Annex to 10.1 "Selected Projects for Pre-Feasibility Study"

Contents

(2) FINANCIAL/ECONOMIC ANALYSIS OF INDIVIDUAL WASTEWATER TREATMENT PROJECTS

Abu Nuder WWTP Upgrade & Expansion

Hydraulic Analysis (M m³/yr)

Item	Allocation		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	2.6	2.7
Municipal Water	1.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.6	2.6	2.7
Physical Losses (%)			0.34	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.3
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.2
Industrial Water	0.80		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Losses (%)			0.34	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Financial Analysis (M JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	50%	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	50%	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		3.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Costs			0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenues																							
Municipal Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.2
Municipal Tariff (JD/m3)			0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Municipal Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Industrial Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Tariff (JD/m3)			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Net Cash Flow (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Discounting (DR=6.5%)			0.93897	0.88166	0.82785	0.77732	0.72988	0.68533	0.64351	0.60423	0.56735	0.53273	0.50021	0.46968	0.44102	0.41410	0.38883	0.36510	0.34281	0.32189	0.30224	0.28380	0.26648
Total Qty Whose Bills are Collected (M m³)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.2
FIRR	7%																						
NPV (M JD)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-0.6	-0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PV of Total Costs (M JD)	2.0		0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Bills Collected Qty (M m³)	15.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
Unit Water Price (Fils/m³)	146																						

Economic Analysis (JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	50%	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	50%	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		3.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Costs			0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benefits																							
Municipal Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.3
Unit Benefits of Municipal Water (JD/m3)			0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368
Municipal Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Industrial Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 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
Industrial Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Net Cash Flow (JD)			0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Discounting (DR=10%)			0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784	0.17986	0.16351	0.14864	0.13513
Total Qty Delivered (m³)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.3
EIRR	19%																						
NPV (JD)	1.4		0.0	0.0	0.0	0.0	0.0	0.0	-0.5	-0.5	-0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1
PV of Total Costs (JD)	1.5		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Qty Delivered (m³)	7.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
Unit Water Price (Fils/m³)	192																						

Jordan Valley Community Waste Management Project

Hydraulic Analysis (M m³/yr)

Item	Allocation		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced			0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5
Municipal Water	1.00		0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5
Physical Losses (%)			0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2
Industrial Water	0.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Losses (%)			0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Financial Analysis (M JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		2.8	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.5	1.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Costs			0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenues																							
Municipal Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2
Municipal Tariff (JD/m3)			0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Municipal Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Industrial Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Tariff (JD/m3)			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Net Cash Flow (M JD)			0.0	-0.5	-0.5	-0.5	-0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Discounting (DR=6.5%)			0.93897	0.88166	0.82785	0.77732	0.72988	0.68533	0.64351	0.60423	0.56735	0.53273	0.50021	0.46968	0.44102	0.41410	0.38883	0.36510	0.34281	0.32188	0.30224	0.28380	0.26648
Total Qty Whose Bills are Collected (M m³)			0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2
FIRR	4%																						
NPV (M JD)	-0.5		0.0	-0.4	-0.4	-0.4	-0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Costs (M JD)	1.8		0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Bills Collected Qty (M m³)	8.8		0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Unit Water Price (Fils/m³)	203																						

Economic Analysis (JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		2.8	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.5	1.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Costs			0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benefits																							
Municipal Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3
Unit Benefits of Municipal Water (JD/m3)			0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368
Municipal Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Industrial Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 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
Industrial Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 (JD)			0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Net Cash Flow (JD)			0.0	-0.5	-0.5	-0.5	-0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Discounting (DR=10%)			0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784	0.17986	0.16351	0.14864	0.13513
Total Qty Delivered (m³)			0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3
EIRR	13%																						
NPV (JD)	0.6		0.0	-0.4	-0.4	-0.3	-0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PV of Total Costs (JD)	1.6		0.0	0.4	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Qty Delivered (m³)	5.8		0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Unit Water Price (Fils/m³)	270																						

Aqaba Wastewater Project

Hydraulic Analysis (M m³/yr)

Item	Allocation		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced			0.0	0.0	0.0	0.0	0.0	5.0	5.2	5.3	5.5	5.6	5.8	6.0	6.2	6.5	6.5	6.7	6.9	7.1	7.5	7.5	7.7
Municipal Water	1.00		0.0	0.0	0.0	0.0	0.0	5.0	5.2	5.3	5.5	5.6	5.8	6.0	6.2	6.3	6.5	6.7	6.9	7.1	7.3	7.5	7.7
Physical Losses (%)			0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	4.0	4.2	4.3	4.6	4.7	4.9	5.1	5.3	5.4	5.5	5.7	5.9	6.0	6.2	6.4	6.5
Quantity Where Bills are Collected			0.0	0.0	0.0	0.0	0.0	3.5	3.7	3.8	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.5	5.7	5.8	6.0	6.2	6.2
Industrial Water	0.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Losses (%)			0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Where Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Financial Analysis (M JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	10%	1.2	0.0	0.0	0.3	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	90%	10.8	0.0	0.0	2.7	4.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		12.0	0.0	0.0	3.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	3.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Costs			0.0	0.0	3.0	5.0	4.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Revenues																							
Municipal Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	3.5	3.7	3.8	4.2	4.4	4.6	4.8	5.0	5.0	5.3	5.4	5.5	5.7	5.8	6.0	6.2
Municipal Tariff (JD/m3)			0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Municipal Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Industrial Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Tariff (JD/m3)			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Net Cash Flow (M JD)			0.0	0.0	-3.0	-5.0	-4.0	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8
Discounting (DR=6.5%)			0.93897	0.88166	0.82785	0.77732	0.72988	0.68533	0.64351	0.60423	0.56735	0.53273	0.50021	0.46968	0.44102	0.41410	0.38883	0.36510	0.34281	0.32189	0.30224	0.28380	0.26648
Total Qty Where Bills are Collected (M m³)			0.0	0.0	0.0	0.0	0.0	3.5	3.7	3.8	4.2	4.4	4.6	4.8	5.0	5.0	5.2	5.4	5.5	5.7	5.8	6.0	6.2
EIRR	3%																						
NPV (M JD)	-3.6		0.0	0.0	-2.5	-3.9	-2.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
PV of Total Costs (M JD)	18.4		0.0	0.0	2.5	3.9	2.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Bills Collected Qty (M m³)	46.2		0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.6
Unit Water Price (Fils/m³)	325																						

Economic Analysis (JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	10%	1.2	0.0	0.0	0.3	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	90%	10.8	0.0	0.0	2.7	4.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		12.0	0.0	0.0	3.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	3.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Costs			0.0	0.0	3.0	5.0	4.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Benefits																							
Municipal Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	4.0	4.2	4.3	4.6	4.7	4.9	5.1	5.3	5.4	5.5	5.7	5.9	6.0	6.2	6.4	6.5
Unit Benefits of Municipal Water (JD/m3)			0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368
Municipal Benefits (JD)			0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3	2.4
Industrial Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 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
Industrial Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 (JD)			0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3	2.4
Net Cash Flow (JD)			0.0	0.0	-3.0	-5.0	-4.0	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3
Discounting (DR=10%)			0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784	0.17986	0.16351	0.14864	0.13513
Total Qty Delivered (m³)			0.0	0.0	0.0	0.0	0.0	4.0	4.2	4.3	4.6	4.7	4.9	5.1	5.3	5.4	5.5	5.7	5.9	6.0	6.2	6.4	6.5
EIRR	10%																						
NPV (JD)	2.2		0.0	0.0	-2.3	-3.4	-2.5	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
PV of Total Costs (JD)	8.8		0.0	0.0	2.3	3.4	2.5	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Qty Delivered (m³)	29.9		0.0	0.0	0.0	0.0	0.0	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.9	0.9
Unit Water Price (Fils/m³)	296																						

Wadi Zarqa Treatment Plant
Hydraulic Analysis (M m³/yr)

Item	Alloration		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.4	41.7	42.8	44.0	45.2	46.8	48.8	49.3	50.6	52.0	53.5
Municipal Water	1.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.4	41.7	42.8	44.0	45.2	46.8	48.8	49.3	50.6	52.0	53.5
Physical Losses (%)			0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.3	6.4	6.6	6.8	7.0	7.3	7.4	7.6	7.8	8.0
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.5	2.6	2.7
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4	35.4	36.3	37.4	38.5	39.7	40.8	41.8	43.0	44.2	45.3
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	33.4	34.2	35.2	36.2	37.4	38.4	39.4	40.4	41.6	42.6
Industrial Water	0.00		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Losses (%)			0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative/Managerial Losses (%)			0.21	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Delivered			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quantity Whose Bills are Collected			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Financial Analysis (M JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		62.4	0.0	0.0	0.0	0.0	0.0	0.0	15.6	15.6	15.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	0.0	0.0	0.0	0.0	15.6	31.2	46.8	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total Costs			0.0	0.0	0.0	0.0	0.0	0.0	15.6	15.6	15.6	15.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Revenues																							
Municipal Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	33.4	34.2	35.2	36.2	37.4	38.4	39.4	40.4	41.6	42.6
Municipal Tariff (JD/m3)			0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Municipal Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.9	5.0	5.2	5.3	5.5	5.6	5.8	5.9	6.1	6.3
Industrial Usage Qty (M m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Tariff (JD/m3)			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Revenues (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.9	5.0	5.2	5.3	5.5	5.6	5.8	5.9	6.1	6.3
Net Cash Flow (M JD)			0.0	0.0	0.0	0.0	0.0	0.0	-15.6	-15.6	-15.6	-15.6	1.6	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1
Discounting (DR=6.5%)			0.93897	0.88166	0.82785	0.77732	0.72988	0.68533	0.64351	0.60423	0.56735	0.53273	0.50021	0.46968	0.44102	0.41410	0.38883	0.36510	0.34281	0.32188	0.30224	0.28380	0.26648
Total Qty Whose Bills are Collected (M m³)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	33.4	34.2	35.2	36.2	37.4	38.4	39.4	40.4	41.6	42.6
FIRR	#DIV/0!																						
NPV (M JD)	-21.3		0.0	0.0	0.0	0.0	0.0	0.0	-10.0	-9.4	-8.8	-8.3	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.8
PV of Total Costs (M JD)	55.4		0.0	0.0	0.0	0.0	0.0	0.0	10.0	9.4	8.8	8.3	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.9	0.9	0.8
PV of Total Bills Collected Qty (M m³)	232.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	15.7	15.1	14.6	14.1	13.7	13.2	12.7	12.2	11.8	11.4
Unit Water Price (Fils/m³)	238																						

Economic Analysis (JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		62.4	0.0	0.0	0.0	0.0	0.0	0.0	15.6	15.6	15.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	0.0	0.0	0.0	0.0	0.0	15.6	31.2	46.8	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
O & M Costs			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total Costs			0.0	0.0	0.0	0.0	0.0	0.0	15.6	15.6	15.6	15.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Benefits																							
Municipal Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4	35.4	36.3	37.4	38.5	39.7	40.8	41.8	43.0	44.2	45.3
Unit Benefits of Municipal Water (JD/m3)			0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368
Municipal Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	13.0	13.4	13.8	14.2	14.6	15.0	15.4	15.8	16.3	16.7
Industrial Usage Qty (m3)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 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
Industrial Benefits (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 (JD)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.7	13.0	13.4	13.8	14.2	14.6	15.0	15.4	15.8	16.3	16.7
Net Cash Flow (JD)			0.0	0.0	0.0	0.0	0.0	0.0	-15.6	-15.6	-15.6	-15.6	9.5	9.9	10.3	10.7	11.0	11.5	11.9	12.3	12.7	13.2	13.5
Discounting (DR=10%)			0.91909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784	0.17986	0.16351	0.14864	0.13513
Total Qty Delivered (m³)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4	35.4	36.3	37.4	38.5	39.7	40.8	41.8	43.0	44.2	45.3
EIRR	14%																						
NPV (JD)	11.2		0.0	0.0	0.0	0.0	0.0	0.0	-8.8	-7.3	-6.6	-6.0	3.3	3.2	3.0	2.8	2.6	2.5	2.4	2.2	2.1	2.0	1.8
PV of Total Costs (JD)	38.3		0.0	0.0	0.0	0.0	0.0	0.0	8.8	7.3	6.6	6.0	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.4
PV of Total Qty Delivered (m³)	134.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	11.3	10.5	9.9	9.2	8.6	8.1	7.5	7.0	6.6	6.1
Unit Water Price (Fils/m³)	285																						

Upgrading Mafraq WWTP
Hydraulic Analysis (M m³/yr)

Item	Allocation	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced		0.0	0.0	0.8	1.0	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4
Municipal Water	1.00	0.0	0.0	0.8	1.0	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4
Physical Losses (%)		0.34	0.25	0.22	0.21	0.21	0.20	0.18	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses		0.0	0.0	0.8	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Administrative/Managerial Losses (%)		0.21	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses		0.0	0.0	0.8	1.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Quantity Delivered		0.0	0.0	0.8	1.0	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0
Quantity Whose Bills are Collected		0.0	0.0	0.8	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9
Industrial Water	0.00	0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Physical Losses (%)		0.34	0.25	0.22	0.21	0.21	0.20	0.18	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Physical Losses		0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Administrative/Managerial Losses (%)		0.21	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses		0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Quantity Delivered		0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Quantity Whose Bills are Collected		0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0

Financial Analysis (M JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	20%	1.1	0.0	0.3	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	80%	4.4	0.0	1.1	2.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		5.5	0.0	1.4	2.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	1.4	4.1	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
O & M Costs			0.0	0.0	0.8	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Costs			0.0	1.4	2.8	1.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Revenues																							
Municipal Usage Qty (M m3)			0.0	0.0	0.8	1.0	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4
Municipal Tariff (JD/m3)			0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Municipal Revenues (M JD)			0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Industrial Usage Qty (M m3)			0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Industrial Tariff (JD/m3)			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (M JD)			0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
Total Revenues (M JD)			0.0	0.0	0.8	1.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Net Cash Flow (M JD)			0.0	-1.4	-2.8	-1.4	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Discounting (DR=6.5%)			1.00000	0.93897	0.88166	0.82785	0.77752	0.72998	0.68535	0.64351	0.60433	0.56755	0.53273	0.50021	0.46968	0.44102	0.41410	0.38883	0.36510	0.34281	0.32189	0.30224	0.28380	0.26648
Total Qty Whose Bills are Collected (M m³)			0.0	0.0	0.8	1.0	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9
FIRR	8%																						
NPV (M JD)	-2.9		0.0	-1.2	-2.3	-1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PV of Total Costs (M JD)	5.1		0.0	1.2	2.3	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Bills Collected Qty (M m³)	14.8		0.0	0.0	0.8	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5
Unit Water Price (Fils/m³)	344																						

Economic Analysis (JD at 2000 Prices)

Item	Percent	Amount	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																							
Local Components	20%	1.1	0.0	0.3	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Components	80%	4.4	0.0	1.1	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duty & Taxes	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Capital Costs		5.5	0.0	1.4	2.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative Costs			0.0	1.4	4.1	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
O & M Costs			0.0	0.0	0.8	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Costs			0.0	1.4	2.8	1.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Benefits																							
Municipal Usage Qty (m3)			0.0	0.0	0.8	1.0	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4
Unit Benefits of Municipal Water (JD/m3)			0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368
Municipal Benefits (JD)			0.0	0.0	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8
Industrial Usage Qty (m3)			0.0	0.0	0.8	1.0	0.8	0.8	0.8	0.0	1.0	0.8	0.8	0.8	0.0	0.0	0.8	1.0	0.8	1.0	0.8	0.0	1.0
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
Industrial Benefits (JD)			0.0	0.0	2.2	2.7	2.2	2.2	2.2	0.0	2.7	2.2	2.2	2.2	0.0	0.0	2.2	2.7	2.2	2.7	2.2	0.0	2.7
Total Benefits (JD)			0.0	0.0	2.5	3.1	2.6	2.7	2.7	0.5	3.3	2.8	2.8	2.8	0.6	0.7	2.9	3.4	2.9	3.4	2.9	0.7	3.5
Net Cash Flow (JD)			0.0	-1.4	-0.3	1.7	2.5	2.6	2.6	0.4	3.2	2.7	2.7	2.7	0.5	0.6	2.8	3.3	2.8	3.3	2.8	0.6	3.4
Discounting (DR=10%)			1.00000	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21765	0.19784	0.17986	0.16351	0.14864	0.13513
Total Qty Delivered (m³)			0.0	0.0	0.8	1.0	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0
EIRR	8%																						
NPV (JD)	-0.8		0.0	-1.1	-2.1	-0.9	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PV of Total Costs (JD)	4.5		0.0	1.1	2.1	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV of Total Qty Delivered (m³)	5.9		0.0	0.0	0.8	1.0	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
Unit Water Price (Fils/m³)	453																						