

Scenario Analysis (M JD at 2000 Prices)																									
Item	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020			
Cost																									
Total Costs		1,071.2	26.3	63.1	128.8	164.9	178.4	157.4	115.0	123.1	85.5	96.5	70.5	52.6	66.4	88.6	66.7	65.9	56.3	56.2	56.3	56.4	56.5	57.7	
Benefits																									
Municipal Usage Qty (M m³)		1.0	0.1	4.1	17.4	36.0	44.8	68.2	118.9	182.0	104.3	229.3	232.0	232.8	232.0	232.0	238.3	229.4	238.4	239.4	239.4	239.4	239.4	239.4	
Unit Benefits of Municipal Water (JD/m³)		0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	
Municipal Benefits (M JD)		1.0	0.1	3.0	12.8	36.5	32.9	50.1	81.5	133.8	135.4	168.5	279.5	170.5	170.5	170.5	175.6	176.0	176.0	176.0	176.0	176.0	176.0	176.0	
Industrial Usage Qty (M m³)		1.0	0.1	1.0	4.1	8.5	10.5	16.0	28.0	42.7	43.2	53.8	54.5	54.1	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
Unit Benefits of Industrial Water (JD/m³)		2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	
Industrial Benefits (M JD)		1.0	0.1	2.6	11.2	23.2	28.1	42.9	71.3	117.1	118.5	147.4	149.2	149.2	149.2	149.2	153.6	154.0	154.0	154.0	154.0	154.0	154.0	154.0	
Irrigation Usage Qty (M m³)		1.0	0.1	1.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Unit Benefits of Irrigation Water (JD/m³)		0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	
Irrigation Benefits (M JD)		1.0	0.1	1.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Benefits (M JD)		1.0	0.1	5.7	29.1	49.6	61.7	94.0	152.9	250.9	253.9	316.8	319.7	319.7	319.7	319.7	339.1	339.1	339.1	339.1	339.1	339.1	339.1	339.1	
Net Cash Flow (M JD)		-28.3	-63.8	-123.1	-140.9	-138.8	-95.7	-21.0	25.8	165.4	167.4	245.1	267.1	253.1	253.1	253.1	352.8	352.8	373.8	373.8	272.7	273.6	273.5	272.3	
Discounting (DR=10%)		0.90909	0.82445	0.75131	0.68381	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35048	0.31863	0.28944	0.26333	0.23919	0.21763	0.19794	0.17966	0.16351	0.14864	0.13513	0.12285		
Total Qty Delivered (M m³)		1.0	0.1	5.1	23.5	44.5	55.3	84.2	137.0	224.8	227.5	283.1	214.5	208.5	208.5	208.5	205.1	204.6	205.6	205.6	205.6	205.6	205.6	205.6	
EIRR		19%																							
NPV (M JD)		698	-23.9	-52.7	-71.5	-96.2	-70.7	-54.8	-10.8	11.9	70.1	0.0	85.5	35.1	73.4	68.7	60.8	55.0	54.3	49.2	44.7	40.7	37.0	33.4	
PV of Total Costs (M JD)		890	23.9	52.7	96.1	111.6	109.5	33.8	59.1	57.4	36.3	34.9	24.9	16.8	19.2	17.5	16.0	14.6	11.1	10.1	9.2	8.4	7.6	7.1	
PV of Total Qty Delivered (M m³)		1,423	0.0	3.0	5.1	14.7	27.8	31.2	45.2	63.9	58.3	37.7	59.2	91.3	81.0	75.4	81.6	62.1	58.4	55.2	48.5	41.9	39.9	34.3	
Unit Water Price (JD/m³)		628																							

Table 8.1.5-5 Financial/Economic Analysis of Irrigation Water Development Projects

Economic Analysis (M JD at 2000 Prices)		Amount	Completed																					
Item	Year			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																								
Total Costs	201	6.7	13.2	24.3	36.1	28.8	21.6	7.7	4.8	4.2	2.8	2.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	
Benefits																								
Municipal Usage Qty (M m³)		0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Unit Benefits of Municipal Water (JD/m³)		0.735	1.735	0.735	0.735	1.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	
Municipal Benefits (M JD)		0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Industrial Usage Qty (M m³)		0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Unit Benefits of Industrial Water (JD/m³)		2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	
Industrial Benefits (M JD)		0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Irrigation Usage Qty (M m³)		0.0	1.0	0.0	0.0	16.0	33.3	41.2	77.5	78.5	79.4	87.1	98.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2
Unit Benefits of Irrigation Water (JD/m³)		1.233	0.283	0.283	0.283	1.233	0.283	0.283	1.233	0.283	0.283	1.233	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	1.233	0.283	0.283	0.283
Irrigation Benefit (M JD)		0.0	1.0	0.0	0.0	4.5	9.4	11.7	21.3	22.2	22.5	24.7	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Benefits (M JD)		0.0	1.0	0.0	0.0	4.5	9.4	11.7	21.3	22.2	22.5	24.7	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Net Cash Flow (M JD)		-6.7	-15.2	-24.3	-36.1	-24.3	-12.2	4.0	17.3	18.0	11.3	21.8	22.2	31.2	22.1	4.7	-1.3	-2.3	33.4	33.4	33.4	33.4	33.4	33.4
Discounting (DR=18%)		0.90809	0.22645	0.75111	0.68301	1.62032	0.56447	0.51316	1.46651	0.42410	0.38554	1.35148	0.31863	0.28966	1.14113	0.23999	0.21783	0.19784	0.17988	1.16351	0.14864	0.13513	1.12235	1.12235
Total Qty Delivered (M m³)		0.0	1.0	0.0	0.0	16.0	33.3	41.2	77.5	78.5	79.4	87.1	98.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2
IRR		12%																						
NPV (M JD)		26	-6.1	-12.6	-18.3	-24.7	-15.1	-6.9	3.0	8.1	7.6	7.0	7.7	7.1	8.4	5.8	1.1	-1.3	-0.5	6.0	5.5	5.0	4.5	4.1
PV of Total Costs (M JD)		125	6.1	12.6	18.3	24.7	17.9	12.2	4.0	2.1	1.8	1.6	1.0	0.8	0.8	1.7	4.8	6.7	5.4	0.4	0.4	1.3	0.3	0.3
PV of Total Qty Delivered (M m³)		536	0.8	0.0	1.0	0.8	10.0	18.8	21.1	36.2	31.3	30.6	30.6	28.1	25.6	23.2	21.1	19.2	17.5	22.6	20.6	18.7	17.0	15.5
Unit Water Price (JD/m³)		134																						

Table 8.1-5-6 Overall Financial/Economic Evaluation of Water Development Projects

Financial Analysis																																									
Item	Completed	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020																			
Net Cash Flow (M JD)																																									
Municipal Water	-26	-64	-127	-157	-159	-136	-81	-66	9	7	52	73	59	59	59	73	74	73	73	73	72																				
Irrigation Water	-7	-15	-24	-36	-29	-21	-7	-4	-4	-4	-2	-2	-2	-2	-10	-30	-27	-1	-1	-1	-1																				
Total	-33	-79	-151	-193	-188	-157	-88	-70	6	3	50	71	57	57	40	29	47	73	72	72	71																				
FIRR 18%																																									
Item	NPV (M JD)	PV of Total Costs(M JD)		PV of Total Bills Collected Qty (M m³)																																					
Municipal Water	-128	1,172		2,386																																					
Irrigation Water	-150	202		838																																					
Total	-278	1,374		3,224																																					
NPV (M JD)	-273																																								
Unit Water Price (Fls/m³)	426																																								
Economic Analysis																																									
Item	Completed	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020																			
Net Cash Flow (M JD)																																									
Municipal Water	-23	-64	-109	-129	-138	-133	-65	5	117	114	178	199	186	185	185	203	203	203	203	203	201																				
Irrigation Water	-10	-15	-40	-54	-13	33	53	54	55	56	67	68	68	51	40	44	104	104	104	104	104																				
Total	-33	-79	-149	-183	-152	-69	-12	39	171	170	246	268	254	254	236	225	247	307	307	307	307	306																			
FIRR 18%																																									
Item	NPV (M JD)	PV of Total Costs(M JD)		PV of Total Bills Collected Qty (M m³)																																					
Municipal Water	366	857		1,447																																					
Irrigation Water	315	162		514																																					
Total	681	1,019		1,961																																					
NPV (M JD)	681																																								
Unit Water Price (Fls/m³)	520																																								

Table 8.1.8-7 Overall Financial/Economic Evaluation of Wastewater Treatment Projects

Table 8.1.5-8.1 Overall Financial/Economic Evaluation of Wastewater Reuse Projects - Tariff=10 Fils/m³

Financial Analysis		Item	2006	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Net Cash Flow (JD)																								
Abs Shater	0	-114,140	-5,567	-5,832	-4,401	-3,366	-5,239	-2,678	-2,890	-1,490	-881	-24,435	-282	12	315	598	942	1,288	1,659	1,974	2,318			
Aqaba	0	0	-1,643,721	-1,643,720	-11,865	-75,121	-726,038	-754,087	-41,736	-56,017	-50,749	-45,462	-195,316	-345,089	-64,148	-55,341	-64,258	-64,259	-40,398	-30,916	-28,835			
Palestine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-18,240	-16,16	-13,16	-11,16	-10,16		
Irbid (Central and West Arab)	0	0	0	0	0	0	0	0	0	0	0	-163,184	-4,318	-1,797	-3,256	-2,695	-2,115	-73,159	-1,205	-587	-491	-355		
Karak	0	0	0	0	0	0	0	0	0	0	0	-227,500	-227,500	-3,385	-2,169	-1,034	-182	1,238	2,374	3,533	4,692	5,851		
Kufrineh	0	0	0	0	0	0	0	0	0	0	0	-194,064	-13,920	-13,436	-12,952	-12,488	-11,985	-11,421	-11,180	-10,343	-9,796	-9,185		
Mutanabbi	0	0	0	0	0	0	0	0	0	0	0	-511,031	-24,181	-21,781	-22,825	-21,089	-15,448	-17,755	-15,995	-14,188	-11,947	-251,778	-12,681	
Mutah	0	0	0	0	0	0	0	0	0	0	0	-274,546	-15,449	-14,735	-14,311	-11,878	-13,427	-12,964	-12,481	-11,737	-11,384	-10,935	-10,518	
Ramtha	0	0	0	0	0	0	0	0	0	0	0	-278,024	-28,375	-18,237	-18,034	-16,214	-15,937	-15,088	-14,213	-13,393	-12,401	-11,283	-242,194	
Tafeth	0	0	0	0	0	0	0	0	0	0	0	-178,547	-16,106	-15,433	-14,764	-14,528	-14,291	-14,055	-13,818	-13,588	-13,384	-12,748	-166,338	
West Arab	0	0	0	0	0	0	0	0	0	0	0	-318,900	-12,266	-7,501	-2,523	-193,582	8,072	13,889	37,256	20,822	24,281	21,958	373,429	
West East	0	0	0	0	0	0	0	0	0	0	0	-185,560	-7,637	-5,942	-4,158	-2,284	-321	-4,562	437	818	1,134	1,573	1,982	
West Jordan	0	0	0	0	0	0	0	0	0	0	0	-275,211	-24,826	-24,122	-23,412	-22,591	-21,725	-20,151	-19,957	-18,933	-18,290	-19,958	-18,298	
Al-Jetta	0	0	0	0	0	0	0	0	0	0	0	-631,031	-17,332	-16,554	-15,864	-14,644	-13,764	-12,714	-11,683	-11,915	-10,225	-9,554	-10,123	
Dir Al-Baid	0	0	0	0	0	0	0	0	0	0	0	-631,031	-17,332	-16,554	-15,864	-14,644	-13,764	-12,714	-11,683	-11,915	-10,225	-9,554	-10,123	
Dir Alla	0	0	0	0	0	0	0	0	0	0	0	-631,031	-17,332	-16,554	-15,864	-14,644	-13,764	-12,714	-11,683	-11,915	-10,225	-9,554	-10,123	
Kofra Ayyad	0	0	0	0	0	0	0	0	0	0	0	-354,120	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	-5,018	
Aqaba South Coast	0	0	0	0	0	0	0	0	0	0	0	-138,516	-17,853	-17,526	-17,384	-17,196	-17,022	-16,842	-16,699	-16,556	-16,413	-16,126	-15,981	
Near	0	0	0	0	0	0	0	0	0	0	0	-154,188	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	-1,308	
North Queen Alia Airport	0	0	0	0	0	0	0	0	0	0	0	-414,930	8,086	18,882	13,723	16,696	19,754	-18,190	-24,519	-26,982	28,234	31,667	38,389	
North Jordan Valley	0	0	0	0	0	0	0	0	0	0	0	-546,794	-51,293	-48,328	-43,123	-46,907	-45,424	-43,186	-42,292	-40,641	-39,712	-31,553	-50,981	
Shara South	0	0	0	0	0	0	0	0	0	0	0	-464,940	-25,725	-25,896	-24,474	-22,833	-21,124	-22,497	-21,381	-21,371	-20,941	-57,222	-21,449	
Tara	0	0	0	0	0	0	0	0	0	0	0	-293,329	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	-303,121	
West Shabata	0	0	0	0	0	0	0	0	0	0	0	-597,285	-10,801	-14,007	-11,058	-11,348	-9,585	-7,441	-4,499	4,734	-5,371	-2,188	-2,378	
West East	0	0	0	0	0	0	0	0	0	0	0	-173,160	-5,649	-5,649	-5,649	-5,649	-5,649	-5,649	-4,912	-4,300	-3,594	-3,888	-3,383	
West Jordan	0	0	0	0	0	0	0	0	0	0	0	-301,783	-17,782	-17,121	-16,451	-15,801	-15,511	-15,048	-14,570	-14,100	-12,631	-18,588	-18,112	
West Hauran	0	0	0	0	0	0	0	0	0	0	0	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599	-61,599		
West Mounts	0	0	0	0	0	0	0	0	0	0	0	-74,851	158,025	158,025	158,025	158,025	158,025	158,025	158,025	158,025	158,025	158,025	158,025	
Al-Jetta	0	0	0	0	0	0	0	0	0	0	0	-513,853	704,108	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877	17,523,877
Dir Al-Baid	0	0	0	0	0	0	0	0	0	0	0	-278,892	349,454	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313	7,057,313
Dir Alla	0	0	0	0	0	0	0	0	0	0	0	-663,827	380,029	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338	22,711,338
Kofra Ayyad	0	0	0	0	0	0	0	0	0	0	0	-115,859	333,359	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657	26,784,657
Aqaba South Coast	0	0	0	0	0	0	0	0	0	0	0	-164,867	-466,867	-466,867	-26,000	-30,081	-1,297,333	-3,255,333	-2,353,333	-9,800	-90,000	-91,000	-91,000	
Music, Muta, Adaysya	0	0	0	0	0	0	0	0	0	0	0	-157,700	209,297	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722	5,157,722
Dead Sea East Coast	0	0	0	0	0	0	0	0	0	0	0	-765,835	445,432	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669	6,839,669
As-Sanwa	0	0	0	0	0	0	0	0	0	0	0	-7,681,942	10,312,871	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867	283,212,867
Total:	0	0	-2,788,279	-3,273,836	-3,243,329	-1,649,388	-1,434,474	-1,476,072	-2,542,801	-3,198,819	-2,909,585	-623,389	-1,855,062	-2,088,164	-978,120	-1,337,650	-1,227,944	-1,388,556	-2,340,267	-2,516,525				
NPV (JD)			-22,094,615																					
Unit Water Price (Fils/m ³)			31																					