

TABLES



Table C-2.1 Stratigraphic Column

	Epoch	Age	Thickness (m)	Typical Lithology
P a l e o g e n e	Pliocene		260	Laminated Clayey limestones, marls, calcareous clays, siliceous limestone & flint
			210..300	Pebble conglomerates with argillaceous & carbonaceous cement. Contains beds of sandstone & sandy clays. Locally basal coarse argillaceous sandstone, marls & limestones
	Miocene	Upper	77..600	Sandstones, clays, conglomerates, limestones & marls. Also basalts with lenses of tuff, clays & sands.
		Lower	40	Quartz sands & intercalations of limestone
		Oligocene	30	Marbly arenaceous limestones & quartz sandstones
	Eocene	Upper Middle	78	Marbly limestones. At base grey laminated limestones with intercalations of marls & clayey limestones.
			100..620	Chalk-like limestones & marls
		Lower	60..150	Clayey limestones, marls, flint
			38..300	Chalky limestones, marls & clays
		Paleocene		
C r e t a c e o u s	Upper	Danian	7..18	
		Maestrichtian	90..180	Chalk-like clayey limestones, marls, clays, flint lenses, limestones with glauconite, phosphate & barite concretions
		Campanian	40..110	Chalk-like limestones, flint beds, intercalations of clayey pelitomorphie limestones, some siliceous limestones & marls
		Coniacian & Santonian	54..192	Chalk-like organic & clayey limestones with intercalations of pelitomorphie limestones and marl
		Upper Turonian	70..115	Dolomites & pelitomorphie limestones with rare marl intercalations & flints
		Lower Turonian	20..60	Pelitomorphie limestones some chalk-like & clayey limestones with intercalations of marls, organic & detrital limestones & dolomites
		Cenomanian	70..500	Pelitomorphie thick laminated dolomites & marl & limestone members
		Cenomanian	370..500	Pelitomorphie limestones with marl intercalations, grey dolomites.
		Albian	100..270	Organic pelitomorphie and clayey limestones with intercalations of marls & clays
		Upper Aptian	100..150	Ferruginated quartz sandstones above pelitomorphie organic and detrital clayey massive limestones
Pre-upper Aptian	90..200	Ferruginous quartz sandstone with intercalations and lenses of clays, argillaceous sandstones. Basalts and other extrusive rocks.		
J u r a s s i c	Upper	Tithonian	35..73	Laminated limestones & marls over organic and fragmental & oolitic limestones
		Kimmeridgian	70	Organic & fragmental oolitic limestones with intercalations of limestones over reef massive laminated limestones
		Oxfordian	158..285	Clay marls and clayey limestones
		Callovian	717	Thick-laminated and clayey limestones over dolomitic limestones
	Middle	Bathonian	170	Oolitic and organic laminated limestones with rare intercalations of clay
		Bajocian	580	Massive-laminated limestones over limestones & organic limestones & dolomites
			150..180	Spilitics. Oolitic and organic limestones, dolomites
			170	Massive-laminated dolomites
Lower		>160	Thin-laminated limestones with intercalations of dolomitic limestones.	

Table C-2.2 Climatic Statistics for Damascus

Month	Air Temperature (°C)			Average Monthly Precipitation (mm)	Average Monthly Relative Humidity (%)
	Mean Monthly	Absolute Maximum	Absolute Minimum		
January	7.0	22.7	-8.3	51.2	72
February	8.7	25.0	-5.3	38.7	66
March	11.7	31.1	-3.7	28.3	57
April	16.1	35.5	-3.3	17.6	48
May	21.0	38.4	3.5	6.8	40
June	25.1	40.9	9.2	0.1	35
July	26.9	43.6	10.8	0	38
August	26.6	44.0	10.8	0	40
September	24.1	42.0	8.7	0.2	42
October	20.0	36.6	3.8	7.1	46
November	13.7	29.7	-4.4	27.2	58
December	8.6	26.1	-6.4	46.2	72

Note: Data for Mezze Meteorological Station 1947-84, Damascus.

Table C-2.3 Climatic Statistics for Zabadani

Month	Air Temperature (°C)			Average Monthly Precipitation (mm)	Average Monthly Relative Humidity (%)
	Mean Monthly	Absolute Maximum	Absolute Minimum		
January	4.0	22.4	-12.6	111	75
February	5.1	25.0	-13.5	100	70
March	8.5	28.4	-8.2	84	62
April	12.1	31.0	-2.5	41	55
May	17.2	35.0	0.6	16	48
June	21.6	38.0	5.7	0	40
July	23.9	41.0	7.8	0	38
August	23.8	40.0	5.6	0	39
September	20.7	48.0	4.0	1	47
October	15.9	32.8	-0.7	15	56
November	9.8	26.5	-8.0	57	67
December	5.5	24.2	-11.9	96	74

Note: Data for Zabadani Meteorological Station 1947-84. Reported in USSR(1986).

Table C-2.4 Meteorological Stations in the Damascus Basin

Number	Name	Operator	Grid Coordinates			Start of Record from	Type
			East (m)	North (m)	Elevation (m)		
DAWSSA Stations							
4	Sergaya	Met. Dept	352000	3744000	1400	1962	Climate
9	Zabadani	Met. Dept	348000	3734000	1160	1935	Climate
10	Bloudan	DAWSSA	350950	3733550	1540	1971	Climate
11	Madaya	DAWSSA	346200	3728780	1105	1959	Climate
12	Hureireh	DAWSSA	350600	3728400	1520	1971	Climate
76	Rankous	DAWSSA	368800	3742000	2000	*	Climate
77	Jube	DAWSSA	378200	3760100	2415	*	Climate
Other Stations							
3	Maaloula	Met. Dept	389025	3740550	1440	1959	Climate
6	Rankous	Met. Dept	374800	3738000	1600	1960	Climate
7	Qutaifeh	Met. Dept	394500	3736000	980	1959	Rain
8	Tawati	Met. Dept	385000	3740200	1250	1974	Rain
13	Sednaya	Met. Dept			1250	1959	Rain
14	Jdeidet	Met. Dept	336400	3715700	1300	1959	Rain
15	Batrouneh	Met. Dept	341000	3725800	1270	1974	Rain
16	Ifra	Met. Dept	356200	3726150	1540	1971	Rain
17	Halboun	Met. Dept	362000	3727500	1290	1974	Rain
18	Tekieh	Met. Dept	346000	3723000	1150	1974	Rain
19	Fijeh	Met. Dept	355650	3721800	860	1959	Rain
20	Mnia	Met. Dept	367000	3725000	1150	1974	Rain
21	At Tell	Met. Dept	369300	3720350	940	1974	Climate
22	Adra	Met. Dept	386500	3721500	609	1972	Rain
23	Meisaloun	Met. Dept	344750	3719280	1170	1959	Climate
24	Dimas	Met. Dept	348000	3718500	1050	1974	Rain
25	Hame	Met. Dept	360000	3716000	785	1974	Rain
26	Maaraba	Met. Dept	367000	3717500	870	1974	Rain
27	Douma	Met. Dept	375600	3716200	667	1959	Climate
28	Maidaa	Met. Dept	388000	3716500	608	1972	Rain
29	Rakhleh	Met. Dept	336600	3710200	1600	1971	Rain
30	Yaafour	Met. Dept	346000	3712000	960	1971	Rain
31	Damascus (Mazze)	Met. Dept	360500	3707500	729	1918	Climate
32	Kharabo	Met. Dept	381800	3709550	626	1947	Climate
33	Ateibeh	Met. Dept	396000	3708500	602	1972	Rain
34	Qatana	Met. Dept	346100	3701750	890	1946	Rain
35	Karaha	Met. Dept	379000	3699500	633	1972	Rain
36	Damascus (Airport)	Met. Dept	388000	3700000	608	1955	Climate
37	Bqaasam	Met. Dept	333750	3698200	1500	1974	Rain
39	Rimeh	Met. Dept	330300	3695800	1480	1971	Rain
40	Beit Tina	Met. Dept	339200	3694000	1050	1974	Rain
41	El Kisweh	Met. Dept	362000	3693200	700	1972	Rain
42	Deir el Hajar	Met. Dept	383000	3692800	617	1963	Climate
43	El Hijaneh	Met. Dept	390500	3694000	620	1972	Rain
44	Beit Jenn	Met. Dept	328300	3688000	1150	1974	Rain
45	Om Sharafiet	Met. Dept	345500	3689000	850	1974	Rain
61	Assal el Ward	Met. Dept	377000	3750000	1625	1961	Rain
71	Rayak	(Lebanon)			920		
72	Rachaya	(Lebanon)			1235		

Source: USSR(1986)

*: To be installed summer 1996 as Remote Radio Link Stations

Table C--2.5 Annual Rainfall for the Fijeh Catchment

Hydrological Year Starting 1 September	Sergaya (mm)	Zabadani (mm)	Madaya (mm)	Bloudan (mm)	Hureire (mm)	Mean (mm)
1956/57	427.4	406.2	387.2	398.9	398.1	403.6
1957/58	434.7	408.5	394.1	403.4	402.5	408.6
1958/59	416.8	392.5	378.9	389.8	389.3	393.5
1959/60	240.4	221.6	187.7	238.1	246.8	226.9
1960/61	369.4	348.0	354.1	356.9	357.8	357.2
1961/62	464.4	465.4	464.1	447.7	444.8	457.3
1962/63	632.8	590.1	555.3	555.5	548.2	576.4
1963/64	529.4	534.4	528.9	502.7	497.5	518.6
1964/65	549.5	492.3	476.7	482.8	478.5	496.0
1965/66	503.0	427.3	368.5	420.9	419.1	427.8
1966/67	761.1	768.6	710.7	686.3	673.6	720.1
1967/68	615.0	603.1	636.6	577.6	569.4	600.3
1968/69	910.0	860.9	812.2	782.9	766.2	826.4
1969/70	520.2	488.7	426.3	459.4	556.0	490.1
1970/71	601.6	519.7	543.5	524.1	518.0	541.4
1971/72	519.4	431.8	450.0	463.2	467.3	466.3
1972/73	297.0	208.0	286.0	290.2	260.1	268.3
1973/74	492.0	558.0	538.0	507.3	490.8	517.2
1974/75	450.0	406.0	388.0	418.7	365.3	405.6
1975/76	721.7	568.3	534.2	570.1	616.1	602.1
1976/77	708.9	568.6	603.1	555.3	542.7	595.7
1977/78	633.8	614.9	627.3	544.0	575.6	599.1
1978/79	385.9	344.0	311.6	301.8	308.0	330.3
1979/80	771.2	709.5	661.4	670.6	664.2	695.4
1980/81	719.6	614.2	560.8	581.4	569.4	609.1
1981/82	462.1	302.6	274.9	352.9	432.8	365.1
1982/83	739.0	629.8	543.2	636.5	552.1	620.1
1983/84	648.6	566.6	535.7	465.7	528.3	549.0
1984/85	540.0	540.4	479.4	470.8	446.9	495.5
1985/86	370.0	365.5	355.0	353.0	315.8	351.9
1986/87	752.0	746.0	613.0	571.9	646.2	665.8
1987/88	848.0	844.0	681.9	615.9	603.1	718.6
1988/89	322.6	302.3	250.3	255.2	276.2	281.3
1989/90	312.7	353.2	265.2	301.9	266.1	299.8
1990/91	548.8	559.2	485.9	487.2	549.4	526.1
1991/92	1064.8	940.7	708.5	995.4	924.8	926.8
1992/93	681.1	660.5	564.1	577.7	618.5	620.4
1993/94	481.5	517.0	460.0	431.4	431.5	464.3
1994/95	620.8	636.8	507.9	545.4	510.4	564.3
Mean	565.8	526.0	484.9	492.1	493.0	512.4
Standard Deviation	177.1	168.0	141.7	145.9	142.0	151.4

Source: DAWSSA Year book 1991

Table C-2.6 Apportionment of Barada River Flow in Damascus

Watercourse Name	Portion of Flow at El Hameh (ppm)	Distance from El Hameh (km)
Barada at El Hame	1,000,000	0
Yazid Canal	750,000	3
Mezzawi Canal	62,500	6.8
Derani Canal	140,625	7.8
Tora Canal	27,343	8.5
Kanawat Canal	16,276	9.2
Banias Canal	3,119	10.6
Barada at Rabouyeh	136	10.8
Akrabani Canal	102	15.9
Dayani Canal	22	16.8
Melehani Canal	7	18.2
Zebdini Canal	4	22.0
Barada River	5	22.0

Table C-2.7 Hydrographic Stations in the Barada & Awaj Basins

Site	Site	River	Location	UTM Coordinates		Elevation (m asl)	Distance from source (km)	Catchment Area (km ²)
				East (m)	North (m)			
1	1	Barada	Ramleh	344,100	3,728,270	1,094.53	0.3	6
2	2	Barada	Tkieyeh	345,940	3,723,270	1,088.76	7.3	164
3	3	Barada	US of FigeH	355,600	3,721,880	820.57	19.4	429
4	4	Barada	El-Hameh	358,130	3,716,910	762.68	27.3	562
5	5	Barada	Rabouyeh	363,100	3,711,420	699.40	38.1	843
6	6	Barada	Nashabiyeh	385,260	3,709,740	614.13	64.8	946
7	7	Yazid Canal	Rabouyeh	363,040	3,711,490	733.18	37.8	
8	8	Mezzawi Canal	Rabouyeh	363,090	3,711,360	716.55	37.7	
9	9	Derani Canal	Rabouyeh	363,090	3,711,370	711.99	37.9	
10	10	Tora Canal	Rabouyeh	363,030	3,711,500	710.47	37.8	
11	11	Kanawat Canal	Rabouyeh	363,100	3,711,410	704.36	38.0	
12	12	Banias Canal	Rabouyeh	363,100	3,711,410	701.56	38.0	
13	13	Akrabani Canal	Bab Touma	368,650	3,710,700	674.92	43.8	
14	14	Ateibeh Lake	Ateibeh	397,270	3,710,960	596.27	81.0	
15	15	Wadi Karren	Tkieyeh	343,370	3,721,800		23.9	134
16	16	FigeH Spring	FigeH	355,690	3,722,030	823.36	19.6	
17	17	Wadi Mnin	Maaraba	367,540	3,717,090		33.9	199
18	18	Wadi Dmeir	Dmeir	404,250	3,728,200	698.67	48.8	378
19	19	Awaj	Om Sharatiet	345,260	3,688,880	827.92	2.6	261
20	20	Awaj	Abbasiyeh	351,820	3,291,330		10.0	323
21	21	Awaj	Marani	358,140	3,693,080	723.95	18.9	429
22	22	Awaj	Hijaneh	390,180	3,690,720			493
23	23	Jnani	Beit Jenn	330,260	3,687,750	1,058.65	11.8	34
24	24	Seibarani	Arneh	329,330	3,694,820	1,358.36	9.1	40
25	25	Seibarani	Beit Tima	339,220	3,693,770	997.48	19.9	80
26	26	Kanakri Canal	Saasaa	342,570	3,685,730			
27	27	Derani Canal	Om Sharatiet	346,470	3,688,980	826.58		
28	28	Zakiani Canal	Abbasiyeh	351,780	3,216,900			
29	29	Darhabani Canal	Abbasiyeh	351,820	3,291,930			
30	30	Wadi Liva	Sowara	388,650	3,668,530		65.9	380
31	31	Wadi El-Khanafes	Moutbin	362,120	3,669,510			276

Source: USSR(1986) Vol 2 Table 2.2

Table C-2.8 Major Springs in the Damascus Area

MOI Spring Number	Location	UTM Coordinates		Elevation (m)	Data Record Period	Natural Conditions Annual Discharge	
		Easting (m)	Northing (m)			Normal (MCM)	95% (MCM)
1	Sarada	353,380	3,743,950	1,346	1974-date	3.72	1.26
2	Ain Hour	351,820	3,738,970	1,385	1974-date	1.89	0.63
3	Fraskin	350,560	3,738,820	1,367	1974-date	0.69	0.13
4	El Arik	350,170	3,735,840	1,290	1974-date	2.78	1.73
5	Nabua	348,610	3,735,050	1,186	1974-date	4.26	2.21
6	Abou Zad	351,190	3,734,800	1,595	1974-date	0.44	0.10
7	Ain Beda	351,700	3,735,940	1,766	1974-date	0.41	
8	Jourjaniyeh	349,510	3,732,370	1,251	1974-date	0.66	0.47
9	Khan el Founduk	348,710	3,732,000	1,128	1974-1988	1.55	1.04
10	Boukein	349,000	3,730,590	1,270	1974-1984	0.41	0.28
11	Ain Saleh				1974-date		
12	Ain Haddad				1974-date		
13	Barada	343,830	3,728,220	1,095	1961-1993	98.0	62.0
14	Kafr el Awamki	349,730	3,722,180	928	1974-date	1.07	0.38
15	Harouch (Figeih)	355,010	3,721,720	829	1970-1984	3.15	0.00
16	Meisaloun	344,770	3,719,390	1,095	1974-date	0.69	0.32
17	Ain el Figeih	355,600	3,722,020	820	1941-date	243.0	137.0
18	Ain el Khadra	356,920	3,721,090	805	1974-date	5.14	3.46
19	Yaafour	344,420	3,712,940	985	1974-date	10.2	6.9
20	Sayafeh	359,620	3,716,430	833	1974-date	0.63	0.22
21	Muin				1974-date		
22					1985-date		
23	Fasraya	378,120	3,720,530	634	1985-1986	7.60	2.83
24					none		
25	Sednaya				1974-date		
26	Hafir el Foka				1974-date		
27	Maaloula	389,350	3,748,100	1,442	1974-date	0.88	0.60
28	Ain el Tineh	390,490	3,745,160	1,252	1974-date	0.85	0.57
29	Ain Awenad	390,750	3,743,930	1,201	1974-date	0.50	0.28
30	Qutaifeh	394,920	3,736,270	921	1974-date	1.04	0.53
31	El Moukabrat	404,030	3,729,820	714	1974-date	1.04	0.66
32	Maatroun	405,370	3,726,180	700	1974-date	0.91	0.69
33	Safsafi				1977-date		
34	Shakbab	354,870	3,682,910	726	1976-1984	1.04	0.63
35	Beit Jenn	330,030	3,687,890	1,063	1974-date	22.7	15.8
36	Membej	334,200	3,687,330	940	1974-date	24.6	0.0
37	Talmasiyat	336,330	3,686,240	928	1974-date	24.6	18.3
38	Ain Issa	328,630	3,692,820	1,488	1974-date	0.88	0.19
39	Dourbol	330,950	3,692,840	1,394	1974-date	0.54	0.19
40	Ain el Malha	328,110	3,694,360	1,392	1974-date	3.78	2.46
41	Ain Saba	328,400	3,694,520	1,385	1974-date	3.28	1.70
42	Ain el Bardeh	329,200	3,694,700	1,364	1974-date	5.83	3.09
43	Rashashih	328,780	3,694,750	1,379	1974-date	1.17	0.82
44	Rijmech	330,920	3,697,020	1,429	1974-date	1.10	0.00
45	Ras el Wadi	335,790	3,699,530	1,303	1974-date	1.48	0.44
46	Tabibiyeh	346,000	3,688,560	831	1974-date	26.1	18.3
47	Huseiniyeh	348,130	3,690,130	795	1974-date	1.26	0.88
48	Hassibeh	350,370	3,696,320	794	1974-date	1.64	0.85
50	Qatana	346,030	3,701,780	887	1974-date	5.14	0.47
51	Artouz	350,280	3,700,070	817	1974-date	2.39	0.56
52	Kalaya	378,950	3,709,900	629	1974-date	4.22	2.58
53	El Shuwbat	379,660	3,707,920	633	none	3.94	0.00
54	Deir el Assafir	376,830	3,705,990	637	1974-date	6.94	2.83
55	Harroush (Ghuta)	378,650	3,706,510	628	1974-date	22.1	6.6
56	El Feld	378,670	3,704,150	629	none	6.31	1.89
57	Raukous	373,710	3,743,740	1,622	1974-date	0.44	0.16
58	Kreneh	397,070	3,760,000	1,382	1974-date	4.32	1.38
59	Skafia	397,330	3,762,410	1,406	1974-date	0.69	0.44
60	Nebk	406,000	3,768,000	1,290	1974-date	2.49	1.61
61	El Fawar	332,730	3,679,060	934	1974-date	3.09	
62	Ain Nouriyeh	330,770	3,676,520	937	1977-1983	4.35	
63	Ain Roudwan				1987-date		
64	Ain Habib				1988-1993		

Table C-2.9 Mean Annual Spring Discharge 1984/5 to 1994/5

Spring Number	Water Year with Mean Annual Discharge (l/s)										
	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
1	91	46	105	133	40	41	70	170	144	92	91
2	33	17	41	54	22	4	6	45	33	15	19
3	17	10	46	32	0	0	2	43	17	4	13
4	78	85	86	109	57	65	61	70	63	54	45
5	105	91	112	143	57	45	53	108	92	66	91
6	9	6	12	17	4	2	7	16	11	6	9
7	15	7	21	26	3	2	11	17	13	9	10
8	22	14	17	23	14	14	11	29	23	19	15
9	35	2	18	72	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	14	7	9	14	12	6	3	13	17	12	9
12	14	8	8	15	15	3	2	7	12	10	9
13	2010	1320	2120	2510	1610	1750	1730	3880	3000	-	-
14	21	25	26	26	30	39	38	39	36	39	40
15	-	-	-	-	-	-	-	-	-	-	-
16	8	2	21	43	2	0	0	19	19	4	8
17	7198	6722	5105	8467	9481	4661	4154	5644.3	10591	8593	6754
18	175	102	136	169	125	92	109	187	187	153	166
19	-	-	-	428	206	68	65	374	406	318	212
20	21	22	23	19	16	15	13	18	20	22	22
21	131	15	171	264	82	10	16	482	562	212	227
22	26	0	54	64	3	1	2	75	46	19	56
23 & 24	76	11	-	-	-	-	-	-	-	-	-
25	4	4	3	3	2	2	1	3	4	3	2
26	14	11	11	12	11	8	8	12	23	26	21
27	29	27	24	30	24	23	21	35	37	29	27
28	22	27	17	26	20	17	18	35	38	33	28
29	12	9	10	19	16	16	11	21	32	27	25
30	22	16	22	15	9	13	16	15	12	13	11
31	30	27	24	25	23	22	21	55	43	24	31
32	-	-	25	25	24	25	26	34	37	30	22
33	33	14	71	67	23	8	7	13	93	49	76
34	-	-	-	-	-	-	-	-	-	-	-
35	902	529	703	672	522	597	593	1300	969	801	1018
36	489	138	1079	902	44	62	153	1693	1290	448	756
37	517	415	610	622	402	438	468	958	648	654	734
38	28	10	42	38	10	10	16	49	34	18	32
39	16	8	21	21	7	6	9	26	20	12	18
40	102	85	124	114	87	80	86	164	125	114	149
41	53	68	146	136	73	64	87	150	136	118	136
42	201	120	175	155	80	74	96	175	132	104	136
43	35	34	38	37	32	33	40	46	51	41	42
44	0	11	66	53	1	0	0	44	28	2	12
45	-	25	64	63	22	18	15	87	59	29	43
46	602	423	889	990	510	401	424	997	875	662	709
47	36	-	11	24	28	10	7	27	48	20	18
48	-	11	44	66	49	30	22	91	108	74	45
49	-	4	26	50	6	9	3	178	64	14	24
50	143	94	274	233	76	75	56	400	208	159	255
51	74	38	90	115	49	29	37	96	809	805	131
52	193	115	44	-	141	0	0	96	190	184	164
53	-	-	-	-	-	-	-	-	-	-	-
54	192	73	152	208	148	9	0	173	292	241	200
55	357	168	210	318	234	96	0	253	416	163	350
56	-	-	-	-	-	-	-	-	-	-	-
57	6	0	6	12	0	0	0	28	9	-	-
58	28	3	0	0	17	0	0	8	7	30	-
59	15	13	7	11	17	14	1	5	25	29	8
60	39	24	15	8	7	6	1	-	-	-	3
61	-	107	41	-	32	25	24	71	67	58	72
62	-	-	-	-	-	-	-	-	49	-	-
63	-	-	-	40	10	5	6	50	49	15	34
64	-	-	-	-	109	85	91	-	106	-	-
Totals											
Flow (l/s)	14329	11163	13215	17738	14635	9128	8717	18624	22425	14676	13131
Flow (MCM)	451.9	352.1	416.8	559.4	461.5	287.9	274.9	587.3	707.2	462.8	414.1
Rainfall (mm)	496	352	666	719	281	300	526	927	620	461	564

Table C-2.10 Spring Yield - Rainfall Relationships

Russian Study [Up to 1985]		Mean Annual Flow (l/s)			Spring Yield Equation			Weightings for Rainfall		
Normal	95%	Current Study [1996] with rainfall probability of			Q = m . Rain(weighted) + c			n	n-1	n-2
		10%	50%	95%	c	m	r ²	(%)	(%)	(%)
118	40	126	87	37	-19.08	0.209	0.88	100	0	0
60	20	49	32	11	-32.01	0.127	0.99	70	20	10
22	4	21	5	0	-46.22	0.101	0.97	85	15	0
88	55	100	74	41	-26.39	0.198	0.98	70	20	10
135	70	85	67	43	-6.27	0.143	0.96	70	20	10
14	3	13	8	3	-3.23	0.023	0.87	100	0	0
14	2	23	14	3	-18.63	0.064	0.96	75	25	0
21	15	22	17	11	-3.61	0.041	0.78	60	25	15
49	33	-	-	-	-	-	-	-	-	-
13	9	-	-	-	No Data	-	-	-	-	-
26	7	12	9	6	-8.41	0.035	0.85	40	40	20
19	10	10	9	6	-4.82	0.026	0.41	40	40	20
3120	1970	2715	2075	1261	-407.29	4.887	0.85	70	20	10
34	12	-	33	9	No Relationship*	-	-	-	-	-
100	0	-	-	-	No Data	-	-	-	-	-
22	10	24	8	0	-52.53	0.119	0.85	70	20	10
7710	4360	9195	6954	4101	-1746.03	17.126	0.87	70	20	10
163	110	167	137	99	1.72	0.267	0.83	60	25	15
323	219	327	214	70	-299.31	1.010	0.86	60	25	15
20	7	-	19	14	No Relationship*	-	-	-	-	-
288	122	270	120	0	-560.83	1.340	0.75	60	25	15
50	0	52	28	0	-39.96	0.133	0.82	100	0	0
241	90	-	-	-	Insufficient Data	-	-	-	-	-
4	1	-	3	1	No Relationship*	-	-	-	-	-
21	14	-	13	7	No Relationship*	-	-	-	-	-
28	19	29	25	21	10.99	0.028	0.69	70	20	10
27	18	27	22	16	3.87	0.037	0.50	70	20	10
16	9	-	17	9	No Relationship*	-	-	-	-	-
33	17	-	14	10	No Relationship*	-	-	-	-	-
33	21	-	28	18	No Relationship*	-	-	-	-	-
29	22	-	27	21	No Relationship*	-	-	-	-	-
19	7	64	30	0	-98.50	0.254	0.86	70	20	10
33	2	-	-	-	No Data	-	-	-	-	-
750	500	923	739	505	24.57	1.407	0.61	70	20	10
780	0	1032	522	0	-1456.59	3.894	0.91	70	20	10
780	580	696	555	375	7.47	1.077	0.84	70	20	10
28	6	37	24	8	-10.73	0.068	0.89	100	0	0
17	6	20	14	6	-2.95	0.033	0.88	100	0	0
120	78	129	106	78	18.44	0.173	0.72	70	20	10
104	54	129	99	61	-17.40	0.229	0.69	70	20	10
185	98	137	108	71	-4.82	0.222	0.91	70	20	10
37	26	40	36	31	20.94	0.030	0.57	70	20	10
35	0	22	5	0	-57.52	0.123	0.99	75	25	0
47	14	57	38	14	-31.32	0.137	0.86	75	25	0
828	580	841	631	364	-183.60	1.603	0.89	70	20	10
40	28	23	16	8	-9.60	0.051	0.38	70	20	10
52	27	62	39	11	-47.91	0.172	0.72	70	20	10
4	1	41	13	3	-0.88	0.004	0.83	70	20	10
163	15	250	158	41	-198.41	0.701	0.79	70	20	10
76	18	100	73	39	-30.75	0.205	0.59	70	20	10
134	82	-	129	62	No Relationship*	-	-	-	-	-
125	0	-	-	-	No Data	-	-	-	-	-
220	90	-	130	29	No Relationship*	-	-	-	-	-
700	210	-	236	121	No Relationship*	-	-	-	-	-
200	60	-	-	-	No Relationship*	-	-	-	-	-
14	5	-	-	-	Insufficient Data	-	-	-	-	-
137	44	-	9	0	No Relationship*	-	-	-	-	-
25	14	-	12	0	No Relationship*	-	-	-	-	-
87	51	-	13	0	No Relationship*	-	-	-	-	-
-	-	-	55	15	No Relationship*	-	-	-	-	-
-	-	-	-	-	No Data	-	-	-	-	-
-	-	39	24	3	-38	0.1211	0.88	70	20	10
-	-	-	-	-	Insufficient Data	-	-	-	-	-
16,483	9,329	17,872	13,268	7,432						
519.8	294.2	563.6	418.4	234.4						
		625	508	270						

Notes: n: Year
r²: Correlation Coefficient
*: No relationship with rainfall
Q: Spring Flow (l/s)

Table C-2.11 | Factors in Flow Prediction Equations for Barada Spring

Period	Constant				
	w ₁	w ₂	w ₃	m	c
Full Year (1961-76)	0.7	0.2	0.1	7.73	-838
Full Year (1982-93)	0.7	0.2	0.1	2.78	820
January (1982-93)	0.6	0.3	0.1	2.00	1100
February (1982-93)	0.6	0.3	0.1	3.50	500
March (1982-93)	0.6	0.3	0.1	4.80	200
April (1982-93)	0.6	0.3	0.1	5.90	100
May (1982-93)	0.6	0.3	0.1	4.80	200
June (1982-93)	0.6	0.3	0.1	4.00	300
July (1982-93)	0.6	0.3	0.1	3.70	300
August (1982-93)	0.6	0.3	0.1	2.60	600
September (1982-93)	0.6	0.3	0.1	2.70	500
October (1982-93)	0.6	0.3	0.1	3.70	0
November (1982-93)	0.6	0.3	0.1	2.60	600
December (1982-93)	0.8	0.2	0.1	1.60	1100

Notes:

$$Q_{total} = m (R_n w_1 + R_{n-1} w_2 + R_{n-2} w_3) + c$$

Where: Q_{total} : Mean Discharge in l/s
 R : Rainfall averaged from 5 stations in mm
 n : Year index
 w : Weighting of rainfall
 m, c : Empirical Constants

Table C-2.12 Barada Spring Radial Water Levels

Measuring Location	Eastings		Northings		Radius		Water Levels		
	Name	(km)	(km)	(m)	(log m)	Sep 1987	Dec 1987	Nov 1985	
						(masl)	(masl)	(masl)	
POOL		3.800	8.250	84	1.92	1095.60	1090.98	1094.78	
p1		4.129	8.261	329	2.52	1095.88	1094.50		
p2		4.224	8.245	424	2.63	1095.63	1095.25		
p3		4.084	8.200	288	2.46	1095.83	1093.00		
p4		3.799	8.025	225	2.35	1097.15	1093.70		
p5		4.120	6.930	1358	3.13	1098.99			
p6		3.883	7.669	587	2.77	1097.54	1094.25		
p7		3.163	7.829	764	2.88	1099.59			
p8		3.689	8.088	196	2.29	1097.47	1093.83		
s3		3.420	8.582	505	2.70	1098.03			
s4		3.852	8.341	105	2.02	1096.87	1093.67		
s5		3.970	8.715	495	2.69	1097.91	1094.43		
s6		3.824	6.478	1772					
i1		4.646	9.445	1464	3.17				
i2		3.589	10.100	1862	3.27			1097.82	
i3		6.072	11.721	4148	3.62				
i4		5.160	11.721	3728	3.57				
241ak		3.900	9.750	1503	3.18			1097.17	
302k		4.000	8.700	492	2.69			1096.65	

Note: Grid Co-ordinates are UTM relative to 340 East 3720 North

Table C-2.13 Multiple Regression Factors for Fiegh Discharge Prediction

Factors	April		May		June		July		August		Sept		Oct		Nov		Dec		Jan		Feb																									
	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15																								
Factors (mL.m10) & B																																														
B	2.1783	1.8431	1.6684	1.1464	1.2431	1.3750	1.6585	1.7156	2.1344	2.0501	3.9052	2.2725	1.8796	1.1274	2.1541	2.4670	6.6912	4.5384	2.1592	2.8956	0.6530	1.0025	1.2209	1.2176	1.1328	1.0487	1.0771	1.0900	1.1842	1.1212	1.1195	1.1746	1.0928	1.0675	1.0569	0.9325	0.9980	0.8654	0.7633	0.6219						
m1	1.5337	0.9620	0.9661	1.0465	0.8252	0.9530	0.9241	0.9260	0.9246	0.9394	0.9542	0.8853	0.9316	0.9956	1.1195	0.9781	0.9801	0.7801	0.3798	0.9342	0.8872	1.0028	1.0002	0.9987	0.9990	0.9992	0.9997	0.9997	0.9993	0.9996	0.9991	0.9997	1.0003	0.9997	1.0003	0.9992	1.0000	1.0005	1.0016	1.0024						
m2	0.9984	1.0005	1.0007	1.0020	1.0033	1.0035	1.0029	1.0023	1.0031	1.0027	1.0026	1.0019	1.0015	1.0016	1.0010	1.0018	1.0012	1.0025	1.0016	1.0005	0.9991	0.9972	0.9994	1.0000	1.0003	1.0005	1.0007	1.0002	1.0008	1.0005	1.0002	1.0010	1.0004	1.0004	1.0018	1.0017	1.0017	1.0005	0.9991							
m3	0.9401	1.1345	1.0118	0.9998	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0846	1.0203	1.0060	1.0006	0.9925	0.9945	0.9879	0.9859	0.9854	0.9905	0.9965	0.9895	0.9951	0.9951	0.9951	0.9951	0.9951	1.0005	1.0005	1.0005	1.0005	1.0005				
m4	1.1491	1.0703	1.0377	1.0073	0.9601	1.0006	0.9831	0.9710	0.9742	0.9713	0.9754	0.9488	0.9842	0.9858	0.9928	0.9710	0.9784	0.9596	0.9856	1.0376	1.0582	1.0033	0.9933	0.9862	0.9844	0.9879	0.9840	0.9983	0.9967	1.0002	0.9976	0.9949	0.9914	0.9936	0.9838	0.9947	0.9841	0.9832	0.9859	0.9768	0.9572	0.9546				
m5	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
m6	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
m7	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
m8	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
m9	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
m10	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559	1.0191	1.0015	0.9934	0.9935	1.0029	0.9973	0.9938	0.9951	0.9934	0.9943	0.9986	0.9914	1.0018	1.0022	1.0017	1.0032	1.0059	1.0043	1.0183	1.0439	1.0559				
Mean Value																																														
Flow (m3/s) on 15 Sep n-1	4.656	0.17	1.01	2.53	2.50	1.79	1.25	1.41	1.49	2.20	1.70	1.69	2.12	1.51	1.36	1.19	1.29	0.72	0.99	0.51	0.28	0.11	Flow (m3/s) on 15 Sep n-2	4.656	0.17	1.01	2.53	2.50	1.79	1.25	1.41	1.49	2.20	1.70	1.69	2.12	1.51	1.36	1.19	1.29	0.72	0.99	0.51	0.28	0.11	
Precipitation (mm) n-1	508.000	4.09	1.09	0.52	0.59	0.65	0.87	0.84	0.86	0.70	0.80	0.81	0.62	0.85	0.87	1.14	0.85	1.14	0.65	0.98	1.27	2.20	Precipitation (mm) n-2	508.000	4.09	1.09	0.52	0.59	0.65	0.87	0.84	0.86	0.70	0.80	0.81	0.62	0.85	0.87	1.14	0.85	1.14	0.65	0.98	1.27	2.20	
Main Flood	7.690	0.62	2.64	1.09	1.00	1.88	1.87	1.41	1.05	1.00	0.85	1.19	0.71	1.00	1.03	1.35	1.22	1.49	0.79	0.81	0.95	1.44	Early Flood	8.070	1.18	1.05	1.00	0.94	0.96	0.91	0.92	0.91	0.93	0.95	0.97	0.92	1.02	0.99	0.99	0.97	0.99	0.96	1.00	1.07	1.14	
Peak Flow (m3/s)	19.270	14.56	3.70	2.04	1.15	0.68	1.01	0.79	0.57	0.60	0.57	0.62	0.36	0.74	0.76	0.87	0.87	0.57	0.66	0.45	0.76	2.04	2.97	Pumping n-1	9.400	1.03	0.94	0.88	0.86	0.89	0.86	0.93	0.97	1.00	0.98	0.95	0.92	0.94	0.90	0.95	0.86	0.85	0.88	0.80	0.66	0.65
Pump n-2	9.400	1.19	1.01	0.94	0.94	1.03	0.96	0.94	0.95	0.94	0.95	0.99	0.92	1.02	1.02	1.02	1.02	1.03	1.06	1.04	1.19	1.50	1.67	Mean Discharge (m3/s)	15.47	15.28	13.73	11.03	7.54	6.89	5.76	5.20	4.89	4.70	4.47	4.24	4.12	4.11	3.91	3.82	3.72	3.65	3.89	4.45	4.50	
95% Case Value																																														
Flow (m3/s) on 15 Sep n-1	4.240	0.20	1.01	2.33	2.30	1.70	1.22	1.37	1.44	2.05	1.62	1.61	1.98	1.46	1.32	1.17	1.26	0.74	0.99	0.54	0.32	0.13	Flow (m3/s) on 15 Sep n-2	4.240	0.20	1.01	2.33	2.30	1.70	1.22	1.37	1.44	2.05	1.62	1.61	1.98	1.46	1.32	1.17	1.26	0.74	0.99	0.54	0.32	0.13	
Precipitation (mm) n-1	508.000	4.09	1.09	0.52	0.59	0.65	0.87	0.84	0.86	0.70	0.80	0.81	0.62	0.85	0.87	1.14	0.85	1.14	0.65	0.98	1.27	2.20	Precipitation (mm) n-2	508.000	4.09	1.09	0.52	0.59	0.65	0.87	0.84	0.86	0.70	0.80	0.81	0.62	0.85	0.87	1.14	0.85	1.14	0.65	0.98	1.27	2.20	
Main Flood	7.000	0.65	2.42	1.09	1.00	1.78	1.77	1.37	1.04	1.00	0.86	1.17	0.73	1.00	1.02	1.31	1.19	1.44	0.81	0.83	0.96	1.39	Early Flood	7.910	1.04	1.01	1.00	0.99	0.99	0.98	0.98	0.98	0.99	0.99	0.99	0.98	1.00	1.00	1.00	0.99	1.00	0.99	1.00	1.02	1.03	
Peak Flow (m3/s)	10.600	4.36	2.05	1.48	1.08	0.81	1.01	0.83	0.73	0.76	0.73	0.77	0.57	0.84	0.86	0.93	0.73	0.79	0.65	0.86	1.48	1.82	Pumping n-1	10.000	1.03	0.93	0.87	0.85	0.89	0.85	0.98	0.97	1.00	0.98	0.95	0.92	0.94	0.89	0.95	0.85	0.84	0.87	0.79	0.65	0.65	
Pump n-2	10.000	1.21	1.02	0.94	0.94	1.03	0.95	0.94	0.95	0.94	0.94	0.99	0.92	1.02	1.02	1.02	1.02	1.03	1.06	1.04	1.20	1.54	1.72	95% Probability Discharge (m3/s)	8.24	8.84	5.64	4.43	3.93	3.44	3.43	3.40	3.29	3.32	3.44	3.41	3.26	3.07	3.00	3.20	3.38	3.36	3.44	3.16	3.83	

Table C-2.14 Aquifer Properties

Aquifer	Upper Quaternary - Recent alluvial-proluvial deposits	Upper Quaternary - Recent Lacustrine Deposits	Middle-Lower Quaternary Lacustrine-alluvial deposits	Cenomanian-Turonian Strata
Permeability (m/d)				
Minimum	3.7	.03	0.2	n/a
Maximum	142	88	7.3	n/a
Median	57.5	3.3	0.6	n/a
Sample Size	21	6	5	n/a
Transmissivity (m/d)				
Minimum	135	1.2	4	1.1
Maximum	3700	1500	316	7500
Median	1325	195	12	1020
Sample Size	28	9	7	10

Table C-2.15 Aquifer Properties for Wells in Jurassic Rocks in the Barada Spring Area

Test Well	Transmissivity (m ² /d)	Depth Interval	Permeability (cm/s)
21K	1304	-	-
71BK	1556	70-115	0.040
71BK	1039	200-265	0.018
214K	59	117-136	0.0036
215K	420	117-205	0.0055
227K	2732	110-227	0.027
227K	1102	110-250	0.0091
240K	1366	153-220	0.023
243K	760	170-205	0.025
244K	3085	190-232	0.085
245K	4	88-122	0.00014
247K	1004	110-243	0.087
248K	740	109-260	0.056

Table C-3.1 Barada & Awaj Basin, Irrigated Areas & Abstractions

Year	Irrigated Area (Ha)	Number of Boreholes	Irrigation Abstraction (MCM/y)		
			Surface water	Groundwater	Total
1947	7,400	622			53.2
1985	66,400	16,200	553	430	983
1995	n/a	est 30,000	n/a	n/a	n/a

		Damascus Ghouta	Awaj Basin	Other Areas *
Irrigated Area (km ²)	Surface Water	87.0	89.8	27.6
	Groundwater	116.6	58.1	41.7
	Mixed	167.4	58.9	15.7
	TOTAL	370.0	207.8	85.5
Water Abstraction (MCM/y)	Surface Water	376.2	182.6	37.4
	Groundwater	292.8	94.1	43.09
	TOTAL	669.0	276.7	80.49

Notes: * Zabadani, At Tell, Qutaifeh, Izra, Shahba.

Table C-3.2 (1/5) Rural Water Establishment Sources

Unit	Settlement	No. on Map	Source Name	Borehole (No)	Capacity (m3/h)	Unit Total (m3/h)	Annual Quantity (MCM)	
1 Sehnaya	Sehnaya	1	Well 1	1	40	345	2.27	
			Well 5	1	45			
			Well 6	1	45			
			Well 7	1	25			
	Ashafieh Sehnaya	2	Dispensary Assemby	2	35			
			Al Naoou Reservoir	1	15			
			Socks Project	2	35			
			Masaker Project	1	20			
			Al Jafna Project	1	25			
			Al Kusa Project	1	5			
2 Al Ghizlariéh	Al Ghizlariéh	3	Al-Mazaneé Lane	2	45			
			Al-Maksam	1	15			
			Anab Lane	1	5			
	Al Haygana	4	Central Sekka Wells	1	20			
	Al Bitariéh	4						
	Tal Maskan	6	Central Sekka Wells	1	20			
	Al Ghassola	7	Ghassola	1	15			
	Sabba	8						
	Delbeh	9	Sakka Balad	2	10			
	Htaita	10	Htaita	1	15			
	Karbata	11	Htaita	1	15			
	Deir al Hajar	12						
	3 Nashabich	Nashabich	14	Western Moutain	1	5	135	0.89
Hazsama Reservoir				1	20			
Tal al Nashbleh				1	20			
Hazsama				1	20			
Al Kasmieh			15	Western Village	1	25		
				Village Crossroads	1	20		
Kaisana			16	West of Village	1	20		
				Middle of Village	1	15		
				Al Gharifab	1	30		
Al Obada			17	Middle of Village	1	20		
Otaibieh			18	Northern Reservoir	1	15		
				Southern Reservoir	1	20		
				Midle of Village	1	20		
Al Jarba			19	Midle of Village	1	15		
		West of Village		1	15			
Al Bohariéh		20	High Reservoir	1	10			
Harasta Kantaua		21	Southern Well	1	30			
Marge al Sultau		22	Western Wells	2	30			
Al Bilalieh		23	Village Western Pump	2	18			
			Village Eastern Pump	2	18			
Deir Salman		24	Village Entrance	1	25			
			Front of Munkipality	1	25			
			End of Villge	1	30			
AL Ahmedieh	25	Near reservoir	2	40				
Harran al Awameed	26	Front of the Centre ?	1	20				
		Near first reservoir	1	20				
		Near the big reservoir	1	25				
		East of Village	2	40				
		Near the Assembly	1	25				
Sdaideh	27	Al Ghasula	1	40				
		First of the village ?	1	10				
		Middle of the village	1	10				
Al Kafreet	28		1	20				
Al Baraka	29		1	10				
					756	4.97		

Table C--3.2 (2/5) Rural Water Establishment Sources

Unit	Settlement	No. on Map	Source Name	Borehole (No)	Capacity (m ³ /h)	Unit Total (m ³ /h)	Annual Quantity (MCM)	
4 Yabroud	Yabroud Area	30	Karaniéh	7	250	600	3.94	
			Alu Saleh	2	90			
	Ras al Ain Village	31		1	45			
	Rima	32		2	25			
	Ra'as Ma'asa	33		1	45			
	Al Jabbeh	34		2	45			
	Al Serfej	35		1	30			
	Isal al Ward	36	Eastern Western	2 2	50 20			
5 Sednaya	Sednaya	37	Al Bustan	3	40	345	2.27	
			Al Medafiah	3	20			
			Al Jabal Reservoir	3	15			
			Bessan Spring & Kalfas		20			
	Massat Sednaya	38	Western Massat	3	30			
			Eastern Massat 1	3	25			
			Eastern Massat 2	1	10			
	Raukous	39	Sina Spring		10			
			Rankous Kabbada & Gaoua	3 1	40 10			
		Hafeer al Fuka	40		4			40
		Hosh Anab	41		2			25
		Akubra	42		1			15
		Badda	43		2			30
	Talfina	44		1	5			
			Bessan Spring		10			
6 Kisweh	Al Kisweh	45	New Al Kisweh Wells	2	80	517	3.40	
			Al Jabal	2	15			
			Al Ain	2	25			
			Al Manhal	2	25			
			Al Jazini	2	20			
			Gatesa al Fardani	1	8			
			Al Harkaleh Crossing	1	6			
			Zaieh	46	Al Merge Reservoir			4 1
		Al Deir Khabieh	47		3			35
		Al Maklabieh	48					
		Marraneh	49					
		Maallaka	50		3			35
		Al Teibach	51	old reservoir	3			35
		Al Khyana	52	old reservoir new reservoir	1 4			8 25
		Al Deir Ali	53	Eastern Western	2 2			10 10
		Al Magdieh	54	Standpipe				5
		Jeb al Safa	55	Al Jeb	2			10
		Kara al Kisweh	56	Nara	1			7
		Al Hargala	57	Al Hargala	3			15
		Al Adlich	58	Al Adlich	3			12
		Al Metalleh	59	Al Metalleh	2			8
		Kesbet al Shayyab	60	Al Khesba	2			10
		Arkees	61	Arkees	1			12
		Al Zoraikieh	62	Al Zoraikieh	2			10
		Al Kalaa	63		1			6
		Al Saada	64		1			5

Table C-3.2 (3/5) Rural Water Establishment Sources

Unit	Settlement	No. on Map	Source Name	Borehole (No)	Capacity (m3/h)	Unit Total (m3/h)	Annual Quantity (MCM)		
7 Kara	Kara	65	Eastern Kara	4	80	223	1.47		
			Western Kara	2	85				
	Janajeen	66	Al Thawati	1	50	406	2.67		
			Old Al Thawati	1	8				
8 Darlah	Darlah	67	Wells in & around villag	25	406				
9 Zabadani	Zabadani	68	Al Arik Spring		20	775	5.09		
			Ish al Daba'a	5	20				
			Jerganeh	2	70				
			Al Shakeef	3	180				
			Al Naboua	1	45				
			Qalat Al Zahra	1	25				
			Wadi Abu Saleh	1	60				
			Al Fardous	1	20				
			Al Sultanieh	1	15				
			Ain Hour	69	Well No 2			2	60
			Sergaya	70	Sardeh Spring				40
					Sardeh Wells			3	120
Judaideh	71	Judaideh	3	60					
Yabaus	72								
Kfeir Yabous	73	Al Kfeir	2	40					
10 Sasaa	Sasaa	74	Sasaa Wells	2	65	415	2.73		
			Kanker	75	Kanker Wells			3	60
			Dier Maker	76					
			Najl	78				1	25
			Doslik & Villages	79				3	50
			Kafan Hour	80				2	10
			Hosineh	81				2	25
			Abu Kawook	82				1	15
			Al Kolaya'a	83				1	15
			Ain Al Sha'ra	84				1	20
			Al Nafoor	85				1	15
			Darbal	86	Spring				15
			Al Makrousa	87	Spring				10
			Beit Jenn	88					
			Itasfa						
			Mafar Al Neer		Spring				50
			Not on Map		Badran Spring				40
			11 Al Dmeir	Al Dmeir	89			Al Dmeir Wellfield	3
Seperate Wells	3	80							
Al Masailana	3	36							
Adra	90	Unified Adra Wellfield				15	500		
Hafir	91	Hafir Wells				2	20		
Meda'a	92	Meda'a Wells	1	15					
12 Al Nabk	Al Nabk	93	Old Eastern Wells	4	150	350	2.30		
			New Eastern Wells	2	80				
			Rima - Al Nabk Wells	2	25				
			Al Musheika	94	Old & New Wells			2	60
			Al Sameh	95				1	10
Al Kastal	96		1	25					

Table C-3.2 (4/5) Rural Water Establishment Sources

Unit	Settlement	No. on Map	Source Name	Borehole (No)	Capacity (m ³ /h)	Unit Total (m ³ /h)	Annual Quantity (MCM)
13 Katana	Judiadet	97	First Housing Wells	2	100	818	5.37
			Naziheen	1	35		
			Al Jabal	1	50		
	Artous	98	Near High Reservoir	3	65		
			New Wellfield	4	80		
	Dasousha	99	Dasousha Wells	2	35		
	Kawkab	100	Kawkab Wells	2	30		
	Kefan Karak	101					
	Rodwan			2	28		
	Rakblah	102		1	15		
	Al Bajja'a	103		1	40		
	Qalat Jandal	104		1	40		
	Al Sham Moadamie	105		22	100		
	Katana	106	Erneh Spring		80		
Ra'as al Nabek Spring				20			
Al Sabboura	107						
Ra'as al Ain Yaafour		Ra'as al Ain Spring		30			
Baksam	108	Ain al Nahas Spring		10			
Al Rimeh	109	Kisyata Spring		10			
Erneh	110	2 Extension Springs		50			
14 Qataifa	Qataifa	111	Wells around Kutaifa	7	140	987	6.48
			Al Rohaiba	112	Old Rohaiba Wells		
			Old Rohaiba Wells	5	155		
	Moadamia	113	Western Wells	3	33		
	Kalamon		Village Wells	6	100		
	Hala	114	Hala Wells	4	45		
	Jbeddeen						
	Maalula						
	Ain al Tina						
	Tawani	115	Wellfield	3	140		
	Jeroud	116	Jeroud al Jabal	6	120		
Old Jeroud Wells			3	32			
Al Nasireh	117	Al Nasireh Wells	5	125			
Al Ataua	118	Atana Wells	2	25			
15 Duma	Duma	119	Old Duma Wells	8	240	1468	9.64
			Ogoon Fas Rayga	12	1000		
	Al Shiforieh	120		2	55		
	Al Raibana	121		1	35		
	Hosh Naslu	122		1	35		
	Hosh al Ghara	123		1	35		
	Hosh al Afwahera	124		1	18		
	Amtaya	125		1	30		
Belt Naem	126		1	20			
16 Bloudan	Bloudan	127	Near Al Thanawieh Wel	2	25	325	2.14
			Al Shakeef Wells	3	300		
17 Al Tal	Al Tal	128	Baargal Wells	9	360	690	4.53
			Ain Honayn Spring		40		
	Herneh	129		3	130		
	Maaraba	130		1	35		
	Al Doseig	131		2	50		
	Maarana	132		1	30		
Halbouu	133	Ain al Saheb	1	30			
		Ain al Fakhookh	1	15			
18 Arbine	Arbine	134		23	520	850	5.58
	Zawalka			11	330		

Table C-3.2 (5/5) Rural Water Establishment Sources

Unit	Settlement	No. on Map	Source Name	Borehole (No)	Capacity (m ³ /h)	Unit Total (m ³ /h)	Annual Quantity (MCM)	
19 Jaramana	Jaramana	136	Al Wehda Wells	3	130	955	6.27	
			Karam Itdid Wells	1	40			
			Al Talaleeh	1	40			
			Al os al Gharbi	1	40			
			Al Bekdan Alley	2	90			
			Al Nahda	2	90			
			Al Moleha	137	7			285
Saba'a	138	2	80					
20 Babbila	Babbila	141	Deir Al Asafir	2	90	1213	7.97	
			Zeldeen	140				
			Hatia	2	70			
			Dabbila	141	4			200
			Yalda	142	3			150
			Sidi Mekdar	143	3			120
			Beit Sahem	144	4			150
			Akraba	145	2			100
			Al Sayeda Zeinab	146	4			200
			Nagha	147	1			6
			Al Moallaka	148	1			10
			Buwayda	149				
			Hajina		2			65
			Sabba	151	1			60
Al Bobolieh	152	1	25					
Al Sheira	153	4	115					
Khenbet al Ward	154	1	12					
21 Harasta	Harasta Area	155	Store Assembly	2	25	675	4.43	
			Around Harasta	35	650			
22 Deir Atiya	Deir Atiya	156	Al Shaab Valley Wells	5	160	226	1.48	
			Eastern Station	2	50			
			Al Hamira	157	3			10
23 Madaya	Madaya	159	Al Barikeh	158	1	6	186	1.22
			Madaya	159	3	50		
			Akaba Madaya	1	4			
			M Dyab - Madaya	1	4			
			Boukkein	160	2	40		
			Boukkein Spring Wells	2	40			
Al Rawda	161	1	60					
Hosh Yagel	162	2	20					
24 Kafan Batna	Kafan Batna	163	Sakba	163	8	215	1065	7.00
			Kafan Batna	164	6	155		
			Ifamusia	165	6	200		
			Beit Swda	166	3	90		
			Jessin	167	4	125		
			Hezze	168	3	85		
			Ain Tarma	169	6	195		
25 Wadi Barada	Wadi Barada	170	Deir Makarren			300	1.97	
			Husayneh					
			Barhalieh					
			Kfein al Zeit					
			Deir Kanoun					
				5	300			
TOTAL						15,376	101.02	

Notes:

1. Information provided by Rural Water Supply Establishment
2. Water Source Unit are those used in USSR (1986)
3. Outside - not within the Brada & Awaj Catchments
4. Annual Totals assume 365 days of source operation at 18 hrs per day

Table C-5.1 Summary of DAWSSA Boreholes

Name	Number of Boreholes				
	Production			Observation	
	In Use (#)	Unused (#)	New (#)	In Use (#)	Unused (#)
Quaternary Aquifer					
Ibn Assaker	19	--	--	2	--
Jaramana	--	--	10	--	1
Jobar	14	--	--	2	--
Kaboon	5	5	--	1	--
Kywan	--	--	5	--	--
Mazraa	24	--	--	1	--
Oumawiyin	13	--	--	1	--
Kadam Store	3	--	7	--	1
Kadam Railway	10	--	--	1	--
Takadom	--	--	10	--	1
Tisireen Garden	--	--	10	--	--
University	9	3	--	1	--
Fringe Bhs	23	--	--	--	7
Emergency Bhs	58	--	--	--	--
Jurassic/Cretaceous					
Barada	18	--	3	1	--
Deir Moukaren	7	3	--	1	--
Dummar Project	--	2	5	--	1
Wadi Marwan	--	--	16	--	--
Zabadani Valley	--	10	15	--	--
Total	203	23	81	11	11

Table C-5.2 DAWSSA Observation Boreholes

Name	Nr	Bh Diameter (")	Datum Height (m)	Maximum Water Level 1994		Instrument Details	Status	Housing	Current (1996) Measurement Frequency
				(mbdat)	(masl)				
Quaternary Aquifer									
Ibn Assaker	1	10	680.311	8.89	671.42	Autographic/Manual	Failed	Building	Weekly/Monthly
Ibn Assaker	2	10	683.745	9.82	673.93	Autographic/Manual	Failed	Building	Weekly/Monthly
Jaramania	1	9				None		Open	None
Jobar	D2	3	680.614	13.20	667.41	Autographic/Manual	Failed	Box	Weekly/Monthly
Jobar	2	8	681.860			None		Open	None
Kaboon	1	10	715.091	31.14	683.95	Manual		Building	Weekly
Mazraa	1	10	696.864	5.96	690.90	Autographic/Manual	working	Box	Continuous/Weekly
Oumawivin	D10	3	696.926	4.40	692.53	Manual		Box	Weekly/Monthly
Kadam Store	D3	3	688.603			None		Open	None
Kadam Railway	1	3	683.973	4.70	679.27	Autographic/Manual	Failed	Building	Weekly/Monthly
Takadum	1	9	670.860			None		Building	None
University	1	9	712.322			Manual		Open	Weekly/Monthly
University	D1	3				None		Open	None
Jalar	D4	3				None		Open	Not available
Khatib Garden	D5	3				None		Open	None
Agriculture Fac.	D6	3				None		Open	None
Zahera Garden	D11	3				None		Open	None
Diwania Garden	D9	3				None		Open	None
Bashir	D15	3				None		Open	None
Cretaceous/Jurassic Aquifers									
Barada Springs	9	11	1107.500			Autographic/Manual	working	Building	Continuous/Weekly
Dummar	D7	3				None		Building	None

Table C-6.1 Previous Recommendations for New Water Sources

Source	Useable Resource in 1981 (MCM/y)		Useable Resource in 2010 (MCM/y)	
	(1)	(2)	(1)	(2)
a. Fiegh Spring	1.1	140.2	3.1	140.2
b. Hermon Wellfields	0	0	0	42.8
c. Barada Spring	0	0	0	81
d. Awaj Springs	5.2	0	10.1	0
e. Damascus Wellfields	0	28.5	0	35
f. Rural Wellfields	50.1	0	165.9	0
g. Ghouta Wellfields	0	0	0	83
h. Adliyah Reservoir	0	0	0	143.3
Total	56.4	168.7	189.1	525.3

Notes: (1) Rural Area (2) City Area Source: Lengiprovdkhoz (1986)

Table C-6.2 Existing Resources - Capacities Used for Planning Purposes

Source Name	Capacity				Seasonal Capacity ⁵ (MCM)
	Installed ²	Minimum ³	Average ⁴		
	(l/s)	(l/s)	(l/s)	(m ³ /d)	
Mazraa Wellfield	665	290	335	28,800	7.06
Jobar Wellfield	390	220	350	30,200	7.40
Kaboon Wellfield	83	est 80	65	5,620	1.38
Ibn Assaker Wellfield	455	280	345	29,800	7.30
Kadam Railway Wellfield	350	200	305	26,500	6.49
Oumawiya Wellfield	390	175	175	15,000	3.67
University Wellfield	420	est 215	200	17,300	4.24
Fringe Wells	320	125	125	10,800	3.93
Fiegh Main Spring					
Average Year (1995)	12,400 ¹	-	5,800	507,000	185.00
Dry Year (1990)	-	2,880	3,870	334,000	122.00
Barada Spring Wellfield	1,100	1,100	1,100	95,000	23.27
TOTAL					
Average Year (1995)	16,573	-	8,800	766,020	249.74
Dry Year (1990)	-	5,565	6,870	593,020	186.74

- Notes:
1. Capacity limited to that of the supply tunnels during flood period
 2. Capacity of well sources is that of the current pumping equipment
 3. Minimum capacity is that produced in December 1990, at the lowest capacity of Fiegh during a drought year. For sources not commissioned at that time or which have been subsequently changed an estimate is made based upon December 1995.
 4. Average capacity is based upon operating the source at an achievable rate based on conditions in 1996.
 5. Seasonal Capacity is the average rate applied for the abstraction season. This is taken as 365 days for Fiegh and the Fringe Wells and 245 days (8 months) for other sources.

Table C-6.3 Barada (Al Sahl) Wellfield Details

Well Number	Design Capacity (t/s)	Q/s (t/s/m)	SWL (mbgl)	Depth (m)	Anticipated Drawdown (m)
Group 1					
21K	60	12.83	3.61	1020	4.7
215K	30	3.13	4.20	250	9.6
243K	60	5.76	2.65	343	10.4
244K	80	22.98	2.77	232	3.5
Group 2					
240K	30	10.60	37.08	220	2.8
20/2	60	18.77	21.10	213	3.2
25/2	60	142.86	21.15	115	0.4
Group 3					
247K	30	7.92	21.30	243	3.8
227K	20	8.31	18.23	250	2.4
23/3	10	-	-	-	-
24/3	10	0.95	21.50	225	10.5

Table C-6.4 Barada Spring Hydraulic Properties

Test	Method	Observation Location	Transmissivity (m ² /d)	Storativity (-)
Natural Discharge Nov 1985	Distance-Drawdown	Various	17,600	-
Natural Discharge Sep 1987	Distance-Drawdown	Various	18,000	-
Pumped Levels Dec 1987	Distance-Drawdown	Various	18,000	-
	Time-Drawdown (CJ)	Lake	18,600	-
		P8	15,200	0.026
		P3	35,500	0.0015
	Time-Drawdown (TC)	P8	16,100	0.025
	Time-Drawdown (Recovery)	Lake	17,800	-
	Radial Flow Model	Lake & P8	17,000 to 4 km 2,000 to 10 km	0.03
	Typical		17,000	0.025

Notes: TC: Type curve method, CJ: Cooper-Jacob straight line method.

Table C-6.5 Anticipated Behaviour for Takadom Wellfield

Well	A	B	P	Static Water Level (m)	Pumping Water Level (m)	Pump Capacity (m ³ /hr)
1	0.0405	3.94×10^{-5}	2	8	23.0	120
4	-	-	-	8	23.2	100
5	0.0126	3.15×10^{-4}	2	8	23.1	100
6	0.0406	4.27×10^{-5}	2	8	23.1	120
7	0.0406	4.27×10^{-5}	2	8	23.8	120
8	0.0330	1.06×10^{-3}	2	8	31.8	100
9	0.0255	2.44×10^{-5}	2	8	18.5	Obs Well
10	0.0552	3.68×10^{-17}	8.7	8	33.2	100
11	-	-	-	8	23.7	100
12	0.0418	4.19×10^{-5}	2	8	23.4	100
13	0.0422	3.83×10^{-5}	2	8	22.7	100

Notes: $s = A \times Q + B \times Q^P$

Where: Q Pumping rate in m³/hr.

s Well Drawdown in m

A,B,P Parameters in table above.

Pump Water level includes interference effects plus 3 m or regional recession

Table C-6.6 Anticipated Behaviour for Kadam Store Wellfield

Well Drilling Number	Q/s (l/s/m)	Static Water Level (m)	Pumping Water Level (m)	Pump Capacity (m ³ /hr)
1	8.8	6	21.1	100
2	9.9	6	20.8	100
3	8.9	6	21.1	100
4	8.8	6	21.1	100
5	14.6	6	19.9	100
6	5.8	6	22.8	100
7	6.5	6	22.3	100
8	10.5	6	20.6	100
9	8.5	6	21.3	100
10	26.5	6	19.0	100

Notes: Pumping water level includes for a total of 9 m interference effects plus 3 m regional recession
Well 5 is operational number 1 and wells 2 and 3 are operational numbers 2 and 3

Table C-7.1a Well Details at Deir el Ashayer Area

Well	Depth (m)	Surface Elevation (m asl)	Water Level (m bdat)		Pumping Rate (l/s)	Specific Capacity (l/s/m)	Test Date
			Static	Dynamic			
308K	334	1188.36	11.44	11.87	38	88.37	6/8/85
571	19	1187.10	9.63	9.84	5	23.81	n.a.
660	38	1189	16.00	25.88	-	-	-
809	160	1190.49	11.52	28.75	26	1.81	11/02/87
809a	65	1188.60	18.60	21.28	8	0.80	20/10/86
809b	462	1190.44	13.75	22.84	22	2.92	25/01/88
844	151	1190.71	26.36	23.44	68	28.93	13/09/89
846	188	1190.18	22.47	27.96	24	27.58	05/12/89
847	185	1187.83	19.46	-	22	2.59	25/11/89
849	150	1189.16	20.69	-	-	-	-
850	-	1192.73	-	57.47	-	-	-
853	148	1212.70	44.45	-	15	1.15	23/03/90
854	152	-	28.96	-	-	-	n.a.
858	107	1190.82	28.60	-	-	-	-
859	160	1188.46	20.23	18.57	-	-	-
1547	32	1196.62	18.35	33.98	11.8	53.63	15/9/83
1577	54	1198	27.07	-	6.47	0.94	9/10/83

Table C-7.1b Anticipated Behavior of Deir el Ashayer Wellfield

Well	Static Water Level (mbgl) ¹	Drawdown (m) ²	Dynamic Water Level (mbgl) ³	Pump Capacity (l/s)	Installation Depth (m)
844	16	24.2	46.2	50	65
846	15	23.0	44.0	50	65
854	19	24.2	49.2	50	65
new	20	23.0	49.0	50	65

- Notes: 1 Typical level anticipated for beginning of pumping period, using May 1995 as the reference year, Using determined by comparison with well 809.
 2 After 6 months pumping
 3 Lowest expected level based on drawdowns plus 6 m of regional recession from an initial static water level in May

Table C-7.2 Details of wells in the Rimch Area

Number	Eastings (m)	Northings (m)	Elevation (masl)	Depth Water Level		Discharge (l/s)	Drawdown (m)	Q/s (l/s/m)	Transmissivity (m ² /d)	Test Date	Productive Zone		
				(m)	(mbgl)						(masl)	Top (m)	Base (m)
825a	330.505	3.696.780	1.433.20	113	5.00	1428.20	57	0.77	74.03	7.748	17/4/89		
825b	330.464	3.696.760	1.433.82	250	7.90	1425.92	30	0.75	40.00	3.440	2/9/89	160	202
825c	330.420	3.696.740	1.437.47	112	12.22	1425.25	10	22.98	0.44	36	23/9/89	108	197
825r-	330.523	3.696.790	1.433.61							2.370			
836	330.725	3.696.900	1.437.85	30	13.22	1424.63				7.859			
863	330.430	3.696.925	1.450.75	202	22.19	1428.56				7.859		120	135
864	330.510	3.696.515	1.431.53	200	10.00	1421.53						122	175
865	330.582	3.696.860	1.437.11										
867	330.644	3.696.740		260						2.108		185	250
868			1.427.41	140	38.58	1388.83							

Table C-7.3 Determination of Water Levels in Pumped Boreholes

Parameter	Ibn Assaker		Mazraa		Kaboon		Jobar		Kadam	
	current	future	current	future	current	future	current	future	current	future
Pump Rate (m ³ /hr)	100	108	100	100	60	60	100	100	100	135
Number of Boreholes	19	19	24	24	5	5	14	14	13	13
Utilisation (%)	65	80	50	50	80	50	90	90	85	85
Total Pumped (m ³ /d)	29,640	39,398	28,800	28,800	5,760	3,600	30,240	30,240	26,520	35,802
Transmissivity (m ² /d)	1000	1000	500	500	175	175	500	500	600	600
delta s (m/cycle)	5.42	7.21	10.54	10.54	6.02	3.76	11.07	11.07	8.09	10.92
Time zero (day)	10	10	10	10	10	10	10	10	10	10
Time end (day)	200	365	200	365	200	245	200	365	200	365
Observation Bh DD (m)	7.06	11.26	13.71	16.47	7.84	5.23	14.40	17.29	10.52	17.06
Observation Bh WI (mbgl)	22.06	26.26	21.71	24.47	40.84	38.23	30.40	33.29	17.52	24.06
delta r (m/cycle)	0.44	0.47	0.88	0.88	1.51	1.51	0.88	0.88	0.73	0.99
Well diam (inch)	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25
Radius to Obs (m)	50	50	50	50	50	50	50	50	50	50
Obs to Bh DD (m)	1.10	1.19	2.20	2.20	3.76	3.76	2.20	2.20	1.83	2.47
Ideal Q/s (l/s/m)	13.73	13.73	15.97	15.97	7.59	7.59	5	5	20.58	20.58
Test Rate (m ³ /hr)	86	86	113	113	82	82	144	144	120	120
Test Drawdown (m)	4.9	4.9	6.33	6.33	22.75	22.75	9.5	9.5	7.16	7.16
'a' parameter	0.020	0.020	0.017	0.017	0.037	0.037	0.056	0.056	0.013	0.013
Aquifer Loss (m)	2.02	2.18	1.74	1.74	2.20	2.20	5.56	5.56	1.35	1.82
'b' parameter	4.3E-04	4.3E-04	3.4E-04	3.4E-04	2.9E-03	2.9E-03	7.2E-05	7.2E-05	3.8E-04	3.8E-04
Well Losses (m)	1.81	3.19	0.85	0.85	6.77	2.64	0.59	0.59	2.78	5.07
Regional Recession (m)	3	3	3	3	2	2	3	3	3	3
Water level May (mbgl)	12	12	5	5	31	31	13	13	4	4
Predicted Water Level (mbgl)	24.96	30.64	24.76	27.52	51.37	44.64	33.18	36.07	22.13	31.60

Table C-7.4 Details of Fringe Wells to be Re-equipped

Well Number	Proposed Installed Capacity (l/s)	Anticipated Drawdown (m)	Anticipated dynamic water level (m bgl)
1	30	4.3	24
2	30	3.2	20
3	30	2.9	20
4	30	6.4	23
5	30	9.3	27
10	20	9.2	22
17	20	8.6	19
21	25	9.3	24

Table C-7.5 Step Test Analysis Results for Jaramana Wellfield

Well	A	B	P	Comments
1	0.0092	5.82×10^{-6}	2	-
2	0.0096	2.09×10^{-6}	2	-
3	0.0097	8.48×10^{-6}	2	-
4	0.0238	2.36×10^{-15}	7.6	Breakaway drawdown
5..10	0.0096	2.09×10^{-6}	2	Identical Test Data

Notes: $s = A \times Q + B \times Q^P$
 Where: Q Pumping rate in m³/hr.
 s Drawdown in m
 A,B,P Parameters in table above.

Table C-7.6 Well Characteristics at Tishreen and Kywan Wellfield

Well	A	B	P	Q/s (l/s/m)	Comments
Tishreen 1	0.497	4.80×10^{-3}	2	-	-
Tishreen 2	0.581	1.46×10^{-3}	2	-	-
Tishreen 3	0.0198	2.14×10^{-10}	5.2	-	Very high well losses
Tishreen 4	0.0268	1.08×10^{-15}	8.0	-	Very high well losses
Tishreen 5	0.158	8.22×10^{-8}	4.2	-	-
Tishreen 6	-	-	-	-	Very low yield
Tishreen 7	-	-	-	-	Very low yield
Tishreen 8	0.072	1.17×10^{-3}	2	-	-
Tishreen 9	0.126	1.34×10^{-7}	3.9	-	-
Tishreen 10	0.429	1.78×10^{-2}	2	-	-
Kywan 1	-	-	-	0.12	Very large drawdown
Kywan 2	-	-	-	11.57	-
Kywan 3	-	-	-	12.63	-
Kywan 4	-	-	-	0.52	Very large drawdown
Kywan 5	-	-	-	0.32	Very large drawdown

Notes: $s = A \times Q + B \times Q^P$
 Where: Q Pumping rate in m³/hr.
 s Drawdown in m
 A,B,P Parameters in table above.

Table C-7.7 Proposed Wells for Shoukry at Qouwatly Street Wellfield

Well	Total Depth (m)	Casing Diam (inch)	Length of Casing (m)		Casing Diam (inch)	Length of Casing (m)
			Plain	Perforated		
obs	75	9	20	50	13	20
1	75	17	20	50	20	20
2	75	17	20	50	20	20
3	75	17	20	50	20	20
4	75	17	20	50	20	20
5	75	17	20	50	20	20

Table C-7.8 Anticipated Water Levels for Shoukry at Qouwatly Street Wellfield

Well	Static Water Level (m)	Pumping Water Level (m)	Pump Capacity (l/s)	Installation Depth (m)
1	5	35	42	65
2	5	35	42	65
3	5	35	42	65
4	5	35	42	65
5	5	35	42	65

Table C-7.9 Anticipated Capacities of Proposed Water Sources

Source Name	Design Capacity (l/s)	Average Capacity		Seasonal Capacity (MCM)
		(l/s)	(m ³ /d)	
Existing Resources				
Average Year (1995)	16,070	8,800	766,020	249.74
Dry Year (1990)	9,830	6,870	593,020	186.74
On going schemes				
1. Wadi Marwan Wellfield	235	185	16,000	* 5.84
2. Barada Group 1 Wellfield	230	185	16,000	3.92
3. Barada Group 2 Wellfield	150	120	10,400	2.55
4. Barada Group 3 Wellfield	70	60	5,200	1.27
5. Takadom Wellfield	295	140	12,100	2.96
6. New Kaboon Wellfield				
Phase I	30	25	2,200	0.54
Phase II	120	95	8,200	2.00
7. Kadan Store Wellfield	275	170	14,700	3.60
8. Dummar Wellfield	125	100	8,600	* 3.14
8. Figeh Side Spring	+ 500 ¹	0	0	0
9. Ain Haroush	1500 ²	0	0	0
Master Plan Schemes				
1. Ibn Assaker Wellfield	75	120	10,200	2.50
2. Kadan Railway Wellfield	135	115	9,300	2.28
3. University Wellfield	no change	-200	-17,300	-4.24
4. Fringe Wells	100	110	9,600	1.76
5. Tishreen and Kywan Wfd				
Phase I	135	110	9,500	2.33
Phase II	130	100	8,600	2.12
Phase III	50	40	3,500	0.85
6. Jaramana Wellfield	360	290	25,000	6.12
7. Kafar Souseh Wellfield	125	80	6,900	1.69
8. Kanawat Gardens Wellfield	125	80	6,900	1.69
9. Shokry al Qouwatly Wfd	210	170	14,700	3.60
10. Deir al Ashayer	200	200	17,280	** 3.16
Schemes not in the Master Plan				
1. Sergaya and El Irk Wellfields	180	140	12,000	2.94
2. Rimch Wellfield	285	285	24,500	** 4.48
3. Beit Jenn Spring				
Average Year	500	485	42,000	10.30
Dry Year	483	335	29,000	7.09
4. Tabibiyeh Spring				
Average Year	500	440	38,400	9.40
Dry Year	449	225	19,400	4.75
5. Barada Wellfield Reinforcement	1,400	950	81,600	20.00

Notes Season of 245 days assumed unless indicated otherwise
 * Season of 365 days operation
 ** Season of 183 days operation
 1 Net increase in capacity for Figeh Side Spring
 2 Will replace the existing pumps at Ain Haroush

**Table C-8.1 Minimum Perforated Casing Lengths
for a Screen Entrance Velocity of Less than 0.03 m/s**

9" Casing Material

Linear Discharge (l/s/m)	Screen Open Area (%)	Clogging Ratio	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)
0.002	0.5	0.25	10	124	20	248	30	371
0.004	1	0.25	10	62	20	124	30	186
0.008	2	0.25	10	31	20	62	30	93
0.012	3	0.25	10	21	20	41	30	62
0.016	4	0.25	10	15	20	31	30	46
0.020	5	0.25	10	12	20	25	30	37
0.024	6	0.25	10	10	20	21	30	31
0.028	7	0.25	10	9	20	18	30	27
0.032	8	0.25	10	8	20	15	30	23

10" Casing Material

Linear Discharge (l/s/m)	Screen Open Area (%)	Clogging Ratio	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)
0.002	0.5	0.25	10	111	20	223	30	334
0.004	1	0.25	10	56	20	111	30	167
0.009	2	0.25	10	28	20	56	30	84
0.013	3	0.25	10	19	20	37	30	56
0.018	4	0.25	10	14	20	28	30	42
0.022	5	0.25	10	11	20	22	30	33
0.027	6	0.25	10	9	20	19	30	28
0.031	7	0.25	10	8	20	16	30	24
0.036	8	0.25	10	7	20	14	30	21

12" Casing Material

Linear Discharge (l/s/m)	Screen Open Area (%)	Clogging Ratio	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)	Pumping Rate (l/s)	Screen Length (m)
0.003	0.5	0.25	10	93	20	186	30	278
0.005	1	0.25	10	46	20	93	30	139
0.011	2	0.25	10	23	20	46	30	70
0.016	3	0.25	10	15	20	31	30	46
0.022	4	0.25	10	12	20	23	30	35
0.027	5	0.25	10	9	20	19	30	28
0.032	6	0.25	10	8	20	15	30	23
0.038	7	0.25	10	7	20	13	30	20
0.043	8	0.25	10	6	20	12	30	17

Table C--8.2b Water Production Plan for 2000 (Average Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)	
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec		
Ain Figh Area															
Figh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.061	5.698	5.197	4.710	4.380	4.263	4.175	215.487	
Overflow	Loss to River			2.079	5.632	3.782								30.204	
Figh Total to Supply		5.458	5.771	7.621	7.968	8.188	7.064	5.698	5.197	4.710	4.380	4.263	4.175	185.256	
Barada & Al Sahl															
Spring Wells	Wellfield	0.750	0.750			0.500	1.100	1.100	1.100	1.100	1.100	1.100	1.100	22.601	
Group 1	Wellfield					0.185	0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.403	
Group 2	Wellfield	0.120	0.120			0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838	
Group 3	Wellfield													0.000	
Sub Total		0.870	0.870	0.000	0.000	0.000	0.805	1.405	1.405	1.405	1.405	1.405	1.405	28.842	
Damascus (Existing Stations)															
Mazraa	Wellfield						0.335	0.335	0.335	0.335	0.335	0.335	0.335	6.163	
Ibn Assaker	Wellfield	0.345	0.345					0.345	0.345	0.345	0.345	0.345	0.345	7.253	
Ibn Assaker	Re-equipped														
Jobar	Wellfield	0.350	0.350					0.350	0.350	0.350	0.350	0.350	0.350	7.358	
Kadam Railway	Wellfield	0.305					0.245	0.305	0.305	0.305	0.305	0.305	0.305	6.255	
Kadam Railway	Re-equipped														
Ounayyia	Wellfield	0.017	0.008					0.175	0.175	0.175	0.175	0.175	0.175	2.825	
Kaboon	Wellfield							0.015	0.065	0.065	0.065	0.065	0.065	0.972	
University	Wellfield													0.000	
Kadam Store	Wellfield								0.170	0.170	0.170	0.170	0.170	2.234	
Dunnar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154	
Fringe Wells	23 wells	0.105	0.195	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942	
Fringe Wells	8 Re-equipped													0.000	
Emergency Wells	55 wells													0.000	
Sub Total		1.222	0.908	0.205	0.205	0.245	0.825	1.800	1.990	1.990	1.990	1.950	1.950	40.156	
Damascus (New Stations)															
New Kaboon	2 wells Phase I								0.024	0.024	0.024	0.024	0.024	0.315	
New Kaboon	8 wells Phase II								0.096	0.096	0.096	0.096	0.096	1.261	
Kahr Soueh	5 wells	0.080	0.080						0.080	0.080	0.080	0.080	0.080	1.472	
Tishreen & Kyuan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313	
Tishreen & Kyuan	9 wells Phase II								0.100					0.263	
Tishreen & Kyuan	2 wells Phase III													0.000	
Jazanaa	9 wells							0.290	0.290	0.290	0.290	0.290	0.290	4.573	
Takadon	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	1.577	
Shokry al Qouady	5 wells													0.000	
Yalbuga Centre	10 wells													0.000	
Kanawat Gardens	5 wells													0.000	
Sub Total		0.190	0.190	0.000	0.000	0.000	0.000	0.400	0.840	0.740	0.740	0.740	0.640	11.773	
Hermon & Zabadani Area															
Bait Jena	Spring Intake													0.000	
Tabbayeh	Spring Intake													0.000	
Rineh	8 wells													0.000	
Wadi Maraan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253	
Seigaya Wellfield	9 wells													0.000	
Dier Al Asbayr	4 wells								0.140	0.020	0.040			0.526	
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.370	0.250	0.270	0.230	0.230	7.779	
TOTAL SOURCES (MCM)		7.970	7.969	8.056	8.403	8.663	8.924	9.533	9.802	9.095	8.785	8.588	8.400	273.807	
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.080	
Deficit (l/s)		0	0	0	0	0	0	0	74	0	0	0	2		
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.01	0.20	

Table C--8.2c Water Production Plan for 2005 (Average Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			1.406	4.930	3.069								24.716
Fiqeh Total to Supply		5.458	5.771	8.295	8.670	8.912	7.064	5.698	5.197	4.710	4.380	4.263	4.175	190.775
Barada & Al Sahl														
Spring Wells	Wellfield	1.070	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.858
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.889
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.070	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.901
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325					0.335	0.335	0.335	0.335	0.335	0.335	7.017
Iba Assaker	Wellfield						0.345	0.345	0.345	0.345	0.345	0.345	0.345	6.347
Iba Assaker	Re-equipped													
Jobar	Wellfield	0.180					0.350	0.350	0.350	0.350	0.350	0.350	0.350	6.912
Kadun Railway	Wellfield	0.305	0.305					0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadun Railway	Re-equipped													
Qunayyin	Wellfield							0.175	0.175	0.175	0.175	0.175	0.175	2.759
Kaboon	Wellfield						0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.196
University	Wellfield													0.000
Kadun Store	Wellfield							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Dunidar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	35 wells													0.000
Sub Total		1.025	0.855	0.205	0.205	0.245	1.605	1.990	1.990	1.990	1.990	1.950	1.950	40.619
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024					0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kabr Souneh	5 wells							0.080	0.080	0.080	0.080	0.080	0.080	1.261
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II	0.100						0.032	0.100	0.100	0.100	0.100	0.100	1.661
Tishreen & Kywan	2 wells Phase III	0.034							0.040	0.040	0.040	0.040	0.040	0.510
Jarmanan	9 wells	0.290	0.290					0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadout	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	2.208
Shokry al Qunaydy	5 wells							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Yalanga Centre	10 wells													0.000
Kna'ant Gardens	5 wells								0.080	0.080	0.080	0.080	0.080	1.051
Sub Total		0.654	0.520	0.000	0.000	0.000	0.000	0.942	1.130	1.130	1.130	1.130	1.090	20.304
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		8.637	8.641	8.730	9.105	9.387	9.704	10.325	10.362	9.825	9.445	9.288	9.110	295.806
Need (m³/s)		8.636	8.635	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.600
Deficit (ls)		0	0	0	0	0	0	0	330	30	35	5	0	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.08	0.09	0.01	0.00	1.08

Table C--8.2d Water Production Plan for 2010 (Average Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)	
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec		
Ain Fiqeh Area															
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487	
Overflow	Loss to River			0.474	3.985	2.065								17.145	
Fiqeh Total to Supply		5.458	5.771	9.226	9.642	9.915	7.064	5.698	5.197	4.710	4.380	4.263	4.175	198.412	
Barada & Al Sahl															
Spring Wells	Wellfield	1.100	1.100			1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017	
Group 1	Wellfield	0.185	0.185			0.185	0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376	
Group 2	Wellfield	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523	
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946	
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862	
Damascus (Existing Stations)															
Mazraa	Wellfield	0.335	0.335				0.335	0.335	0.335	0.335	0.335	0.335	0.335	7.043	
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253	
Ibn Assaker	Re-equipped														
Jobar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358	
Kadani Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412	
Kadani Railway	Re-equipped														
Onnashyia	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681	
Kaboon	Wellfield	0.037	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.377	
University	Wellfield													0.000	
Kadani Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574	
Dammar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154	
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942	
Fringe Wells	8 Re-equipped													0.000	
Emergency Wells	55 wells													0.000	
Sub Total		1.355	1.160	0.205	0.205	0.245	1.655	1.990	1.990	1.990	1.990	1.950	1.950	43.794	
Damascus (New Stations)															
New Kaboon	2 wells Phase I	0.024	0.004					0.024	0.024	0.024	0.024	0.024	0.024	0.452	
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018	
Kafar Souseh	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682	
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313	
Tishreen & Kywan	9 wells Phase II							0.100	0.100	0.100	0.100	0.100	0.100	1.577	
Tishreen & Kywan	2 wells Phase III							0.040	0.040	0.040	0.040	0.040	0.040	0.631	
Jammana	9 wells	0.290	0.290					0.290	0.290	0.290	0.290	0.290	0.290	6.097	
Takadom	7 wells	0.140	0.140					0.140	0.140	0.140	0.140	0.140	0.140	2.943	
Shokry al Qoozaly	5 wells	0.170	0.170					0.170	0.170	0.170	0.170	0.170	0.170	3.574	
Yalbuga Centre	10 wells													0.000	
Kanawat Gardens	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682	
Sub Total		0.990	0.970	0.000	0.000	0.000	0.000	1.130	1.130	1.130	1.130	1.130	1.130	22.969	
Hermos & Zabadani Area															
Beit Jeen	Spring Intake													0.000	
Tabibiyeh	Spring Intake													0.000	
Rineh	8 wells													0.000	
Wadi Marana	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253	
Sergaya Wellfield	9 wells													0.000	
Dier Al Askajer	4 wells							0.200	0.200	0.200	0.200	0.200	0.200	3.154	
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	0.430	10.407	
TOTAL SOURCES (MCM)		9.417	9.416	9.661	10.077	10.390	10.354	10.713	10.212	9.725	9.395	9.238	9.150	309.444	
Need (m³/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.84	10.91	10.49	10.28	10.08	328.608	
Deficit (l/s)		140	141	0	0	0	346	714	1631	1183	1098	1047	927		
Deficit (MCM)		0.37	0.37	0.00	0.00	0.00	0.91	1.88	4.29	3.11	2.88	2.75	2.44	19.00	

Table C-8.2c Water Production Plan for 2015 (Average Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.000	2.895	0.975								10.170
Fijeh Total to Supply		5.458	5.771	9.700	10.705	11.005	7.064	5.698	5.197	4.710	4.380	4.263	4.175	205.316
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.168	0.168				0.335	0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadani Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadani Railway	Re-equipped													
Ommanayin	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.033	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.367
University	Wellfield													0.000
Kadani Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.163	0.993	0.205	0.205	0.245	1.990	1.990	1.990	1.990	1.990	1.950	1.950	43.784
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024				0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096				0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafri Soufeh	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.682
Tishreen & Kywan	5 wells Phase I	0.110	0.110				0.110	0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II						0.100	0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III						0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.290				0.290	0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takdoot	7 wells	0.140	0.140				0.140	0.140	0.140	0.140	0.140	0.140	0.140	2.943
Shokry al Qomawdy	5 wells	0.170	0.170				0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.682
Sub Total		0.990	0.990	0.000	0.000	0.000	0.000	1.130	1.130	1.130	1.130	1.130	1.130	23.021
Hermou & Zabadani Area														
Beit Jena	Spring Intake													0.000
Tabbiyah	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marzan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells						0.200	0.200	0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		9.246	9.269	10.135	11.140	11.480	10.689	10.713	10.212	9.725	9.395	9.238	9.150	316.390
Need (m³/s)		10.56	10.56	10.68	11.14	11.48	11.82	12.63	13.09	12.03	11.59	11.36	11.14	363.100
Deficit (ls)		1315	1292	541	0	0	1135	1914	2875	2328	2199	2127	1985	
Deficit (MCM)		3.46	3.40	1.42	0.00	0.00	2.98	5.03	7.55	6.12	3.78	3.59	5.22	46.54

Table C-8.3b Water Production Plan for 2000 (Low Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.252	0.000								0.652
Fiqeh Total to Supply		2.960	2.880	4.500	7.969	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	131.342
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.150	1.200	1.200	1.100	1.100	1.100	1.100	26.674
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		1.405	1.405	0.000	0.000	0.000	1.455	1.505	1.505	1.405	1.405	1.405	1.405	33.888
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335			0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Iba Assaker	Wellfield	0.345	0.345	0.345			0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Iba Assaker	Re-equipped													
Johar	Wellfield	0.350	0.350	0.350			0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadani Railway	Wellfield	0.245	0.245	0.245			0.245	0.245	0.305	0.305	0.305	0.305	0.305	8.029
Kadani Railway	Re-equipped													
Ounayyin	Wellfield	0.175	0.175	0.175			0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065			0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadani Store	Wellfield	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.151
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.890	1.890	1.890	2.205	1.930	1.930	1.990	1.990	1.990	1.990	1.950	1.950	56.752
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024			0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096			0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souneh	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100			0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells	0.290	0.290	0.290			0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadon	7 wells	0.140	0.140	0.140			0.140	0.140	0.140	0.140	0.140	0.140	0.140	3.784
Shokry al Qorvady	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanaat Gardens	5 wells													0.000
Sub Total		0.840	0.840	0.840	0.000	0.840	0.840	0.840	0.840	0.840	0.840	0.840	0.740	24.020
Hermou & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200		0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	5.782
Sub Total		0.430	0.430	0.430	0.230	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.035

Table C-8.3c Water Production Plan for 2005 (Low Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fiqeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sukh														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.937
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.889
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield							0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.100	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.980
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335			0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Iba Assaker	Wellfield	0.345	0.345	0.345			0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Iba Assaker	Re-equipped	0.120	0.120	0.120			0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350			0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadani Railway	Wellfield	0.245	0.245	0.245			0.245	0.245	0.305	0.305	0.305	0.305	0.305	8.029
Kadani Railway	Re-equipped	0.115	0.115	0.115			0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Omrawayin	Wellfield	0.175	0.175	0.175			0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065			0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadani Store	Wellfield	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105		0.145	0.145	0.145	0.145	0.145	0.145	0.145	3.912
Fringe Wells	8 Re-equipped	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024			0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096			0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souweh	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100			0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040			0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290			0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadon	7 wells	0.140	0.140	0.140			0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouaaty	5 wells	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbugh Centre	10 wells													0.000
Kaawati Gardens	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Herman & Zabadani Area														
Beit Jean	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560

Tabc C-8.3d Water Production Plan for 2010 (Low Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fiqeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	53.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335			0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345			0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120			0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobor	Wellfield	0.350	0.350	0.350			0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadma Railway	Wellfield	0.245	0.245	0.245			0.245	0.245	0.305	0.305	0.305	0.305	0.305	8.029
Kadma Railway	Re-equipped	0.115	0.115	0.115			0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Qunawiyin	Wellfield	0.175	0.175	0.175			0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065			0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadma Store	Wellfield	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dunimar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024			0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096			0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100			0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040			0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290			0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Taladon	7 wells	0.140	0.140	0.140			0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouady	5 wells	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbaga Centre	10 wells													0.000
Kanawati Gardens	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Herman & Zabadaai Area														
Beit Jenn	Spring Intake													0.000
Tabiliyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Maraan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.255
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560

Table C-8.3c Water Production Plan for 2015 (Low Rainfall)

Source	Type	Monthly Quantity (m ³ /d)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fijeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.916
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335			0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345			0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120			0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350			0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadani Railway	Wellfield	0.245	0.245	0.245			0.245	0.245	0.245	0.245	0.245	0.245	0.245	8.029
Kadani Railway	Re-equipped	0.115	0.115	0.115			0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Qunayyia	Wellfield	0.175	0.175	0.175			0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065			0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadani Store	Wellfield	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dunniar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024			0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096			0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110			0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100			0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040			0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290			0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadon	7 wells	0.140	0.140	0.140			0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qorady	5 wells	0.170	0.170	0.170			0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kaasat Gardens	5 wells	0.080	0.080	0.080			0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Haramon & Zabadani Area														
Beit Jass	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Maraan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560

Table C-8.4b Water Production Plan for 2000 (High Rainfall)

Sources	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.940	5.930	8.010	22.590	25.870	20.840	13.640	9.360	7.650	6.270	5.270	5.510	359.721
Overflow	Loss to River			0.389	14.622	17.682	12.393	4.586						130.538
Fijeh Total to Supply		5.940	5.930	7.621	7.968	8.188	8.447	9.054	9.360	7.650	6.270	5.270	5.510	229.183
Barada & Al Saml														
Spring Wells	Wellfield	0.900	0.790						0.040	0.971	1.100	1.100	1.100	15.771
Group 1	Wellfield										0.185	0.185	0.185	1.459
Group 2	Wellfield	0.120	0.120								0.060	0.120	0.120	1.419
Group 3	Wellfield													0.000
Sub Total		1.020	0.910	0.000	0.000	0.000	0.000	0.000	0.040	0.971	1.345	1.405	1.405	18.648
Damascus (Existing Stations)														
Mazraa	Wellfield										0.335	0.335	0.335	2.641
Ibn Assaker	Wellfield	0.225	0.345								0.325	0.345	0.345	4.165
Ibn Assaker	Re-equipped													0.000
Jobar	Wellfield	0.350	0.350									0.350		2.759
Kadani Railway	Wellfield													0.000
Kadani Railway	Re-equipped													0.000
Omranayia	Wellfield											0.175	0.175	0.920
Kaboon	Wellfield													0.000
University	Wellfield													0.000
Kadani Store	Wellfield												0.155	0.088
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		0.780	0.900	0.205	0.205	0.245	0.245	0.245	0.245	0.245	0.905	1.565	1.148	18.220
Damascus (New Stations)														
New Kaboon	2 wells Phase I													0.000
New Kaboon	8 wells Phase II													0.000
Kafri Souseh	5 wells													0.000
Fishreen & Kywan	5 wells Phase I											0.110	0.110	0.578
Fishreen & Kywan	9 wells Phase II													0.000
Fishreen & Kywan	2 wells Phase III													0.000
Jarzanina	9 wells													0.000
Takadon	7 wells													0.000
Shokry al Qorandy	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.110	0.578
Haramon & Zabadani Area														
Beit Jean	Spring Intake													0.000
Tabliyah	Spring Intake													0.000
Riaseh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Achayer	4 wells													0.000
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
TOTAL SOURCES (MCM)		7.970	7.970	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.750	8.580	8.403	273.882
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
De Beir (l/s)		0	0	0	0	0	0	0	0	0	0	0	0	0
De Beir (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-8.4c Water Production Plan for 2005 (High Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.940	5.930	8.010	22.590	25.870	20.840	13.640	9.360	7.650	6.270	5.270	5.510	359.721
Overflow	Loss to River				13.920	16.920	11.647	3.785						121.603
Fiqeh Total to Supply		5.940	5.930	8.010	8.670	8.951	9.193	9.855	9.360	7.650	6.270	5.270	5.510	238.120
Barada & Al Sahl														
Spring Wells	Wellfield	1.070	1.100						0.500	1.060	1.100	1.100	1.100	18.475
Group 1	Wellfield	0.185	0.185						0.185	0.185	0.185	0.185	0.185	3.403
Group 2	Wellfield								0.120	0.120	0.120	0.120	0.120	1.577
Group 3	Wellfield								0.060	0.060	0.060	0.060	0.060	0.788
Sub Total		1.255	1.285	0.000	0.000	0.000	0.000	0.000	0.865	1.425	1.465	1.465	1.465	24.243
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325	0.284							0.335	0.335	0.335	5.122
Iba Assaker	Wellfield		0.320								0.345	0.345	0.345	3.561
Iba Assaker	Re-equipped													0.000
Jobar	Wellfield	0.276	0.036								0.215	0.350	0.350	3.225
Kadani Railway	Wellfield	0.305	0.305									0.305		2.405
Kadani Railway	Re-equipped													0.000
Oumawiya	Wellfield									0.110	0.175	0.175		1.209
Kaboon	Wellfield											0.065	0.065	0.342
University	Wellfield													0.000
Kadani Store	Wellfield											0.170	0.170	0.894
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.121	1.191	0.489	0.205	0.245	0.245	0.245	0.245	0.355	1.315	1.950	1.470	23.852
Damascus (New Stations)														
New Kaboon	2 wells Phase I													0.000
New Kaboon	8 wells Phase II													0.000
Kabri Souneh	5 wells													0.000
Tishreen & Kywan	5 wells Phase I											0.110	0.110	0.578
Tishreen & Kywan	9 wells Phase II											0.070	0.100	0.447
Tishreen & Kywan	2 wells Phase III												0.020	0.053
Jaramana	9 wells													0.000
Takadon	7 wells													0.000
Shokry al Qourady	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kananaat Gardens	5 wells													0.000
Sub Total		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.180	0.230	1.077
Hermon & Zabadani Area														
Beit Jeon	Spring Intake													0.000
Tabilyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marasa	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Djer Al Ashayer	4 wells	0.200	0.000							0.200	0.200	0.200	0.200	2.628
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	9.881
TOTAL SOURCES (MCM)		8.746	8.636	8.729	9.105	9.426	9.668	10.330	10.700	9.860	9.489	9.295	9.105	297.174
Need (m³/s)		8.636	8.636	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		0	0	0	0	0	0	0	1	0	0	0	0	0
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table C-8.4d Water Production Plan for 2010 (High Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.940	5.930	8.010	22.590	25.870	20.840	13.610	9.360	7.650	6.270	5.270	5.510	359.721
Overflow	Loss to River				12.945	15.955	10.645	2.687						110.986
Fiqeh Total to Supply		5.940	5.930	8.010	9.645	9.915	10.225	10.953	9.360	7.650	6.270	5.270	5.510	248.814
Barada & Al Sahl														
Spring Wells	Wellfield	1.200	1.200						1.300	1.300	1.300	1.300	1.120	22.916
Group 1	Wellfield	0.185	0.185						0.185	0.185	0.185	0.185	0.185	3.403
Group 2	Wellfield	0.120	0.120						0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield	0.060	0.060						0.060	0.060	0.060	0.060	0.060	1.104
Sub Total		1.565	1.565	0.000	0.000	0.000	0.000	0.000	1.665	1.665	1.665	1.665	1.485	29.631
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325	0.325						0.335	0.335	0.335	0.335	6.110
Ibn Assaker	Wellfield	0.345	0.345	0.345					0.145	0.345	0.345	0.345	0.345	6.728
Ibn Assaker	Re-equipped													0.000
Jobar	Wellfield	0.350	0.350	0.350						0.080	0.350	0.350	0.350	5.729
Kadani Railway	Wellfield	0.305	0.305	0.200							0.305	0.305	0.305	4.533
Kadani Railway	Re-equipped													0.000
Ounayyin	Wellfield	0.020	0.175							0.160	0.175	0.175	0.175	2.343
Kaboon	Wellfield	0.065												0.171
University	Wellfield													0.000
Kadaes Store	Wellfield		0.160								0.170	0.170	0.172	1.766
Dunniaa	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.932
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.625	1.865	1.425	0.205	0.245	0.245	0.245	0.390	1.165	1.925	1.885	1.887	34.445
Damascus (New Stations)														
New Kaboon	2 wells Phase I													0.000
New Kaboon	8 wells Phase II													0.000
Kabr Souseh	5 wells											0.080	0.080	0.420
Tishreen & Kywan	5 wells Phase I										0.110	0.110	0.110	0.865
Tishreen & Kywan	9 wells Phase II									0.100	0.100	0.100	0.100	0.788
Tishreen & Kywan	2 wells Phase III											0.040	0.040	0.210
Jaramana	9 wells											0.290	0.290	1.524
Takadoun	7 wells											0.140		0.368
Shokry al Qouaady	5 wells											0.170	0.170	0.894
Yalbuga Centre	10 wells													0.000
Kaasat Gardens	5 wells											0.080		0.210
Sub Total		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.210	1.010	0.790	3.282
Haramon & Zabadosi Area														
Beit Jean	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		9.560	9.590	9.665	10.080	10.390	10.700	11.428	11.843	10.910	10.500	10.260	10.102	328.579
Need (m³/s)		9.558	9.558	9.661	10.077	10.389	10.700	11.428	11.843	10.908	10.493	10.285	10.077	328.600
Debit (l/s)		0	0	0	0	0	0	0	0	0	0	2.5	0	
Debit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07

Table C--8.4c Water Production Plan for 2015 (High Rainfall)

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)	
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec		
Ain Fiqh Area															
Fiqh Sources	Spring/Wells	5.940	5.930	8.010	22.590	25.870	20.840	13.610	9.360	7.650	6.270	5.270	5.510	359.721	
Overflow	Loss to River				11.890	14.866	9.391	1.488						98.905	
Fiqh Total to Supply		5.940	5.930	8.010	10.700	11.004	11.449	12.152	9.360	7.650	6.270	5.270	5.510	260.816	
Barada & Al Sahl															
Spring Wells	Wellfield	1.200	1.200						1.300	1.300	1.300	1.300	1.300	23.589	
Group 1	Wellfield	0.185	0.185						0.185	0.185	0.185	0.185	0.185	3.403	
Group 2	Wellfield	0.120	0.120						0.120	0.120	0.120	0.120	0.120	2.208	
Group 3	Wellfield	0.060	0.060						0.060	0.060	0.060	0.060	0.060	1.104	
Sub Total		1.565	1.565	0.000	0.000	0.000	0.000	0.000	1.665	1.665	1.665	1.665	1.665	30.104	
Damascus (Existing Stations)															
Mazraa	Wellfield	0.335	0.325	0.325					0.335	0.335	0.335	0.335	0.335	6.990	
Ibn Assaker	Wellfield	0.345	0.345	0.345					0.345	0.345	0.345	0.345	0.345	7.253	
Ibn Assaker	Re-equipped									0.120	0.120	0.120	0.120	0.946	
Jobar	Wellfield	0.350	0.350	0.350					0.350	0.350	0.350	0.350	0.350	7.358	
Kadam Railway	Wellfield	0.305	0.305	0.305					0.220	0.305	0.305	0.305	0.305	6.189	
Kadam Railway	Re-equipped										0.115	0.115	0.115	0.907	
Qunayyia	Wellfield	0.175	0.175	0.175					0.140	0.160	0.175	0.175	0.175	3.548	
Kaboon	Wellfield	0.065	0.065	0.065							0.065	0.065	0.065	1.196	
University	Wellfield											0.170	0.170	0.000	
Kadam Store	Wellfield										0.170	0.170	0.170	1.787	
Dunidar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154	
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942	
Fringe Wells	8 Re-equipped											0.110	0.110	0.867	
Emergency Wells	55 wells													0.000	
Sub Total		1.780	1.770	1.770	0.205	0.245	0.245	0.245	1.655	1.975	2.335	2.295	2.295	44.137	
Damascus (New Stations)															
New Kaboon	2 wells Phase I	0.024	0.024	0.024							0.024	0.024	0.024	0.378	
New Kaboon	8 wells Phase II	0.096	0.096	0.096							0.096	0.096	0.096	1.514	
Kahr Souseh	5 wells	0.080	0.080	0.080							0.080	0.080	0.080	1.261	
Tishreen & Kyana	5 wells Phase I	0.110	0.110	0.110						0.110	0.110	0.110	0.110	2.024	
Tishreen & Kyana	9 wells Phase II	0.100	0.100	0.100						0.100	0.100	0.100	0.100	1.840	
Tishreen & Kyana	2 wells Phase III										0.025	0.040	0.040	0.276	
Jaramana	9 wells	0.290	0.290	0.290						0.125	0.290	0.290	0.290	4.901	
Takadon	7 wells	0.070	0.140									0.140	0.140	1.288	
Shokry al Qunaydy	5 wells		0.170								0.170	0.170	0.170	1.787	
Yalbuga Centre	10 wells													0.000	
Kanawat Gardens	5 wells	0.080	0.080									0.080	0.080	0.841	
Sub Total		0.850	1.090	0.700	0.000	0.000	0.000	0.000	0.000	0.355	0.895	1.130	1.130	16.110	
Hermos & Zabadosi Area															
Beit Jenn	Spring Intake													0.000	
Tabbiyeh	Spring Intake													0.000	
Rimeh	8 wells													0.000	
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253	
Sergaya Wellfield	9 wells													0.000	
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154	
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	10.407	
TOTAL SOURCES (MCM)		10.565	10.585	10.710	11.135	11.479	11.824	12.627	13.090	12.035	11.595	10.790	11.030	361.573	
Need (m³/s)		10.561	10.561	10.636	11.135	11.479	11.824	12.627	13.087	12.033	11.594	11.365	11.135	363.000	
Deficit (l/s)		0	0	0	0	0	0	0	0	0	0	575	105		
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51	0.28	1.79	

Table C- 8.5b Water Production Plan for 2000 (Average Rainfall) Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			2.079	5.632	3.782								30.204
Fijeh Total to Supply		5.458	5.771	7.621	7.968	8.188	7.064	5.698	5.197	4.710	4.380	4.263	4.175	185.256
Barada & Al Sahl														
Spring Wells	Wellfield	0.750	0.750				0.500	1.100	1.100	1.100	1.100	1.100	1.100	22.601
Group 1	Wellfield						0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.403
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		0.870	0.870	0.000	0.000	0.000	0.805	1.405	1.405	1.405	1.405	1.405	1.405	28.842
Damascus (Existing Stations)														
Mazraa	Wellfield						0.335	0.335	0.335	0.335	0.335	0.335	0.335	6.163
Ibn Assaker	Wellfield	0.345	0.345					0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re - equipped													
Jotar	Wellfield	0.350	0.350					0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.305					0.245	0.305	0.305	0.305	0.305	0.305	0.305	6.255
Kadam Railway	Re - equipped													
Oumayyiyin	Wellfield	0.017	0.008					0.175	0.175	0.175	0.175	0.175	0.175	2.825
Kaboon	Wellfield							0.045	0.065	0.065	0.065	0.065	0.065	0.972
University	Wellfield													0.000
Kadam Store	Wellfield								0.170	0.170	0.170	0.170	0.170	2.234
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re - equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.222	0.908	0.205	0.205	0.245	0.825	1.800	1.990	1.990	1.990	1.950	1.950	40.156
Damascus (New Stations)														
New Kaboon	2 wells Phase I								0.024	0.024	0.024	0.024	0.024	0.315
New Kaboon	8 wells Phase II								0.096	0.096	0.096	0.096	0.096	1.261
Kafar Souseh	5 wells	0.080	0.080						0.080	0.080	0.080	0.080	0.080	1.472
Ishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Ishreen & Kywan	9 wells Phase II								0.100					0.263
Ishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells							0.290	0.290	0.290	0.290	0.290	0.290	4.573
Takadom	7 wells								0.140	0.140	0.140	0.140	0.140	1.577
Shokry al Qouwatly	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.190	0.190	0.000	0.000	0.000	0.000	0.400	0.840	0.740	0.740	0.740	0.640	11.773
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sargaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells								0.140	0.020	0.040			0.526
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.370	0.250	0.270	0.230	0.230	7.779
TOTAL SOURCES (MCM)		7.970	7.969	8.056	8.403	8.663	8.924	9.533	9.802	9.095	8.785	8.588	8.400	273.807
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		0	0	0	0	0	0	0	74	0	0	0	2	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.01	0.20

Table C-8.5c Water Production Plan for 2005 (Average Rainfall) Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Figeih Area														
Figeih Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			1.406	4.930	3.069								24.716
Figeih Total to Supply		5.458	5.771	8.295	8.670	8.912	7.064	5.698	5.197	4.710	4.380	4.263	4.175	190.775
Barada & Al Sahl														
Spring Wells	Wellfield	1.070	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.858
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.859
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield							0.060	0.060	0.060	0.060	0.060	0.060	0.916
Sub Total		1.070	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.901
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325					0.335	0.335	0.335	0.335	0.335	0.335	7.017
Ibn Assaker	Wellfield						0.345	0.345	0.345	0.345	0.345	0.345	0.345	6.347
Ibn Assaker	Re - equipped													
Jobar	Wellfield	0.180					0.350	0.350	0.350	0.350	0.350	0.350	0.350	6.912
Kadani Railway	Wellfield	0.305	0.305					0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadani Railway	Re - equipped													
Oumawiya	Wellfield							0.175	0.175	0.175	0.175	0.175	0.175	2.759
Kaboon	Wellfield						0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.196
University	Wellfield													0.000
Kadani Store	Wellfield							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re - equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.025	0.835	0.205	0.205	0.245	1.005	1.990	1.990	1.990	1.990	1.950	1.950	40.419
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024					0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells							0.080	0.080	0.080	0.080	0.080	0.080	1.261
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	1.734
Tishreen & Kywan	9 wells Phase II							0.032	0.100	0.100		0.100	0.100	1.135
Tishreen & Kywan	2 wells Phase III								0.040	0.040	0.040	0.040	0.040	0.420
Jaramana	9 wells	0.290	0.290					0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadom	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	1.810
Shokry al Qouwatly	5 wells							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Yalbuga Centre	10 wells													0.000
Kanawat Gardeus	5 wells								0.080	0.080	0.080	0.080	0.080	1.051
Sub Total		0.520	0.520	0.000	0.000	0.000	0.000	0.942	1.130	1.020	1.030	1.020	0.950	18.743
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells	0.140							0.140	0.140	0.140	0.140	0.140	2.208
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.570	0.230	0.230	0.230	0.230	0.230	0.230	0.570	0.570	0.570	0.570	0.570	12.614
TOTAL SOURCES (MCM)		8.643	8.641	8.730	9.105	9.387	9.704	10.325	10.502	9.855	9.485	9.318	9.110	296.452
Need (m³/s)		8.636	8.636	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	295.900
Deficit (l/s)		0	0	0	0	0	0	0	199	0	0	0	0	0
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.52

Table C-8.5.d Water Production Plan for 2010 (Average Rainfall) Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.474	3.985	2.065								17.145
Piqeh Total to Supply		5.458	5.771	9.226	9.642	9.915	7.064	5.698	5.197	4.710	4.380	4.263	4.175	198.412
Barada & Al Sabl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335					0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped						0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.946
Jobar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped						0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.710
Qunawiyin	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.037	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.141
University	Wellfield													0.000
Kadam Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.335	1.160	0.205	0.205	0.245	1.590	1.990	2.225	2.225	2.150	1.950	1.925	45.213
Damascus (New Stations)														
New Kaboon	2 wells Phase I							0.024	0.024	0.024	0.024	0.024	0.024	0.378
New Kaboon	8 wells Phase II	0.060	0.040					0.096	0.096	0.096	0.096	0.096	0.096	1.777
Kafar Souseh	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II							0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III							0.040	0.040	0.040	0.040	0.040	0.040	0.526
Jaramana	9 wells							0.290	0.290	0.290	0.290	0.290	0.290	4.573
Takadom	7 wells	0.140	0.140					0.140	0.140	0.140	0.140	0.140	0.140	2.575
Shokry al Qouwayh	5 wells	0.170	0.170					0.170	0.170	0.170	0.170	0.170	0.170	2.681
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.472
Sub Total		0.640	0.620	0.000	0.000	0.000	0.000	0.700	1.130	1.130	1.130	1.130	0.960	19.552
Hermon & Zabadani Area														
Bait Jean	Spring Intake	0.500	0.500				0.500	0.500	0.500	0.500	0.451	0.462	0.500	11.597
Tabibiyeh	Spring Intake							0.500	0.423	0.326	0.347	0.470	0.500	6.743
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells							0.140	0.140	0.140	0.140	0.140	0.140	2.208
Dier Al Ashayer	4 wells							0.200	0.200	0.200	0.200	0.200	0.200	3.151
Sub Total		0.730	0.730	0.230	0.230	0.230	0.730	1.570	1.493	1.396	1.368	1.502	1.570	30.955
TOTAL SOURCES (MCM)		9.567	9.566	9.661	10.077	10.390	10.789	11.423	11.510	10.926	10.493	10.310	10.095	327.995
Need (m³/s)		9.558	9.558	9.661	10.077	10.389	10.700	11.428	11.843	10.908	10.493	10.285	10.077	328.600
Deficit (l/s)		0	0	0	0	0	0	4	333	0	0	0	0	0.89
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.88	0.00	0.00	0.00	0.00	0.89

Table C-8.5e Water Production Plan for 2015 (Average Rainfall) Option 2

Source	Type	Monthly Quantity (m3/s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.933	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.000	2.895	0.975								10.170
Fiqeh Total to Supply		5.458	5.771	9.700	10.705	11.005	7.064	5.698	5.197	4.710	4.380	4.263	4.175	205.316
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.168	0.168				0.335	0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped													
Oumawiyin	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.033	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.367
University	Wellfield													0.000
Kadam Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.163	0.993	0.205	0.205	0.245	1.990	1.990	1.990	1.990	1.990	1.950	1.950	43.784
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024				0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096				0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.682
Tishreen & Kywan	5 wells Phase I	0.110	0.110				0.110	0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II						0.100	0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III						0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.290				0.290	0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadom	7 wells	0.140	0.140				0.140	0.140	0.140	0.140	0.140	0.140	0.140	2.913
Shokry al Qouwatly	5 wells	0.170	0.170				0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.682
Sub Total		0.990	0.990	0.000	0.000	0.000	0.000	1.130	1.130	1.130	1.130	1.130	1.130	23.021
Hermon & Zabadani Area														
Beit Jenn	Spring Intake	0.500	0.500	0.500			0.500	0.500	0.500	0.500	0.451	0.462	0.550	13.013
Tabibiyeh	Spring Intake	0.500	0.500				0.500	0.500	0.423	0.326	0.347	0.470	0.500	10.685
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells						0.140	0.140	0.140	0.140	0.140	0.140	0.140	2.208
Dier Al Ashayer	4 wells						0.200	0.200	0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		1.230	1.230	0.730	0.230	0.230	1.230	1.570	1.493	1.396	1.368	1.502	1.620	36.343
TOTAL SOURCES (MCM)		10.246	10.269	10.635	11.140	11.480	11.689	11.853	11.275	10.691	10.333	10.310	10.340	342.325
Need (m3/s)		10.56	10.36	10.68	11.14	11.48	11.82	12.63	13.09	12.65	11.59	11.36	11.14	363.100
Deficit (l/s)		315	292	41	0	0	135	774	1812	1362	1261	1055	795	
Deficit (MCM)		0.83	0.77	0.11	0.00	0.00	0.35	2.03	4.76	3.58	3.31	2.77	2.09	20.61

Table C-8.6a Summary Water Production Plan - Average Conditions Option 3

Source	Type	Calendar Year																			
		1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Ain Fiqeh Area Fqih Source Overflow	Spring/Wells	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215
	Lines to River	31	30	30	30	29	28	27	25	24	23	21	20	18	17	15	14	13	11	10	
Fqih Total to Supply		246	245	245	245	244	243	242	240	239	238	236	234	232	230	228	226	224	222	220	218
Barada & Al Sahi	Spring Wells	4.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Wellfield	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Group 1		7.7	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Group 2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Group 3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total		7.7	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Dammacus (Existing Stations)	Wellfield	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7
	Wellfield	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
In Assakir		3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Kadim Railway		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Railway		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Store		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Store		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pringe Wells		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pringe Wells		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total		9.2	12.7	16.2	19.7	23.2	26.7	30.2	33.7	37.2	40.7	44.2	47.7	51.2	54.7	58.2	61.7	65.2	68.7	72.2	75.7
Dammacus (New Stations)	New Station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	New Station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Railway		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Railway		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Store		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kadim Store		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pringe Wells		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pringe Wells		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Karamon & Zabadani Area	Spring Intake	146.7	178.9	187.1	191.5	194.9	197.7	200.7	203.4	206.4	209.4	212.4	215.4	218.4	221.4	224.4	227.4	230.4	233.4	236.4	239.4
	Spring Intake	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248
Sub Total		394.7	427.8	435.2	439.4	443.3	448.1	452.1	456.8	461.8	466.8	471.8	476.8	481.8	486.8	491.8	496.8	501.8	506.8	511.8	516.8
TOTAL SOURCES (MCM)		394.7	427.8	435.2	439.4	443.3	448.1	452.1	456.8	461.8	466.8	471.8	476.8	481.8	486.8	491.8	496.8	501.8	506.8	511.8	516.8
Water Requirement (MCM)		249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249
Deficit (MCM)		145.7	178.9	187.1	191.5	194.9	197.7	200.7	203.4	206.4	209.4	212.4	215.4	218.4	221.4	224.4	227.4	230.4	233.4	236.4	239.4

Table C-8.6b Water Production Plan for 2000 (Average Rainfall) Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			2.079	5.632	3.782								30.204
Fijeh Total to Supply		5.458	5.771	7.621	7.968	8.188	7.064	5.698	5.197	4.710	4.380	4.263	4.175	185.256
Barada & Al Sahl														
Spring Wells	Wellfield	0.750	0.750				0.500	1.100	1.100	1.100	1.100	1.100	1.100	22.601
Group 1	Wellfield						0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.403
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		0.870	0.870	0.000	0.000	0.000	0.805	1.405	1.405	1.405	1.405	1.405	1.405	28.842
Damascus (Existing Stations)														
Mazraa	Wellfield						0.335	0.335	0.335	0.335	0.335	0.335	0.335	6.163
Ibn Assaker	Wellfield	0.315	0.315					0.315	0.315	0.315	0.315	0.315	0.315	7.253
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.350	0.350					0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.305					0.245	0.305	0.305	0.305	0.305	0.305	0.305	6.255
Kadam Railway	Re-equipped													
Oumawiya	Wellfield	0.017	0.008					0.175	0.175	0.175	0.175	0.175	0.175	2.825
Kaboon	Wellfield							0.045	0.065	0.065	0.065	0.065	0.065	0.972
University	Wellfield													0.000
Kadam Store	Wellfield								0.170	0.170	0.170	0.170	0.170	2.234
Dusmanar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.222	0.908	0.205	0.205	0.245	0.825	1.800	1.990	1.990	1.990	1.950	1.950	40.156
Damascus (New Stations)														
New Kaboon	2 wells Phase I								0.024	0.024	0.024	0.024	0.024	0.315
New Kaboon	8 wells Phase II								0.096	0.096	0.096	0.096	0.096	1.261
Kafar Souseh	5 wells	0.080	0.080						0.080	0.080	0.080	0.080	0.080	1.472
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II								0.100					0.263
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells							0.290	0.290	0.290	0.290	0.290	0.290	4.573
Takadom	7 wells								0.140	0.140	0.140	0.140	0.140	1.577
Shokry al Qouwayly	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.190	0.190	0.000	0.000	0.000	0.000	0.400	0.840	0.740	0.740	0.740	0.640	11.773
Hermon & Zaladani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells								0.140	0.020	0.010			0.526
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.370	0.250	0.270	0.230	0.230	7.779
TOTAL SOURCES (MCM)		7.970	7.969	8.056	8.403	8.663	8.924	9.533	9.802	9.095	8.785	8.588	8.400	273.807
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		0	0	0	0	0	0	0	74	0	0	0	2	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.01	0.20

Table C-8.6c Water Production Plan for 2005 (Average Rainfall) Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Aia Figeih Area														
Figeih Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			1.406	4.930	3.069								24.716
Figeih Total to Supply		5.458	5.771	8.295	8.670	8.912	7.064	5.698	5.197	4.710	4.380	4.263	4.175	190.775
Barada & Al Sahl														
Spring Wells	Wellfield	1.070	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.858
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.889
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield							0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.070	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.901
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325					0.335	0.335	0.335	0.335	0.335	0.335	7.017
Ibn Assaker	Wellfield						0.345	0.345	0.345	0.345	0.345	0.345	0.345	6.347
Ibn Assaker	Re-equipped													
Jolbar	Wellfield	0.180					0.350	0.350	0.350	0.350	0.350	0.350	0.350	6.912
Kadam Railway	Wellfield	0.305	0.305					0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped													
Oumawiya	Wellfield							0.175	0.175	0.175	0.175	0.175	0.175	2.759
Kaboon	Wellfield						0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.196
University	Wellfield													0.000
Kadam Store	Wellfield							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.025	0.835	0.205	0.205	0.245	1.005	1.990	1.990	1.990	1.990	1.950	1.950	40.419
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024					0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells							0.080	0.080	0.080	0.080	0.080	0.080	1.261
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II	0.100						0.032	0.100	0.100	0.100	0.100	0.100	1.661
Tishreen & Kywan	2 wells Phase III	0.034							0.040	0.040	0.040	0.040	0.040	0.510
Jaramana	9 wells	0.290	0.290					0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadom	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	2.208
Shokry al Qouvatly	5 wells							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells								0.080	0.080	0.080	0.080	0.080	1.051
Sub Total		0.654	0.520	0.000	0.000	0.000	0.000	0.942	1.130	1.130	1.130	1.130	1.090	20.304
Hermon & Zabadani Area														
Bait Jenn	Spring Intake													0.000
Tatibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		8.637	8.641	8.730	9.105	9.387	9.704	10.325	10.362	9.825	9.445	9.288	9.110	295.806
Need (m³/s)		8.636	8.636	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		0	0	0	0	0	0	0	339	30	35	5	0	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.08	0.09	0.01	0.00	1.08

Table C-8.6d Water Production Plan for 2010 (Average Rainfall) Option 3

Source	Type	Monthly Quantity (m3/s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.474	3.985	2.065								17.145
Fiqeh Total to Supply		5.458	5.771	9.226	9.642	9.915	7.064	5.698	5.197	4.710	4.380	4.263	4.175	198.412
Barada & Al Sahl														
Spring Wells	Wellfield	1.200	1.250				1.500	2.000	2.500	2.300	2.200	2.150	2.030	45.018
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield	0.040					0.060	0.060	0.060	0.060	0.060	0.060	0.060	1.051
Sub Total		1.545	1.435	0.000	0.000	0.000	1.805	2.365	2.865	2.665	2.565	2.515	2.395	52.967
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335					0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped								0.12					0.315
Jobar	Wellfield	0.175	0.175				0.300	0.350	0.350	0.350	0.350	0.350	0.350	7.227
Kadam Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped								0.115					0.302
Oumawiyin	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.037	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.377
University	Wellfield													0.000
Kadam Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.335	1.160	0.205	0.205	0.245	1.605	1.990	2.225	1.990	1.990	1.950	1.950	41.280
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.004					0.024	0.024	0.024	0.024	0.024	0.024	0.452
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II							0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III							0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.290					0.100	0.290	0.290	0.290	0.290	0.290	5.593
Takadom	7 wells	0.140	0.140					0.140	0.140	0.140	0.140	0.140	0.140	2.913
Shokry al Qouwayh	5 wells	0.170	0.170					0.170	0.170	0.170	0.170	0.170	0.170	3.574
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682
Sub Total		0.990	0.970	0.000	0.000	0.000	0.000	0.940	1.130	1.130	1.130	1.130	1.130	22.469
Hermon & Zabadani Area														
Bait Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells							0.200	0.200	0.200	0.200	0.200	0.200	3.151
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		9.557	9.566	9.661	10.077	10.390	10.704	11.423	11.847	10.925	10.495	10.288	10.080	328.536
Need (m3/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.84	10.91	10.49	10.28	10.08	328.600
Deficit (l/s)		0	0	0	0	0	0	4	0	0	0	0	0	0
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01

Table C-8.6c Water Production Plan for 2015 (Average Rainfall) Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.000	2.895	0.975								10.170
Fijeh Total to Supply		5.458	5.771	9.700	10.705	11.005	7.064	5.698	5.197	4.710	4.380	4.263	4.175	205.316
Barada & Al Sahl														
Spring Wells	Wellfield	2.000	2.000				2.500	2.500	2.500	2.500	2.500	2.500	2.000	55.188
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield	0.060	0.060				0.060	0.060	0.060	0.060	0.060	0.060	0.060	1.419
Sub Total		2.365	2.365	0.000	0.000	0.000	2.865	2.865	2.865	2.865	2.865	2.865	2.365	63.821
Damascus (Existing Stations)														
Mazraa	Wellfield	0.168	0.168				0.335	0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped							0.12						0.315
Jobar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	5.611
Kadam Railway	Re-equipped							0.115						0.302
Oumawiya	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.033	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.367
University	Wellfield													0.000
Kadam Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.163	0.993	0.205	0.205	0.245	1.685	1.990	2.225	1.990	1.990	1.950	1.950	43.600
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024				0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	3 wells Phase II	0.096	0.096				0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.652
Tishreen & Kywan	5 wells Phase I	0.110	0.110				0.110	0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II						0.100	0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III						0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.290				0.290	0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadom	7 wells	0.140	0.140				0.140	0.140	0.140	0.140	0.140	0.140	0.140	2.943
Shokry al Qouwatly	5 wells	0.170	0.170				0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080				0.080	0.080	0.080	0.080	0.080	0.080	0.080	1.682
Sub Total		0.990	0.990	0.000	0.000	0.000	0.000	1.130	1.130	1.130	1.130	1.130	1.130	23.021
Hermon & Zabadani Area														
Peit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells						0.200	0.200	0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		10.206	10.349	10.135	11.140	11.480	11.844	12.113	11.847	11.125	10.795	10.638	10.050	346.165
Need (m³/s)		10.56	10.56	10.63	11.14	11.48	11.82	12.63	13.09	12.05	11.59	11.36	11.14	363.100
Deficit (l/s)		355	212	541	0	0	0	514	1240	928	799	727	1035	
Deficit (MCM)		0.93	0.56	1.42	0.00	0.00	0.00	1.35	3.26	2.44	2.10	1.91	2.85	16.82

Table C-8.7b Water Production Plan for 2000 (Average Rainfall) Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			2.079	5.632	3.782								30.204
Fijeh Total to Supply		5.458	5.771	7.621	7.968	8.188	7.064	5.698	5.197	4.710	4.380	4.263	4.175	185.256
Barada & Al Sahl														
Spring Wells	Wellfield	0.750	0.750				0.500	1.100	1.100	1.100	1.100	1.100	1.100	22.601
Group 1	Wellfield						0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.403
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		0.870	0.870	0.009	0.009	0.000	0.805	1.405	1.405	1.405	1.405	1.405	1.405	28.842
Damascus (Existing Stations)														
Mazraa	Wellfield						0.335	0.335	0.335	0.335	0.335	0.335	0.335	6.163
Ibn Assaker	Wellfield	0.315	0.315					0.315	0.315	0.315	0.315	0.315	0.315	7.253
Ibn Assaker	Re-equipped								0.350	0.350	0.350	0.350	0.350	7.358
Jobar	Wellfield	0.350	0.350						0.305	0.305	0.305	0.305	0.305	6.255
Kadam Railway	Wellfield	0.305					0.245	0.305	0.305	0.305	0.305	0.305	0.305	6.255
Kadam Railway	Re-equipped								0.175	0.175	0.175	0.175	0.175	2.825
Oumawiyin	Wellfield	0.017	0.008						0.045	0.065	0.065	0.065	0.065	0.972
Kaboon	Wellfield													0.000
University	Wellfield								0.170	0.170	0.170	0.170	0.170	2.234
Kadam Store	Wellfield								0.100	0.100	0.100	0.100	0.100	3.154
Dunimar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.912
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	0.000
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.222	0.908	0.205	0.205	0.245	0.825	1.800	1.990	1.990	1.990	1.950	1.950	40.156
Damascus (New Stations)														
New Kaboon	2 wells Phase I								0.024	0.024	0.024	0.024	0.024	0.315
New Kaboon	8 wells Phase II								0.096	0.096	0.096	0.096	0.096	1.261
Kafar Souseh	5 wells	0.080	0.080						0.080	0.080	0.080	0.080	0.080	1.472
Tishreen & Kywan	5 wells Phase I	0.110	0.110				0.110	0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II								0.100					0.263
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells							0.290	0.290	0.290	0.290	0.290	0.290	4.573
Takadon	7 wells							0.140	0.140	0.140	0.140	0.140	0.040	1.577
Shokry al Qouwaly	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.190	0.190	0.000	0.000	0.000	0.000	0.400	0.840	0.740	0.740	0.740	0.640	11.773
Hermon & Zabadaani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells								0.140	0.020	0.040			0.526
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.370	0.250	0.270	0.230	0.230	7.779
TOTAL SOURCES (MCM)		7.970	7.969	8.056	8.403	8.663	8.924	9.533	9.802	9.095	8.785	8.588	8.400	273.807
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		0	0	0	0	0	0	0	74	0	0	0	2	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.01	0.20

Table C-8.7c Water Production Plan for 2005 (Average Rainfall) Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ala Fiqeh Area														
Fiqeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			1.406	4.930	3.069								24.716
Fiqeh Total to Supply		5.458	5.771	8.295	8.670	8.912	7.064	5.698	5.197	4.710	4.380	4.263	4.175	190.775
Barada & Al Sahl														
Spring Wells Group 1	Wellfield	1.070	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.858
Group 2	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.659
Group 3	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Sub Total		1.070	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.901
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.325					0.335	0.335	0.335	0.335	0.335	0.335	7.017
Ibn Assaker	Wellfield						0.345	0.345	0.345	0.345	0.345	0.345	0.345	6.347
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.180					0.350	0.350	0.350	0.350	0.350	0.350	0.350	6.912
Kadam Railway	Wellfield	0.305	0.305					0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped													
Oumawiya	Wellfield							0.175	0.175	0.175	0.175	0.175	0.175	2.759
Kaboon	Wellfield						0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.196
University	Wellfield													0.000
Kadam Store	Wellfield							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.025	0.835	0.205	0.205	0.245	1.605	1.990	1.990	1.990	1.990	1.950	1.950	40.419
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024					0.024	0.024	0.024	0.024	0.024	0.024	0.505
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells							0.080	0.080	0.080	0.080	0.080	0.080	1.261
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II	0.100						0.032	0.100	0.100	0.100	0.100	0.100	1.661
Tishreen & Kywan	2 wells Phase III	0.034							0.040	0.040	0.040	0.040	0.040	0.510
Jaramana	9 wells	0.290	0.290					0.290	0.290	0.290	0.290	0.290	0.290	6.097
Takadom	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	2.208
Shokry al Qouwayly	5 wells							0.170	0.170	0.170	0.170	0.170	0.170	2.681
Yalbuga Centre	10 wells													0.000
Kanzawat Gardens	5 wells								0.080	0.080	0.080	0.080	0.080	1.051
Sub Total		0.654	0.520	0.000	0.000	0.000	0.000	0.942	1.130	1.130	1.130	1.130	1.090	20.304
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200							0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.430	0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		8.637	8.641	8.730	9.105	9.387	9.704	10.325	10.362	9.825	9.445	9.288	9.110	295.806
Need (m³/s)		8.636	8.636	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		0	0	0	0	0	0	0	339	30	35	5	0	
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.08	0.09	0.01	0.00	1.08

Table C-8.7d Water Production Plan for 2010 (Average Rainfall) Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.064	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.474	3.985	2.065								17.145
Fijeh Total to Supply		5.458	5.771	9.226	9.642	9.915	7.064	5.698	5.197	4.710	4.380	4.263	4.175	198.412
Barada & Al Sahi														
Spring Wells	Wellfield	1.200	1.250				1.500	2.000	2.500	2.300	2.200	2.150	2.030	45.018
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield	0.010						0.060	0.060	0.060	0.060	0.060	0.060	1.051
Sub Total		1.545	1.435	0.000	0.000	0.000	1.805	2.365	2.865	2.665	2.565	2.515	2.395	52.967
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335					0.335	0.335	0.335	0.335	0.335	0.335	7.043
Ibn Assaker	Wellfield	0.173	0.173				0.345	0.345	0.345	0.345	0.345	0.345	0.345	7.253
Ibn Assaker	Re-equipped							0.12						0.315
Jobar	Wellfield	0.175	0.175				0.300	0.350	0.350	0.350	0.350	0.350	0.350	7.227
Kadam Railway	Wellfield	0.153	0.153				0.305	0.305	0.305	0.305	0.305	0.305	0.305	6.412
Kadam Railway	Re-equipped							0.115						0.302
Oumawiyyin	Wellfield	0.088	0.088				0.175	0.175	0.175	0.175	0.175	0.175	0.175	3.681
Kaboon	Wellfield	0.037	0.033				0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.377
University	Wellfield													0.000
Kadam Store	Wellfield	0.170					0.170	0.170	0.170	0.170	0.170	0.170	0.170	3.574
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.335	1.160	0.205	0.205	0.245	1.605	1.990	2.225	1.990	1.990	1.950	1.950	44.280
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.001					0.024	0.024	0.024	0.024	0.024	0.024	0.452
New Kaboon	8 wells Phase II	0.096	0.096					0.096	0.096	0.096	0.096	0.096	0.096	2.018
Kafar Souseh	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682
Tishreen & Kywan	5 wells Phase I	0.110	0.110					0.110	0.110	0.110	0.110	0.110	0.110	2.313
Tishreen & Kywan	9 wells Phase II							0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III							0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.290					0.100	0.290	0.290	0.290	0.290	0.290	5.598
Takadon	7 wells	0.140	0.140					0.140	0.140	0.140	0.140	0.140	0.140	2.943
Shokry al Qouwarly	5 wells	0.170	0.170					0.170	0.170	0.170	0.170	0.170	0.170	3.574
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080					0.080	0.080	0.080	0.080	0.080	0.080	1.682
Sub Total		0.990	0.970	0.000	0.000	0.000	0.000	0.940	1.130	1.130	1.130	1.130	1.130	22.469
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells							0.200	0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		0.230	0.230	0.230	0.230	0.230	0.230	0.430	0.430	0.430	0.430	0.430	0.430	10.407
TOTAL SOURCES (MCM)		9.557	9.566	9.661	10.077	10.390	10.704	11.423	11.847	10.925	10.495	10.268	10.080	328.536
Need (m³/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.84	10.91	10.49	10.28	10.08	328.600
Deficit (l/s)		0	0	0	0	0	0	4	0	0	0	0	0	0
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01

Table C-8.7e Water Production Plan for 2015 (Average Rainfall) Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Figeih Area														
Figeih Sources	Spring/Wells	5.458	5.771	9.700	13.597	11.983	7.061	5.698	5.197	4.710	4.380	4.263	4.175	215.487
Overflow	Loss to River			0.000	2.895	0.975								10.170
Figeih Total to Supply		5.458	5.771	9.700	10.705	11.005	7.064	5.698	5.197	4.710	4.380	4.263	4.175	205.316
Barada & Al Sahi														
Spring Wells	Wellfield	2.000	2.000				2.500	2.500	2.500	2.500	2.500	2.500	2.000	55.188
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield	0.060	0.060				0.060	0.060	0.060	0.060	0.060	0.060	0.060	1.419
Sub Total		2.365	2.365	0.000	0.000	0.000	2.865	2.865	2.865	2.865	2.865	2.865	2.365	63.821
Damascus (Existing Stations)														
Mazraa	Wellfield	0.168	0.168					0.335	0.335	0.335	0.335	0.335	0.335	6.163
Ibn Assaker	Wellfield	0.173	0.173				0.100	0.345	0.345	0.345	0.345	0.345	0.345	6.609
Ibn Assaker	Re-equipped								0.12					0.315
Jotar	Wellfield	0.175	0.175				0.350	0.350	0.350	0.350	0.350	0.350	0.350	7.358
Kadam Railway	Wellfield	0.153	0.153					0.305	0.305	0.305	0.305	0.305	0.305	5.611
Kadam Railway	Re-equipped								0.115					0.302
Oumawiya	Wellfield	0.088	0.088					0.175	0.175	0.175	0.175	0.175	0.175	3.221
Kaboon	Wellfield	0.033	0.033					0.065	0.065	0.065	0.065	0.065	0.065	1.196
University	Wellfield													0.000
Kadam Store	Wellfield	0.170						0.170	0.170	0.170	0.170	0.170	0.170	3.127
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.060
Emergency Wells	55 wells													0.000
Sub Total		1.163	0.993	0.205	0.205	0.245	0.695	1.990	2.225	1.990	1.990	1.950	1.950	40.998
Damascus (New Stations)														
New Kaboon	2 wells Phase I							0.024	0.024	0.024	0.024	0.024	0.024	0.378
New Kaboon	8 wells Phase II							0.096	0.096	0.096	0.096	0.096	0.096	1.514
Kafar Souseh	5 wells							0.080	0.080	0.080	0.080	0.080	0.080	0.811
Tishreen & Kywan	5 wells Phase I							0.110	0.110	0.110	0.110	0.110	0.110	1.734
Tishreen & Kywan	9 wells Phase II							0.100	0.100	0.100	0.100	0.100	0.100	1.577
Tishreen & Kywan	2 wells Phase III							0.040	0.040	0.040	0.040	0.040	0.040	0.631
Jaramana	9 wells	0.290	0.140	0.045				0.135	0.290	0.290	0.290	0.290	0.290	5.414
Takadom	7 wells							0.140	0.140	0.140	0.140	0.140	0.140	1.840
Shokry al Qouwaly	5 wells							0.170	0.170	0.120			0.170	1.656
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080						0.080	0.040				0.736
Sub Total		0.370	0.220	0.045	0.000	0.000	0.000	0.505	1.130	1.090	1.000	0.800	1.050	16.320
Hermon & Zabadani Area														
Beit Jenn	Spring Intake	0.500	0.500	0.500			0.500	0.500	0.500	0.500	0.451	0.462	0.550	13.013
Tabibiyeh	Spring Intake	0.500	0.500				0.500	0.500	0.423	0.326	0.347	0.470	0.500	10.685
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells							0.140	0.140	0.140	0.140	0.140	0.140	2.208
Dier Al Ashayer	4 wells							0.200	0.200	0.200	0.200	0.200	0.200	3.154
Sub Total		1.230	1.230	0.730	0.230	0.230	1.230	1.570	1.493	1.396	1.368	1.502	1.620	36.343
TOTAL SOURCES (MCM)		10.586	10.579	10.680	11.140	11.480	11.854	12.628	12.910	12.051	11.603	11.380	11.160	362.798
Need (m³/s)		10.56	10.56	10.68	11.14	11.48	11.82	12.63	13.09	12.05	11.59	11.36	11.14	363.108
Deficit (ls)		0	0	0	0	0	0	0	177	2	0	0	0	0
Deficit (MCM)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.01	0.00	0.00	0.00	0.47

Table C-8.8a Summary of Water Production Plan - Dry Conditions, Option 2

Source	Type	1989-2015 Actual 1999-2015 Forecast, 1990-2015 meteorological conditions, MAF: = Mch annual, F: Forecast																										
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ain Fiqeh Area Fqih Sources Overflow	Spring/Wells Loss to River	132	137	137	137	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
Fqih Total to Supply		132	137	137	137	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
Barama & Al Sahi	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wells	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group 1	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group 2	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group 3	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Damascus (Touring Stations)		2.12	2.76	5.22	7.19	7.50	5.86	5.42	6.25	6.55	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
Misran	Wellfield	5.23	1.71	2.60	7.50	7.00	6.57	5.57	3.89	4.91	3.94	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Ibn Awshar	Re-equipped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Johar	Wellfield	3.76	1.77	0.96	2.23	2.16	4.23	3.47	6.57	5.80	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Nadim Railway	Wellfield	-	-	-	3.14	3.34	3.75	1.98	3.04	3.71	5.25	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Nadim Railway	Re-equipped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qunayn	Wellfield	0.09	0.00	0.00	1.18	1.94	2.99	3.81	4.14	3.31	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Qunayn	Wellfield	1.00	0.56	0.83	1.96	2.59	2.41	0.86	0.87	1.26	0.86	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Khawin	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
University	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nadim Store	Wellfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dunayn	Wellfield	0.88	0.76	0.50	0.19	0.03	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fringe Wells	23 wells	6.12	5.05	4.98	5.94	5.94	4.50	3.67	3.24	4.32	4.01	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Fringe Wells	8 Re-equipped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Emergency Wells	35 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total		17.90	12.81	13.26	39.57	32.71	34.18	24.13	23.57	33.61	34.09	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
Damascus (New Stations)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Saboon	2 wells Phase I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Saboon	8 wells Phase II	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kulfi Souah	5 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tahrir & Nayan	3 wells Phase I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tahrir & Nayan	9 wells Phase II	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tahrir & Nayan	2 wells Phase III	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tarannan	9 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Takadon	7 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shahry al Qasbiy	5 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yalugh Centre	10 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nanayn Campdays	5 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haramon & Zabadan Area		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dei Lem	Spring Intake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tabbweh	Spring Intake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rimch	8 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wadi Marwan	13 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sergayn Wellfield	9 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dei Al Jalawer	4 wells	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SOURCES (MCM)		146.7	178.9	187.1	101.5	154.9	139.7	208.7	212.3	209.4	218.5	208	221	229	241	250	265	276	279	283	285	292	302	302	302	302	302	302
Water Requirement (MCM)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deficit (MCM)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C--8.8b Water Production Plan for 2000 (Low Rainfall), Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Less to River			0.000	0.252	0.000								0.662
Fijeh Total to Supply		2.960	2.880	4.500	7.968	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	131.342
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.150	1.200	1.200	1.100	1.100	1.100	1.100	26.674
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		1.405	1.405	0.000	0.000	0.000	1.455	1.505	1.505	1.405	1.405	1.405	1.405	33.888
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.116
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped													
Oumawiin	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.890	1.890	1.890	0.205	1.930	1.930	1.990	1.990	1.990	1.990	1.950	1.950	56.752
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	3.784
Shokry al Qouwayh	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.840	0.840	0.840	0.000	0.840	0.840	0.840	0.840	0.840	0.840	0.840	0.740	24.020
Hermon & Zabadaai Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200		0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	5.782
Sub Total		0.430	0.430	0.430	0.230	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.035
TOTAL SOURCES (MCM)		7.525	7.445	7.660	8.403	8.520	8.935	8.875	8.785	8.465	8.195	8.035	7.725	259.037
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		445	525	396	0	143	0	654	1090	631	554	541	678	
Deficit (MCM)		1.17	1.38	1.04	0.00	0.37	0.00	1.72	2.87	1.66	1.46	1.42	1.78	14.86

Table C-8.8c Water Production Plan for 2005 (Low Rainfall), Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Figeih Area														
Figeih Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Figeih Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahi														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.937
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.639
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield							0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.100	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.980
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.017
Shokry al Qouwaty	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.415
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.570	0.570	0.570	0.570	0.570	0.570	0.570	0.570	0.570	0.570	0.570	0.570	17.976
TOTAL SOURCES (MCM)		7.995	8.100	8.435	8.995	9.295	9.660	9.610	9.670	9.400	9.080	8.920	8.660	283.351
Need (m³/s)		8.636	8.636	8.729	9.105	9.356	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		641	536	294	110	91	8	715	1031	456	400	373	445	
Deficit (MCM)		1.68	1.41	0.77	0.29	0.24	0.02	1.88	2.71	1.20	1.05	0.98	1.17	13.40

Table C-8.8d Water Production Plan for 2010 (Low Rainfall), Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Figeih Area														
Figeih Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Figeih Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwayly	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jenn	Spring Intake	0.266	0.427	0.486	0.434	0.286	0.366	0.335	0.190	0.274	0.228	0.157	0.188	9.558
Tabibiyeh	Spring Intake	0.449	0.567	0.500	0.378	0.293	0.312	0.205	0.131	0.099	0.102	0.234	0.262	9.282
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.415
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		1.285	1.564	1.556	1.382	1.149	1.248	1.110	0.891	0.943	0.900	0.961	1.020	36.816
TOTAL SOURCES (MCM)		9.015	9.094	9.421	9.807	9.874	10.338	10.150	9.841	9.673	9.360	9.261	9.110	302.073
Need (m³/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.81	10.91	10.49	10.28	10.08	328.600
Deficit (l/s)		513	461	240	270	515	362	1278	2002	1235	1133	1024	967	
Deficit (MCM)		1.43	1.22	0.63	0.71	1.35	0.95	3.36	5.26	3.25	2.98	2.69	2.54	26.36

Table C-8.8e Water Production Plan for 2015 (Low Rainfall), Option 2

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	296	288	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132001
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fiqeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.100	1.100	1.100	1.100	1.100	26.017
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.405	1.285	0.000	0.000	0.000	1.405	1.465	1.465	1.465	1.465	1.465	1.465	33.862
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jotar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadam	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.017
Shokry al Qouwatly	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermou & Zabadani Area														
Beit Jenn	Spring Intake	0.266	0.427	0.486	0.434	0.286	0.366	0.335	0.190	0.274	0.228	0.157	0.188	9.558
Tabbiyeh	Spring Intake	0.449	0.567	0.500	0.378	0.293	0.312	0.205	0.131	0.099	0.102	0.234	0.262	9.282
Rinath	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.415
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		1.285	1.564	1.556	1.382	1.149	1.248	1.110	0.891	0.943	0.900	0.961	1.020	36.816
TOTAL SOURCES (MCM)		9.015	9.094	9.421	9.807	9.874	10.338	10.150	9.841	9.673	9.360	9.261	9.110	302.073
Need (m³/s)		10.56	10.56	10.68	11.14	11.48	11.82	12.63	13.09	12.05	11.59	11.36	11.14	363.100
Deficit (l/s)		1546	1467	1255	1328	1605	1486	2477	3246	2380	2234	2104	2025	
Deficit (MCM)		4.06	3.86	3.30	3.49	4.22	3.90	6.51	8.53	6.26	5.87	5.53	5.32	60.85

Table C-8.9b Water Production Plan for 2000 (Low Rainfall), Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ais Figh Area														
Figh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.252	0.000								0.662
Figh Total to Supply		2.960	2.880	4.500	7.968	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	131.342
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.150	1.200	1.200	1.100	1.100	1.100	1.100	26.674
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		1.405	1.405	0.000	0.000	0.000	1.455	1.505	1.505	1.405	1.405	1.405	1.405	33.888
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadani Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadani Railway	Re-equipped													
Oumawiyin	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadani Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dunmar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.151
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.145	0.145	3.912
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.890	1.890	1.890	0.205	1.930	1.930	1.990	1.990	1.990	1.990	1.950	1.950	56.752
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	3.784
Shokry al Qouwaly	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.840	0.840	0.840	0.000	0.840	0.840	0.840	0.840	0.840	0.840	0.840	0.740	24.020
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200		0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	5.782
Sub Total		0.430	0.430	0.430	0.230	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.035
TOTAL SOURCES (MCM)		7.525	7.445	7.660	8.403	8.520	8.935	8.875	8.785	8.465	8.195	8.035	7.725	259.037
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		445	525	396	0	143	0	654	1090	631	554	541	678	
Deficit (MCM)		1.17	1.38	1.04	0.00	0.37	0.00	1.72	2.87	1.66	1.46	1.42	1.78	14.86

Table C-8.9c Water Production Plan for 2005 (Low Rainfall), Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fijeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Borada & Al Sabl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.937
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.889
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.100	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.515	1.465	33.980
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re - equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadani Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re - equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiyin	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re - equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.691
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwayt	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jena	Spring Intake													0.000
Tabibiych	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560
TOTAL SOURCES (MCM)		7.855	7.960	8.295	8.855	9.155	9.520	9.470	9.530	9.260	8.940	8.780	8.520	278.936
Need (m³/s)		8.636	8.636	8.729	9.105	9.386	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		781	676	434	250	231	148	855	1171	596	540	513	585	
Deficit (MCM)		2.05	1.78	1.14	0.66	0.61	0.39	2.25	3.08	1.57	1.42	1.35	1.54	17.82

Table C-8.9d Water Production Plan for 2010 (Low Rainfall), Option 3

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Fiqeh Sources	Spring/Wells	2.95	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fiqeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	2.500	2.500	1.000	1.000	1.000	2.000	2.500	2.500	2.500	2.500	2.500	2.500	65.700
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		2.805	2.685	1.000	1.000	1.000	2.305	2.865	2.865	2.865	2.865	2.865	2.865	73.545
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	6 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadam	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwayh	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560
TOTAL SOURCES (MCM)		9.560	9.360	9.295	9.855	10.155	10.420	10.870	10.780	10.560	10.290	10.130	9.920	318.500
Need (m³/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.84	10.91	10.49	10.28	10.08	328.600
Deficit (l/s)		0	198	366	222	234	280	558	1063	348	203	155	157	9.94
Deficit (MCM)		0.00	0.52	0.96	0.58	0.61	0.74	1.47	2.79	0.91	0.53	0.41	0.41	9.94

Table C-8.9c Water Production Plan for 2015 (Low Rainfall), Option 3

Source	Type	Monthly Quantity (m3/s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fijeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	2.500	2.500	1.000	1.000	1.000	2.000	2.500	2.500	2.500	2.500	2.500	2.500	65.700
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		2.805	2.685	1.000	1.000	1.000	2.305	2.865	2.865	2.865	2.865	2.865	2.865	73.545
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Qunawiyin	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.912
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.691
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwath	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermou & Zabadani Area														
Beit Jena	Spring Intake													0.000
Tabibiyeh	Spring Intake													0.000
Rineh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560
TOTAL SOURCES (MCM)		9.560	9.360	9.295	9.855	10.155	10.420	10.870	10.780	10.560	10.290	10.130	9.920	318.500
Need (m3/s)		10.56	10.56	10.68	11.14	11.48	11.82	12.63	13.09	12.03	11.59	11.36	11.14	363.100
Deficit (l/s)		1001	1201	1381	1280	1324	1401	1757	2307	1493	1301	1235	1215	
Deficit (MCM)		2.63	3.16	3.63	3.36	3.48	3.69	4.62	6.06	3.92	3.43	3.24	3.19	44.42

Table C-8.10a Summary of Water Production Plan - Dry Conditions, Option 4

Source	Type	1980-2015 Forecast, 1980 Field - Meteorological Conditions, M&E - Mechanical & Electrical																											
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Air High Area	Spring/Wells																												
Fresh Source	Loss to River																												
Overflow																													
High Total to Supply		129.4	169.9	171.9	131.2	122.2	136.6	150.5	188.2	175.0	177.4	151	151	151	152	152	152	152	152	152	152	152	152	152	152	152	152	152	
Barada & Al Sahi	Wellfield									4.8	267	267	267	267	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269
Spring Wells	Wellfield									M&E	4.4	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Group 1	Wellfield									M&E	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Group 2	Wellfield									M&E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Group 3	Wellfield									M&E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total		0	0	0	0	0	0	0	0	9.8	292	292	292	292	290	290	290	290	290	290	290	290	290	290	290	290	290	290	
Damascus (Existing Stations)		210	276	322	430	719	720	536	545	635	67	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	
Mozara	Wellfield									5.64	10.0	13.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Ben Awakar	Re-equipped									3.86	4.81	5.64	4.81	5.64	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Ben Awakar	Wellfield									8.47	6.87	5.80	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	
Jobar	Wellfield									3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	
Kadim Railway	Re-equipped									3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	
Kadim Railway	Wellfield									3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	
Qunawan	Wellfield									3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	
University	Wellfield									2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	
Kadim Store	Wellfield									0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Dammur	Wellfield									0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	
Fringe Wells	23 wells									4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	
Emergency Wells	8 Re-equipped									3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	
Sub Total	35 wells	1736	2251	2526	3032	5271	5418	5517	5583	5641	5409	487	510	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	
Damascus (New Stations)																													
New Naloon	2 wells Phase I																												
New Naloon	8 wells Phase II																												
Kafar Souah	5 wells																												
Tahrir & Kiyun	5 wells Phase I																												
Tahrir & Kiyun	6 wells Phase II																												
Tahrir & Kiyun	2 wells Phase III																												
Zamman	7 wells																												
Takadon	6 wells																												
Stoby & Coawthly	5 wells																												
Yabugh Centre	10 wells																												
Kafayyah Centre	5 wells																												
Sub Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Harman & Zaharani Area																													
Ben Jann	Spring Intake																												
Zaharih	Spring Intake																												
Kunch	8 wells																												
Wadi Marwan	15 wells																												
Sergaya Wellfield	5 wells																												
Luz Al Ahwar	4 wells																												
Sub Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL SOURCES (MCM)		146.7	178.9	187.1	161.5	154.9	170.7	209.7	212.3	209.4	218.5	208	221	229	241	259	276	279	279	267	302	314	320	327	329	331	334	336	
Water Requirement (MCM)																													
Deficit (MCM)		248	332	377	283	258	274	278	288	297	297	308	309	316	322	329	335	342	340	340	340	340	340	340	340	340	340	340	

Table C--8.10b Water Production Plan for 2000 (Low Rainfall), Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Rigeih Area														
Fiegeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.001
Overflow	Loss to River			0.000	0.252	0.000								0.662
Fiegeh Total to Supply		2.960	2.880	4.500	7.968	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	131.342
Barada & Al Sabl														
Spring Wells	Wellfield	1.100	1.100				1.150	1.200	1.200	1.100	1.100	1.100	1.100	26.674
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120	0.120				0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.838
Group 3	Wellfield													0.000
Sub Total		1.405	1.405	0.000	0.000	0.000	1.455	1.505	1.505	1.405	1.405	1.405	1.405	33.668
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped													
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped													
Oumawiyyin	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
Unkrsity	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped													0.000
Emergency Wells	55 wells													0.000
Sub Total		1.890	1.890	1.890	0.205	1.930	1.930	1.990	1.990	1.990	1.990	1.950	1.950	56.752
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.691
Tishreen & Kywan	2 wells Phase III													0.000
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadam	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	3.784
Shokry al Qouwatly	5 wells													0.000
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells													0.000
Sub Total		0.840	0.840	0.840	0.000	0.840	0.840	0.840	0.840	0.840	0.840	0.840	0.740	24.020
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200		0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	5.782
Sub Total		0.430	0.430	0.430	0.230	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.035
TOTAL SOURCES (MCM)		7.525	7.445	7.660	8.403	8.520	8.935	8.875	8.785	8.465	8.195	8.035	7.725	259.037
Need (m³/s)		7.97	7.97	8.056	8.403	8.663	8.922	9.529	9.875	9.096	8.749	8.576	8.403	274.000
Deficit (l/s)		445	525	396	0	143	0	654	1090	631	554	541	678	
Deficit (MCM)		1.17	1.38	1.04	0.00	0.37	0.00	1.72	2.87	1.66	1.46	1.42	1.78	14.86

Table C-8.10c Water Production Plan for 2005 (Low Rainfall), Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fiqeh Area														
Piqeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fiqeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sahl														
Spring Wells	Wellfield	1.100	1.100				1.100	1.100	1.250	1.200	1.150	1.150	1.100	26.937
Group 1	Wellfield		0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	3.889
Group 2	Wellfield						0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.208
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		1.100	1.285	0.000	0.000	0.000	1.405	1.465	1.615	1.565	1.515	1.465	33.980	
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwayt	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yaibuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jenn	Spring Intake													0.000
Tabbiyeh	Spring Intake													0.000
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	13.560
TOTAL SOURCES (MCM)		7.855	7.960	8.295	8.855	9.155	9.520	9.470	9.530	9.260	8.940	8.780	8.520	278.936
Need (m³/s)		8.636	8.636	8.729	9.105	9.385	9.668	10.33	10.7	9.856	9.48	9.293	9.105	296.900
Deficit (l/s)		781	676	434	250	231	148	855	1171	596	540	513	585	
Deficit (MCM)		2.05	1.78	1.14	0.66	0.61	0.39	2.25	3.08	1.57	1.42	1.35	1.54	17.82

Table C-8.10d Water Production Plan for 2010 (Low Rainfall). Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Fijeh Area														
Fijeh Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Fijeh Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sabl														
Spring Wells	Wellfield	1.790	1.700	0.400	0.400	0.700	1.700	2.500	2.500	2.500	2.300	2.300	2.200	55.162
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.916
Sub Total		2.095	1.885	0.400	0.400	0.700	2.005	2.865	2.865	2.865	2.665	2.665	2.565	63.006
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiyah	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dummar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokiy al Qouwaty	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermou & Zabadani Area														
Beit Jejj	Spring Intake	0.266	0.427	0.456	0.434	0.286	0.366	0.335	0.190	0.274	0.228	0.157	0.188	9.558
Tabsbiyeh	Spring Intake	0.449	0.567	0.500	0.378	0.293	0.312	0.205	0.131	0.099	0.102	0.234	0.262	9.282
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		1.145	1.424	1.416	1.242	1.009	1.108	0.970	0.751	0.803	0.760	0.821	0.880	32.401
TOTAL SOURCES (MCM)		9.565	9.554	9.681	10.067	10.434	10.798	11.410	11.101	10.933	10.420	10.321	10.070	326.802
Need (m³/s)		9.558	9.558	9.661	10.08	10.39	10.7	11.43	11.81	10.91	10.49	10.28	10.08	328.600
Deficit (l/s)		0	4	0	10	0	0	18	742	0	73	0	7	
Deficit (MCM)		0.00	0.01	0.00	0.03	0.00	0.00	0.05	1.95	0.00	0.19	0.00	0.02	2.24

Table C-8.10e Water Production Plan for 2015 (Low Rainfall). Option 4

Source	Type	Monthly Quantity (m ³ /s)												TOTAL (MCM)
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Ain Pigeih Area														
Figeih Sources	Spring/Wells	2.96	2.88	4.50	8.22	5.32	4.28	4.11	4.02	3.80	3.53	3.41	3.20	132.004
Overflow	Loss to River			0.000	0.000	0.000								0.000
Figeih Total to Supply		2.960	2.880	4.500	8.220	5.320	4.280	4.110	4.020	3.800	3.530	3.410	3.200	132.004
Barada & Al Sabi														
Spring Wells	Wellfield	2.500	2.500	1.000	1.000	1.000	2.000	2.500	2.500	2.500	2.500	2.500	2.500	65.700
Group 1	Wellfield	0.185	0.185				0.185	0.185	0.185	0.185	0.185	0.185	0.185	4.376
Group 2	Wellfield	0.120					0.120	0.120	0.120	0.120	0.120	0.120	0.120	2.523
Group 3	Wellfield						0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.946
Sub Total		2.805	2.685	1.000	1.000	1.000	2.305	2.865	2.865	2.865	2.865	2.865	2.865	73.545
Damascus (Existing Stations)														
Mazraa	Wellfield	0.335	0.335	0.335		0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335	9.684
Ibn Assaker	Wellfield	0.345	0.345	0.345		0.345	0.345	0.345	0.345	0.345	0.345	0.345	0.345	9.973
Ibn Assaker	Re-equipped	0.120	0.120	0.120		0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	3.469
Jobar	Wellfield	0.350	0.350	0.350		0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	10.118
Kadam Railway	Wellfield	0.245	0.245	0.245		0.245	0.245	0.305	0.305	0.305	0.305	0.305	0.305	8.029
Kadam Railway	Re-equipped	0.115	0.115	0.115		0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	3.324
Oumawiya	Wellfield	0.175	0.175	0.175		0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	5.059
Kaboon	Wellfield	0.065	0.065	0.065		0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	1.879
University	Wellfield													0.000
Kadam Store	Wellfield	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Dunimar	Wellfield	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	3.154
Fringe Wells	23 wells	0.105	0.105	0.105	0.105	0.145	0.145	0.145	0.145	0.145	0.145	0.105	0.105	3.942
Fringe Wells	8 Re-equipped	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Emergency Wells	55 wells													0.000
Sub Total		2.235	2.235	2.235	0.205	2.275	2.275	2.335	2.335	2.335	2.335	2.295	2.295	66.725
Damascus (New Stations)														
New Kaboon	2 wells Phase I	0.024	0.024	0.024		0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.694
New Kaboon	8 wells Phase II	0.096	0.096	0.096		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	2.775
Kafar Souseh	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Tishreen & Kywan	5 wells Phase I	0.110	0.110	0.110		0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	3.180
Tishreen & Kywan	9 wells Phase II	0.100	0.100	0.100		0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	2.891
Tishreen & Kywan	2 wells Phase III	0.040	0.040	0.040		0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	1.156
Jaramana	9 wells	0.290	0.290	0.290		0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	8.383
Takadom	7 wells	0.140	0.140	0.140		0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	4.047
Shokry al Qouwayly	5 wells	0.170	0.170	0.170		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	4.914
Yalbuga Centre	10 wells													0.000
Kanawat Gardens	5 wells	0.080	0.080	0.080		0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	2.313
Sub Total		1.130	1.130	1.130	0.000	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	32.666
Hermon & Zabadani Area														
Beit Jena	Spring Intake	0.266	0.427	0.486	0.434	0.286	0.366	0.335	0.190	0.274	0.228	0.157	0.188	9.558
Tabbiyeh	Spring Intake	0.449	0.567	0.500	0.378	0.293	0.312	0.205	0.131	0.099	0.102	0.234	0.262	9.282
Rimeh	8 wells													0.000
Wadi Marwan	13 wells	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	7.253
Sergaya Wellfield	9 wells													0.000
Dier Al Ashayer	4 wells	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	6.307
Sub Total		1.145	1.424	1.416	1.242	1.009	1.108	0.970	0.754	0.803	0.760	0.821	0.880	32.401
TOTAL SOURCES (MCM)		10.275	10.354	10.281	10.667	10.734	11.093	11.410	11.101	10.933	10.620	10.521	10.370	337.341
Need (m³/s)		10.56	10.56	10.68	11.14	11.48	11.82	12.63	13.09	12.05	11.59	11.36	11.14	363.100
Deficit (l/s)		286	207	395	468	745	726	1217	1986	1120	974	844	765	
Deficit (MCM)		0.75	0.54	1.04	1.23	1.96	1.91	3.20	5.22	2.94	2.56	2.22	2.01	25.58