.197	0.000	4.324	1.185
1999	74.434		0.310	4.122			1.130		77.736	77.736	73.102	73.102	91.500	0.000	73.226	0.000	4.324	1.185
2000	74.434		0.313	4.161			1.141		77.767	77.767	73.130	73.130	91.500	0.000	73.254	0.000	4.324	1.185
2001	74.434		0.316	4.200			1.151		77.799	77.799	73.159	73.159	91.500	0.000	73.283	0.000	4.324	1.185
2002			0.319	4.242			1.163						91.500					
2003			0.322	4.283			1.174						91.500					
2004			0.326	4.324			1.185						91.500					

**Cálculo del escurrimiento disponible en la subcuenca V11 El Salto**

Demandas actuales (Mm³):

riego	pecuario	urbano	total
1.43	0.53	0.01	2.030

Capacidad de almacenamiento (Mm³):

mínima	máxima
0	7.6

#jREF!

Año	Salidas históricas (Mm³)				Entradas históricas (Mm³)			Δ V	Cp	Escurrimiento (Mm³)						Δ V'	Usos actuales (Mm³)		Escurrimiento disponible (Mm³)
	Ab	Ex	Ev	Uc	Ar	Im	R			CP+Esc. disp. Ar	menos usos actuales	excedente	almacenado	deficit	derrames		Uc real	R real	
1945	62.307		3.603	0.697			0.394		66.212	66.212	60.580	60.580	7.600	-			2.030	1.149	61.728
1946	127.706		3.675	0.711			0.402		131.689	131.689	125.985	125.985	7.600	0.000	126.045	0.000	2.030	1.149	127.133
1947	126.874		3.748	0.725			0.410		130.937	130.937	125.159	125.159	7.600	0.000	125.219	0.000	2.030	1.149	126.308
1948	50.591		3.823	0.739			0.418		54.735	54.735	48.882	48.882	7.600	0.000	48.942	0.000	2.030	1.149	50.030
1949	64.441		3.899	0.754			0.427		68.668	68.668	62.738	62.738	7.600	0.000	62.798	0.000	2.030	1.149	63.887
1950	46.794		3.977	0.769			0.435		51.105	51.105	45.098	45.098	7.600	0.000	45.158	0.000	2.030	1.149	46.246
1951	72.740		4.057	0.785			0.444		77.138	77.138	71.051	71.051	7.600	0.000	71.111	0.000	2.030	1.149	72.199
1952	73.436		4.138	0.800			0.453		77.922	77.922	71.753	71.753	7.600	0.000	71.813	0.000	2.030	1.149	72.902
1953	32.448		4.221	0.816			0.462		37.023	37.023	30.773	30.773	7.600	0.000	30.833	0.000	2.030	1.149	31.921
1954	17.287		4.305	0.833			0.471		21.954	21.954	15.619	15.619	7.600	0.000	15.679	0.000	2.030	1.149	16.767
1955	116.290		4.391	0.849			0.481		121.050	121.050	114.628	114.628	7.600	0.000	114.688	0.000	2.030	1.149	115.777
1956	113.601		4.479	0.866			0.490		118.456	118.456	111.947	111.947	7.600	0.000	112.007	0.000	2.030	1.149	113.096
1957	3.199		4.569	0.884			0.500		8.151	8.151	1.552	1.552	7.600	0.000	1.612	0.000	2.030	1.149	2.701
1958	263.050		4.660	0.901			0.510		268.101	268.101	261.411	261.411	7.600	0.000	261.471	0.000	2.030	1.149	262.559
1959	93.884		4.753	0.919			0.520		99.036	99.036	92.253	92.253	7.600	0.000	92.313	0.000	2.030	1.149	93.402
1960	47.913		4.849	0.938			0.531		53.168	53.168	46.290	46.290	7.600	0.000	46.350	0.000	2.030	1.149	47.439
1961	104.734		4.945	0.956			0.541		110.095	110.095	103.119	103.119	7.600	0.000	103.179	0.000	2.030	1.149	104.268
1962	47.951		5.044	0.976			0.552		53.419	53.419	46.344	46.344	7.600	0.000	46.404	0.000	2.030	1.149	47.493
1963	219.899		5.145	0.995			0.563		225.477	225.477	218.301	218.301	7.600	0.000	218.361	0.000	2.030	1.149	219.450
1964	46.947		5.248	1.015			0.574		52.636	52.636	45.358	45.358	7.600	0.000	45.418	0.000	2.030	1.149	46.507
1965	214.039		5.353	1.035			0.586		219.842	219.842	212.459	212.459	7.600	0.000	212.519	0.000	2.030	1.149	213.607
1966	57.720		5.460	1.056			0.597		63.639	63.639	56.148	56.148	7.600	0.000	56.208	0.000	2.030	1.149	57.297
1967	199.005		5.569	1.077			0.609		205.042	205.042	197.443	197.443	7.600	0.000	197.503	0.000	2.030	1.149	198.591
1968	135.960		5.681	1.099			0.622		142.118	142.118	134.407	134.407	7.600	0.000	134.467	0.000	2.030	1.149	135.556
1969	11.404		5.794	1.121			0.634		17.685	17.685	9.860	9.860	7.600	0.000	9.920	0.000	2.030	1.149	11.009
1970	147.008		5.910	1.143			0.647		153.414	153.414	145.474	145.474	7.600	0.000	145.534	0.000	2.030	1.149	146.622
1971	177.172		6.029	1.166			0.660		183.707	183.707	175.648	175.648	7.600	0.000	175.708	0.000	2.030	1.149	176.797
1972	24.690		6.149	1.189			0.673		31.355	31.355	23.176	23.176	7.600	0.000	23.236	0.000	2.030	1.149	24.325
1973	260.167		6.272	1.213			0.686		266.966	266.966	258.664	258.664	7.600	0.000	258.724	0.000	2.030	1.149	259.813
1974	32.835		6.398	1.237			0.700		39.770	39.770	31.342	31.342	7.600	0.000	31.402	0.000	2.030	1.149	32.491
1975	157.746		6.525	1.262			0.714		164.819	164.819	156.264	156.264	7.600	0.000	156.324	0.000	2.030	1.149	157.412
1976	245.891		6.656	1.287			0.728		253.106	253.106	244.420	244.420	7.600	0.000	244.480	0.000	2.030	1.149	245.568
1977	121.193		6.789	1.313			0.743		128.552	128.552	119.733	119.733	7.600	0.000	119.793	0.000	2.030	1.149	120.882
1978	158.858		6.925	1.339			0.758		166.364	166.364	157.409	157.409	7.600	0.000	157.469	0.000	2.030	1.149	158.558
1979	56.467		7.063	1.366			0.773		64.123	64.123	55.030	55.030	7.600	0.000	55.090	0.000	2.030	1.149	56.179
1980	87.429		7.205	1.393			0.788		95.238	95.238	86.004	86.004	7.600	0.000	86.064	0.000	2.030	1.149	87.152
1981	75.830		7.349	1.421			0.804		83.796	83.796	74.417	74.417	7.600	0.000	74.477	0.000	2.030	1.149	75.566
1982	11.131		7.496	1.450			0.820		19.256	19.256	9.730	9.730	7.600	0.000	9.790	0.000	2.030	1.149	10.879
1983	188.223		7.646	1.479			0.837		196.511	196.511	186.835	186.835	7.600	0.000	186.895	0.000	2.030	1.149	187.984
1984	204.661		7.799	1.508			0.853		213.114	213.114	203.285	203.285	7.600	0.000	203.345	0.000	2.030	1.149	204.434
1985	80.659		7.955	1.538			0.870		89.282	89.282	79.297	79.297	7.600	0.000	79.357	0.000	2.030	1.149	80.446
1986	151.870		8.114	1.569			0.888		160.664	160.664	150.521	150.521	7.600	0.000	150.581	0.000	2.030	1.149	151.669
1987	36.923		8.276	1.600			0.906		45.894	45.894	35.588	35.588	7.600	0.000	35.648	0.000	2.030	1.149	36.737
1988	134.468		8.441	1.632			0.924		143.618	143.618	133.146	133.146	7.600	0.000	133.206	0.000	2.030	1.149	134.295
1989	139.287		8.610	1.665			0.942		148.620	148.620	137.980	137.980	7.600	0.000	138.040	0.000	2.030	1.149	139.128
1990	140.926		8.782	1.698			0.961		150.446	150.446	139.634	139.634	7.600	0.000	139.694	0.000	2.030	1.149	140.782
1991	142.566		8.958	1.732			0.980		152.276	152.276	141.288	141.288	7.600	0.000	141.348	0.000	2.030	1.149	142.437
1992	144.205		9.137	1.767			1.000		154.110	154.110	142.942	142.942	7.600	0.000	143.002	0.000	2.030	1.149	144.091
1993	145.845		9.320	1.802			1.020		155.947	155.947	144.597	144.597	7.600	0.000	144.657	0.000	2.030	1.149	145.746
1994	139.250		9.506	1.838			1.040		149.555	149.555	138.018	138.018	7.600	0.000	138.078	0.000	2.030	1.149	139.167
1995	78.350		9.604	1.857			1.051		88.760	88.760	77.127	77.127	7.600	0.000	77.187	0.000	2.030	1.149	78.275
1996	150.767		9.701	1.876			1.062		161.282	161.282	149.552	149.552	7.600	0.000	149.612	0.000	2.030	1.149	150.700
1997	152.455		9.798	1.895			1.072		163.075	163.075	151.247	151.247	7.600	0.000	151.307	0.000	2.030	1.149	152.396
1998	154.142		9.895	1.914			1.083		164.868	164.868	152.943	152.943	7.600	0.000	153.003	0.000	2.030	1.149	154.092
1999	155.830		9.992	1.932			1.093		166.661	166.661	154.639	154.639	7.600	0.000	154.699	0.000	2.030	1.149	155.787
2000	109.450		10.089	1.951			1.104		120.387	120.387	108.267	108.267	7.600	0.000	108.327	0.000	2.030	1.149	109.416
2001	0.000		10.187	1.970			1.115		11.042	11.042	-1.175	0.000	7.600	0.000	0.000	0.000	2.030	1.149	0.000
2002	75.000		10.284	1.990			1.126		86.148	86.148	73.834	73.834	7.600	0.000	73.834	0.000	2.030	1.149	74.983
2003	120.000		10.381	2.010			1.137		131.254	131.254	118.843	118.843	7.600	0.000	118.843	0.000	2.030	1.149	119.991
2004	145.000		10.478	2.030			1.149		156.359	156.359	143.851	143.851	7.600	0.000	143.851	0.000	2.030	1.149	145.000

**Cálculo del escurrimiento disponible en la subcuenca V12 La Cuña, incluye las cuencas V10 y V11**

Demandas actuales (Mm³):			
riego	pecuario	urbano	total
			18.381

Capacidad de almacenamiento (Mm³):	
mínima	máxima
0	113.1

$$\text{Esc disp} = \text{Cp} + \text{Ar disp} + \text{R} + \text{Im} - (\text{Uc} + \text{Ev} + \text{Ex} + \text{DV})$$

Paso del Sabino+San Gaspar

Año	Año proyectado	Salidas históricas (Mm³)						Entradas históricas (Mm³)						D V	Cp	Escurrimiento (Mm³)						Usos actuales (Mm³)		Escurrimiento disponible (Mm³) Con Sabino
		Ab (Est Cuña)	Ex	EV (V10+V11+V12)	Tot	Ev (V12)	Uc (V10+V11+V12)	Ar	Im	R (V10+V11+V12)	R	CP+Esc. disp. Ar	menos usos actuales			excedente	almacenado Total	deficit	derrames	D V'	Uc real=Uc total actual-natural	R real		
1945	2005	473.591			3.956	0.242	6.333	4.149	210.795			1.826	1.024	271.258	362.094	339.757	339.757	113.100	0.000	0.000	0.000	18.381	5.301	345.058
1946	2006	454.634			4.035	0.246	6.460	4.232	198.932			1.863	1.045	264.334	356.179	333.763	333.763	113.100	0.000	333.763	0.000	18.381	5.301	339.064
1947	2007	565.194			4.116	0.251	6.589	4.316	268.119			1.900	1.066	305.880	475.849	453.352	453.352	113.100	0.000	453.352	0.000	18.381	5.301	458.653
1948	2008	757.539			4.198	0.256	6.721	4.403	384.436			1.938	1.087	382.083	671.564	648.985	648.985	113.100	0.000	648.985	0.000	18.381	5.301	654.285
1949	2009	388.014			4.282	0.261	6.855	4.491	175.596			1.977	1.109	221.578	284.786	262.123	262.123	113.100	0.000	262.123	0.000	18.381	5.301	267.424
1950	2010	413.237			4.368	0.267	6.992	4.580	212.307			2.017	1.131	210.274	332.796	310.048	310.048	113.100	0.000	310.048	0.000	18.381	5.301	315.348
1951	2011	437.659			4.455	0.272	7.132	4.672	208.641			2.057	1.154	238.549	341.128	318.292	318.292	113.100	0.000	318.292	0.000	18.381	5.301	323.592
1952	2012	548.992			4.544	0.277	7.275	4.766	233.990			2.098	1.177	324.724	457.586	434.661	434.661	113.100	0.000	434.661	0.000	18.381	5.301	439.962
1953	2013	518.656			4.635	0.283	7.420	4.861	263.845			2.140	1.200	264.726	445.392	422.376	422.376	113.100	0.000	422.376	0.000	18.381	5.301	427.677
1954	2014	302.673			4.728	0.289	7.569	4.958	177.709			2.183	1.224	135.078	202.861	179.753	179.753	113.100	0.000	179.753	0.000	18.381	5.301	185.053
1955	2015	973.118			4.822	0.294	7.720	5.057	490.844			2.226	1.249	492.590	917.263	894.059	894.059	113.100	0.000	894.059	0.000	18.381	5.301	899.360
1956	2016	492.605			4.919	0.300	7.875	5.158	228.900			2.271	1.274	274.228	405.098	381.798	381.798	113.100	0.000	381.798	0.000	18.381	5.301	387.099
1957	2017	171.576			5.017	0.306	8.032	5.262	115.034			2.316	1.299	67.275	93.217	69.819	69.819	113.100	0.000	69.819	0.000	18.381	5.301	75.120
1958	2018	1570.235			5.118	0.312	8.193	5.367	946.547			2.363	1.325	634.636	1503.251	1479.752	1479.752	113.100	0.000	1479.752	0.000	18.381	5.301	1485.053
1959	2019	527.715			5.220	0.319	8.357	5.474	245.371			2.410	1.352	293.510	438.202	414.601	414.601	113.100	0.000	414.601	0.000	18.381	5.301	419.902
1960	2020	325.349			5.324	0.325	8.524	5.584	125.379			2.458	1.379	184.982	271.125	247.419	247.419	113.100	0.000	247.419	0.000	18.381	5.301	252.720
1961	2021	358.296			5.431	0.332	8.694	5.695	103.481			2.507	1.406	266.432	311.680	287.868	287.868	113.100	0.000	287.868	0.000	18.381	5.301	293.169
1962	2022	437.504			5.540	0.338	8.868	5.809	206.324			2.557	1.434	243.030	362.485	338.565	338.565	113.100	0.000	338.565	0.000	18.381	5.301	343.866
1963	2023	922.081			5.650	0.345	9.045	5.925	246.665			2.609	1.463	687.503	848.833	824.802	824.802	113.100	0.000	824.802	0.000	18.381	5.301	830.103
1964	2024	410.200			5.763	0.352	9.226	6.044	185.720			2.661	1.492	236.809	353.614	329.470	329.470	113.100	0.000	329.470	0.000	18.381	5.301	334.777
1965	2025	1241.029			5.879	0.359	9.411	6.165	589.847			2.714	1.522	663.757	1195.356	1171.096	1171.096	113.100	0.000	1171.096	0.000	18.381	5.301	1176.397
1966	2026	602.290			5.996	0.366	9.599	6.288	341.103			2.768	1.553	274.014	556.630	532.253	532.253	113.100	0.000	532.253	0.000	18.381	5.301	537.554
1967	2027	1899.260			6.116	0.373	9.791	6.414	939.629			2.824	1.584	972.715	1820.880	1796.383	1796.383	113.100	0.000	1796.383	0.000	18.381	5.301	1801.684
1968	2028	593.079			6.238	0.381	9.987	6.542	215.942			2.880	1.615	390.482	547.064	522.444	522.444	113.100	0.000	522.444	0.000	18.381	5.301	527.745
1969	2029	195.763			6.363	0.389	10.187	6.673	82.339			2.938	1.648	127.036	170.750	146.006	146.006	113.100	0.000	146.006	0.000	18.381	5.301	151.307
1970	2030	872.967			6.490	0.396	10.390	6.806	403.277			2.997	1.681	483.574	188.006	173.134	173.134	113.100	0.000	173.134	0.000	18.381	5.301	178.435
1971	2031	1366.076			6.620	0.404	10.598	6.942	910.139			3.056	1.714	470.099	1327.919	1302.917	1302.917	113.100	0.000	1302.917	0.000	18.381	5.301	1308.218
1972	2032	274.666			6.753	0.412	10.810	7.081	116.103			3.118	1.749	173.008	222.324	197.190	197.190	113.100	0.000	197.190	0.000	18.381	5.301	202.491
1973	2033	1969.912			6.888	0.421	11.026	7.223	1043.840			3.180	1.783	940.806	1911.031	1885.762	1885.762	113.100	0.000	1885.762	0.000	18.381	5.301	1891.063
1974	2034	364.506			7.025	0.429	11.247	7.367	140.708			3.244	1.819	238.827	296.318	270.912	270.912	113.100	0.000	270.912	0.000	18.381	5.301	276.213
1975	2035	864.459			7.166	0.438	11.472	7.515	401.732			3.308	1.856	478.056	839.366	813.819	813.819	113.100	0.000	813.819	0.000	18.381	5.301	819.120
1976	2036	1448.454			7.309	0.446	11.701	7.665	1023.239			3.375	1.893	440.851	1386.835	1361.145	1361.145	113.100	0.000	1361.145	0.000	18.381	5.301	1366.446
1977	2037	570.023			7.455	0.455	11.935	7.818	231.512			3.442	1.931	354.460	541.165	515.328	515.328	113.100	0.000	515.328	0.000	18.381	5.301	520.629
1978	2038	462.136			7.605	0.464	12.174	7.975	234.448			3.511	1.969	243.956	430.665	404.680	404.680	113.100	0.000	404.680	0.000	18.381	5.301	409.981
1979	2039	216.733			7.757	0.474	12.418	8.134	84.928			3.581	2.008	148.398	167.428	141.291	141.291	113.100	0.000	141.291	0.000	18.381	5.301	146.591
1980	2040	285.571			7.912	0.483	12.666	8.297	224.167			3.653	2.049	78.329	213.258	186.965	186.965	113.100	0.000	186.965	0.000	18.381	5.301	192.266
1981	2041	270.888			8.070	0.493	12.919	8.463	88.707			3.726	2.090	199.444	227.195	200.744	200.744	113.100	0.000	200.744	0.000	18.381	5.301	206.045
1982	2042	143.917			8.231	0.503	13.178	8.632	66.659			3.800	2.131	94.866	116.624	90.012	90.012	113.100	0.000	90.012	0.000	18.381	5.301	95.313
1983	2043	665.114			8.396	0.513	13.441	8.805	219.231			3.876	2.174	463.844	607.529	580.751	580.751	113.100	0.000	580.751	0.000	18.381	5.301	586.052
1984	2044	571.280			8.564	0.523	13.710	8.981	196.790			3.954	2.218	392.810	559.760	532.816	532.816	113.100	0.000	532.816	0.000	18.381	5.301	538.116
1985	2045	413.312			8.735	0.533	13.984	9.160	135.525			4.033	2.262	296.473	395.811	368.695	368.695	113.100	0.000	368.695	0.000	18.381	5.301	373.996
1986	2046	814.682			8.910	0.544	14.264	9.344	258.373			4.114	2.307	575.369	792.550	765.259	765.259	113.100	0.000	765.259	0.000	18.381	5.301	770.560
1987	2047	251.971			9.088	0.555	14.549	9.531	209.360			4.196	2.353	62.052	244.961	217.492	217.492	113.100	0.000	217.492	0.000	18.381	5.301	222.793
1988	2048	704.370			9.270	0.566	14.840	9.721	345.241			4.280	2.400	378.959	677.420	649.769	649.769	113.100	0.000	649.769	0.000	18.381	5.301	655.070
1989	2049	226.291			9.455	0.577	15.137	9.916	100.636			4.365	2.448	145.882	208.081	180.245	180.245	113.100	0.000	180.245	0.000	18.381	5.301	185.546
1990	2050	806.182			9.644	0.589	15.440	10.114	350.718			4.453	2.497	476.095	759.688	731.663	731.663	113.100	0.000	731.663	0.000	18.381	5.301	736.964
1991	2051	1723.019			9.837	0.601	15.7																	

Disponibles					Azapotillo/Acuña		
Año	Año proyectado	Cuña	Paso del Sabino	San Gaspar	Disponible cuenca propia (Sabino+SGaspar)=Vcp cuña	Cuenca propia Zapotillo	Disponible hasta Zapotillo=VSG +VPS+Vcp zapot
1945	2005	345.058	71.339	19.497	254.222	158.88	249.72
1946	2006	339.064	75.730	16.115	247.218	154.50	246.35
1947	2007	458.653	88.379	81.589	288.684	180.42	350.39
1948	2008	654.285	173.503	115.977	364.805	227.99	517.47
1949	2009	267.424	43.606	19.602	204.216	127.63	190.84
1950	2010	315.348	88.990	33.532	192.826	120.51	243.03
1951	2011	323.592	91.084	11.495	221.014	138.13	240.71
1952	2012	439.962	70.602	62.261	307.099	191.93	324.79
1953	2013	427.677	87.229	93.436	247.011	154.37	335.04
1954	2014	185.053	60.098	7.686	117.270	73.29	141.07
1955	2015	899.360	230.058	194.615	474.688	296.67	721.34
1956	2016	387.099	84.656	46.215	256.229	160.14	291.01
1957	2017	75.120	18.368	7.574	49.178	30.73	56.68
1958	2018	1485.053	419.890	448.725	616.438	385.26	1253.87
1959	2019	419.902	63.583	81.108	275.210	172.00	316.69
1960	2020	252.720	78.298	7.845	166.577	104.11	190.25
1961	2021	293.169	36.513	8.735	247.922	154.94	200.19
1962	2022	343.866	90.094	29.361	224.411	140.25	259.71
1963	2023	830.103	66.152	95.178	668.772	417.96	579.29
1964	2024	334.771	39.126	77.679	217.966	136.22	253.03
1965	2025	1176.397	164.583	367.016	644.799	402.98	934.58
1966	2026	537.554	155.895	126.721	254.938	159.33	441.94
1967	2027	1801.684	460.894	387.272	953.518	595.92	1444.09
1968	2028	527.745	111.254	45.327	371.164	231.97	388.55
1969	2029	151.307	35.661	8.053	107.593	67.24	110.96
1970	2030	798.435	189.302	145.129	464.004	289.99	624.42
1971	2031	1308.218	364.016	493.804	450.399	281.49	1139.31
1972	2032	202.491	29.292	20.023	153.176	95.73	145.05
1973	2033	1891.063	522.015	448.210	920.838	575.50	1545.72
1974	2034	276.213	18.062	39.429	218.721	136.69	194.19
1975	2035	819.120	173.771	187.538	457.810	286.12	647.43
1976	2036	1366.446	413.910	532.074	420.462	262.78	1208.76
1977	2037	520.629	106.264	80.441	333.924	208.69	395.40
1978	2038	409.981	122.841	63.869	223.271	139.54	326.25
1979	2039	146.591	11.715	7.316	127.561	79.72	98.75
1980	2040	192.266	13.312	121.617	57.338	35.83	170.76
1981	2041	206.045	11.716	16.035	178.294	111.43	139.18
1982	2042	95.313	11.717	10.041	73.555	45.97	67.73
1983	2043	586.052	87.669	56.015	442.368	276.47	420.15
1984	2044	538.116	112.034	54.917	371.166	231.97	398.92
1985	2045	373.996	57.414	41.924	274.658	171.65	270.99
1986	2046	770.560	141.709	75.471	553.379	345.85	563.03
1987	2047	222.793	41.204	141.705	39.884	24.93	207.84
1988	2048	655.070	120.399	178.062	356.609	222.87	521.33
1989	2049	185.546	24.972	37.227	123.347	77.09	139.29
1990	2050	736.964	95.526	188.068	453.370	283.34	566.94
1991	2051	1688.161	480.938	573.136	634.087	396.29	1450.36
1992	2052	922.463	244.665	168.563	509.235	318.26	731.49
1993	2053	299.203	41.848	82.236	175.119	109.44	233.53
1994	2054	202.989	17.369	50.605	135.015	84.38	152.35
1995	2055	439.230	69.417	74.784	295.029	184.38	328.59
1996	2056	315.094	17.141	49.788	248.165	155.10	222.03
1997	2057	89.232	38.407	18.448	32.378	20.24	77.09
1998	2058	321.834	139.179	191.164	0.000	0.00	330.34
1999	2059	221.381	128.107	25.435	67.838	42.40	195.94
2000	2060	110.440	52.920	15.267	42.254	26.41	94.59
2001	2061	320.993	107.573	63.084	150.337	93.96	264.61
2002	2062	541.463	112.928	190.297	238.238	148.89	452.12
2003	2063	984.997	227.283	565.138	192.575	120.35	912.78
2004	2064	1027.238	220.338	419.297	387.602	242.24	881.88
<b>PROMEDIO 45-2004</b>		<b>550.977</b>	<b>124.543</b>	<b>130.313</b>	<b>296.263</b>	<b>185.156</b>	<b>440.011</b>

Cuenca La Cuña=	<b>19218</b> km2
Cuenca Zapotillo=	<b>17617</b> km2
Cuenca San Nicolas =	15260 km2
Area Sabino+San Gaspar=	14949 km3
Cuenca Cuña-(Sabino+Gaspar)	<b>4269</b>
Zapotillo-(Sabino+Gaspar)	<b>2668</b>
Factor de transporte Cuenca propia	<b>0.62</b>

## FACTORES MENSUALES DE DISTRIBUCIÓN DEL ESCURRIMIENTO EN LA CUÑA

Año	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000
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	1.000



VOLUMEN DISPONIBLE EN ZAPOTILLO CON LOS FACTORES MENSUALES DE LA CUÑA

Año	Año proyectado	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	Suma
1945	2005	4.704	2.942	2.308	1.599	1.391	34.572	7.118	83.532	100.605	5.662	3.080	2.129	249.643
1946	2006	4.641	2.902	2.277	1.577	1.372	34.105	7.022	82.406	99.249	5.586	3.039	2.100	246.276
1947	2007	6.600	4.128	3.238	2.244	1.952	48.509	9.988	117.207	141.163	7.945	4.322	2.987	350.283
1948	2008	7.423	3.005	2.495	2.194	2.825	84.317	231.437	109.399	56.570	9.447	4.681	3.678	517.473
1949	2009	2.469	1.967	1.596	1.294	1.140	28.669	90.487	40.786	13.538	5.117	1.856	1.917	190.837
1950	2010	2.240	1.819	1.894	1.419	1.270	41.743	106.432	32.202	41.745	6.779	3.315	2.175	243.033
1951	2011	2.291	1.831	1.859	1.527	1.406	38.293	102.223	43.028	36.011	5.985	4.252	2.000	240.706
1952	2012	2.322	2.130	1.843	1.682	1.192	41.394	79.673	94.877	59.169	30.767	6.601	3.141	324.791
1953	2013	3.161	2.540	2.260	1.584	1.223	25.505	51.447	115.223	103.691	11.065	10.106	7.234	335.040
1954	2014	2.783	1.704	1.396	1.165	1.164	24.377	41.560	36.322	10.330	13.944	4.017	2.312	141.074
1955	2015	3.440	2.812	2.431	1.538	1.322	10.069	105.185	332.338	151.125	96.304	8.972	5.803	721.338
1956	2016	3.679	2.836	2.286	1.866	11.293	34.012	117.395	82.957	25.019	3.419	3.163	3.081	291.006
1957	2017	1.532	1.319	1.130	0.872	0.767	3.779	6.480	9.912	19.927	6.809	2.484	1.666	56.677
1958	2018	5.031	3.093	2.373	1.295	1.184	54.209	320.612	158.118	288.860	191.613	209.487	17.995	1253.871
1959	2019	8.556	4.489	3.216	4.716	2.357	28.005	74.228	114.010	41.268	23.588	8.112	4.147	316.690
1960	2020	3.632	2.640	2.278	1.730	1.156	2.436	33.397	89.236	44.432	4.058	2.544	2.710	190.249
1961	2021	2.698	2.049	1.909	1.402	1.249	16.169	120.476	30.533	13.560	4.116	3.031	3.000	200.191
1962	2022	2.509	2.373	2.031	1.981	1.248	31.599	75.563	17.818	81.006	33.813	5.334	4.431	259.705
1963	2023	3.649	2.354	2.134	1.407	1.079	41.553	263.348	171.692	67.350	12.479	4.313	7.935	579.293
1964	2024	5.308	2.240	1.631	1.005	1.318	20.631	42.476	54.788	85.173	29.062	6.033	3.362	253.027
1965	2025	5.572	4.084	2.259	1.939	3.622	9.845	45.012	470.428	219.443	156.471	9.004	6.901	934.579
1966	2026	5.303	5.562	3.871	5.332	2.914	31.264	48.660	182.003	111.758	33.503	6.357	5.419	441.945
1967	2027	13.719	4.441	3.504	1.940	3.722	47.995	94.678	352.364	780.500	112.843	18.889	9.492	1444.087
1968	2028	6.143	5.480	10.362	3.398	2.973	9.688	116.829	86.519	126.493	11.202	4.647	4.817	388.548
1969	2029	4.000	2.907	1.925	1.544	1.291	3.337	39.284	14.182	29.784	7.397	2.600	2.705	110.956
1970	2030	4.114	3.627	3.051	1.948	1.288	70.909	121.602	108.784	227.667	67.964	6.427	7.038	624.420
1971	2031	6.675	4.829	4.474	3.059	3.342	92.912	127.292	441.948	310.984	126.064	9.133	8.593	1139.306
1972	2032	4.361	3.236	2.696	1.756	2.674	21.997	30.093	37.204	29.442	5.363	3.270	2.954	145.046
1973	2033	5.176	4.380	3.226	2.611	1.834	13.485	396.950	926.317	119.558	50.506	14.293	7.386	1545.722
1974	2034	4.476	3.344	3.010	2.148	1.758	2.804	61.367	62.126	41.438	5.661	2.995	3.060	194.186
1975	2035	5.236	3.594	3.468	2.085	1.442	24.099	194.457	333.178	65.382	5.699	4.007	4.780	647.427
1976	2036	4.981	4.087	3.392	2.381	1.586	3.760	723.515	112.981	85.910	214.247	35.187	16.734	1208.760
1977	2037	5.803	3.527	3.185	2.294	1.536	42.201	70.172	43.507	203.749	9.572	5.124	4.727	395.398
1978	2038	4.121	3.593	3.096	1.869	1.282	8.675	26.229	54.410	104.392	106.200	7.154	5.225	326.248
1979	2039	2.676	2.408	2.014	1.340	0.816	1.556	7.895	44.420	28.276	2.415	2.136	2.800	98.752
1980	2040	3.744	3.129	1.981	1.194	0.874	2.144	24.817	82.088	35.948	5.892	5.838	3.114	170.763
1981	2041	3.170	2.216	1.797	1.410	0.675	16.957	44.284	28.598	30.033	4.883	2.808	2.349	139.180
1982	2042	2.126	1.780	1.670	0.803	0.649	0.544	27.761	16.327	5.536	5.543	2.042	2.947	67.727
1983	2043	3.341	2.134	1.911	1.043	0.810	7.697	143.315	133.247	109.845	8.994	4.665	3.150	420.151
1984	2044	3.602	3.448	2.592	1.548	1.113	27.766	162.914	120.391	61.383	6.801	3.760	3.599	398.918
1985	2045	3.654	2.619	2.192	1.417	1.001	37.352	96.441	90.902	18.774	9.796	3.472	3.372	270.991
1986	2046	3.242	2.771	2.488	1.189	0.999	101.355	233.602	42.349	86.982	72.629	8.411	7.008	563.026
1987	2047	4.636	3.173	3.680	1.843	1.640	4.434	68.426	74.875	28.414	9.467	3.205	4.041	207.835
1988	2048	2.042	1.475	1.577	0.900	0.454	3.423	170.952	267.163	58.419	8.833	3.205	2.888	521.331
1989	2049	2.560	2.310	2.322	1.211	0.660	3.873	17.203	57.124	41.703	4.147	2.262	3.913	139.287
1990	2050	3.190	2.727	2.146	1.052	0.821	11.359	57.930	300.320	119.777	50.085	13.843	3.687	566.937
1991	2051	4.150	4.064	3.250	1.963	1.183	2.079	1101.266	129.437	158.820	28.568	8.334	7.245	1450.360
1992	2052	244.843	65.298	9.186	4.262	3.144	15.634	38.054	98.758	56.164	170.172	17.504	8.465	731.485
1993	2053	5.461	4.607	2.956	2.223	1.538	9.079	123.769	18.411	47.262	8.785	4.914	4.523	233.528

1994	2054	4.347	3.524	2.489	1.451	1.033	25.973	14.643	25.035	55.449	10.770	3.928	3.712	152.354
1995	2055	4.531	4.352	3.303	1.938	1.360	3.900	44.452	123.814	123.554	10.555	3.378	3.449	328.586
1996	2056	2.888	2.625	2.474	1.704	1.713	6.105	9.697	21.378	40.470	43.722	86.652	2.598	222.025
1997	2057	2.486	2.147	1.884	2.158	1.502	10.461	23.511	10.365	12.400	5.870	2.096	2.208	77.090
1998	2058	4.564	3.185	2.998	2.215	1.901	3.239	21.080	54.966	110.584	111.912	10.502	3.197	330.343
1999	2059	2.217	2.003	2.227	1.718	0.888	5.230	56.220	54.125	59.517	6.280	2.861	2.654	195.939
2000	2060	2.732	2.470	2.307	1.468	0.893	27.427	18.733	14.900	9.394	7.159	4.382	2.729	94.594
2001	2061	2.743	2.476	2.738	1.054	1.079	19.564	71.598	54.200	85.442	14.055	5.273	4.390	264.613
2002	2062	3.091	2.794	3.030	1.068	0.913	10.732	101.490	163.573	103.638	32.789	25.493	3.509	452.117
2003	2063	3.960	3.584	3.784	2.013	1.326	17.481	148.546	172.415	438.646	93.519	20.810	6.690	912.775
2004	2064	3.536	3.306	3.487	3.070	2.455	48.216	61.512	93.785	486.866	143.984	22.239	9.419	881.875
Minimo		<b>1.532</b>	<b>1.319</b>	<b>1.130</b>	<b>0.803</b>	<b>0.454</b>	<b>0.544</b>	<b>6.480</b>	<b>9.912</b>	<b>5.536</b>	<b>2.415</b>	<b>1.856</b>	<b>1.666</b>	<b>56.677</b>
Máximo		<b>8.251</b>	<b>4.115</b>	<b>2.793</b>	<b>1.870</b>	<b>1.687</b>	<b>23.824</b>	<b>118.253</b>	<b>123.610</b>	<b>106.030</b>	<b>39.425</b>	<b>11.995</b>	<b>4.777</b>	<b>1545.722</b>
Medio		<b>8.985</b>	<b>4.390</b>	<b>2.908</b>	<b>1.907</b>	<b>1.677</b>	<b>24.175</b>	<b>114.547</b>	<b>122.255</b>	<b>105.826</b>	<b>38.298</b>	<b>11.697</b>	<b>4.688</b>	<b>440.007</b>

Año	Escurremientos Registrados			Volúmenes disponibles actuales		
	La Cuña	Paso del Sabino	San Gaspar	La Cuña	Paso del Sabino	San Gaspar
1945	473.591	144.396	66.399	345.058	71.339	19.497
1946	454.634	136.419	62.513	339.064	75.730	16.115
1947	565.194	140.645	127.474	458.653	88.379	81.589
1948	757.539	223.098	161.338	654.285	173.503	115.977
1949	388.014	111.167	64.429	267.424	43.606	19.602
1950	413.237	145.457	66.850	315.348	88.990	33.532
1951	437.659	144.904	63.737	323.592	91.084	11.495
1952	548.992	134.942	99.048	439.962	70.602	62.261
1953	518.656	141.313	122.532	427.677	87.229	93.436
1954	302.673	126.625	51.084	185.053	60.098	7.686
1955	973.118	259.882	230.962	899.360	230.058	194.615
1956	492.605	139.945	88.955	387.099	84.656	46.215
1957	171.576	84.948	30.086	75.120	18.368	7.574
1958	1,570.235	446.994	499.553	1485.053	419.890	448.725
1959	527.715	121.918	123.453	419.902	63.583	81.108
1960	325.349	107.272	44.485	252.720	78.298	7.845
1961	358.296	62.454	41.027	293.169	36.513	8.735
1962	437.504	115.380	90.944	343.866	90.094	29.361
1963	922.081	115.200	131.465	830.103	66.152	95.178
1964	410.200	91.761	93.959	334.771	39.126	77.679
1965	1,241.029	188.407	401.440	1176.397	164.583	367.016
1966	602.290	179.213	161.890	537.554	155.895	126.721
1967	1,899.260	521.148	418.481	1801.684	460.894	387.272
1968	593.079	133.528	82.414	527.745	111.254	45.327
1969	195.763	57.397	24.942	151.307	35.661	8.053
1970	872.967	210.490	192.787	798.435	189.302	145.129
1971	1,366.076	392.054	518.085	1308.218	364.016	493.804
1972	274.666	67.332	48.771	202.491	29.292	20.023
1973	1,969.912	567.498	476.342	1891.063	522.015	448.210
1974	364.506	67.371	73.337	276.213	18.062	39.429
1975	864.459	192.049	209.683	819.120	173.771	187.538
1976	1,448.454	470.418	552.821	1366.446	413.910	532.074
1977	570.023	123.295	108.217	520.629	106.264	80.441
1978	462.136	147.636	86.812	409.981	122.841	63.869
1979	216.733	49.557	35.371	146.591	11.715	7.316
1980	285.571	68.215	155.951	192.266	13.312	121.617
1981	270.888	51.947	36.760	206.045	11.716	16.035
1982	143.917	54.359	12.300	95.313	11.717	10.041
1983	392.270	127.126	92.105	586.052	87.669	56.015
1984	403.770	124.291	72.499	538.116	112.034	54.917
1985	217.050	77.109	58.416	373.996	57.414	41.924
1986	814.682	167.521	90.852	770.560	141.709	75.471
1987	251.971	53.409	155.951	222.793	41.204	141.705
1988	704.370	154.089	191.152	655.070	120.399	178.062
1989	226.291	51.498	49.138	185.546	24.972	37.227
1990	806.182	151.943	198.775	736.964	95.526	188.068
1991	1,723.019	504.443	582.616	1688.161	480.938	573.136
1992	946.124	258.449	176.791	922.463	244.665	168.563
1993	325.676	59.949	89.187	299.203	41.848	82.236
1994	243.092	50.636	56.254	202.989	17.369	50.605
1995	454.585	78.646	79.839	439.230	69.417	74.784
1996	352.928	49.559	54.250	315.094	17.141	49.788
1997	127.959	72.428	22.316	89.232	38.407	18.448
1998	344.680	158.029	194.439	321.834	139.179	191.164
1999	254.588	158.029	28.117	221.381	128.107	25.435

2000	119.011	58.915	17.355	110.440	52.920	15.267
2001	330.233	114.947	64.579	320.993	107.573	63.084
2002	571.232	141.587	191.161	541.463	112.928	190.297
2003	1,019.336	261.255	565.382	984.997	227.283	565.138
2004	1,028.366	221.466	419.297	1027.238	220.338	419.297
Promedio 1945-2004	<b>605.800</b>	<b>160.533</b>	<b>155.119</b>	<b>550.977</b>	<b>124.543</b>	<b>130.313</b>