

Attachment 1 FINANCIAL STATEMENTS

Profit Loss Statement
With the Project
Adealah-Deir Alla-Amman Water Supply Scheme

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2006
	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD
Revenue													
Water Sales/ Piped	21,805,262	24,269,085	25,197,198	29,480,722	36,730,584	46,223,677	51,472,104	57,907,277	61,923,308	82,890,980	86,206,819	96,579,000	100,234,160
Water Sales/ Tankers	243,501	332,752	347,200	381,171	375,618	390,843	406,268	422,519	439,420	456,987	475,277	494,288	514,059
Wastewater Surchage	4,324,811	4,516,323	4,876,173	5,705,122	6,941,983	9,968,553	10,285,285	12,190,170	12,667,377	13,477,935	14,017,052	15,671,065	16,287,907
Wastewater Tax	4,170,716	5,408,723	5,123,458	5,326,396	5,541,532	5,763,193	5,969,721	6,233,470	6,482,809	6,742,121	7,011,806	7,292,278	7,583,969
Subscription Fee	3,164,544	3,616,653	3,302,778	3,434,889	3,572,285	3,715,176	3,869,783	4,018,334	4,179,068	4,346,231	4,520,080	4,700,883	4,888,918
Meters Maintenance Fee	590,307	622,442	645,532	671,353	698,207	726,136	755,181	785,386	816,804	849,476	883,455	918,793	955,545
Bank Interest	132,554	48,431	15,329	15,942	16,590	17,243	17,933	18,650	19,396	20,172	20,979	21,818	22,691
Pipeline Maintenance Fee	0	179,645	5,871	61,839	64,312	66,885	69,560	72,342	75,236	78,246	81,375	84,630	88,016
Sundries (Other revenues)	392,533	1,096,264	1,109,653	865,817	900,449	936,467	973,926	1,012,883	1,053,398	1,095,534	1,139,356	1,184,930	1,232,327
Performance Improvements						2,259,315	2,485,667	2,820,399	3,001,204	3,873,036	4,027,958	4,501,774	4,681,845
Total Revenue	34,824,308	40,090,328	40,623,272	45,925,251	54,841,541	66,967,287	76,301,438	85,471,434	90,658,021	113,830,728	119,383,957	131,249,460	136,499,438
Expenses													
Salaries and Wages	15,218,277	16,096,444	16,348,330	17,165,747	18,024,034	18,925,236	19,871,487	20,865,072	21,808,326	23,003,742	24,153,928	25,361,626	26,629,707
Maintenance and Operation	3,702,037	7,351,716	8,467,384	8,890,753	9,335,281	10,002,055	10,502,158	11,027,266	11,578,629	13,282,561	13,946,689	14,644,023	15,376,225
Electricity Bill	15,315,217	17,835,891	21,287,445	22,362,317	23,480,433	25,012,390	25,420,924	25,849,895	26,297,315	34,362,180	36,080,289	37,884,304	39,778,519
Administration and General	497,531	632,735	723,136	759,293	797,257	837,120	878,976	922,925	969,071	1,017,525	1,068,401	1,121,821	1,177,912
Subtotal	34,733,062	41,919,786	46,836,296	49,178,110	51,637,015	54,776,791	56,673,556	58,665,158	60,753,341	71,666,008	75,249,309	79,011,774	82,962,363
Depreciation	24,388,270	27,585,984	29,453,509	30,878,924	32,896,678	35,336,828	38,063,373	43,782,206	46,842,052	51,731,472	53,973,895	56,459,205	52,551,150
Interest on Loans	12,043,867	15,782,486	16,187,979	23,065,133	28,590,260	33,396,910	36,284,850	38,008,457	38,533,716	35,555,768	32,330,233	30,701,856	18,426,374
Total Expenses	71,165,199	85,288,268	92,477,783	103,222,167	113,113,954	123,510,529	132,021,879	140,455,821	148,129,109	158,953,269	161,553,437	166,171,935	153,939,887
Deficit	(36,340,891)	(45,197,940)	(51,854,511)	(57,296,915)	(58,272,413)	(53,543,242)	(55,720,441)	(54,984,387)	(57,471,088)	(45,122,541)	(43,169,480)	(34,922,376)	(17,440,449)
Foreign Exchange (loss) Gain	(2,226,909)	(4,129,084)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)
Deficit for the Year	(38,567,800)	(49,327,024)	(58,780,271)	(64,222,675)	(65,198,173)	(60,469,002)	(62,646,201)	(61,910,147)	(64,396,848)	(52,048,301)	(50,095,240)	(41,848,136)	(24,366,209)
Prior Year Accumulated Deficit	(192,130,688)	(230,698,468)	(280,025,492)	(339,905,763)	(403,028,438)	(468,226,611)	(528,695,613)	(591,341,814)	(653,251,961)	(717,648,809)	(769,697,110)	(819,792,350)	(861,640,485)
Balance	(230,698,468)	(280,025,492)	(338,805,763)	(403,028,438)	(468,226,611)	(528,695,613)	(591,341,814)	(653,251,961)	(717,648,809)	(769,697,110)	(819,792,350)	(861,640,485)	(896,006,694)
Total Accumulative Deficit	(230,698,468)	(280,025,492)	(338,805,763)	(403,028,438)	(468,226,611)	(528,695,613)	(591,341,814)	(653,251,961)	(717,648,809)	(769,697,110)	(819,792,350)	(861,640,485)	(896,006,694)

Balance Sheet
 With the Project
 Adasiyah-Deir Alla-Amman Water Supply Scheme

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2006
	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD
Fixed Assets													
Fixed Assets at Cost	526,154,425	569,291,268	627,763,127	619,578,499	657,733,579	708,736,590	781,267,484	875,842,704	876,841,065	1,034,629,476	1,079,477,925	1,128,164,133	1,051,023,022
Accumulated Depreciation	(131,209,514)	(158,020,859)	(187,474,367)	(218,453,291)	(251,339,969)	(286,676,797)	(325,740,170)	(369,522,376)	(418,364,426)	(470,095,900)	(524,069,795)	(580,528,000)	(633,079,150)
Net Book Value	394,944,911	411,270,440	440,288,760	401,125,208	406,393,610	422,059,793	455,527,314	506,320,328	558,476,637	564,533,576	555,408,130	547,636,133	417,943,872
Projects in Progress	49,737,975	54,205,459	40,750,675	90,750,675	128,000,000	174,783,000	189,166,000	176,766,000	129,983,000	105,600,000	100,000,000	100,000,000	100,000,000
Current Assets													
Spare Parts and Materials	11,816,219	11,459,419	13,024,395	13,545,371	14,087,186	14,650,673	15,236,700	15,846,166	16,480,015	17,139,215	17,824,784	18,537,775	19,279,286
Accounts Receivable	14,962,137	16,757,562	15,116,034	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	22,359,957
Other Debt Balances	2,733,185	2,157,186	2,923,296	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Cash	1,628,895	798,357	562,987	1,000,000	1,220,455	3,191,119	4,220,878	5,489,563	7,209,100	9,443,254	10,903,731	11,018,129	7,429,765
Total Current Assets	31,140,436	31,172,546	31,626,724	32,545,371	33,307,641	35,841,792	37,457,578	39,335,731	41,689,115	44,582,469	46,728,515	47,556,904	52,069,006
Total Assets	475,823,322	496,848,445	512,666,159	524,421,254	567,701,251	630,684,585	692,150,892	722,222,059	730,148,752	714,716,045	702,136,645	696,192,037	570,012,880
Capital & Liabilities Equity													
Capital	296,414,377	314,444,110	332,721,904	382,721,904	438,387,904	505,813,904	578,839,904	648,199,904	701,799,904	751,799,904	801,799,904	851,799,904	901,799,904
Accumulated Deficit	(230,698,468)	(260,025,492)	(338,905,763)	(403,028,438)	(468,226,611)	(528,695,613)	(591,341,814)	(653,251,961)	(717,648,909)	(768,697,110)	(819,792,350)	(861,640,485)	(886,006,694)
Net Capital	65,715,909	34,418,618	(6,083,859)	(20,306,534)	(29,838,707)	(22,881,709)	(12,501,910)	(7,052,057)	(15,848,905)	(17,897,206)	(17,992,446)	(9,840,581)	15,793,210
Provision for Contingencies	1,462,686	1,462,548	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417	1,386,417
International Loans	127,344,781	127,342,326	122,268,021	139,424,939	176,897,201	228,462,885	280,884,756	309,674,614	337,921,320	365,479,998	394,153,532	392,146,950	307,106,233
Local Loans	56,568,001	76,879,347	108,427,886	122,487,121	149,803,588	164,066,143	182,032,206	161,899,832	152,153,637	113,558,236	72,341,845	59,775,325	0
Bonds and Debentures	21,325,000	21,325,000	21,325,000	19,867,728	12,900,889	9,428,934	10,347,498	6,111,328	4,334,358	1,886,675	2,045,372	2,522,002	127,322
Total Long term Loans	205,267,782	225,546,673	252,020,707	281,769,489	339,601,659	401,977,962	453,064,460	477,695,774	494,409,315	481,024,909	466,540,719	454,444,277	307,233,565
Current Liabilities													
Accounts Payable	9,085,294	13,867,823	16,348,957	11,349,957	6,349,957	0	0	0	0	0	0	0	0
Retention from Contractors	2,769,951	2,488,070	2,478,086	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Deposits	26,047,917	26,742,896	29,312,926	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000
Post due Instalment/Interest	158,113,561	182,168,335	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733
Pension Fund	99,029	99,576	96,577	96,577	96,577	96,577	96,577	96,577	96,577	96,577	96,577	96,577	96,577
Payable to Banks	7,271,173	9,844,906	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	7,558,615	2,956,388
Total Current Liabilities	203,376,945	235,220,606	265,342,694	261,351,892	256,551,892	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	245,598,698
Total Capital & Liabilities	475,823,322	496,848,445	512,666,159	524,421,254	567,701,251	630,684,585	692,150,892	722,222,059	730,148,752	714,716,045	702,136,645	696,192,036	570,012,880

CASH FLOW WITH THE PROJECT

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D	J.D
Operational Cash Flow													
Deficit for the Year	(38,567,800)	(49,327,024)	(58,780,271)	(64,222,875)	(65,198,173)	(60,469,002)	(62,646,201)	(61,910,147)	(64,396,848)	(62,048,301)	(50,095,240)	(41,848,136)	(118,879,448)
Adjustment to Reconcile Net Deficit to Net Cash Provided by Operating Expenses													
Depreciation	24,395,270	26,811,344	29,453,508	30,978,924	32,896,678	35,336,828	39,063,373	43,782,206	48,942,052	51,731,472	53,973,895	56,458,205	52,551,150
Foreign Exchange (Gain) Loss	2,226,909	4,128,084	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760
Changes Relating to Operational Assets & Liabilities													
Accounts Receivable	14,862,137	(1,795,445)	1,641,548	116,034	0	0	0	0	0	0	0	0	(7,359,957)
Other Parts & Materials	(158,122)	356,800	(1,564,976)	(520,976)	(541,815)	(563,487)	(586,027)	(609,468)	(633,847)	(659,201)	(685,569)	(712,991)	(741,511)
Other Debt Balances	(246,810)	575,997	(766,110)	(76,702)	0	0	0	0	0	0	0	0	0
Accounts Payable	2,698,246	4,822,529	2,462,134	(5,000,000)	(5,000,000)	(6,349,957)	0	0	0	0	0	0	0
Retention of Contractors	1,177,567	(301,881)	(9,884)	521,914	0	0	0	0	0	0	0	0	0
Pension Fund	0	(453)	1	0	0	0	0	0	0	0	0	0	0
Deposits	1,979,844	694,979	2,570,030	687,074	0	0	0	0	0	0	0	0	0
Net Cash Used in Operating Activities	8,460,261	(14,034,070)	(18,068,358)	(30,590,647)	(30,927,550)	(25,119,859)	(17,243,095)	(11,811,648)	(9,262,863)	5,949,731	10,118,846	20,822,838	(67,504,006)
Cash Flow from Investing Activities													
Net Changes in Fixed Assets & Project in Progress	(56,033,872)	(47,604,357)	(45,017,045)	(41,815,372)	(75,404,405)	(95,786,011)	(98,913,894)	(71,975,220)	(54,415,361)	(33,405,411)	(39,248,449)	(49,686,208)	78,141,111
Net Cash Used in Investing Activities	(56,033,872)	(47,604,357)	(45,017,045)	(41,815,372)	(75,404,405)	(95,786,011)	(98,913,894)	(71,975,220)	(54,415,361)	(33,405,411)	(39,248,449)	(49,686,208)	78,141,111
Cash Flow from Financing Activities													
Banks Payable	568,976	2,573,733	(2,286,281)	0	0	0	0	0	0	0	0	0	(4,602,227)
Long Term Loans	7,950,176	17,421,122	23,236,059	22,406,019	50,665,955	53,479,870	43,130,969	16,426,869	8,078,244	(22,544,320)	(20,870,397)	(21,136,630)	(56,034,878)
Overdue Installments & Accrued Interest on Loans	25,392,097	22,783,439	23,833,973	0	0	0	0	0	0	0	0	0	0
Change in Capital	0	18,028,733	18,277,794	50,000,000	55,666,000	67,426,000	73,026,000	67,360,000	55,600,000	50,000,000	50,000,000	50,000,000	50,000,000
Provision for Contingencies	0	(138)	(76,131)	0	0	0	0	0	0	0	0	0	0
Net Cash Provided by Financing Activities	33,911,249	60,807,889	63,085,404	72,406,019	106,331,955	120,905,870	116,156,989	83,768,869	63,678,244	27,455,680	29,129,603	28,863,370	(10,637,105)
Net Change in Cash & Cash Equivalent	(2,470,701)	(830,538)	(235,360)	437,003	220,455	1,970,664	1,029,759	1,268,685	1,719,537	2,234,154	1,460,477	114,398	(3,586,364)
Cash Beginning of the Year	(4,069,596)	1,628,695	796,357	562,987	1,000,000	1,220,455	3,191,119	4,220,878	5,489,563	7,209,100	9,443,254	10,903,731	11,018,129
Cash End of the Year	1,628,695	796,357	562,987	1,000,000	1,220,455	3,191,119	4,220,878	5,489,563	7,209,100	9,443,254	10,903,731	11,018,129	7,429,765

Assumptions

Unaccounted-for-Water in 1997 is 49% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 1998 is 35% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 1999 is 27% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 2000 is 23% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 2001 is 19% Due to Donors Meeting in Frankfurt

Water and Wastewater revenues natural growth increased by 4%

In 1996 water revenue increased by 12.5% due to new tariff
In 1996 wastewater revenue increased by 12.5% due to new surcharge
In 1997 water revenue increased by 13.2% due to new proposed tariff
In 1997 wastewater revenue increased by 17.0% due to new proposed surcharge
In 2000 water revenue increased by 5% due to new tariff
In 2000 wastewater revenue increased by 5% due to new surcharge
In 2002 water revenue increased by 5% due to new tariff
In 2002 wastewater revenue increased by 5% due to new surcharge
In 2004 water revenue increased by 7.5% due to new tariff
In 2004 wastewater revenue increased by 7.5% due to new surcharge

In 1998 water revenue increased by the additional water qua (65% Accounted for)
In 1998 wastewater surcharge increased by the additional discharge of (8*0.9*0.5*0.65 Mcm) (85% Accounted for, 50% of the Country Served & 90% of Consumption Discharged)

In 2002 water revenue increased by the additional water quantity (45* 81Mcm)(81% Accounted for)
In 2002 wastewater surcharge increased by the additional discharge of (45*0.9*0.5*0.81 Mcm) (81% Accounted for, 50% of the Country Served & 90% of Consumption Discharged)

Expenses Assumptions

Salaries & wages increased by 5% yearly

In 1998 the salaries increased by 5% According to the project operation

Maintenance & operation increased by 5% yearly

In 1998 the chemicals increased by the cost of the additional quantity (8Mcm* 0.25 flis)

In 2002 the chemicals increased by the cost of the additional quantity (45Mcm* 0.25flis)

Electricity bill increased by 5% yearly

In 1998 the electricity bill increased according to the additional water quantity (8Mcm* 150flis/cm)

In 2002 the electricity bill increased according to the additional water quantity (45Mcm* 150flis/cm)

The administration & general increased by 5% yearly

Depreciation calculated by 5% yearly

Interest on local loans calculated by 12%

Interest on foreign loans calculated by 6%

Interest on all Loans are not calculated in the total expenses because of the Cabinet Decision to write-off debts and interests

Depreciation in taken into consideration in the total expenses

Balance sheet Assumptions

Projects in progress estimated at 50MJD annually

Fixed assets at cost increased by the value of the work in progress every tow years

The assets decreased by the depreciated assets (after 20 years age)

Spare parts increased by 4% annually

The capital increased by the value of government, ministry of planing contribution & grants

The international loans increased by 40% of the value of the work in progress

The local loans increased by 20% of the value of the work in progress & the shortage of financing

Profit Loss Statement
Without the Project

Adasiyah-Deir Alla-Amman Water Supply Scheme

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.
Revenue													
Water Sales/ Piped	21,805,262	24,269,095	25,197,198	29,480,722	38,730,584	44,148,877	49,314,312	52,986,624	56,805,829	59,078,062	61,441,185	63,898,832	66,454,765
Water Sales/ Tankers	243,581	332,752	347,280	381,171	375,618	390,643	406,268	422,519	439,420	458,987	475,277	494,288	514,059
Wastewater Surcharge	4,324,811	4,516,323	4,876,173	5,705,122	6,841,983	7,219,673	7,508,460	7,808,798	8,121,150	8,445,986	8,763,836	9,135,189	9,500,597
Wastewater Tax	4,170,716	5,409,723	5,123,458	5,328,398	5,541,532	5,763,193	5,983,721	6,233,470	6,482,809	6,742,121	7,011,806	7,282,278	7,563,969
Subscription Fee	3,184,544	3,616,653	3,302,778	3,302,778	3,434,889	3,572,285	3,715,176	3,863,783	4,018,334	4,179,068	4,346,231	4,520,080	4,700,893
Meters Maintenance Fee	590,307	622,442	645,532	671,353	698,207	726,136	755,181	785,388	816,804	849,476	883,455	918,793	955,545
Bank Interest	132,554	48,431	15,328	15,942	16,580	17,243	17,953	18,650	19,396	20,172	20,979	21,818	2,269
Pipeline Maintenance Fee	0	179,645	5,871	61,839	64,312	66,885	69,590	72,342	75,236	78,246	81,375	84,630	88,016
Sundries (other revenues)	392,533	1,095,264	1,109,653	865,817	900,449	936,467	973,926	1,012,883	1,053,398	1,095,534	1,139,356	1,184,930	1,232,327
Performance improvements					2,070,368	2,289,162	2,448,718	2,614,656	2,814,656	2,719,242	2,828,012	2,941,132	3,058,778
Total Revenue	34,824,308	40,090,328	40,623,272	45,793,140	54,704,145	64,911,769	71,043,699	75,653,176	80,447,033	83,664,914	87,011,511	90,491,971	94,091,228
Expenses													
Salaries and Wages	15,218,277	16,098,444	16,348,330	17,165,747	18,024,034	18,925,236	19,871,497	20,865,072	21,908,326	23,003,742	24,153,929	25,361,626	26,629,707
Maintenance and Operation	3,702,037	7,351,716	8,467,384	8,890,753	9,335,291	9,802,055	10,292,158	10,806,766	11,347,104	11,914,460	12,510,183	13,135,692	13,792,476
Electricity Bill	15,315,217	17,835,891	21,297,445	22,362,317	23,490,433	23,812,380	24,160,924	24,526,895	24,908,165	26,153,573	27,461,252	28,834,314	30,276,030
Administration and General	497,531	632,735	723,136	759,283	797,257	837,120	878,976	922,925	969,071	1,017,525	1,068,401	1,121,821	1,177,912
Subtotal	34,733,062	41,919,786	46,836,295	49,178,110	51,637,015	53,376,791	55,203,556	57,121,658	59,132,666	62,089,300	65,193,765	68,453,453	71,876,125
Depreciation	24,398,270	27,585,984	29,483,508	30,978,924	32,886,678	35,336,828	38,063,373	43,782,206	48,842,052	51,731,472	53,973,885	56,458,205	59,551,150
Interest on Loans	12,043,867	15,782,498	16,187,979	23,073,060	28,607,392	33,550,058	36,594,749	38,770,889	39,772,019	38,423,571	37,288,559	36,718,288	29,944,577
Total Expenses	71,165,199	85,285,268	92,477,783	103,230,093	113,131,075	122,263,677	130,961,677	139,674,853	147,746,737	152,244,343	156,456,218	163,629,946	154,371,852
Deficit	(36,340,891)	(45,197,940)	(51,854,511)	(57,436,953)	(58,426,930)	(57,351,909)	(59,817,979)	(64,021,677)	(67,299,705)	(68,579,429)	(69,444,706)	(73,137,975)	(60,280,624)
Foreign Exchange (loss) Gain	(2,226,909)	(4,129,084)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)	(6,925,760)
Deficit for the Year	(38,567,800)	(49,327,024)	(58,780,271)	(64,362,713)	(65,352,690)	(64,277,669)	(66,743,739)	(70,947,437)	(74,225,465)	(75,505,189)	(76,370,466)	(80,063,735)	(67,206,384)
Prior Year Accumulated Deficit	(192,130,669)	(230,698,468)	(280,025,492)	(338,805,763)	(403,168,476)	(468,521,166)	(532,798,835)	(598,542,573)	(674,489,010)	(744,715,475)	(820,220,664)	(896,591,132)	(976,654,867)
Balance	(230,698,469)	(280,025,492)	(338,805,763)	(403,168,476)	(468,521,166)	(532,798,835)	(598,542,573)	(670,490,010)	(744,715,475)	(820,220,664)	(896,591,132)	(976,654,867)	(1,043,861,251)
Total Accumulative Deficit	(230,698,469)	(280,025,492)	(338,805,763)	(403,168,476)	(468,521,166)	(532,798,835)	(598,542,573)	(670,490,010)	(744,715,475)	(820,220,664)	(896,591,132)	(976,654,867)	(1,043,861,251)

Balance Sheet
Without the Project
Adalah-Deir Alla-Amman Water Supply Scheme

	1983	1984	1985	1986	1987	1988	1989	2000	2001	2002	2003	2004	2006
	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.
Fixed Assets													
Fixed Assets at Cost	528,154,425	569,291,298	627,763,127	619,578,499	657,733,578	706,736,590	781,267,484	875,842,704	978,841,065	1,034,629,476	1,079,477,925	1,129,164,133	1,051,023,022
Accumulated Depreciation	(131,209,514)	(158,020,858)	(187,474,367)	(218,453,291)	(251,339,969)	(286,676,797)	(325,740,170)	(369,522,376)	(418,364,428)	(470,095,900)	(524,069,795)	(580,528,000)	(633,079,150)
Net Book Value	396,944,911	411,270,440	440,288,760	401,125,208	406,393,610	420,059,793	455,527,314	506,320,328	558,476,637	564,533,576	555,408,130	548,636,133	417,943,872
Projects in Progress	49,737,975	54,205,459	40,750,675	80,750,675	128,000,000	174,783,000	199,166,000	176,766,000	129,993,000	105,600,000	100,000,000	100,000,000	100,000,000
Current Assets													
Spare Parts and Materials	11,816,219	11,459,419	13,024,365	13,545,371	14,087,186	14,850,673	15,236,700	15,846,168	16,480,015	17,139,215	17,824,764	18,537,775	19,279,296
Accounts Receivable	14,962,137	16,757,592	15,116,034	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	22,359,957
Other Debt Balances	2,733,185	2,157,188	2,823,298	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Cash	1,628,895	798,357	562,997	1,000,000	1,220,455	1,776,390	1,340,081	1,093,473	1,258,598	1,000,000	1,000,000	1,000,000	1,000,000
Total Current Assets	31,140,436	31,172,546	31,626,724	32,545,371	33,307,641	34,427,063	34,576,781	34,939,641	35,736,613	36,139,215	36,824,784	37,537,775	45,639,243
Total Assets	475,823,322	496,648,445	512,666,159	524,421,254	587,701,251	629,269,856	689,270,095	717,825,969	724,196,250	706,272,791	692,232,914	686,173,908	563,583,115
Capital & Liabilities Equity													
Capital	298,414,377	314,444,110	332,721,904	382,721,904	438,387,904	505,813,904	578,839,904	648,199,904	701,799,904	751,799,904	801,799,904	851,799,904	901,799,904
Accumulated Deficit	(230,898,468)	(280,025,492)	(338,805,763)	(403,168,476)	(488,521,186)	(532,798,835)	(589,542,573)	(670,480,010)	(744,715,475)	(820,220,684)	(896,591,132)	(976,654,867)	(1,043,861,251)
Net Capital	65,715,909	34,418,618	(6,083,859)	(20,446,572)	(50,133,282)	(26,984,931)	(20,702,669)	(24,280,106)	(42,915,571)	(68,420,790)	(94,791,228)	(124,854,963)	(142,061,347)
Provision for Contingencies	1,462,896	1,462,548	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417	1,396,417
International Loans	127,344,761	127,342,326	122,269,021	139,556,750	177,182,561	231,035,351	285,848,068	322,363,479	358,559,712	398,595,248	441,123,791	462,416,041	403,381,654
Local Loans	56,598,001	76,879,347	108,427,696	122,487,121	149,803,598	164,066,143	162,032,206	181,899,832	152,153,637	120,903,805	90,176,094	91,444,390	47,847,313
Bonds and Debentures	21,325,000	21,325,000	21,325,000	19,875,656	12,910,084	9,594,951	10,504,148	6,244,422	4,810,130	3,616,156	4,135,915	5,580,108	7,429,390
Total Long term Loans	205,267,792	225,546,673	252,020,707	281,929,527	339,896,214	404,666,445	458,384,422	490,527,733	515,523,479	523,105,209	535,435,800	559,440,529	453,658,347
Current Liabilities													
Accounts Payable	9,065,294	13,887,823	16,349,957	11,349,957	6,349,957	0	0	0	0	0	0	0	0
Retention from Contractors	2,789,951	2,485,070	2,478,086	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Deposits	26,047,917	26,742,898	29,312,926	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000
Part due installments & interest	158,113,581	182,165,335	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733	209,554,733
Pension Fund	89,029	88,577	88,577	88,577	88,577	88,577	88,577	88,577	88,577	88,577	88,577	88,577	88,577
Payable to Banks	7,271,173	9,844,908	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	7,556,615	2,956,388
Total Current Liabilities	209,378,945	235,220,606	265,342,604	261,551,882	256,551,882	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	250,201,925	245,599,686
Total Capital & Liabilities	475,823,322	496,648,445	512,666,159	524,421,254	587,701,251	629,269,856	689,270,095	717,825,969	724,196,250	706,272,791	692,232,914	686,173,908	563,583,115

CASH FLOW WITH THE PROJECT

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.	J.D.
Operational Cash Flow													
Deficit for the Year	(38,567,800)	(49,327,024)	(58,780,271)	(64,362,713)	(65,352,690)	(64,277,669)	(66,743,739)	(70,947,437)	(74,225,465)	(75,505,169)	(76,370,468)	(80,063,735)	(118,879,448)
Adjustment to Reconcile Net Deficit to Net Cash Provided by Operating Expenses													
Depreciation	24,388,270	26,811,344	29,453,509	30,978,924	32,886,678	35,336,828	39,063,373	43,782,206	48,842,052	51,731,472	53,973,895	56,488,205	52,551,150
Foreign Exchange (Gain) Loss	2,226,909	4,129,084	6,925,780	6,925,780	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760	6,925,760
Changes Related to Operational Assets & Liabilities													
Accounts Receivable	14,962,137	(1,785,445)	1,641,548	116,034	0	0	0	0	0	0	0	0	7,358,857
Spare Parts & Materials	(156,122)	346,800	(1,564,976)	(520,376)	(541,815)	(563,487)	(596,027)	(608,468)	(633,847)	(659,201)	(685,569)	(712,991)	(741,511)
Other Debt Balances	(246,810)	575,987	(766,110)	(76,702)	0	0	0	0	0	0	0	0	0
Accounts Payable	2,898,246	4,822,134	2,462,134	(5,000,000)	(5,000,000)	(6,349,857)	0	0	0	0	0	0	0
Retention of Contractors	1,177,587	(9,984)	(9,984)	521,914	0	0	0	0	0	0	0	0	0
Pension Fund	0	(453)	1	0	0	0	0	0	0	0	0	0	0
Deposits	1,879,844	694,979	2,570,000	687,074	0	0	0	0	0	0	0	0	0
Net Cash Used in Operating Activities	8460281	(14,034,070)	(18,068,359)	(30,730,685)	(31,082,067)	(28,928,525)	(21,340,633)	(20,846,939)	(19,091,489)	(17,507,156)	(16,156,381)	(17,992,761)	(67,504,006)
Cash Flow from Investing Activities													
Net Cash in Fixed Assets & Project in Progress	(56,033,872)	(67,604,357)	(45,017,045)	(41,815,372)	(75,404,405)	(95,786,011)	(98,913,884)	(71,975,220)	(54,415,361)	(33,405,411)	(39,248,449)	(49,686,208)	78,141,111
Net Cash Used in Investing Activities	(56,033,872)	(67,604,357)	(45,017,045)	(41,815,372)	(75,404,405)	(95,786,011)	(98,913,884)	(71,975,220)	(54,415,361)	(33,405,411)	(39,248,449)	(49,686,208)	78,141,111
Cash Flow from Financing Activities													
Banks Payable	568,976	2,573,733	(2,286,281)	0	0	0	0	0	0	0	0	0	(4,602,227)
Long Term Loans	7,950,176	17,421,122	23,236,059	22,546,057	50,820,472	57,286,536	47,228,527	25,464,159	17,006,860	912,569	5,404,830	17,078,969	(56,034,878)
Overdue Installments & Accrued Interest on Loans	25,392,087	22,783,439	23,933,973	0	0	0	0	0	0	0	0	0	0
Change in Capital	0	18,029,733	18,277,794	50,000,000	55,668,000	67,426,000	73,026,000	67,360,000	55,600,000	50,000,000	50,000,000	50,000,000	50,000,000
Provision for Contingencies	0	(136)	(76,131)	0	0	0	0	0	0	0	0	0	0
Net Cash Provided by Financing Activities	33,911,249	60,807,889	63,085,404	72,546,057	106,486,472	124,714,536	120,254,527	92,824,159	73,506,860	50,912,569	55,404,830	67,078,969	(10,637,105)
Net Change in Cash & Cash Equivalent	(2,470,701)	(830,535)	(235,360)	437,003	0	(220,455)	(776,390)	(340,081)	(93,473)	(256,596)	0	0	0
Cash Beginning of the Year	(4,099,596)	1,628,895	796,357	562,987	1,000,000	1,220,455	1,776,390	1,340,081	1,053,473	1,256,596	1,000,000	1,000,000	1,000,000
Cash End of the Year	1,628,895	796,357	562,987	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

Assumptions

Unaccounted-for-Water in 1997 is 49% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 1998 is 35% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 1999 is 27% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 2000 is 23% Due to Donors Meeting in Frankfurt
Unaccounted-for-Water in 2001 is 19% Due to Donors Meeting in Frankfurt

Water and Wastewater revenues natural growth increased by 4%

In 1996 water revenue increased by 12.5% due to new tariff
In 1996 wastewater revenue increased by 12.5% due to new surcharge
In 1997 water revenue increased by 13.2% due to new proposed tariff
In 1997 wastewater revenue increased by 17.0% due to new proposed surcharge

Expenses Assumptions

Salaries & wages increased by 5% yearly
Maintenance & operation increased by 5% yearly
Electricity bill increased by 5% yearly
The administration & general increased by 5% yearly
Depreciation calculated by 5% yearly
Interest on local loans calculated by 12%
Interest on foreign loans calculated by 6%
Interest on all Loans are not calculated in the total expenses because of the Cabinet Decision to write-off debts and interests
Depreciation in taken into consideration in the total expenses

Balance sheet Assumptions

Projects in progress estimated at 50MJD annually
Fixed assets at cost increased by the value of the work in progress every tow years
The assets decreased by the depreciated assets (after 20 years age)
Spare parts increased by 4% annually
The capital increased by the value of government, ministry of planing contribution & grants
The international loans increased by 40% of the value of the work in progress
The local loans increased by 20% of the value of the work in progress & the shortage of financing

A Draft Study for the Improvement of the Financial Efficiency of WAJ

Further to the negotiations held in Frankfurt on the 16 and 17 of September 1996, and the signed Minutes of Meeting, the Water Authority hereby presents its plan for the improvement of the financial efficiency of the Water Authority which was agreed upon under the heading "GREATER AMMAN WATER SUPPLY II" of the said Minutes of Meeting.

This paper concentrates on a plan for the improvement of the financial efficiency of the Water Authority in Amman. The plan will be proportionally reflected on the sector as a whole. The main reason for selecting Amman as a target to address such an improvement plan is due to the fact that in 1995:

1. the number of subscribers was 265,000 (total number of subscribers was 579,000) representing almost 46% of the total number of subscribers;
2. the billed water consumption has reached 43% of the total water produced; and
3. expenses represented more than 50% of the total expenses.

Introduction

In 1995 the Water Authority pumped 246.1 million cubic meters of water to various governorates. Table 1 represents the total quantities of water produced to each governorate with the corresponding number of subscribers:

Table 1

Governorate	Water Supply in 1995 in MCM	Percentage of the Total Supplied	Total Number of Subscribers	Percentage of the Total Number
Amman	106.5	43.28	265,100	45.8
Zarqa	032.8	13.33	077,600	13.4
Irbid	039.3	15.97	118,000	20.4
Mafraq	016.5	06.70	021,100	03.6
Balqa	020.4	08.29	037,100	06.4
Karak	007.2	02.93	024,200	04.2
Tafila	002.2	00.89	008,500	01.5
Ma'an	021.2	08.61	026,400	04.6
Total	246.1	100.00	579,000	100.00

At the end of 1995, unaccounted-for-water was calculated at the rate of 54% with the physical losses at approximately 30%. This is of course, as we all agree, a serious problem in a country where shortage of water resources, due to natural and unnatural causes, can be considered as an icon.

The Water Authority is fully aware of this problem and admits its serious implications on the technical soundness and financial viability of its services. To that affect, the Water Authority has mobilised its own and other's financial and technical resources to address this issue.

In 1989, the Water Authority utilised part of the proceeds of the WB's Loan No. 2694-JO, and launched its first three major contracts for the rehabilitation of Zarqa city water network. The city water supply system was originally constructed under KfW, USAID, WB and IDB "Zarqa Ruseifa Water and Wastewater Project". The scheme was successfully implemented. A recent pilot study concluded that the physical losses were measured at 13%. The results, of course, are encouraging and lie within the acceptable standard and can be very well used as an indicator to formulate future plans and projections.

Other rehabilitation schemes for the cities of Sult, Irbid, and Ramtha (financed by EIB), are either implemented or are under-construction. EIB is also financing further parts of the physical rehabilitation of Amman water network.

KfW, among other schemes, is heavily and actively involved in the technical and financial improvement of the water supply system of Amman. Its comprehensive approach addresses the problem facing the complex waterworks system right from the source up to the charging point (end users). KfW has, thankfully, extended loans and grants in various forms to comprehensively address deficiencies in the system through the following schemes:

- (ASTSUP KfW Sector Programme II Grant portion), towards the inventory, monitoring, control, and protection of the groundwater resources all over the Kingdom;
- (KfW Sector Loan II), part of the proceeds of the programme was intended for the procurement of water meters with high accuracy at all flows particularly at low flow aiming at the reduction of administrative losses;
- (KfW Grant Hydraulic Analysis of Amman Water Supply System), which will eventually lead to a rehabilitation plan for conservation of both water and electricity;
- (KfW Amman Water Supply Loan I), physical rehabilitation of part of Amman water network and partially towards Operation Management Support "OMS";
- (CTA Grant), for timely and proper implementation of the new investments in the physical rehabilitation of Amman water network through the Project Management Unit "PMU";
- (KfW Amman Water Supply [eminent] Loan II), physical rehabilitation of further parts of Amman water network and partially towards Operation Management Support;

The above-mentioned schemes, in addition to the OMS scheme granted by GTZ, were thoroughly discussed during the appraisal stage of each project and solely meant to address, inter alia, administrative, technical and financial shortfalls in the supply and delivery systems.

The nature and objectives of these new projects are very well directed and targeted. The projected outcome of implementing such new investments will surely:

- reduce cost and expenses;
- increase revenues; and
- enhance the quantities of water available at no extra operational cost.

Towards the improvement of collection efficiency, the Water Authority has recently concluded an agreement with GTZ/OMS. Under the said agreement, the Water Authority will contribute JD 192,000 while OMS's contribution will be approximately JD 50,000 in the form of management and advisory services. The project goals and objectives are summarised as follows:

- Establishment of an up-to-date subscribers data base enabling the geographical location of subscribers under ANIS;
- Control unregistered subscriptions that are never billed (illegal house-connections);
- Cancel repeated subscriptions;
- Enable more than one collector to work in the same zone and flexibility of transferring him from one zone to another;
- Link water information with sanitary information regarding the location to follow up on subscribers who were not charged the sanitary disposal service fees and other cases of default; and
- Reduce UFW by replacing malfunctioning water meters, determining meters which were not read and sealing meters.

The project will commence as early as December 1996, the duration of the project is 15 months. It is expected that the project outcomes will lead to a considerable revenue generation, in fact OMS staff predicted that MJD 3-4 additional revenues, without any major investment, will be generated.

On other fronts for combating administrative losses, the Water Authority had, in 1995 and 1996, replaced about 60,000 water meters with more accurate new ones supplied under KfW Sector Programme II. The new water meters are capable of registering much higher percentage under low flows (15 l/h at an accuracy rate of +5% to -25%).

Further more, the Water Authority is seriously discussing the involvement of the private sector in its operation management activities in Amman. The terms of reference for such an involvement is under careful analysis right now. The aim of this new approach is to deregulate part of the sector for a specified number of years (for example 4 years). Involvement on a larger scale could be achieved only after detailed evaluation and assessment of the technical, financial and administrative performance in the initial four years contract.

As for the restructuring of the water tariff, the Water Authority has just completed the survey to identifying consumption type i.e. domestic, commercial or industrial. Data has already been downloaded into the central computer and draft reports have been

already issued. Any new restructuring of water tariff will take into consideration consumption type. It is intended that a new structure will be presented for approval as early as Sep. 1997. The effect of such restructuring on revenue will be apparent on the balance sheet of 1998. It is assumed that a minimum of 10% of an additional revenue will be generated by the enforcement of the revised structure. The new structure, however, will introduce full maintenance and operational cost recovery from commercial and industrial consumption. As for domestic consumption, consumers with lifeline consumption will be protected, i.e. subsidised. Full maintenance and operational cost plus part of the investment cost from big consumers will be applied to allow for certain investment as well as to allow for the provision of cross-subsidy. At the moment, in-house discussion is ongoing to define realistic lifeline consumption. There are two schools, one school suggesting that the lifeline consumption is 40 m³/family/3 months, other suggesting 50 m³/family/3 months, (average family size is 7).

Tariff Restructuring

"It is agreeable that cost recovery and budget deficit should not only be subjected to treatment by tariff prescriptions but more accurately through careful diagnosis of the syndrome".

It is somehow true that the present water tariff structure is not recovering maintenance and operational cost, but other measures, to complement tariff, are under-way to improve the financial performance of the Sector. However, in the last two decades, many forms of tariff restructuring scenarios were thoroughly considered to improve, along with other activities, the financial efficiency of WAJ.

A new approach is under serious discussion at the moment. The main features of this approach is to continue protecting the two lowest life-line consumption brackets in the present structure namely <0-20> and <21-40>, (the average family size for these brackets with lifeline consumption is surveyed as 12 members, i.e. equivalent to 36.5 l/c/d). Actual figures for 1995 show that the number of bills, consumption, and revenue, as a percentage of the total, for the two lowest brackets were 64%, 26.81%, and 11.39% respectively.

As for bracket <21-40> the rate per cubic meter will be reduced to, for example, 0.130 JD/m³ and will be charged accordingly. Other brackets consumption will be subjected to a new approach whereby the last cubic meter consumed will be charged at the marginal rate. This approach will yield an additional amount of MJD 2 (equivalent to 16%). The same approach will be used for wastewater tariff yielding an additional amount of MJD 0.6 (equivalent to 18%).

It is also proposed that when the field survey by OMS is completed, a separate tariff for commercial and industrial connections will be applied.

Draft Plan for Technical & Financial Improvements

Scheme	Expected Completion Date	Expected Reduction of UFW %	Total Qty Produced in 1995 M3	Average Water Tariff JD/M3	New UFW %	Water Saved & Sold MM3	Expected Average Additional Revenue JD
Physical Losses							
Rehabilitation of Amman Network Contract 1A	June 1997	1	106,500,000	0.304	53	1,065,000	323,760
Rehabilitation of Amman Network Contract 1B	Feb. 1998	1	106,500,000	0.399	52	1,065,000	424,935
Rehabilitation of Amman Network/ Marqa	Sep. 1999	1	106,500,000	0.399	51	1,065,000	424,935
Rehabilitation of Amman Network/ Hashmi	Sep. 1999	1	106,500,000	0.399	50	1,065,000	424,935
Rehabilitation of Amman Network/ Sahabb	Sep. 1999	1	106,500,000	0.399	49	1,065,000	424,935
Amman Total Restructuring and Rehabilitation	Sep. 1998	3	106,500,000	0.399	46	3,195,000	1,274,805
Amman Total Restructuring and Rehabilitation	Sep. 1999	3	106,500,000	0.399	43	3,195,000	1,274,805
Amman Total Restructuring and Rehabilitation	Sep. 2000	3	106,500,000	0.399	40	3,195,000	1,274,805
Amman Total Restructuring and Rehabilitation	Sep. 2001	3	106,500,000	0.399	37	3,195,000	1,274,805
Administrative Losses							
OMS Field Survey	Dec. 1997	4	106,500,000	0.399	33	4,260,000	1,699,740
OMS Field Survey	Dec. 1998	4	106,500,000	0.399	29	4,260,000	1,699,740
Efficient Management	Dec. 1998	6	106,500,000	0.399	23	6,390,000	2,549,610
Efficient Management	Dec. 1999	2	106,500,000	0.399	21	2,130,000	849,870
Efficient Management	Dec. 2000	1	106,500,000	0.399	20	1,065,000	424,935
Efficient Management	Dec. 2001	1	106,500,000	0.399	19	1,065,000	424,935
Saving in Electricity	Dec. 1998						842,075
Saving in Electricity	Dec. 1999						842,075
Saving in Electricity	Dec. 2000						842,075
Saving in Electricity	Dec. 2001						842,075
Projection	End of 2001	35			19	37,275,000	18,139,850

**General Remarks on 1994 &
1995 Financial Performance**

In 1994, the Water Authority's has nearly approached total recovery of maintenance and operational cost. The total revenue and expenses were JD 40,090,328 and JD 41,919,786 respectively. In 1995 a new water and wastewater tariff with an increase of 13.5% was introduced. Unfortunately this increase was totally absorbed by the increase of the electricity bill coincided in the same year. The increase of both water and electricity tariff resulted in reducing the percentage of WAJ's recovery from 96% to 87%.

**Summary of Assumptions for the
Improvement Plan for (Amman)**

• UFW in 1995	54%
Physical Losses Estimated at	30%
Administrative Losses Estimated at	24%
Variable Costs for 1995	JD 18,451,061
Wages & Salaries	JD 02,600,812
• Total Operating Expenses	JD 21,051,873 ⁽¹⁾

Projections

Revenue in 1995	JD 12,652,166
Expected Additional Revenue Due to the Reduction of UFW (Physical Losses), (Table 2)	JD 06,246,225
Expected Additional Revenue Due to the Reduction of UFW (Administrative Losses), (Table 2)	JD 11,045,556
Expected Additional Revenue Due to Tariff Restructuring, (Table 2)	JD 01,063,606
Expected Additional Revenue Due to Reduction in M&O Costs, (Table 2)	JD 03,368,300 ⁽²⁾
• Projected Total Revenue	

Draft Plan for Technical
and Financial Improvements
Proposed Revenues vs. Expenses/Amman

Item	Expected Completion Date	Expected Reduction of UFW %	New UFW %	Expected Average Additional Revenue JD	Expected Piped Water Revenue JD	Expected Wastewater Surcharge JD	Expected Other Revenues JD	Expected Expenses in JD	Percentage of Recovery %
Expected for 1996					12,652,166	3,163,986	2,000,000	20,407,813	87.50
Expected for 1997					16,607,294	4,195,101	2,140,000	21,836,359	105.07
Amman/ Total Restructuring, Rehabilitation, and Management	June 1997	5	49	2,098,850	18,706,144	4,195,101	2,289,800	23,364,905	107.82
Amman Total Restructuring, Rehabilitation, and Administrative	Feb. 1998	14	35	6,787,906	25,494,050	4,404,856	2,450,086	25,000,448	129.59
Amman Total Restructuring, Rehabilitation, and Administrative	Sep. 1999	8	27	3,781,475	29,275,525	4,625,099	2,621,592	26,750,479	156.55
Amman Total Restructuring, Rehabilitation, and Administrative	Sep. 2000	4	23	2,311,775	31,587,300	4,856,354	2,805,103	28,623,013	137.12
Amman Total Restructuring, Rehabilitation, and Administrative	Sep. 2001	4	19	2,311,775	33,899,075	5,099,171	3,001,461	30,626,624	137.13
Projections	End of 2001	- 35	19	17,291,781					

Electricity

	Total Bill JD	Amman Mixed Sources	Amman Portion JD	Benchmarks
Khaww	1,272,000		636,000	Private Operator is Hired
Zai	5,866,000		5,162,080	Capital Investment is Available
Azraq	1,339,000		1,339,204	New Tariff Structure is implemented in 1987
Walah	1,005,000		1,005,305	
Qastal	720,000		720,000	
Amman/ within	3,409,000		3,409,321	
Total Amman Electricity Bill	13,611,000		12,271,910	
Wages and Salaries	2,600,812		2,600,812	
M&O Operational Expenses	4,200,000		4,200,000	
Total Expenses Amman 96	18,072,722		18,072,722	
Percentage of the Total Expenses			40.7	
Total Electricity Bill + Wages	18,072,722		18,072,722	
WAJ's Total Electricity Bill 1996			22,840,933	

Draft Plan for Technical
and Financial Improvements
Proposed Revenues vs. Expenses/Governorates

Item	Expected Completion Date	Expected Reduction of UPW %	New UPW %	Expected Average Additional Revenue JD	Expected Piped Water Revenue JD	Expected Wastewater Surcharge JD	Expected Other Revenues JD	Expected Expenses in JD	Percentage of Recovery %
Expected for 1996					15,832,307	1,544,336	8,549,901	28,278,476	91.68
Expected for 1997					17,466,387	2,023,020	9,148,394	30,257,970	94.65
Amman/ Total Restructuring, Rehabilitation, and Management	June 1997	2	52	707,500	22,097,776	2,103,941	9,514,330	32,376,027	104.14
Rehabilitation, and Administrative	Feb. 1998	2	50	707,500	25,385,934	2,188,098	9,894,903	34,642,349	108.16
Rehabilitation, and Administrative	Sep. 1999	2	48	707,500	28,805,617	2,275,622	10,290,699	37,067,314	111.61
Rehabilitation, and Administrative	Sep. 2000	2	46	707,500	31,579,035	2,366,647	10,702,327	39,662,026	112.57
Rehabilitation, and Administrative	Sep. 2001	2	44	707,500	34,546,593	2,461,313	11,130,420	42,438,368	113.43
Projections	End of 2001	10	44	3,537,500					

Electricity

	Total Bill JD	Amman Mixed Sources	Amman Portion JD
Khaww	1,272,000		636,000
Zal	5,866,000		5,162,080
Azraq	1,339,000		1,339,204
Walah	1,005,000		1,005,305
Qastal	720,000		720,000
Amman/ within	3,409,000		3,409,321
Total Amman Electricity Bill	13,611,000		12,271,910
Wages and Salaries	2,600,812		2,600,812
M&Operational Expenses	4,200,000		4,200,000
Total Expenses Amman 96	18,072,722		18,072,722
WAJ's Total Expenses 96	48,838,295		40.7
Percentage of the Total Expenses			40.7
Total Electricity Bill + Wages	19,072,722		19,072,722
WAJ's Total Electricity Bill 1996	22,840,933		22,840,933

Benchmarks

New Tariff Structure is implemented in 1997
Private Operator is Hired
Capital Investment is Available

Draft Plan for Technical
and Financial Improvements
Proposed Revenues vs. Expenses

Item	Expected Completion Date	Expected Reduction of UFW %	New UFW %	Expected Average Additional Revenue JD	Expected Piped Water Revenue JD	Expected Wastewater Surcharge JD	Expected Other Revenues JD	Expected Expenses in JD	Percentage of Recovery %
Expected for 1996					28,484,473	4,708,322	10,549,901	48,686,289	89.85
Expected for 1997					34,073,681	6,218,121	11,288,394	52,094,329	99.01
Amman/ Total Restructuring, Rehabilitation, and Management	June 1997			2,806,350	40,803,920	6,299,042	11,804,130	55,740,932	105.68
Rehabilitation, and Administrative	Feb. 1998			7,495,406	50,879,984	6,592,954	12,344,989	59,642,797	117.06
Rehabilitation, and Administrative	Sep. 1999			4,488,975	58,081,142	6,900,721	12,912,291	63,817,793	122.06
Rehabilitation, and Administrative	Sep. 2000			3,019,275	63,166,335	7,223,001	13,507,431	68,285,039	122.86
Rehabilitation, and Administrative	Sep. 2001			3,019,275	68,445,668	7,560,485	14,131,881	73,064,991	123.37
Projections									
	End of 2001								

Electricity	Total Bill JD	Amman Mixed Sources	Amman Portion JD	Benchmarks
Khaww	1,272,000		636,000	New Tariff Structure is Implemented in 1987 Private Operator is Hired Capital Investment is Available
Zal	5,956,000		5,162,080	
Azraq	1,339,000		1,339,204	
Walah	1,005,000		1,005,305	
Qastal	720,000		720,000	
Amman/ within	3,409,000		3,409,321	
Total Amman Electricity Bill	13,611,000		12,271,910	
Wages and Salaries	2,600,812		2,600,812	
M&Operational Expenses	4,200,000		4,200,000	
Total Expenses Amman 96	19,072,722		19,072,722	
WAJ's Total Expenses 96	46,836,296		46,836,296	
Percentage of the Total Expenses			40.7	
Total Electricity Bill + Wages	19,072,722		19,072,722	
WAJ's Total Electricity Bill 1996	22,840,833		22,840,833	

Amman 1995/ Water

Bracket	Consumption up to m ³ /Qtr	No. of Bills	Consumption in Bracket (m ³)	Consumption in Bracket (%)	Average Cons. per Bill	Accumulated Consumption	Accumulated Consumption (%)	Tariff 1996 JD/m ³	Revenue per Bracket (JD)	Revenue per Bracket (%)	Accumulated Revenue (JD)	Accumulated Revenue (%)	Average Bill JD/Qtr	Effective Price per m ³
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
0000-0010	10	148,723	647,383	1.51%	4.35	647,383	1.51%	0.100	223,085	1.71%	223,085	1.71%	1.50	0.345
0011-0020	20	150,046	2,449,177	5.69%	16.32	3,096,560	7.20%	0.100	255,929	1.96%	479,014	3.67%	1.71	0.104
0021-0030	30	152,410	3,998,162	9.30%	26.23	7,094,722	16.50%	0.180	485,323	3.72%	964,337	7.38%	3.18	0.121
0031-0040	40	122,983	4,428,541	10.30%	36.01	11,523,263	26.79%	0.190	620,053	4.75%	1,584,390	12.13%	5.04	0.140
0041-0050	50	91,627	4,218,590	9.81%	46.04	15,741,853	36.60%	0.450	752,841	5.76%	2,337,231	17.89%	8.22	0.178
0051-0060	60	60,477	3,367,904	7.83%	55.69	19,109,757	44.43%	0.450	730,296	5.59%	3,067,527	23.48%	12.08	0.217
0061-0070	70	42,120	2,764,370	6.43%	65.63	21,874,127	50.86%	0.450	676,124	5.18%	3,743,651	28.66%	16.05	0.245
0071-0080	80	29,622	2,236,316	5.20%	75.50	24,110,443	56.06%	0.550	608,660	4.66%	4,352,311	33.32%	20.55	0.272
0081-0090	90	20,507	1,752,049	4.07%	85.44	25,862,492	60.13%	0.550	523,304	4.01%	4,875,615	37.33%	25.52	0.289
0091-0100	100	17,729	1,705,041	3.96%	96.17	27,567,533	64.10%	0.550	547,582	4.19%	5,423,197	41.52%	30.89	0.321
0101-0150	150	35,234	4,247,240	9.88%	120.54	31,814,773	73.97%	0.700	1,589,979	12.17%	7,013,176	53.69%	45.13	0.374
0151-0200	200	11,200	1,934,499	4.50%	172.72	33,749,272	78.47%	0.700	856,059	6.55%	7,869,235	60.25%	76.43	0.443
0201-0250	250	4,683	1,045,656	2.43%	223.29	34,794,928	80.90%	0.700	500,016	3.83%	8,369,251	64.07%	106.77	0.478
0251-0300	300	2,592	711,710	1.65%	274.58	35,506,638	82.56%	0.730	356,524	2.73%	8,725,775	66.80%	137.55	0.501
0301-0400	400	2,333	904,426	1.87%	344.80	36,311,064	84.43%	0.730	419,198	3.21%	9,144,973	70.01%	179.68	0.521
0401-0500	500	1,138	509,520	1.18%	447.73	36,820,584	85.61%	0.730	274,758	2.10%	9,419,731	72.12%	241.44	0.539
0501-0600	600	552	303,525	0.71%	549.86	37,124,109	86.32%	0.730	167,101	1.28%	9,586,832	73.40%	302.72	0.551
0601-0700	700	399	258,906	0.60%	648.89	37,383,015	86.92%	0.730	144,491	1.11%	9,731,323	74.50%	362.13	0.558
0701-1000	1000	627	520,560	1.21%	830.24	37,903,575	88.13%	0.730	295,282	2.26%	10,026,605	76.76%	470.94	0.567
>1000	10000	1,006	5,104,308	11.87%	5,073.86	43,007,883	100.00%	0.730	3,035,222	23.24%	13,061,827	100.00%	3,017.12	0.595
TOTAL		888,088	43,007,883	100.00%	48.00				13,061,827	100.00%			14.58	0.304

Operational Expenses 21,051,873 0.489 JD/m³ (14)=(13)/(6)

Amman/ Proposed Tariff Restructuring/ 97/ Water

Bracket	No. of Bills	Consumption In Bracket (m ³)	Average Cons. per Bill m ³ /Qtr	Tariff 1996 JD/m ³	Average Bill 1996 JD/Qtr	Expected Revenues 1996 (9b)	Tariff 1997 JD/m ³	Average Bill JD/Qtr	Change to 1996 Tariff %	Revenue per Bracket (JD)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0000-0010	148,723	647,383	4.35	0.100	2,000	297,446		2,000	0.0%	297,446
0011-0020	150,046	2,449,177	16.32	0.100	2,000	300,092		2,000	0.0%	300,092
0021-0030	152,410	3,998,162	26.23	0.190	3,184	485,313	0.130	3,410	7.1%	519,761
0031-0040	122,983	4,428,541	36.01	0.190	5,042	620,053	0.130	4,681	-7.2%	575,710
0041-0050	91,627	4,218,590	46.04	0.450	8,518	780,516	0.195	8,519	0.0%	780,596
0051-0060	60,477	3,367,904	55.69	0.450	12,860	777,737	0.241	13,421	4.4%	811,852
0061-0070	42,120	2,764,370	65.63	0.450	17,334	730,103	0.299	19,601	13.1%	925,603
0071-0080	29,622	2,236,316	75.50	0.550	22,322	661,231	0.358	26,867	20.4%	795,841
0081-0090	20,507	1,752,049	85.44	0.550	27,790	569,893	0.414	35,331	27.1%	724,529
0091-0100	17,729	1,705,041	96.17	0.550	33,695	597,376	0.478	45,759	35.8%	811,259
0101-0150	35,234	4,247,240	120.54	0.700	50,181	1,768,065	0.617	74,394	48.3%	2,621,201
0151-0200	11,200	1,934,499	172.72	0.700	86,706	971,109	0.730	126,088	45.4%	1,412,184
0201-0250	4,683	1,045,656	223.29	0.700	122,101	571,801	0.730	163,000	33.5%	763,329
0251-0300	2,592	711,710	274.58	0.730	158,743	411,482	0.730	200,443	26.3%	519,548
0301-0400	2,333	804,426	344.80	0.730	210,006	489,945	0.730	251,706	19.9%	587,231
0401-0500	1,138	509,520	447.73	0.730	285,145	324,495	0.730	326,845	14.6%	371,950
0501-0600	552	303,525	549.86	0.730	359,701	198,555	0.730	401,401	11.6%	221,573
0601-0700	399	258,906	648.89	0.730	431,988	172,363	0.730	473,688	9.7%	188,001
0701-1000	627	520,560	830.24	0.730	564,375	353,863	0.730	606,075	7.4%	380,009
>1000	1,006	5,104,908	5,073.85	0.730	3,662,221	3,684,195	0.730	3,703,921	1.1%	3,726,145
TOTAL	396,008	43,007,883	48.09	0.343		14,765,912	0.401			17,234,862

increase compared to 1996 of J 2,469,050
% of Increase 17
private tankers provide water @ 1.0 JD/m³

Tariff 1996 JD/m ³	Consumption m ³ /Qtr	New Tariff JD/m ³
0.450	41	0.166
0.550	71	0.330
0.700	101	0.504
0.700	125	0.843
0.700	150	0.730
0.730	251	0.730

Benchmarks:
12 l/hr (starting flow of water meter) gives 25.92 m³/Qtr
60 l/c/d with 7 people per subscriber gives 37.80 m³/Qtr
120 l/c/d with 7 people per subscriber gives 75.60 m³/Qtr
150 l/c/d with 7 people per subscriber gives 94.50 m³/Qtr

Policy:
Flat rate only for lowest bracket until 20 m³/Qtr
Until 20 m³/Qtr shall pay min charge of 2,000 JD/Qtr
> 20 <= 40 m³: according to consumption @ 0.130 JD/m³
Above 40 m³/Qtr the following progressive tariff will be applied
Consump/Qtr (m³) 40 140 above
JD/m³ 0.150 0.730 0.730

TARIF97N.wk 04/12/96 O.K.

Amman 1995/ Wastewater

Bracket	Collection up to m ² /Ctr	No. of Bills	Collection in Bracket (m ²)	Collection in Bracket (%)	Average Coll. per Bill	Accumulated Collection	Accumulated Collection (%)	Tariff 1996 JD/m ²	Revenue per Bracket (JD)	Revenue per Bracket (%)	Accumulated Revenue (JD)	Accumulated Revenue (%)	Average Bill JD/Ctr	Effective Price per m ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
0000-0010	10	122,141	527,750	1.66%	4.32	527,750	1.66%	0.030	54,963	1.74%	54,963	1.74%	0.45	0.104
0011-0020	20	118,625	1,930,357	6.09%	16.27	2,458,107	7.75%	0.030	60,583	1.91%	115,546	3.65%	0.51	0.031
0021-0030	30	117,062	3,065,991	9.67%	26.19	5,524,098	17.43%	0.040	99,227	3.14%	214,773	6.79%	0.85	0.032
0031-0040	40	94,106	3,387,729	10.69%	36.00	8,911,827	28.11%	0.040	116,888	3.69%	331,461	10.48%	1.24	0.034
0041-0050	50	69,833	3,212,707	10.13%	46.01	12,124,534	38.25%	0.110	139,705	4.42%	471,166	14.89%	2.00	0.043
0051-0060	60	46,005	2,561,463	8.08%	55.68	14,685,997	46.33%	0.110	136,533	4.32%	607,699	19.21%	2.97	0.053
0061-0070	70	31,590	2,072,921	6.54%	65.62	16,758,918	52.87%	0.110	125,158	3.96%	732,857	23.16%	3.96	0.080
0071-0080	80	22,010	1,661,981	5.24%	75.51	18,420,899	58.11%	0.220	121,100	3.63%	853,957	26.99%	5.50	0.073
0081-0090	90	15,091	1,289,437	4.07%	85.44	19,710,336	62.18%	0.220	113,014	3.57%	966,971	30.56%	7.49	0.088
0091-0100	100	12,885	1,238,958	3.91%	96.16	20,949,294	66.08%	0.220	124,096	3.82%	1,091,067	34.48%	9.63	0.100
0101-0150	150	25,005	3,008,227	9.49%	120.31	23,957,521	75.57%	0.280	386,984	12.23%	1,478,051	46.71%	15.48	0.129
0151-0200	200	7,713	1,333,711	4.21%	172.92	25,291,232	79.78%	0.280	220,818	6.98%	1,698,869	53.69%	28.63	0.166
0201-0250	250	3,299	737,358	2.33%	223.51	26,028,590	82.11%	0.280	136,174	4.30%	1,835,043	58.00%	41.28	0.185
0251-0300	300	1,840	505,466	1.59%	274.71	26,534,056	83.70%	0.300	99,503	3.14%	1,934,546	61.14%	54.08	0.197
0301-0400	400	1,659	571,783	1.80%	344.66	27,105,839	85.50%	0.300	118,724	3.75%	2,053,270	64.90%	71.56	0.208
0401-0500	500	807	361,107	1.14%	447.47	27,466,946	86.64%	0.300	78,495	2.48%	2,131,765	67.38%	97.27	0.217
0501-0600	600	371	203,978	0.64%	549.54	27,670,924	87.29%	0.300	45,553	1.44%	2,177,318	68.82%	122.78	0.223
0601-0700	700	289	187,514	0.59%	648.84	27,858,338	87.88%	0.300	42,859	1.35%	2,219,977	70.16%	147.61	0.227
0701-1000	1000	408	338,895	1.07%	830.63	28,197,233	88.95%	0.300	78,767	2.49%	2,298,744	72.65%	193.06	0.232
>1000	10000	731	3,503,658	11.05%	4,792.97	31,700,891	100.00%	0.300	865,242	27.35%	3,163,986	100.00%	1,183.64	0.247
TOTAL		881,478	31,700,891	100.00%	46.86				3,163,986	100.00%			4.88	0.100

Operational Expenses

21,051,873

0.664

JD/m²

(14)=(13)/(6)

Amman/ Proposed Tariff Restructuring/ 97/ Wastewater

Bracket	No. of Bills	Consumption in Bracket (m ³)	Average Cons. per Bill (m ³ /Qtr)	Tariff 1996 JD/m ³	Average Bill 1996 JD/Qtr	Expected Revenues 1996	Tariff 1997 JD/m ³	Average Bill JD/Qtr	Change to 1996 Tariff %	Revenue per Bracket (JD)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0000-0010	122,141	527,750	4.32	0.030	0.600	73,285		0.600	0.0%	73,285
0011-0020	118,625	1,930,357	16.27	0.030	0.600	71,175		0.600	0.0%	71,175
0021-0030	117,062	3,065,991	26.19	0.040	0.848	99,227	0.030	0.786	-7.3%	91,990
0031-0040	94,106	3,387,729	36.00	0.040	1.240	116,688	0.030	1.080	-12.9%	101,632
0041-0050	69,833	3,212,707	46.01	0.110	2.061	143,899	0.042	1.933	-6.2%	134,969
0051-0060	46,005	2,561,463	55.66	0.110	3.125	143,746	0.061	3.416	9.3%	157,161
0061-0070	31,590	2,072,921	65.62	0.110	4.218	133,251	0.061	5.331	26.4%	169,402
0071-0080	22,010	1,661,981	75.51	0.220	5.912	130,129	0.101	7.628	29.0%	167,894
0081-0090	15,091	1,289,437	85.44	0.220	8.098	122,202	0.121	10.329	27.6%	155,878
0091-0100	12,885	1,238,958	96.16	0.220	10.454	134,701	0.142	13.684	30.9%	176,316
0101-0150	25,005	3,008,227	120.31	0.260	16.985	424,720	0.191	22.931	35.0%	573,368
0151-0200	7,713	1,333,711	172.92	0.260	31.717	244,632	0.300	51.875	63.6%	400,113
0201-0250	3,239	737,358	223.51	0.260	45.883	151,367	0.300	67.053	46.1%	221,207
0251-0300	1,840	505,466	274.71	0.300	60.713	111,712	0.300	82.413	35.7%	151,640
0301-0400	1,659	571,783	344.66	0.300	81.697	135,535	0.300	103.397	26.6%	171,535
0401-0500	807	361,107	447.47	0.300	112.541	90,820	0.300	134.241	19.3%	106,332
0501-0600	371	203,876	549.54	0.300	143.161	53,113	0.300	164.861	15.2%	61,163
0601-0700	289	187,514	648.84	0.300	172.951	49,983	0.300	194.651	12.5%	56,254
0701-1000	408	338,895	830.63	0.300	227.488	92,815	0.300	249.188	9.5%	101,660
>1000	731	3,503,658	4,782.97	0.300	1,416.190	1,035,235	0.300	1,437.890	1.5%	1,051,097
TOTAL	691,470	31,700,391	46.86	0.112		3,568,224	0.132			4,196,101

Increase compared to 1996 of J 636,867
% of Increase 18

Tariff 1996 JD/m ³	Consumption m ³ /Qtr	New Tariff JD/m ³
0.110	41	0.032
0.220	71	0.062
0.260	101	0.162
0.280	125	0.200
0.280	150	0.260
0.300	251	0.300

Policy:
Flat rate only for lowest bracket until 20 m³/Qtr
Until 20 m³/Qtr shall pay min charge of 0.600 JD/Qtr
> 20 <= 40 m³: according to consumption @ 0.030 JD/m³
Above 40 m³/Qtr the following progressive tariff will be applied
Collection/Qtr (m³) 40 165 above
JD/m³ 0.030 0.280 0.300

Governorates/1995/ Water

Bracket (1)	Consump- tion up to m ³ /ctr (2)	No. of Bills (3)	Consumption in Bracket (m ³) (4)	Consumption in Bracket (%) (5)	Average Cons. per Bill (6)	Accumulated Consumption (7)	Accumulated Consumption (%) (7a)	Tariff 1996 JD/m ³ (8)	Revenue per Bracket (JD) (9)	Revenue per Bracket (%) (10)	Accumulated Revenue (JD) (11)	Accumulated Revenue (%) (12)	Average Bill JD/ctr (13)	Effective Price per m ³ (14)
0000-0010	10	158,894	910,630	1.63%	5.73	910,630	1.63%	0.066	158,113	1.14%	158,113	1.14%	1.00	0.174
0011-0020	20	213,296	3,543,077	6.33%	16.61	4,453,707	7.95%	0.065	253,091	1.82%	411,204	2.96%	1.19	0.071
0021-0030	30	231,273	6,120,289	10.93%	26.46	10,573,996	18.89%	0.090	467,201	3.36%	878,405	6.31%	2.02	0.076
0031-0040	40	178,024	6,455,606	11.53%	36.26	17,029,602	30.42%	0.090	511,461	3.69%	1,389,866	9.99%	2.87	0.079
0041-0060	50	125,499	5,787,393	10.34%	46.12	22,816,995	40.75%	0.320	632,518	4.55%	2,022,384	14.54%	5.04	0.109
0061-0090	60	79,220	4,420,266	7.90%	55.80	27,237,261	48.65%	0.320	625,006	4.49%	2,647,390	19.03%	7.89	0.141
0061-0070	70	52,594	3,457,015	6.17%	65.73	30,694,276	54.82%	0.320	570,140	4.10%	3,217,530	23.13%	10.84	0.165
0071-0090	80	36,315	2,745,192	4.90%	75.59	33,439,468	59.73%	0.520	538,745	3.87%	3,756,275	27.00%	14.84	0.196
0081-0090	90	23,908	2,043,983	3.65%	85.49	35,483,451	63.38%	0.520	471,554	3.39%	4,227,829	30.39%	19.72	0.231
0091-0100	100	20,208	1,948,119	3.48%	96.40	37,431,570	66.86%	0.520	504,959	3.63%	4,732,788	34.02%	24.99	0.259
0101-0160	150	34,510	4,147,404	7.41%	120.18	41,578,974	74.26%	0.700	1,331,870	9.57%	6,064,658	43.59%	38.59	0.321
0161-0200	200	9,882	1,714,433	3.06%	173.49	43,293,407	77.33%	0.700	648,766	4.66%	6,713,424	48.26%	65.65	0.378
0201-0250	250	3,867	863,725	1.54%	223.36	44,157,132	78.87%	0.700	375,356	2.70%	7,088,780	50.95%	97.07	0.435
0251-0300	300	2,066	571,049	1.02%	276.40	44,728,181	79.89%	0.730	270,542	1.94%	7,359,322	52.90%	130.95	0.474
0301-0400	400	1,973	690,602	1.22%	344.96	45,408,783	81.11%	0.730	339,274	2.44%	7,698,596	55.34%	171.96	0.498
0401-0500	500	1,048	472,217	0.84%	450.59	45,881,000	81.95%	0.730	247,901	1.78%	7,946,497	57.12%	236.55	0.525
0501-0600	600	546	299,951	0.54%	549.36	46,180,951	82.48%	0.730	161,404	1.16%	8,107,901	58.28%	296.61	0.538
0601-0700	700	403	261,415	0.47%	648.67	46,442,366	82.95%	0.730	142,436	1.02%	8,250,337	59.30%	353.44	0.545
0701-1000	1000	613	510,643	0.91%	833.02	46,953,009	83.86%	0.730	285,603	2.05%	8,535,940	61.36%	465.91	0.559
>1000	10000	1,162	9,034,483	16.14%	7,774.94	55,987,492	100.00%	0.730	5,376,308	38.64%	13,912,248	100.00%	4,626.77	0.595
TOTAL		1,175,290	66,987,492	100.00%	47.84				13,912,248	100.00%			11.84	0.243

Operational Expenses 21,051,873

0.376 JD/m³

(14)=(13)/(6)

Governorates/Proposed Tariff Restructuring/ 97/ Water

Bracket	No. of Bills	Consumption in Bracket (m ³)	Average Cons. per Bill m ³ /Qtr	Tariff 1996 JD/m ³	Average Bill 1996 JD/Qtr	Expected Revenues 1996 (8b)	Tariff 1997 JD/m ³	Average Bill JD/Qtr	Change to 1996 Tariff %	Revenue per Bracket (JD)
(1)	(3)	(4)	(6)	(8)	(8a)	(8b)	(15)	(16)	(18a)	(17)
0000-0010	158,894	910,630	5.73	0.065	1,300	206,549		1,300	0.0%	206,549
0011-0020	213,295	3,543,077	16.61	0.065	1,300	277,284		1,300	0.0%	277,284
0021-0030	231,273	6,120,289	26.46	0.090	1,882	435,190	0.070	1,852	-1.6%	428,420
0031-0040	178,024	6,455,606	36.26	0.090	2,764	491,983	0.070	2,538	-8.2%	451,892
0041-0050	125,499	5,787,393	46.12	0.320	5,057	634,625	0.107	4,953	-2.0%	621,637
0051-0060	79,220	4,420,266	55.80	0.320	8,155	646,051	0.151	8,415	3.2%	688,646
0061-0070	52,594	3,457,015	65.73	0.320	11,334	598,083	0.195	12,840	13.3%	675,301
0071-0080	36,315	2,745,192	75.59	0.520	15,609	588,834	0.240	18,109	16.0%	657,635
0081-0090	23,908	2,043,983	85.49	0.520	20,757	486,252	0.284	24,275	16.9%	580,363
0091-0100	20,208	1,948,119	96.40	0.520	26,430	534,092	0.333	32,087	21.4%	648,417
0101-0150	34,510	4,147,404	120.18	0.700	42,426	1,464,116	0.499	52,810	24.5%	1,822,480
0161-0200	9,882	1,714,433	173.49	0.700	79,743	788,024	0.678	117,697	47.6%	1,163,081
0201-0250	3,887	863,725	223.36	0.700	114,651	443,354	0.730	163,051	42.2%	630,519
0251-0300	2,066	571,049	276.40	0.730	152,574	315,219	0.730	201,774	32.2%	416,866
0301-0400	1,973	680,602	344.96	0.730	202,619	398,768	0.730	251,819	24.3%	496,839
0401-0500	1,048	472,217	450.59	0.730	279,730	283,157	0.730	328,930	17.6%	344,718
0501-0600	546	289,951	549.36	0.730	351,833	182,101	0.730	401,033	14.0%	216,964
0601-0700	403	261,415	648.67	0.730	424,331	171,005	0.730	473,531	11.6%	190,833
0701-1000	613	510,643	833.02	0.730	558,907	342,610	0.730	608,107	8.8%	372,769
>1000	1,162	9,034,483	7,774.94	0.730	5,626,508	6,538,002	0.730	5675,708	0.9%	6,595,173
TOTAL	1,176,290	65,967,492	47.84	0.283		16,832,387	0.312			17,486,387

Benchmarks:

- 12 l/hr (starting flow of water meter) gives
- 60 l/c/d with 7 people per subscriber gives
- 120 l/c/d with 7 people per subscriber gives
- 150 l/c/d with 7 people per subscriber gives

Policy:

Fiat rate only for lowest bracket until 20 m³/Qtr
 Until 20 m³/Qtr shall pay min charge of
 > 20 <= 40 m³: according to consumption @
 Above 40 m³/Qtr the following progressive tariff will be applied

Consump/Qtr (m ³)	40	185	above
JD/m ³	0.080	0.730	0.730

Increase compared to 1996 of J	1,634,080
% of Increase	10

private tankers provide water @ 1.0 JD/m³

Tariff 1996 JD/m ³	Consumption m ³ /Qtr	New Tariff JD/m ³
0.480	41	0.084
0.550	71	0.219
0.700	101	0.363
0.700	125	0.481
0.700	150	0.673
0.730	251	0.730

Governorates/1995/ Wastewater

Bracket	Collection up to m ² /Qtr	No. of Bills	Collection in Bracket (m ²)	Collection in Bracket (%)	Average Coll. per Bill	Accumulated Collection	Accumulated Collection (%)	Tariff 1996 JD/m ²	Revenue per Bracket (JD)	Revenue per Bracket (%)	Accumulated Revenue (JD)	Accumulated Revenue (%)	Average Bill JD/Qtr	Effective Price per m ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
0000-0010	10	54,770	303,926	1.73%	5.55	303,926	1.73%	0.030	24,646	1.60%	24,646	1.60%	0.45	0.081
0011-0020	20	66,163	1,088,248	6.21%	16.45	1,392,174	7.94%	0.030	36,258	2.35%	60,904	3.94%	0.55	0.033
0021-0030	30	72,861	1,911,255	10.90%	26.23	3,303,429	18.85%	0.040	63,476	4.11%	124,380	8.05%	0.87	0.033
0031-0040	40	60,488	2,173,961	12.40%	35.94	5,477,390	31.25%	0.040	76,259	4.94%	200,639	12.99%	1.26	0.035
0041-0050	50	44,261	2,029,519	11.56%	45.85	7,506,909	42.83%	0.110	90,071	5.83%	290,710	18.82%	2.03	0.044
0061-0060	60	29,480	1,640,472	9.36%	55.65	9,147,381	52.19%	0.110	87,399	5.66%	378,109	24.48%	2.96	0.053
0061-0070	70	19,476	1,277,952	7.29%	65.61	10,425,233	59.48%	0.110	77,148	5.00%	455,257	29.49%	3.96	0.060
0071-0080	80	13,243	1,000,024	5.71%	75.51	11,425,257	65.19%	0.220	72,872	4.72%	528,129	34.20%	5.50	0.073
0081-0090	90	8,884	759,197	4.33%	85.46	12,184,454	69.52%	0.220	66,554	4.31%	594,683	38.51%	7.49	0.088
0091-0100	100	6,777	650,557	3.71%	95.99	12,835,011	73.23%	0.220	65,051	4.21%	659,734	42.72%	9.60	0.100
0101-0150	150	11,563	1,378,536	7.87%	119.22	14,213,547	81.10%	0.280	175,816	11.38%	835,550	54.10%	15.21	0.128
0161-0200	200	2,760	473,220	2.70%	171.46	14,686,767	83.80%	0.280	78,009	5.05%	913,559	59.16%	28.26	0.165
0201-0250	250	1,054	234,798	1.34%	222.77	14,921,565	85.14%	0.280	43,313	2.80%	956,872	61.96%	41.09	0.184
0251-0300	300	540	148,487	0.85%	274.98	15,070,052	85.98%	0.300	29,266	1.89%	986,108	63.85%	54.14	0.197
0301-0400	400	533	163,216	1.05%	343.74	15,253,268	87.03%	0.300	38,023	2.46%	1,024,131	66.32%	71.34	0.208
0401-0600	500	291	130,742	0.75%	449.29	15,384,010	87.77%	0.300	28,437	1.84%	1,052,568	68.16%	97.72	0.218
0601-0800	600	155	84,659	0.48%	546.19	15,468,669	88.26%	0.300	18,902	1.22%	1,071,470	69.38%	121.95	0.223
0801-0700	700	95	61,356	0.35%	645.85	15,530,025	88.61%	0.300	13,951	0.90%	1,085,421	70.28%	146.85	0.227
0701-1000	1000	165	135,351	0.77%	820.31	15,665,376	89.38%	0.300	31,428	2.04%	1,116,849	72.32%	190.47	0.232
>1000	10000	329	1,861,330	10.62%	5,657.54	17,526,706	100.00%	0.300	427,487	27.68%	1,544,336	100.00%	1,299.35	0.230
TOTAL		393,898	17,526,706	100.00%	44.60				1,544,336	100.00%			3.92	0.088

Operational Expenses 21,051,873

JD/m² 1.201

(14)=(13)/(6)

Governorates/Proposed Tariff Restructuring/ 97/ Wastewater

Bracket	No. of Bills	Consumption in Bracket (m ³)	Average Cons. per Bill m ³ /Qtr	Tariff 1996 JD/m ³	Average Bill 1996 JD/Qtr	Expected Revenues 1996 (9b)	Tariff 1997 JD/m ³	Average Bill JD/Qtr	Change to 1996 Tariff %	Revenue per Bracket (JD)
(1)	(3)	(4)	(5)	(6)	(8a)	(9b)	(15)	(16)	(15a)	(17)
0000-0010	54,770	303,926	5.55	0.030	0.600	32,862	0.600	0.600	0.0%	32,862
0011-0020	66,163	1,088,248	16.45	0.030	0.600	39,698	0.600	0.600	0.0%	39,698
0021-0030	72,861	1,911,255	26.23	0.040	0.849	61,878	0.030	0.787	-7.3%	57,338
0031-0040	60,488	2,173,961	35.94	0.040	1.238	74,861	0.030	1.078	-12.9%	65,219
0041-0050	44,261	2,029,519	45.85	0.110	2.044	90,464	0.042	1.912	-6.4%	84,645
0051-0060	29,480	1,640,472	55.65	0.110	3.121	92,012	0.061	3.411	9.3%	100,651
0061-0070	19,476	1,277,852	65.61	0.110	4.217	82,136	0.081	5.329	26.4%	103,791
0071-0080	13,243	1,000,024	75.51	0.220	5.913	78,305	0.101	7.629	29.0%	101,029
0081-0090	8,894	759,197	85.46	0.220	8.100	71,965	0.121	10.333	27.6%	91,797
0091-0100	6,777	650,557	95.99	0.220	10.419	70,609	0.142	13.630	30.8%	92,372
0101-0150	11,563	1,378,636	119.22	0.280	16.691	192,888	0.188	22.466	34.7%	259,770
0151-0200	2,760	473,220	171.46	0.280	31.308	86,410	0.300	51.437	64.3%	141,966
0201-0250	1,054	234,798	222.77	0.280	45.675	48,142	0.300	66.831	46.3%	70,439
0251-0300	540	149,487	274.98	0.300	60.793	32,828	0.300	82.493	35.7%	44,546
0301-0400	533	183,216	343.74	0.300	81.423	43,398	0.300	103.123	26.7%	54,965
0401-0500	291	130,742	449.29	0.300	113.066	32,908	0.300	134.786	19.2%	39,223
0501-0600	155	84,659	546.19	0.300	142.158	22,034	0.300	163.856	15.3%	25,398
0601-0700	95	61,356	645.85	0.300	172.056	16,345	0.300	193.756	12.6%	18,407
0701-1000	165	135,351	820.31	0.300	224.993	37,025	0.300	246.093	9.7%	40,605
>1000	329	1,861,330	5,657.54	0.300	1,675.561	551,280	0.300	1,637.261	1.3%	558,399
TOTAL	393,888	17,628,706	44.50	0.100		1,768,077	0.115			2,023,070

Increase compared to 1996 of J 264,993
% of Increase 15

Tariff 1996 JD/m ³	Consumption m ³ /Qtr	New Tariff JD/m ³
0.110	41	0.032
0.220	71	0.092
0.280	101	0.162
0.280	125	0.200
0.280	150	0.260
0.300	251	0.300

Policy:
 Flat rate only for lowest bracket until 20 m³/Qtr
 Until 20 m³/Qtr shall pay min charge of 0.600 JD/Qtr
 > 20 <= 40 m³: according to consumption @ 0.030 JD/m³
 Above 40 m³/Qtr the following progressive tariff will be applied
 Collection/Qtr (m³) 40 165 above
 JD/m³ 0.030 0.280 0.300

Attachment 2 ANSWERS TO PRE-REQUISITES

According to Minutes concerning items to be realized before the Japanese would further consider the expansion scheme presented herein are the answers to the questions posed in said items.

1. Project between Adasiya and Pump Station No. 1 of the Zai System.

• **Introduction**

This project is presently "on hold" awaiting the results of the modeling of the entire water schemes in the valley. This is dependent on the various quantities of water which will be made available as a result of the Peace Treaty. A current alternative to the pipeline, for example, is conveyance of the water from the North via existing King Abdullah Canal. In addition, the investment, which will be provided by loans will affect the price of water supply and imply high water tariffs. Final decision, however, is not made and is not expected to be made before the end of 1997.

• **Process with financial organization**

Various donors have indicated interest in financing such project. This is indicated in the "Notes for the Record" at Frankfurt, Germany on November 20-22, 1996 where it is noted that the Federal Republic of Germany (FRG), European Investment Bank (EIB), and France have shown interest.

• **Possibility of Finance**

The possibility is based on parallel or co-financing basis between the donors. Such interest was shown during meetings alongside the Amman Middle East North Africa (MENA) Summit in 1995 when His Excellency, the Ambassador of Japan, was present.

• **Time when financial arrangement is confirmed**

This will be requested by the Jordanian Government when the issues in the "Introduction", above are resolved.

• **Time when construction is completed**

The project will be completed within three years of decision stipulated in the "Introduction" above.

• **Bottlenecks**

The bottleneck is in arising to the decision for such project.

2. The Project between Pumping Station No. 5 and Dabouq Reservoir

c. Introduction

This project consists in total, expansion of the intake station at Deir Alla to 90 mcm/yr, a section of pipe of 660 m in length, expansion of Pump Station No. 5 to 90 mcm/yr, and a parallel pipeline dia. 1200 mm and 17 km in length.

Process with financial organizations MBZ of Germany, have indicated interest in financing these components. This was realized and recorded in the Minutes of Meeting between the The German-Jordanian (intergovernmental) consultation of November, 1996. The finance will be made under German Regional Fund (DM 140 Million/yr) which was previously available to Israel alone and now is accessible to Jordan, Palestinian National Authority and Israel.

- **Possibility of Finance**

This is clarified above where DM 15 Million allocated to Adasiya-Deir Alla was re-prioritized to this Project along with an additional DM 40 Million for 1997 will be more than sufficient for this project.

- **Time when financial arrangement is confirmed**

This will be confirmed in the German-Jordanian Intergovernmental agreement in the first quarter of 1997.

- **Time when construction is completed**

It is expected that construction will be completed by the end of 1999.

- **Bottlenecks**

Clarification of the availability of 50 mcm/yr (as recorded in the minutes) and JICA's Scheme and involvement in the expansion.

3. The usable water as a result of the Peace Treaty between Jordan and Israel is properly allocated between domestic and agriculture

Discussion process on water allocation in general is the decision of His Excellency the Minister of Water and Irrigation. Presently, a restructuring plan of the organization of the water structure will require the establishment of a "Water Council" whom allocation recommendations will be made. This restructuring is expected to be designed and accepted by the Government by early 1997. Implementation will then commence gradually starting immediately with the establishment of the "Water Council". Specifically, water allocation for domestic

purposes from the Jordan Valley is governed by the maximum available capacities for water transfer and conveyance (such as Deir Alla Scheme).

- **Draft Allocation Plan**

Allocated is a table showing the entire Kingdom's Water Balance forecast with deficits shown for the respective forecast years. This balance is the only schedule approved by the Ministry and has been presented officially by the Government to institutions such as the World Bank.

- **Time when allocation is concluded**

The balance table shows the forecast year allocations.

4. **The Adasiya diversion/storage dam**

- **Process with financial organizations**

The project is totally financed by the budget of the Government of Jordan.

- **Bottlenecks issues**

Finalization of design with Israel. However, preliminary engineering design has been concluded.

- **Possibility of finance**

Local budget for the Jordan Valley Authority. Estimated budget is JD 15 Million.

- **Time when financial arrangement is confirmed**

Upon issuance of the National Budget for 1997.

- **Time when construction is completed**

Preliminary engineering design is completed. Final redesign is ongoing, estimated to be completed by February 1997. Contractors have been already prequalified. Provided no complications arises from Israel, the contract will be tendered in March 1997, awarded by May 1997 and completed in the first quarter of 1999.

DRAFT

Supply & Demand of Water in Jordan (1994 - 2020)

(All Water Figures are in MCM/YR)

Year	1994	2000	2005	2010	2015	2020
Population Growth Rate	3.60	3.40	3.10	2.90	2.70	2.50
Total Population in Millions	4.14	5.11	6.03	7.03	8.11	9.27
Supply						
Groundwater (Safe Yields)	430	370	330	290	277	277
Potential Surface Water	235	195	238	238	238	238
Wastewater Reuse	54	87	114	141	170	200
Yarmouk River	120	185	235	235	235	235
Lower Jordan & the 50 MCM	0	80	80	80	80	80
Expected Disi Extraction	70	125	130	130	130	130
Brackish Groundwater	0	5	10	20	30	40
Total Water Production (MCM)	909	1,047	1,137	1,134	1,160	1,200
Demand						
Municipal	256	315	355	428	511	603
Industrial	25	78	96	119	128	142
Agricultural						
<i>Upland Groundwater</i>	255	195	155	115	100	100
<i>Upland Surface Water</i>	9	9	9	9	9	9
<i>Jordan Valley Groundwater</i>	58	446	556	556	556	556
<i>Jordan Valley Surface Water</i>	228					
<i>Waste Water Reuse</i>	48					
<i>Mid Highland</i>	70	70	70	70	70	70
Total Water Demand (MCM)	949	1,113	1,241	1,297	1,374	1,480
Water Deficit (MCM)	(40)	(66)	(104)	(163)	(214)	(280)
Deficit Alleviation from Desalination, Deep Aquifers & Regional Options	0	66	104	163	214	280
Net Water Balance (MCM)	(40)	0	0	0	0	0

N. B. These figures are subject to the implementation of the Groundwater Reduction Program. This implementation program is contingent on the cooperation of the Ministries of the Interior, Justice, Finance, Agriculture and Planning.

Attachment 3

WAJ's AUDIT REPORT 1995

WATER AUTHORITY OF JORDAN
AUTONOMOUS PUBLIC DEPARTMENT

AMMAN - THE HASHEMITE KINGDOM OF JORDAN

FINANCIAL STATEMENTS
AND AUDITORS ' REPORT

FOR THE YEAR ENDED DECEMBER 31, 1995

TALAL ABU - GHAZALEH & CO.

WATER AUTHORITY OF JORDAN
AUTONOMOUS PUBLIC DEPARTMENT

AMMAN - THE HASHEMITE KINGDOM OF JORDAN

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Statement of revenues and expenses for the year ended December 31, 1995	B
Statement of cash flows for the year ended December 31, 1995	C
	<u>No.</u>
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AUDITORS' REPORT

105180214

THE CHAIRMAN AND MEMBERS OF THE BOARD OF DIRECTORS
WATER AUTHORITY OF JORDAN
AMMAN - THE HASHEMITE KINGDOM OF JORDAN

We have audited the balance sheet of the Water Authority Of Jordan (Autonomous Public Department) as of December 31, 1995 and the related statements of revenues and expenses, and cash flows for the year then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit.

Except as explained in the following paragraph we conducted our audit in accordance with the International Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. Our audit included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audit also included assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

- We have not received any confirmations for Local and International loans and the related overdue payments and accrued interest amounting to JD 333,041,252 from all credit loans amounting to JD 461,575,440.

In our opinion, except for the effects of such adjustments, if any, as might have been determined to be necessary had we been able to confirm local and international loans, the accompanying financial statements present fairly the financial position of the Water Authority Of Jordan as of December 31, 1995 and the related statement of revenues and expenses, and cash flows for the year then ended in accordance with International Accounting Standards and the accounting policies stated in Note No.2.

Talal Abu-Ghazaleh
TALAL ABU - GHAZALEH & CO.

Amman July 2, 1996

**WATER AUTHORITY OF JORDAN
AUTONOMOUS PUBLIC DEPARTMENT
AMMAN - THE HASHEMITE KINGDOM OF JORDAN
BALANCE SHEET AS OF DECEMBER 31, 1995**
(Amounts are expressed in Jordanian Dinars)

EXHIBIT A

ASSETS	1 9 9 5		1 9 9 4	
	J.D		J.D	
FIXED ASSETS				
Fixed assets at cost	627,763,126	569,291,298		
Accumulated depreciation	(187,474,367)	(158,020,858)		
Net book value - Note 3	440,288,759	411,270,440		
Projects in progress - Note 4	40,750,675	54,205,459		
CURRENT ASSETS				
Spare parts and materials	13,024,395	11,459,419		
Accounts receivable - Note 5	15,116,034	16,757,582		
Other debit balances - Note 6	2,923,298	2,157,188		
Cash	562,997	798,357		
Total current assets	31,626,724	31,172,546		
TOTAL ASSETS.	512,666,158	496,648,445		
CAPITAL AND LIABILITIES				
EQUITY				
Capital - Note 7	332,721,904	314,444,110		
Accumulated deficit - Exhibit B	(338,805,763)	(280,025,492)		
Net capital	(6,083,859)	34,418,618		
Provision for contingencies	1,386,417	1,462,548		
LONG TERM LOANS				
International loans (including J.D				
72,299,963 Foreign Currencies Exchange)				
- Note 8	122,268,021	127,342,326		
Local loans - Note 9	108,427,686	76,879,347		
Bonds and debentures	21,325,000	21,325,000		
Total long term loans	252,020,707	225,546,673		
CURRENT LIABILITIES				
Accounts payable	16,349,957	13,887,823		
Retentions from contractors	2,478,087	2,488,070		
Deposits	29,312,926	26,742,896		
Pastdue installments and accrued interest on loans (including J.D				
39,909,226 Foreign Exchange loss)-Note 10	209,554,733	182,168,335		
Pension fund	88,576	88,576		
Payable to banks	7,558,614	9,844,906		
Total current liabilities	265,342,893	235,220,606		
TOTAL CAPITAL AND LIABILITIES	512,666,158	496,648,445		

WATER AUTHORITY OF JORDAN
AUTONOMOUS PUBLIC DEPARTMENT
AMMAN - THE HASHEMITE KINGDOM OF JORDAN

EXHIBIT-B

STATEMENT OF REVENUES AND EXPENSES FOR THE YEAR ENDED DECEMBER 31, 1995
(Amounts are expressed in Jordanian Dinars)

	1 9 9 5	1 9 9 4
	J. D	J. D
REVENUES		
Water sales - Note 11	25,197,198	24,269,095
Water sales by tankers	347,280	332,752
Sewerage and drainage fees	4,876,173	4,516,323
Sewerage tax	5,123,459	5,409,723
Subscription and installation fees	3,302,777	3,616,653
Meters maintenance fees	645,533	622,442
Bank interest	15,329	48,431
Other revenues	5,871	179,645
Miscellaneous	1,109,652	1,095,264
Total Revenues	<u>40,623,272</u>	<u>40,090,328</u>
Less: Expenses		
Salaries & wages	16,348,330	16,099,444
Operating & maintenance expenses	29,764,829	25,187,607
General & administrative expenses	723,136	632,735
Depreciation	29,453,509	27,585,984
Interest on loans	16,187,979	15,782,498
Total expenses	<u>92,477,783</u>	<u>85,288,268</u>
Excess of expenses over revenues	(51,854,511)	(45,197,940)
Foreign exchange (loss) gain	(6,925,760)	(4,129,084)
Deficit for the year	(58,780,271)	(49,327,024)
Prior year accumulated deficit balance	(280,025,492)	(230,698,468)
Accumulated Deficit - Exhibit A	<u>(338,805,763)</u>	<u>(280,025,492)</u>

THE ACCOMPANYING NOTES CONSTITUTE AN INTEGRAL
PART OF THIS STATEMENT

WATER AUTHORITY OF JORDAN
AUTONOMOUS PUBLIC DEPARTMENT
AMMAN - THE HASHEMITE KINGDOM OF JORDAN

NOTES TO THE FINANCIAL STATEMENTS
 (Amounts are expressed in Jordanian Dinars)

1. ESTABLISHMENT AND ACTIVITIES

The Water Authority was established in compliance with Temporary Law Number (34) of 1983 by merging the following water supply entities :

- Water and Sewerage Authority of Greater Amman Area.
- Establishment of Drinking Water.
- Water Divisions of Natural Resources Authority.
- Water Divisions at Municipalities.
- Water Division at Jordan Valley Authority .

The Water Authority has then become one of the Ministry of Water and Irrigation departments. The scope of activities of the Water Authority concentrates on water, sewerage and other related activities in the Hashemite Kingdom of Jordan.

2. SIGNIFICANT ACCOUNTING POLICIES

- a) Revenues and expenses are recorded on accrual basis.
- b) As the Government of the Hashemite Kingdom of Jordan is the guarantor of all loans and banking facilities granted to the authority, the going concern concept applies.
- c) The Authority adopts the straight line method in depreciating its assets using the following rates :

Wells	8 %
Water reservoirs	6 %
Water distribution system	5 %
Buildings	4 %
Machinery and equipment	7 %
Office equipment	12%
Furniture	10%
Vehicles and Tankers	15%
Radio sets and water meters	12%
Drying docks	3 %
Computers	12%
Natural stabilization ponds	4 %

- c) Amounts transferred from projects in progress to fixed assets during the year are depreciated in the following year as shown in note No.2/b.
- d) Spare parts and materials are valued at cost.
- e) Cost of materials and supplies dispatched from warehouses are allocated to the water distribution system project and maintenance expenses, prorata to their respective direct cost.
- f) Foreign loans are translated to Jordanian Dinars using the Central Bank prevailing exchange rates at year end. Foreign exchange gains or losses are charged to the statement of revenues and expenses.
- g) Indirect costs of projects in progress are charged to expenses for the year and are not capitalized.
- h) Interest on loans financing projects in progress are capitalized.

3. FIXED ASSETS

A) This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
Lands Note 3/B	20,401,400	19,623,218
Buldings	13,386,160	10,411,426
Accumulated depreciation	(4,367,712)	(3,951,255)
Net book value	9,018,448	6,460,171
Wells	29,139,278	25,561,894
Accumulated depreciation	(14,524,820)	(12,441,622)
Net book value	14,614,458	13,120,272
Water distribution system	471,121,187	426,970,754
Accumulated depreciation	(131,168,234)	(109,821,721)
Net book value	339,952,953	317,149,033
Water reservoirs	7,225,363	7,225,363
Accumulated depreciation	(3,367,797)	(2,934,275)
Net book value	3,857,566	4,291,088
"Al-Azrak" project	14,750,406	14,750,406
Accumulated depreciation	(7,026,187)	(6,436,171)
Net book value	7,724,219	8,314,235
Furniture	989,455	969,253
Accumulated depreciation	(946,855)	(847,909)
Net book value	42,600	121,344

	1 9 9 5	1 9 9 4
	J. D	J. D
Vehicles	6,172,729	5,677,991
Accumulated depreciation	(5,178,646)	(4,306,671)
Net book value	<u>994,083</u>	<u>1,371,320</u>
Power generators	2,657,152	2,608,413
Accumulated depreciation	(1,093,530)	(884,857)
Net book value	<u>1,563,622</u>	<u>1,723,556</u>
Pumps and motors	10,182,226	9,776,521
Accumulated depreciation	(4,341,743)	(3,364,091)
Net book value	<u>5,840,483</u>	<u>6,412,430</u>
Drilling machinery and equipment	5,934,436	5,079,077
Accumulated depreciation	(1,647,646)	(1,292,110)
Net book value	<u>4,286,790</u>	<u>3,786,967</u>
Irrigation and dams	6,515,144	5,215,951
Accumulated depreciation	(930,605)	(800,206)
Net book value	<u>5,584,539</u>	<u>4,415,745</u>
Meteorology stations	384,021	384,021
Accumulated depreciation	(264,990)	(238,108)
Net book value	<u>119,031</u>	<u>145,913</u>
Water meters	10,280,969	8,451,089
Accumulated depreciation	(2,336,285)	(1,746,385)
Net book value	<u>7,944,684</u>	<u>6,704,704</u>
Miscellaneous machinery & equipment	10,559,701	8,522,422
Accumulated depreciation	(4,793,930)	(4,192,630)
Net book value	<u>5,765,771</u>	<u>4,329,792</u>
Natural stabilization ponds	18,063,499	18,063,499
Accumulated depreciation	(5,485,387)	(4,762,847)
Net book value	<u>12,578,112</u>	<u>13,300,652</u>
Total Net Book Value Of Fixed Assets	<u><u>440,288,759</u></u>	<u><u>411,270,440</u></u>

B) The amount of JD 20,401,400 shown under Lands represent amounts paid by the authority for this asset. The said amount does not represent all Lands owned by the authority. Detailed records for those lands are maintained by the Expropriation Department at the authority.

4. WORK IN PROGRESS

The Water Authority Of Jordan has an obligation balance of JD 47,536,065 (as of December 31, 1995), pertaining to incompletd projects assigned to contractors.

5. ACCOUNTS RECEIVABLE

This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
Subscribers and tankers	12,936,242	13,397,057
Ministry of Planning	1,133,140	1,133,140
Ministry of Finance-sewerage tax	886,906	1,991,669
Miscellaneous	185,746	261,716
Total	15,142,034	16,783,582
Allowance for doubtful debts	(26,000)	(26,000)
Net Receivables	15,116,034	16,757,582

In compliance with article No.(16) of Temporary Law No.(34), the Water Authority receivables are considered public interest (Ameery Funds) and are collected in conformity with the ruling of the collection of The Ameery Funds law. Accordingly an allowance for doubtful debts is not required.

6. OTHER DEBIT BALANCES

This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
Advances to contractors	2,918,667	2,153,221
Imprest advances	4,631	3,967
Total	2,923,298	2,157,188

7. CAPITAL

This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
Balance at begining of the year	314,444,110	296,414,376
Add:		
Contributions of the government (Ministry of Planning) in water and sewerage projects	183,240	133,371
Contributions of the government (Ministry of Finance) in water and sewerage projects	14,265,724	15,539,346
Contributions of citizens for water and		

	1 9 9 5	1 9 9 4
	J. D	J. D
sewerage installations	32,540	3,860
U.S AID Contributions	1,278,818	91,703
European Community Contributions	200,848	1,815,402
K.F.W grant	1,366,188	156,090
British Development Agency (Government of the United Kingdom)	749,732	289,962
Japan grant	200,704	-
Balance at end of the year	332,721,904	314,444,110

8. INTERNATIONAL LOANS

This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
European Investment Bank / new 10572	5,449,200	5,173,200
European Investment Bank	1,338,364	1,446,246
European Investment Bank 106195	4,536,913	4,307,120
European Investment Bank	3,637,341	4,155,373
European Investment Bank 18003	1,367,250	-
European Investment Bank 17366	1,355,761	-
K.F.W. 8966129	2,824,352	3,237,965
K.F.W. 8265183	12,316,785	12,301,632
K.F.W. 9266180	939,621	384,439
K.F.W. 8966400	1,589,955	312,102
K.F.W. 9366295	84,522	-
International Bank For Reconstruction and Development 2213	3,699,100	4,577,040
International Bank For Reconstruction and Development 2425	6,212,500	7,897,500
International Bank For Reconstruction and Development 2483	7,100,000	8,775,000
International Bank For Reconstruction and Development 2694	17,735,800	20,463,300
U.S. AID 278/k/23	5,147,500	5,598,450
U.S. AID 278/k/26	4,277,431	4,401,856
U.S. AID 278/k/28	9,250,841	9,883,706
U.S. AID 278/30	4,082,500	4,387,500
U.S. AID 278/31	5,574,582	6,281,162
Saudi Fund For Development 5/82	1,476,205	2,043,784
Saudi Fund For Development 8/145	4,152,137	4,106,124
Saudi Fund For Development 4/81/1	2,491,234	2,463,627

	1 9 9 5 J. D	1 9 9 4 J. D
Arab Fund For Economic and Social Development - Aqaba swerages 47/79	593,007	817,639
Arab Fund For Economic and Social Development - rural areas 82/82	353,870	451,561
Islamic Bank For Development	2,427,673	2,836,972
British fund 4902/5	559,657	782,310
British fund 39307	767,603	837,384
International Development Association 385	3,550,000	1,754,298
International Development Association 780	1,537,718	3,978,000
Export and Import Bank of Korja	5,262,051	3,687,036
France Loan	576,548	-
Total	122,268,021	127,342,326

There are re-lending agreements between the Water Authority of Jordan and The Ministry of Planning related to these loans.

9. LOCAL LOANS

This item consists of the following:

	1 9 9 5 J. D	1 9 9 4 J. D
Advance from Ministry of Finance on Saudi fund loans	7,067,478	7,067,478
Social Security Corporation (20 million)	20,000,000	20,000,000
Social Security Corporation (8 million)	4,351,228	6,255,866
Social Security Corporation (10 million)	10,000,000	-
Planning Council/Ministry of Planning	-	100,000
Arab Bank (20 million)	20,000,000	20,000,000
Arab Bank (21,5 million) (16,5 million previous)	21,500,000	16,500,000
Arab Bank Leading Loan (15 million)	15,000,000	-
Arab Bank/Ministry of Finance (Treasury)	-	45,903
Amman Investment Bank (Bonds - Third issue)	-	408,100
Arab Finance Corporation (Bonds- Fourth issue)	2,009,000	3,002,000
Islamic Bank	3,500,000	3,500,000
Islamic Bank (5 million)	4,999,980	-
Total	108,427,686	76,879,347

10. PASTDUE INSTALLMENTS AND ACCRUED INTEREST ON LOANS

This item consists of the following:

	1 9 9 5	1 9 9 4
	J. D	J. D
Pastdue installments	114,697,284	97,796,531
Accrued interest	94,857,449	84,371,804
Total	209,554,733	182,168,335

11. SALES OF WATER

Water supplied to consumers constitutes 42% of the water drawn from the wells during the year 1995. This means that the waste percentage was 58%.

12. CONTINGENT LIABILITIES

- A) Contingent liabilities on the balance sheet date amounted to JD 133,214, all related to outstanding letters of credit.
- B) According to the letter from the Authority lawyer, there are pending legal proceedings against the Authority from third parties with total claims amounting to JD 11,744,132. Also there are pending legal proceedings by the Authority against third parties with total claims amounting to JD 801,120.

Attachment 4 ANNUAL EXPENDITURES

ANNUAL EXPENDITURES

(Thousand Dinars)

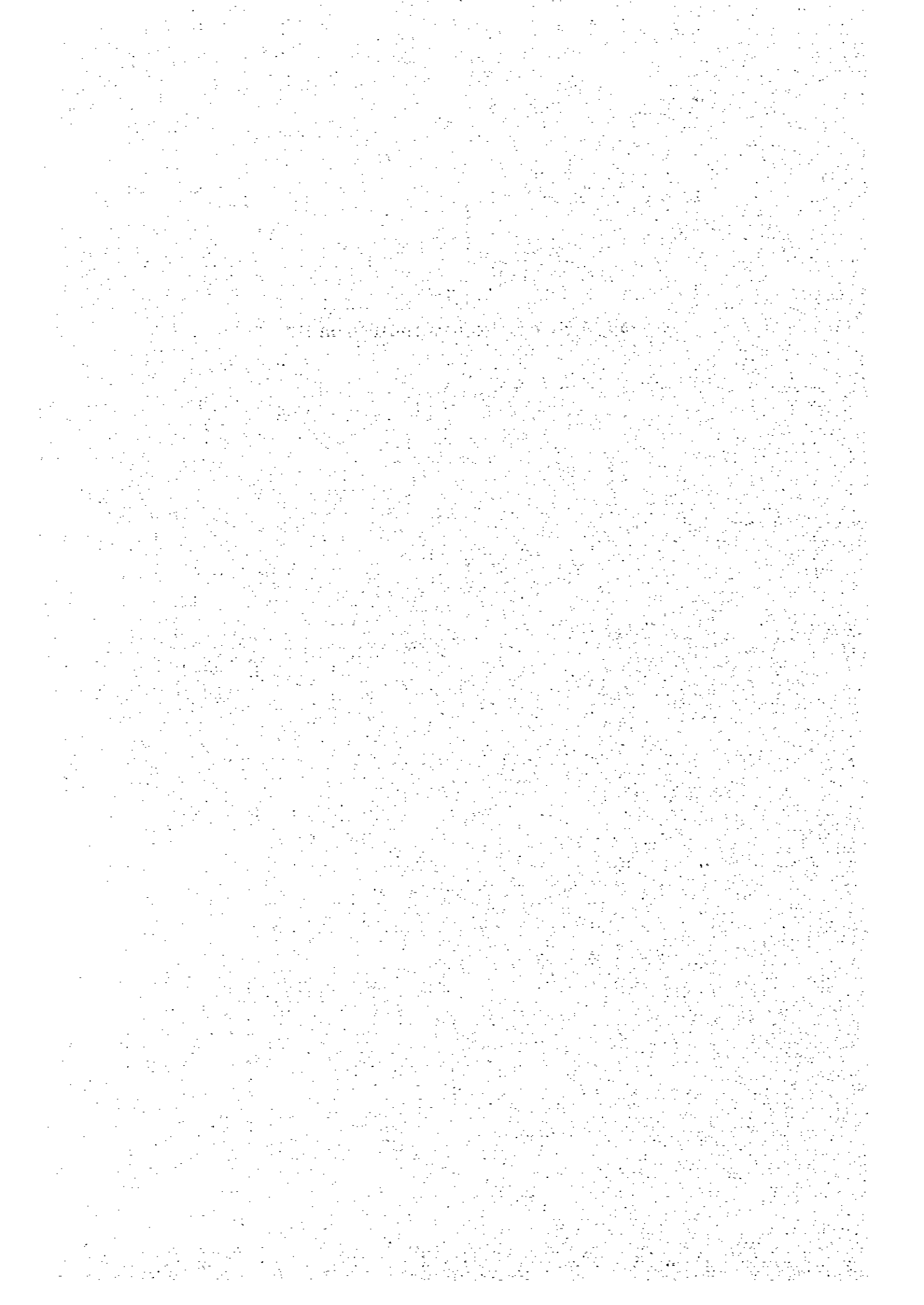
1. REHABILITATION PORTION

Item	Cost	1996	1997	1998	1999	2000
Expansion of 33kv Transmission System	1,300			1,300		

2. EXPANSION PORTION

Item	Cost					
Expenses for procuring temporary sites outside treatment plant	55			55		
Work sites for conveyance pipelines	20			20		
Temporary roads for conveyance pipeline work	10			10		
Supply and Laying of conveyance pipelines	400			400		
Protection of conveyance pipelines	50			50		
Installation of power and water supply for work	10			10		
Fencing around water treatment plant	11			11		
New sludge drying bed	360			360		
Expenses for renewing dosing equipment	125			125		
Expenses for renewing monitoring and control equipment	230			230		
Total	1,271			1,271		

Appendix 7 Recommendation on THM



Appendix 7 Recommendation on THM

1. Current Situation of THM in Zai treatment plant

(1) Jar Test Results

We conducted two jar tests on raw water in the Zai treatment plant on July 2 and 3, 1996 in order to know effects of activated carbon for reduction of THM. Potassium permanganate was added in one of the two jar tests. Followings are the results of the tests;

- a) Reduction of THM was 10% against the 10 mg/l dosage of activated carbon and 20 to 30% against 20 mg/l dosage. Therefore, at least 20 mg/l dosage of activated carbon is required for THM reduction.
- b) Potassium permanganate has little effect on THM reduction.
- c) THM concentration after 24 hours contact is almost twice as that after 2 hours.

The above results indicates the following solutions for reducing THM;

(2) Measures of reducing THM in the treatment plant

- a) Activated carbon should be dosed according to raw water quality but at least 20 mg/l. For measuring raw water quality, UV₂₅₄nm, for example, which is rather easy to be measured, should be one of the daily water quality characters such as turbidity, temperature and pH.
- b) Potassium permanganate seems have little effect on THM reduction and even if potassium permanganate is found to have great effect, dosing ratio is limited. This should be examined further by WAJ.

(3) Other measures of reducing THM

- a) Solids leading to THM generation are believed to come from algae in the KAC and from agricultural waste other than from Tiberias Lake. If the intake points are shifted from Deir Alla, downstream of the KAC to Adasia, upstream of the KAC, raw water quality in the treatment plant will be improved. In order to avoid algae production in the balancing tanks in the pumping stations, covers or roofs of the tanks would be effective.
- b) Organic matters indicators are few in the measured water quality so that pollution degrees are difficult for each water source. Therefore, consumption of potassium permanganate or COD should be measured periodically.
- c) Only TOC and sometimes COD are measured currently for THM producing solids. However, TOC is not related to THM concentration. If THM reduction is needed, relation of activated carbon dosing rate with THM reduction should be analyzed. Further, UV₂₅₄nm etc. should be measured daily.

- d) THM concentration in the distributed water which is usually higher than that in the treatment plant, is not measured. Therefore, after analyzing the relations between the distributed water and the treated water in the plant, target level of THM in the plant should be set up. Until the target is set up, we recommend that the target level is 0.05 mg/l, half of the permissive level of 0.1 mg/l.

2. Response in this Project

If the raw water is treated by the treatment process at Zai, there is a possibility of the THM at the consumers to exceed the permissible level of the water quality standards. To reduce the THM at the consumers, activated carbon must be introduced, but because of the reasons stated below, dosing devices for activated carbon will not be installed in this Project.

- (1) THM measures are strongly related to improvements in raw water quality and treated water quality. These measures incur massive construction and maintenance expenses. Therefore, WAJ should be the first to carry out research and studies continuously, and outside-survey teams should not be hasty in coming to a conclusion.
- (2) The concept should not be how to eliminate the THM generated, but how to stop generating THM, or even if generated what measures should be adopted so that the water complies with the water quality standards.
- (3) A large dosage of activated carbon is difficult considering the financial status of WAJ. According to financial statements by WAJ, large losses are incurred every year (52 million dinars in 1995), and as the Survey Team, we cannot formulate facilities plans that will further increase expenditure.
- (4) Powder carbon dosing equipment (maximum dosage 10 mg/l) are available even in the existing treatment plant, but the average dosage is about 2 ppm. Even if a 50 ppm equipment is installed, there is no guarantee that it will be used and the investment is likely to be a waste.
- (5) Dosing a large amount of activated carbon is not preferable considering deterioration of the dosing work environment, treatment and disposal of drain water, and treatment and disposal of sludge.

3. Measures to be adopted by WAJ in the future

As the organization responsible for waterworks in Jordan, WAJ should adopt the measures below.

(1) Adopt measures to reduce the THM generation in raw water

a) If Adasiya and Deir Alla are connected by pipelines, WAJ should prevent pollution of raw water, and reduce the THM generation. This necessitates periodically and continuously studying the THM generation in water sources in the future, and formulating necessary measures to prevent pollution.

b) If Adasiya and Deir Alla are not connected by pipelines, take measures to prevent pollution in the source water downstream of KAC, and reduce the THM generation. This necessitates periodically and continuously studying the THM generation in water sources in the future, and formulating necessary measures to prevent pollution.

(2) To reduce THM in the supply water, the water should be mixed with treated water containing low THM concentration.

a) Mixing water from other water sources at the Dabouk service reservoir

b) Delivering water from wells and mixing at the Dabouk service reservoir

Formulating plans for Disi Project requires consideration of not only hydrologic aspects but water quality aspects also. Delivering water to Dabouk should also be considered.

Appendix 8 Pipeline for Expansion Stage

Appendix 8 Pipeline for Expansion Stage

The existing pipeline of ϕ 1200mm can convey 45 MCM water per year. In this appendix, the pipeline is analyzed to cope with the planned increased water of 90 MCM/year in the future.

In the expansion stage to convey 90 MCM/year, it will obviously involve duplicating the existing system components; No.1 to No.5 pumping stations, conveyance pipe and treatment plant. However, this idea is not necessarily obvious for the pipes. Therefore, the following alternatives are considered;

Alternative H (Twin System): Additional 1,200 mm pipeline is installed beside the existing pipeline.

Alternative I (Single System): The existing pipeline is used without additional pipeline

The construction cost is higher but the O/M cost is cheaper in the alternative H than the alternative I. Therefore, we have compared the alternatives, using "Net Present Value" method.

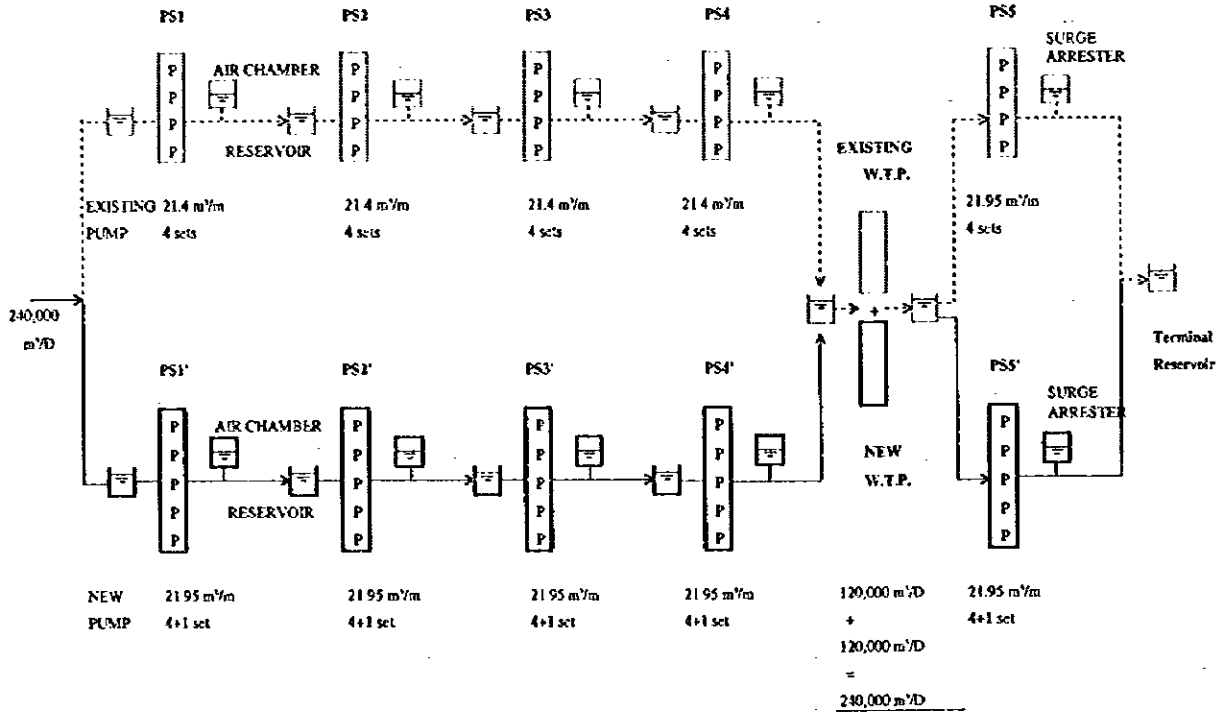
(1) Facilities

Item	Alternative H	Alternative I
Pumping Station (Mechanical)	additional five pumps including one stand-by. pump's capacity is 21.95 m ³ /min. same as the existing	Replace the existing 21.95 m ³ /min. pump with 43.5 m ³ /min. pump
Pumping Station (Electrical)	additional five motors including one stand-by. motor's capacity is 1,200 kw same as the existing	Replace the existing 1,200 kw motor with 3,000 to 3,500 kw motor
Pumping Station (Civil)	pump house for five additional pump	pump house for one additional pump
Pipeline *	additional pipeline of 1,200 mm between intake to Zai treatment plant	-

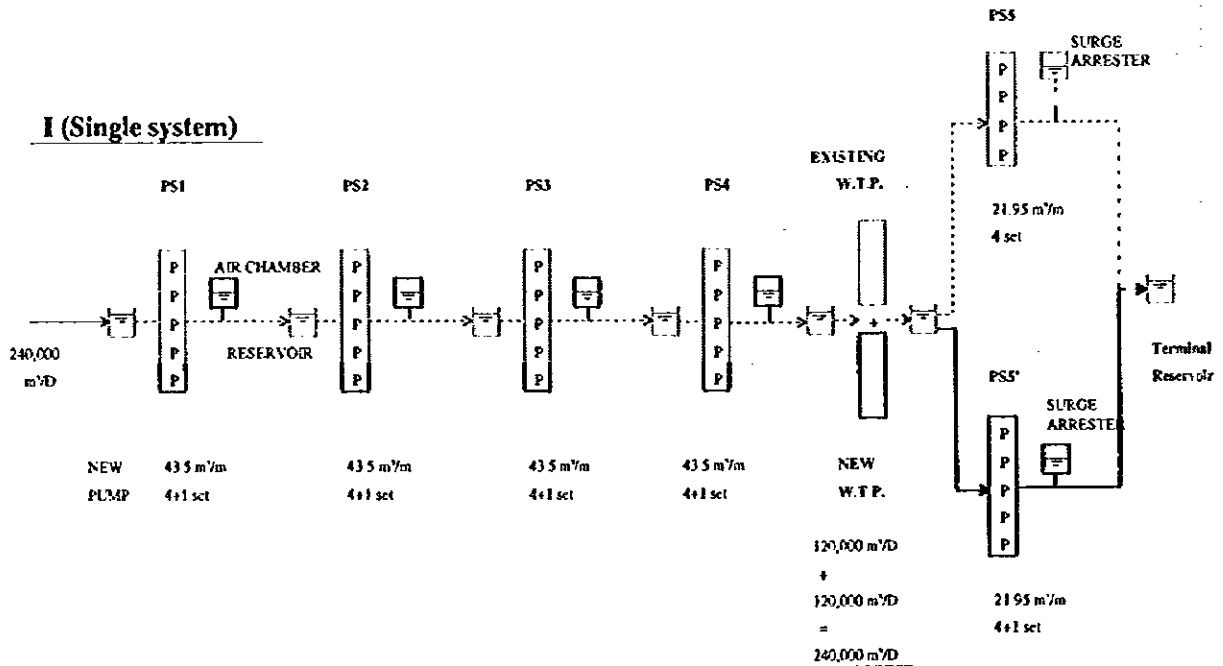
* The additional pipeline is required after Zai treatment plant to Dabouk reservoir in the both alternatives.

ALTERNATIVES

H (Twin system)



I (Single system)



NOTE: [] EXISTING FACILITIES □ NEW FACILITIES

(2) Capital cost

Unit: million dinar

Item	Alternative H	Alternative I
Pumping station (Mechanical and Electrical)	20	18
Pumping station (Civil and architecture)	2	0.5
Pipeline (up to Zai treatment plant)	11	-
Pipeline (after Zai treatment plant)	13	13
Total	46	31.5

(3) Power cost

Unit: million dinar

Item	Alternative H	Alternative I
Annual power cost	12.6	13.4

(4) Life time

Item	Alternative H			Alternative I		
	Facilities	Year	Cost	Facilities	Year	Cost
Pumping station (Mechanical and Electrical) 15 years	Existing	2000	20	Existing	-	-
	Improved	2015	20	Improved	2015	18
Pumping station (Civil and architecture) 50 years	Existing	2035	2	Existing	2035	2
	Improved	2050	2	Improved	2050	0.5
Pipeline 30 years	Existing	2015	11	Existing	2015	24
	Improved	2030	13	Improved	2030	13

(5) Construction schedule

3 years

For the first year, 60% of the capital cost will be invested (27.6 million dinar in the alternative H and 18.9 million dinar in the alternative I).

For the second and third years, each 20% of the capital cost will be invested.

(6) NPV results

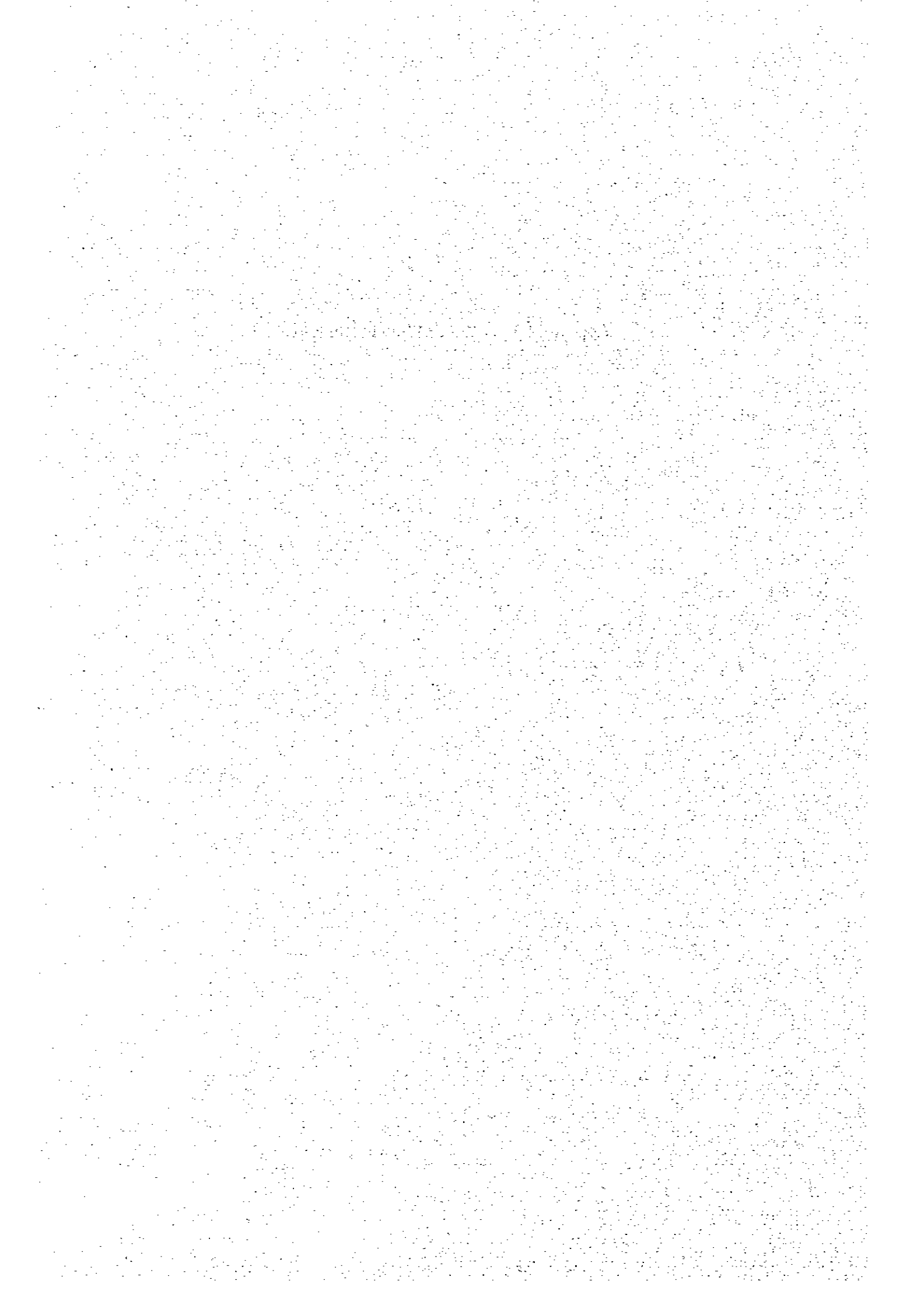
(Unit: million Dinar)

year	Alternative H			Alternative I		
	Capital Cost	Operation Cost	Total Cost	Capital Cost	Operation Cost	Total Cost
2001	47.6		47.6	18.9		18.9
2002	9.2		9.2	6.3		6.3
2003	9.2		9.2	6.3		6.3
2004		12.6	12.6		13.4	13.4
2005		12.6	12.6		13.4	13.4
2006		12.6	12.6		13.4	13.4
2007		12.6	12.6		13.4	13.4
2008		12.6	12.6		13.4	13.4
2009		12.6	12.6		13.4	13.4
2010		12.6	12.6		13.4	13.4
2011		12.6	12.6		13.4	13.4
2012		12.6	12.6		13.4	13.4
2013		12.6	12.6		13.4	13.4
2014		12.6	12.6		13.4	13.4
2015	44.0	12.6	56.6	24.0	13.4	37.4
2016		12.6	12.6		13.4	13.4
2017		12.6	12.6		13.4	13.4
2018	20.0	12.6	32.6	18.0	13.4	31.4
2019		12.6	12.6		13.4	13.4
2020		12.6	12.6		13.4	13.4
2021		12.6	12.6		13.4	13.4
2022		12.6	12.6		13.4	13.4
2023		12.6	12.6		13.4	13.4
2024		12.6	12.6		13.4	13.4
2025		12.6	12.6		13.4	13.4
2026		12.6	12.6		13.4	13.4
2027		12.6	12.6		13.4	13.4
2028		12.6	12.6		13.4	13.4
2029		12.6	12.6		13.4	13.4
2030		12.6	12.6		13.4	13.4
Total	130.0	340.2	470.2	73.5	361.8	435.3
NPV		5%	354.1		5%	313.6
		6%	303.2		6%	265.2
		7%	262.9		7%	226.9
		8%	230.8		8%	196.3
		9%	204.9		9%	171.8
		10%	183.9		10%	151.8
		15%	121.6		15%	92.9

(7) Conclusion

NPV in the alternative I is superior to NPV in the alternative H for any discount rates between 5 to 10%.

Appendix 9 Water Flow in the KAC



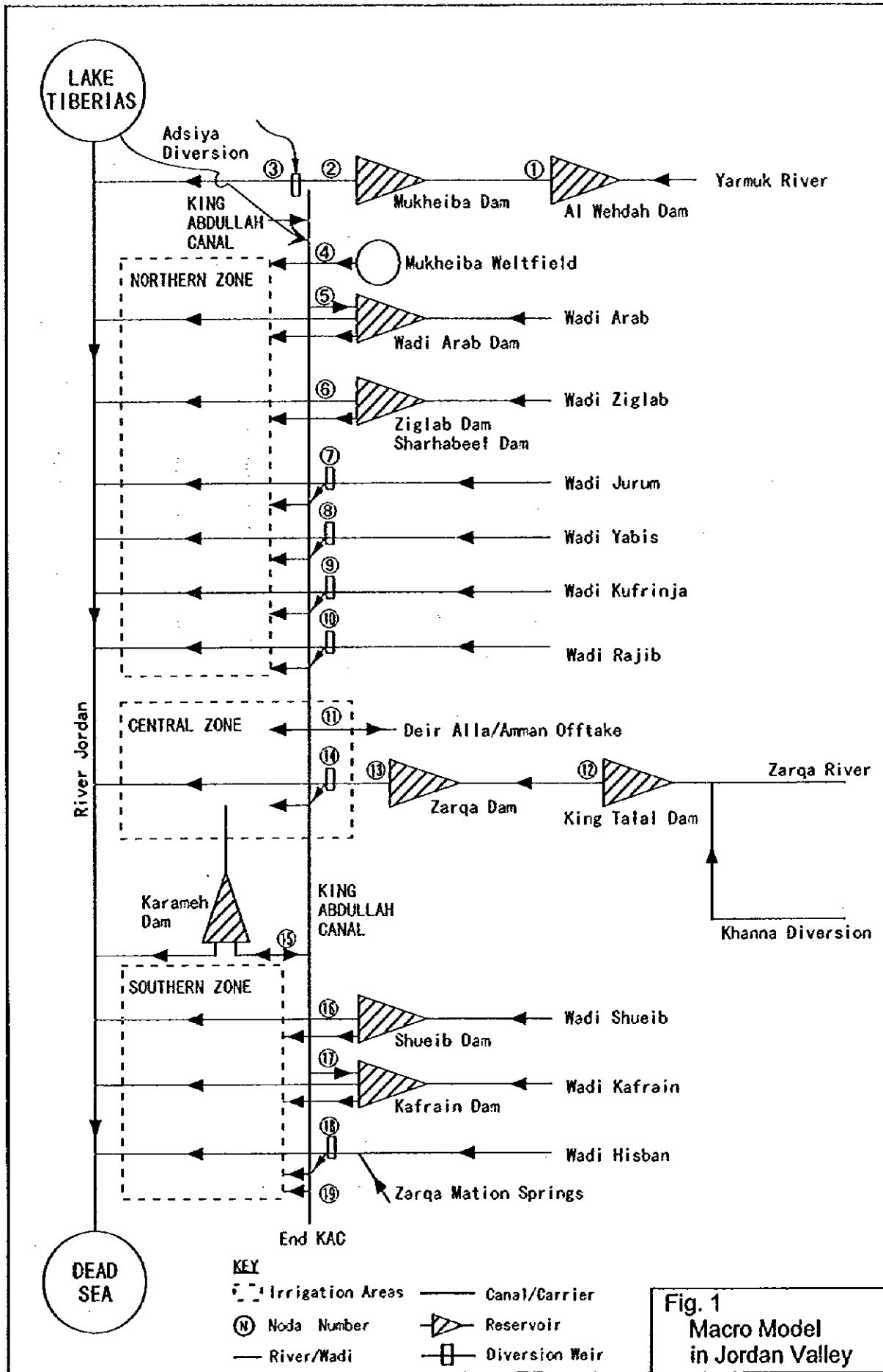


Fig. 1
Macro Model
in Jordan Valley

Existing Condition of the Canal Capacity 20 mcm
Without Diversion/Storage Dam

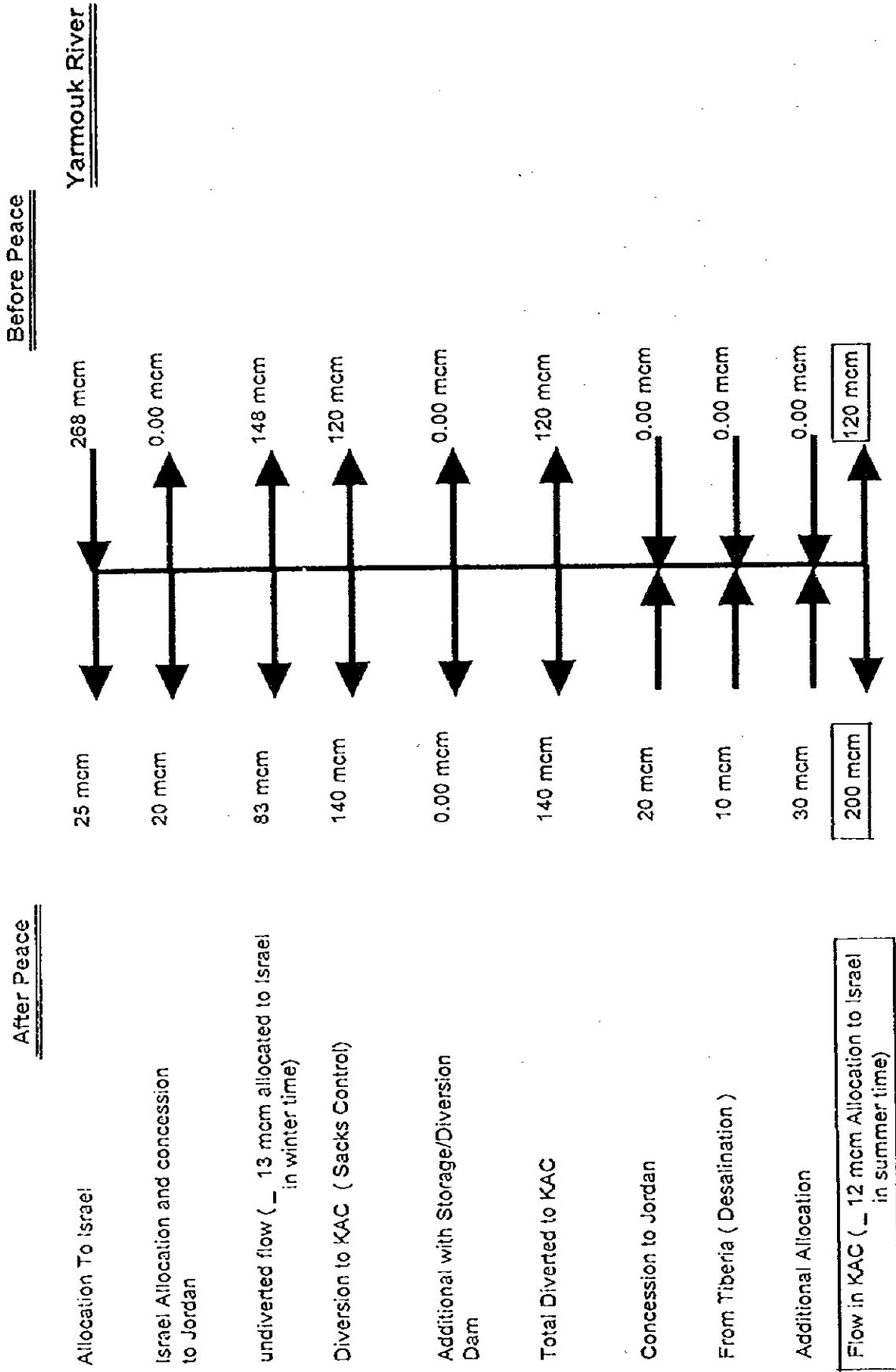


Fig. 2 Flow in the KAC

Table 1 Monthly Available Water in the KAC

(Unit : m³)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1995													
Total Flow in KAC	18,219,559	16,218,096	26,615,790	26,145,300	29,453,290	24,648,333	24,259,487	25,829,446	27,745,843	28,721,873	24,461,171	21,025,157	293,343,345
Pumped to Amman (Actual)	3,389,818	2,936,045	3,207,946	2,832,019	3,070,224	2,759,357	3,247,258	3,312,230	3,163,450	3,338,775	3,003,610	3,297,802	37,558,534
Additional Water Needed to Amman	4,110,182	4,563,955	4,292,054	4,667,981	4,429,776	4,740,643	4,252,742	4,187,770	4,336,550	4,161,225	4,496,390	4,202,198	52,441,466
Total	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	90,000,000
Balance for Agriculture	7,764,459	6,292,496	16,729,380	17,289,350	21,953,290	17,148,333	16,305,527	17,553,886	19,805,803	20,948,303	14,141,471	10,198,937	186,131,235
Pumped to Wadi Arab Dam	2,955,100	2,425,600	2,386,410	1,355,950	0	0	453,960	775,560	440,040	273,570	2,819,700	3,326,220	17,212,110
1996													
Total Flow in KAC	16,381,855	16,739,848	19,487,188	22,934,237	28,136,584	26,096,391	27,823,043	26,264,465	26,359,351	28,029,717	23,298,104	18,385,413	279,936,196
Pumped to Amman (Actual)	3,085,949	3,002,918	3,310,600	3,025,127	3,011,750	3,328,265	3,302,621	3,193,440	3,116,490	3,239,485	3,227,200	3,255,998	38,099,843
Additional Water Needed to Amman	4,414,051	4,497,082	4,189,400	4,474,873	4,488,250	4,171,735	4,197,379	4,306,560	4,383,510	4,260,515	4,272,800	4,244,002	51,900,157
Total	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	90,000,000
Balance for Agriculture	5,818,835	6,649,318	9,303,918	12,910,137	19,266,847	17,541,680	19,088,337	17,996,925	18,315,551	18,421,017	13,265,894	7,804,663	166,383,122
Pumped to Wadi Arab Dam	3,063,020	2,590,530	2,683,270	2,524,100	1,369,737	1,054,711	1,234,706	767,540	543,800	2,108,700	2,532,210	3,080,750	23,553,074
										KAC			

Table 2 Flow at Adasya in the Yarmouk River (1/2)

(Unit : m³)

Year	Measure- ment Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Monthly Average
1981	Jordan	5,234,000	11,298,000	14,479,000	13,255,000	11,474,000	9,916,000	9,411,000	8,830,000	8,941,000	9,649,000	11,229,000	13,864,000	127,580,000	10,631,667
	Israel	28,886,000	28,002,000	8,035,000	6,480,000	6,480,000	4,406,000	4,554,000	4,822,000	4,665,000	4,687,000	7,776,000	12,736,000	121,529,000	10,127,417
	Total	34,120,000	39,300,000	22,514,000	19,735,000	17,954,000	14,322,000	13,965,000	13,652,000	13,506,000	14,336,000	19,005,000	26,600,000	249,109,000	20,759,083
1982	Jordan	14,261,000	12,710,000	17,180,000	11,741,000	11,088,000	10,501,000	11,936,000	11,345,000	10,545,000	11,044,000	10,437,000	12,023,000	144,811,000	12,067,583
	Israel	14,939,000	2,712,000	8,036,000	5,185,000	3,750,000	3,696,000	4,017,000	3,750,000	3,628,000	3,750,000	4,666,000	11,277,000	69,406,000	5,783,833
	Total	29,200,000	15,422,000	25,216,000	16,926,000	14,838,000	14,197,000	15,953,000	15,095,000	14,173,000	14,794,000	15,103,000	23,300,000	214,217,000	17,851,417
1983	Jordan	9,154,000	10,490,000	13,884,000	13,631,000	10,088,000	9,368,000	8,525,000	8,566,000	9,174,000	9,149,000	13,724,000	14,703,000	130,456,000	10,871,333
	Israel	21,427,000	19,354,000	10,714,000	12,096,000	4,821,000	5,443,000	5,625,000	5,357,000	4,406,000	4,821,000	5,703,000	9,374,000	109,141,000	9,095,083
	Total	30,581,000	29,844,000	24,598,000	25,727,000	14,909,000	14,811,000	14,150,000	13,923,000	13,580,000	13,970,000	19,427,000	24,077,000	239,597,000	19,966,417
1984	Jordan	14,066,000	13,278,000	13,705,000	13,301,000	11,061,000	9,227,000	9,786,000	11,363,000	9,482,000	10,662,000	13,818,000	14,230,000	143,979,000	11,998,250
	Israel	22,759,000	17,539,000	16,071,000	10,368,000	5,893,000	4,666,000	4,821,000	4,553,000	4,406,000	3,750,000	5,184,000	8,035,000	108,045,000	9,003,750
	Total	36,825,000	30,817,000	29,776,000	23,669,000	16,954,000	13,893,000	14,607,000	15,916,000	13,888,000	14,412,000	19,002,000	22,265,000	252,024,000	21,002,000
1985	Jordan	14,909,000	13,156,000	15,609,000	10,473,000	8,702,000	7,424,000	7,409,000	7,261,000	7,574,000	9,570,000	10,453,000	13,254,000	125,794,000	10,482,833
	Israel	22,767,000	20,564,000	20,088,000	10,368,000	4,152,000	4,406,000	4,687,000	4,285,000	4,272,000	4,286,000	4,347,000	4,910,000	109,132,000	9,094,333
	Total	37,676,000	33,720,000	35,697,000	20,841,000	12,854,000	11,830,000	12,096,000	11,546,000	11,846,000	13,856,000	14,800,000	18,164,000	234,926,000	19,577,167
1986	Jordan	11,461,000	14,730,000	13,488,000	10,898,000	9,868,000	8,468,000	7,607,000	7,955,000	8,136,000	9,307,000	12,972,000	11,130,000	126,020,000	10,501,667
	Israel	6,637,000	24,601,000	5,405,000	3,330,000	3,675,000	2,608,000	3,385,000	3,305,000	3,017,000	3,301,000	26,226,000	18,399,000	103,889,000	8,657,417
	Total	18,098,000	39,331,000	18,893,000	14,228,000	13,543,000	11,076,000	10,992,000	11,260,000	11,153,000	12,608,000	39,198,000	29,529,000	229,909,000	19,159,083
1987	Jordan	16,352,000	24,724,000	28,296,000	19,280,000	11,308,000	8,515,000	8,397,000	8,864,000	10,803,000	8,974,000	9,711,000	11,792,000	167,016,000	13,918,000
	Israel	59,962,000	17,087,000	64,439,000	5,404,000	2,753,000	2,693,000	3,473,000	3,396,000	5,492,000	3,788,000	3,851,000	17,737,000	190,075,000	15,839,583
	Total	76,314,000	41,811,000	92,735,000	24,684,000	14,061,000	11,208,000	11,870,000	12,260,000	16,295,000	12,762,000	13,562,000	29,529,000	357,091,000	29,757,583
1988	Jordan	16,383,000	14,909,000	21,545,000	17,177,000	11,898,000	8,009,000	7,326,000	6,919,000	7,241,000	8,283,000	10,878,000	13,819,000	144,387,000	12,032,250
	Israel	15,797,000	76,363,000	64,010,000	4,888,000	1,659,000	3,396,000	3,974,000	3,744,000	3,433,000	3,632,000	4,840,000	6,512,000	192,258,000	16,021,500
	Total	32,180,000	91,272,000	85,555,000	22,065,000	13,557,000	11,405,000	11,300,000	10,663,000	10,674,000	11,915,000	15,718,000	20,331,000	336,645,000	28,053,750
1989	Jordan	14,410,483	10,883,808	12,196,224	9,423,130	7,303,219	6,207,062	7,312,118	6,022,080	6,455,808	7,448,976	9,530,784	11,423,635	108,617,327	9,051,444
	Israel	9,050,400	6,556,032	3,786,912	2,635,631	2,971,296	2,893,536	3,144,442	3,386,880	3,255,552	3,278,880	4,410,720	5,667,840	51,038,121	4,253,177
	Total	23,460,883	17,439,840	15,983,136	12,058,761	10,274,515	9,100,598	10,456,560	9,408,960	9,711,360	10,727,856	13,941,504	17,091,475	159,655,448	13,304,621
1990	Jordan	13,037,760	11,143,281	12,913,516	10,021,881	6,833,981	5,748,451	5,754,240	5,910,710	5,700,154	6,929,021	7,313,241	7,971,436	99,277,672	8,273,139
	Israel	9,150,624	7,079,616	6,984,576	5,082,912	3,664,397	3,565,728	3,567,456	3,604,608	3,463,430	4,066,070	4,479,840	4,863,628	59,572,885	4,964,407
	Total	22,188,384	18,222,897	19,898,092	15,104,793	10,498,378	9,314,179	9,321,696	9,515,318	9,163,584	10,995,091	11,793,081	12,835,064	158,850,557	13,237,546
1991	Jordan	9,089,366	10,085,904	10,234,857	8,941,190	6,530,976	5,587,142	5,852,593	5,772,384	5,987,347	6,225,811	7,515,677	13,691,030	95,514,277	7,959,523
	Israel	5,184,173	9,739,008	6,480,951	5,314,810	3,977,424	3,427,920	3,586,205	3,539,894	3,091,997	3,361,133	4,861,382	13,162,176	65,727,073	5,477,256
	Total	14,273,539	19,824,912	16,715,808	14,256,000	10,508,400	9,015,062	9,438,798	9,312,278	9,079,344	9,586,944	12,377,059	26,853,206	161,241,350	13,436,779

Table 2 Flow at Adasya in the Yarmouk River (2/2)

(Unit : m³)

Year	Measure- ment Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Monthly Average
1992	Jordan	23,119,776	21,083,760	16,446,758	17,943,811	13,208,745	12,331,005	9,512,122	9,139,565	8,504,698	9,414,835	9,813,312	14,432,515	164,950,902	13,745,909
	Israel	59,073,667	343,612,800	125,608,320	10,857,024	2,544,480	3,329,424	4,646,765	4,741,200	3,819,744	3,267,903	5,369,242	46,430,928	613,301,497	51,108,458
	Total	82,193,443	364,696,560	142,055,078	28,800,835	15,753,225	15,660,429	14,158,887	13,880,765	12,324,442	12,682,738	15,182,554	60,863,443	778,252,399	64,854,367
1993	Jordan	17,215,391	16,461,964	14,541,725	6,909,494	8,004,442	7,554,973	7,447,680	7,883,568	7,593,610	7,463,232	9,886,061	7,714,570	118,477,210	9,873,101
	Israel	54,712,454	34,479,302	16,586,812	6,925,978	5,889,110	4,917,283	3,464,985	3,364,934	3,353,702	3,944,074	3,338,841	5,969,376	146,946,851	12,245,571
	Total	71,928,345	50,941,266	31,128,537	13,835,472	13,893,552	12,272,256	10,912,665	11,248,502	10,947,312	11,407,306	13,224,902	13,683,946	265,424,061	22,118,672
1994	Jordan	8,615,549	9,329,904	9,745,402	8,374,147	6,691,162	6,260,438	6,356,707	7,550,755	8,216,726	8,589,801	9,397,037	10,051,949	99,179,597	8,264,966
	Israel	8,200,224	6,932,608	11,855,116	3,964,896	3,386,016	3,440,448	3,473,008	2,047,680	1,388,707	1,643,933	8,614,858	12,752,381	67,721,875	5,643,490
	Total	16,815,773	16,262,512	21,600,518	12,339,043	10,077,178	9,700,906	9,831,715	9,598,435	9,605,433	10,233,734	18,011,895	22,804,330	166,901,472	13,908,456
1995	Jordan	10,258,531	8,788,003	11,803,882	10,375,430	9,124,790	7,628,170	6,530,371	7,153,229	7,425,734	7,232,285	10,036,915	11,686,032	108,043,372	9,003,614
	Israel	5,975,424	32,972,486	5,790,614	1,955,837	1,893,888	1,272,758	2,931,811	2,664,403	2,155,939	4,178,304	3,632,083	3,292,790	68,716,337	5,726,361
	Total	16,233,955	41,760,489	17,594,496	12,331,267	11,018,678	8,900,928	9,462,182	9,817,632	9,581,673	11,410,589	13,668,998	14,978,822	176,759,709	14,729,976
Min.	Jordan	5,234,000	8,788,003	9,745,402	6,909,494	6,530,976	5,587,142	5,754,240	5,772,384	5,700,154	6,225,811	7,313,241	7,714,570	95,514,277	
	Israel	5,184,173	2,712,000	3,786,912	1,955,837	1,669,000	1,272,758	2,931,811	2,047,680	1,388,707	1,643,933	3,338,841	3,292,790	51,038,121	
	Total	14,273,539	15,422,000	15,983,136	12,058,761	10,077,178	8,900,928	9,321,696	9,312,278	9,079,244	9,586,944	11,793,081	12,835,064	158,850,557	
Ave.	Jordan	13,171,157	13,538,108	15,071,224	12,116,339	9,545,621	8,169,684	7,944,189	8,035,686	8,118,672	8,662,797	10,447,668	12,119,078	124,940,224	10,578,332
	Israel	22,968,064	43,174,257	24,926,087	6,323,739	3,834,641	3,610,740	3,956,845	3,770,773	3,589,871	3,717,020	6,486,664	12,074,608	138,433,309	11,536,109
	Total	36,139,221	56,712,365	39,997,311	18,440,078	13,380,262	11,780,424	11,901,034	11,806,459	11,708,543	12,379,817	16,934,333	24,193,686	265,373,533	22,114,461
Max.	Jordan	23,119,776	24,724,000	28,296,000	19,280,000	13,208,745	12,331,005	11,936,000	11,363,000	10,803,000	11,044,000	13,818,000	14,703,000	167,016,000	
	Israel	59,962,000	343,612,800	125,608,320	12,096,000	6,480,000	5,443,000	5,625,000	5,357,000	5,492,000	4,821,000	26,226,000	46,430,928	613,301,497	
	Total	82,193,443	364,696,560	142,055,078	28,800,835	17,954,000	15,660,429	15,953,000	15,916,000	16,295,000	14,794,000	39,198,000	60,863,443	778,252,399	



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