



**United States Agency for
International Development**



**Ministry of Water Resources
& Irrigation**

**LIFE Integrated Water Resources Management
Task Order No. 802
EPIQ II: Contract No. EPP-T-802-03-00013-00**

Determination of Biweekly Supplies to IWMDs

(May 2004 to September 2007)

Report No. 59

September 2008

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**Prepared by:
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Determination of Biweekly canal supplies to IWMDs

In this step, the calibrated hydraulic equations that are developed for each inflow site on the canal are used to estimate the discharge (water volume) passing through the canal intake over a certain period of time.

To find the canal flow, the orifice equation is used as long as it shows high correlation. However, this may not work when head on the gate is very small (tends to be zero), particularly when the gate is fully open. The flow in this case becomes a canal free flow (not regulated by the gate) that can be determined by Manning or Stage–Discharge relationship. Manning is recommended; however, if Manning is not well calibrated, then Stage–Discharge can be used. This demonstrates the importance of using more than one method so that the most reliable estimate of canal flow is achieved.

Each IWMDs integrates daily canal flow over the 15-day period and the directorate tabulate them as shown o the attached tables of this report. Then, these data on water supplies to each IWMD can be

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Summer 2004 (m.m3)

	Area f	May - 04		Jun - 04		Jul - 04		Aug - 04		Sep - 04		Total	
		1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end		
Zifta	North Zifta	43,230	9.607	16.664	16.645	19.008	20.873	19.936	15.917	18.527	10.955	9.863	158
	El Santa	55,810	27.987	27.182	21.146	25.996	22.706	23.728	24.889	25.403	20.234	11.921	231
	Quesna	53,250	14.304	20.443	23.568	18.243	16.649	19.739	17.534	18.879	13.109	8.977	171
	South Zifta	39,650	9.600	11.384	11.488	14.044	12.719	14.562	13.290	15.140	13.122	10.036	125
	Berket El Sabaa	39,490	7.558	7.911	10.442	9.133	8.330	9.139	9.469	8.375	4.945	5.205	81
	Total	231,430	69.057	83.585	83.288	86.425	81.277	87.104	81.099	86.324	62.365	46.003	767
Sharkia	Abo Kebir	58882	18.942	24.006	25.554	22.741	25.158	24.606	25.684	26.076	25.286	20.854	239
	Kafr Sakr	54070	16.500	27.516	26.772	29.734	28.195	29.529	26.388	29.941	20.071	10.311	245
	Wlad Sakr	68000	34.638	31.204	25.934	20.227	22.547	28.929	27.264	33.416	30.641	33.054	288
	Ibrahimia	59214	17.854	23.620	22.561	27.422	24.165	29.498	25.624	27.163	23.559	16.860	238
	Zagazig	63685	11.648	14.308	19.901	19.263	21.974	24.024	20.675	22.921	17.020	12.935	185
	Total	303,851	99.582	120.653	120.723	119.388	122.039	136.586	125.635	139.517	116.576	94.013	1195
West Qena	Esna	59970	18.660	19.696	19.388	19.492	20.008	25.369	24.677	25.281	22.499	22.426	217
	Arment	34200	11.511	13.931	16.841	16.941	15.272	19.953	17.333	19.115	18.245	15.856	165
	Nakada	32210	5.414	13.104	13.306	12.096	15.379	14.918	15.034	14.861	11.146	9.274	125
	Nagaa Hammadi	64000	25.909	35.405	32.286	35.746	32.124	39.745	35.589	38.412	38.495	35.921	350
	Abu Tesht	37000	18.473	14.299	22.786	21.958	22.651	22.646	24.962	27.166	22.597	18.911	216
	Total	227,380											1073
East Qena	Luxor	42850	17.717	18.383	15.397	20.764	21.297	26.826	24.954	28.547	28.452	25.779	228
	Qous	36010	8.889	24.550	29.483	20.637	22.868	23.109	20.937	17.816	17.260	17.022	203
	Qena	49400	21.673	23.916	23.866	19.565	20.566	20.107	20.494	23.548	18.805	20.204	213
	Deshna	50100	19.270	19.643	17.359	17.076	14.581	17.139	12.551	7.615	11.164	13.173	150
	Total	405,740	67.549	86.492	86.104	78.042	79.312	87.180	78.936	77.525	75.681	76.178	793
Aswan	Aswan	14350	5.599	6.428	4.960	5.898	6.123	7.270	7.267	8.450	6.941	7.563	66
	Kom Imbou	39768	25.686	30.920	31.603	31.802	31.588	35.649	33.301	36.214	31.603	31.802	320
	Tweissa	30210	21.063	20.156	18.474	19.339	19.369	22.191	21.436	21.794	19.789	19.784	203
	Selsela	29390	13.230	14.432	16.635	17.179	16.589	18.055	17.204	17.457	17.605	17.895	166
	Idfou East	28105	15.258	16.768	20.790	20.386	19.970	27.308	20.692	20.258	21.333	18.611	201
	Edfou West	31385	13.923	15.117	19.157	18.730	18.353	24.794	19.432	18.915	19.639	17.061	185
	Saayda	30000	12.960	13.590	12.852	12.816	12.420	13.518	17.208	19.278	19.278	18.612	153
	Total	203,208	107.719	117.411	124.471	126.150	124.414	148.785	136.540	142.365	136.188	131.327	1295

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Winter 2004-2005 (m.m3)

Directorate	IWMD	Area f	Oct - 04		Nov - 04		Dec - 04		Jan - 05		Feb - 05		Mar - 05		Apr - 05		Total
			1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	
Zifta	North Zifta	43,230	7.885	6.108	6.902	4.374	6.202	5.199	5.532	2.694	4.126	7.643	6.729	8.095	7.125	7.896	86.510
	El Santa	55,810	10.093	11.504	12.932	17.585	15.899	13.325	12.920	14.267	6.222	11.848	7.557	11.293	13.194	21.203	179.844
	Quesna	53,250	6.117	14.237	9.025	15.363	5.417	6.330	3.185	0.051	6.877	8.875	9.302	15.458	20.392	14.879	135.507
	South Zifta	39,650	8.689	7.684	7.445	8.165	7.320	8.072	8.261	9.398	10.082	5.945	7.654	7.592	7.041	10.312	113.662
	Berket El Sab	39,490	5.894	6.245	5.571	7.197	5.863	6.153	7.902	4.736	2.149	6.941	4.498	6.788	5.764	8.891	84.592
Total	231,430	38.678	45.779	41.876	52.684	40.701	39.079	37.801	31.147	29.456	41.252	35.739	49.226	53.516	63.181	600	
Sharkia	Abo Kebir	58882	14.1103402	9.65880462	8.56731377	16.0195496	12.7434865	12.62545	14.0175261	0	0.59418858	12.033912	18.2745311	14.5405316	15.8140568	15.792252	164.792
	Kafr Sakr	54070	5.861	11.390	9.539	3.930	1.374	2.658	5.811	0.000	0.841	12.586	6.477	7.781	7.495	4.844	80.585
	Wlad Sakr	68000	14.6709792	9.336708	10.43129	23.6170296	18.5879756	15.065708	15.6021536	4.1961024	1.42748	6.624664	24.3275224	13.9124148	15.3460872	26.2412068	199.387
	Ibrahimia	59214	16.516	17.969	17.878	15.915	14.701	14.707	17.120	2.351	0.000	14.273	16.895	11.718	16.159	14.581	190.782
	Zagazig	63685	10.26468	10.34022	9.84204	9.735744	8.059752	9.674472	10.457472	0	0	16.02156	12.263784	13.903296	14.028936	11.610408	136.202
Total	303851	61.423	58.695	56.258	69.217	55.466	54.731	63.007	6.547	2.862	61.539	78.238	61.855	68.843	73.068	772	
West Qena	Esna	59970	22.501	24.884	22.811	18.696	20.286	15.552	19.218	26.528	19.568	14.998	19.142	24.338	20.157	18.086	286.765
	Arment	34200	16.633	16.141	15.819	15.283	15.775	12.675	13.419	2.288	9.984	7.382	11.468	12.800	11.412	12.933	174.010
	Nakada	32210	9.2736	12.6432	11.232	8.9856	1.2096	1.9584	0.3456	0	10.5984	0	0	12.816	8.9568	2.4192	80.438
	Nagaa Hammadi	64000	30.981	37.396	30.836	30.493	28.564	9.495	22.588	20.262	22.889	20.968	17.951	20.716	28.062	21.477	342.679
	Abu Tesht	37000	26.005	22.851	21.465	19.030	18.738	1.995	13.452	16.102	23.091	16.049	22.275	22.702	22.171	23.170	269.096
Total	227380	105.394	113.915	102.163	92.487	84.573	41.675	69.022	65.180	86.130	59.397	70.836	93.372	90.758	78.085	1153	
East Qena	Luxor	42850	25.816	25.078	21.844	20.773	20.509	22.629	20.906	4.622	11.067	17.091	22.539	21.343	22.714	29.215	286.146
	Qous	36010	8.835	11.585	10.768	4.552	0.014	5.601	0.410	0.000	3.674	14.109	9.777	26.762	13.049	2.849	111.986
	Qena	49400	19.477	24.332	20.476	20.599	18.648	17.665	19.725	26.951	22.819	19.328	23.176	21.420	19.079	22.131	295.826
	Deshna	50100	19.270	19.643	17.359	17.076	14.581	17.139	12.551	7.615	11.164	13.173	15.453	16.878	20.542	17.212	219.653
	Total	178360	178.792	194.553	172.609	155.488	138.325	104.709	122.614	104.367	134.854	123.099	141.780	179.775	166.142	149.492	914
Aswan	Aswan	14350	6.446	8.226	7.787	6.847	7.035	2.643	4.283	6.296	5.634	4.897	5.579	7.724	7.031	5.171	85.600
	Kom Imbou	39768	25.848	31.110	33.130	32.701	30.535	15.002	24.997	26.470	20.918	21.500	26.123	30.495	27.411	23.317	369.556
	Tweissa	30210	21.459	17.801	15.666	20.297	17.151	11.925	13.427	14.342	17.303	14.747	19.631	19.924	18.342	15.283	237.297
	Selsela	29390	17.895	19.649	15.960	16.898	17.144	3.953	11.042	15.040	15.877	15.518	15.865	16.632	14.270	14.825	210.569
	Idfou East	28105	18.611	21.668	20.735	18.566	18.081	12.998	14.530	14.971	16.726	13.271	15.977	17.165	16.604	14.634	234.537
	Edfou West	31385	17.061	19.763	18.842	16.979	16.569	11.751	13.356	13.588	15.314	12.000	14.576	15.609	15.168	13.362	213.939
	Saayda	30000	16.344	16.272	16.344	15.084	14.202	12.222	12.852	12.240	13.590	13.626	17.748	19.224	18.306	13.338	211.392
Total	203208	123.662992	134.489652	128.463489	127.372056	120.717229	70.49347	94.4865303	102.947345	105.361962	95.5584644	115.498574	126.773858	117.13238	99.9308335	1563	

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Summer 2005 (m.m3)

	Area f	May - 04		Jun - 04		Jul - 04		Aug - 04		Sep - 04		Total	
		1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end		
Zifta	North Zifta	43,230	11.683	15.232	19.491	18.716	16.204	15.934	14.905	15.749	14.367	9.729	152
	El Santa	55,810	23.932	26.030	24.265	24.750	25.655	27.929	24.546	25.208	21.207	15.039	239
	Quesna	53,250	12.943	14.111	21.860	19.039	18.385	27.555	21.648	18.537	15.230	7.402	177
	South Zifta	39,650	12.384	12.773	16.012	15.655	17.386	18.854	19.203	19.373	17.178	12.446	161
	Berket El Sabaa	39,490	9.060	9.536	8.957	8.081	8.391	8.772	8.992	6.631	6.372	5.172	80
	Total	231,430	70.002	77.683	90.585	86.242	86.021	99.044	89.294	85.497	74.353	49.788	809
Sharkia	Abo Kebir	58882	19.275	20.612	24.831	22.989	24.278	24.571	24.452	24.989	23.618	19.813	229
	Kafr Sakr	54070	8.810	22.825	24.960	24.960	28.445	23.912	21.037	20.712	24.106	11.644	211
	Wlad Sakr	68000	27.917	22.696	32.491	27.148	30.534	39.871	27.720	35.452	35.392	33.644	313
	Ibrahimia	59214	18.321	25.375	27.501	29.003	26.326	33.279	28.727	30.795	28.938	21.880	270
	Zagazig	63685	10.458	15.633	21.037	23.311	25.360	26.791	26.842	26.858	24.251	16.637	217
	Total	303,851	84.782	107.141	130.820	127.412	134.943	148.424	128.778	138.806	136.305	103.617	1241
West Qena	Esna	59970	27.177	31.855	29.625	31.156	33.466	36.747	36.698	37.651	35.258	35.112	335
	Arment	34200	11.585	11.131	14.820	16.959	12.996	14.497	14.474	15.239	15.555	14.309	142
	Nakada	32210	4.723	13.795	14.112	12.298	8.294	7.747	7.085	13.910	13.507	11.750	107
	Nagaa Hammadi	64000	25.485	23.151	29.099	28.268	30.370	34.967	34.244	38.220	35.485	32.054	311
	Abu Tesht	37000	22.336	26.694	25.630	24.740	19.438	23.437	18.367	20.346	22.353	23.311	227
	Total	227,380											1122
East Qena	Luxor	42850	10.281	12.534	18.700	18.648	19.394	21.615	21.718	21.695	18.530	27.056	190
	Qous	36010	4.808	20.264	24.155	18.049	20.699	23.361	18.281	17.129	14.636	12.641	174
	Qena	49400	25.979	24.358	22.131	22.998	22.236	23.790	20.740	21.937	22.737	22.267	229
	Deshna	50100	15.785	19.243	19.356	18.727	17.503	20.089	18.325	20.751	17.042	13.900	181
	Total	405,740	56.854	76.400	84.342	78.422	79.833	88.856	79.064	81.512	72.946	75.864	774
Aswan	Aswan	14350	16.658136	13.379256	15.988104	15.389352	15.147	15.36084	16.693776	17.092944	15.82416	14.819112	156
	Kom Imbou	39768	26.761933	28.906606	26.155008	29.783445	27.8222	32.642248	28.923903	32.543027	29.834196	32.370054	296
	Tweissa	30210	21.06294	20.15559	18.47406	19.33932	19.36899	22.19109	21.43623	21.79365	19.7892	19.78437	203
	Selsela	29390	14.331086	15.229069	14.87975	17.565079	19.098982	19.3798	18.244752	19.657392	17.359295	17.429563	173
	Idfou East	28105	17.382516	18.220742	19.346647	19.81573	19.494526	21.653306	21.42629	23.385765	20.131997	21.390259	202
	Edfou West	31385	13.402459	18.236668	17.677233	21.249721	20.779374	21.844714	23.392594	21.588594	20.259643	19.341981	198
	Saayda	30000	17.892	16.992	18.414	19.17	19.152	20.538	19.098	20.61	17.964	19.242	189
	Total	203208	127.49107	131.11993	130.9348	142.31265	140.86307	153.61	149.21555	156.67137	141.16249	144.37734	1418

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Winter 2005-2006 (m.m3)

Directorate	IWMD	Area f	Oct - 05		Nov - 05		Dec - 05		Jan - 06		Feb - 06		Mar - 06		Apr - 06		Total
			1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	
Zifta	North Zifta	43,230	7,747	7,229	7,771	7,546	6,295	6,366	9,226	3,397	5,980	5,684	5,510	8,832	6,471	11,626	100
	El Santa	55,810	11,555	14,956	16,490	18,779	13,489	7,549	14,016	12,896	14,205	12,992	18,139	14,977	18,897	22,643	212
	Quesna	53,250	8,527	16,255	15,779	8,684	2,945	5,649	3,629	-1,326	8,609	10,045	7,150	15,658	8,654	10,425	121
	South Zifta	39,650	9,171	14,057	12,909	10,274	10,178	8,372	11,961	1,163	8,936	10,586	12,094	13,033	12,595	12,085	147
	Berket El Sab	39,490	4,842	4,066	5,956	6,471	7,462	4,889	5,518	0,598	2,869	6,632	7,370	7,986	8,108	7,924	81
Total	231,430	41,842	56,563	58,905	51,754	40,369	32,825	44,351	16,727	40,599	45,938	50,264	60,487	54,726	64,702	660	
Sharkia	Abo Kebir	58882	12,2314635	11,3738241	13,5823838	12,9540103	11,5224079	10,887058	9,8747486	0	6,00519631	12,9444277	8,80060117	10,533263	12,0899975	11,2209199	144
	Kafr Sakr	54070	5,730	13,167	19,307	14,742	13,151	11,616	8,054	0,000	7,607	14,595	20,194	6,968	16,640	26,943	179
	Wlad Sakr	68000	16,903	12,681	18,680	17,655	14,330	15,325	13,177	0,000	11,415	15,868	18,811	13,983	27,422	20,930	217
	Ibrahimia	59214	16,814	19,686	17,670	17,461	13,330	14,983	17,758	3,195	4,074	17,325	13,277	16,235	20,023	17,284	209
	Zagazig	63685	13,071612	15,795264	13,61436	13,41228	11,983872	12,926892	14,4423	0	4,557612	15,20268	14,685144	16,22832	15,023232	15,024936	176
Total	303851	64,750	72,702	82,853	76,225	64,317	65,738	63,305	3,195	33,658	75,934	75,767	63,948	91,198	91,403	925	
West Qena	Esna	59970	32,475	35,877	22,827	22,887	21,329	29,942	1,738	26,140	20,691	18,606	25,386	25,808	27,467	27,672	339
	Arment	34200	12,033	10,771	15,599	14,072	14,131	12,775	5,080	15,546	14,324	12,325	15,142	15,826	14,392	9,755	182
	Nakada	32210	11,750	12,269	7,603	10,886	10,368	11,059	0,000	6,826	10,656	9,101	10,541	11,088	10,858	8,813	132
	Nagaa Hammadi	64000	34,530	35,270	37,030	31,403	31,555	36,721	19,154	33,843	40,932	25,291	29,089	32,521	32,502	31,163	451
	Abu Tesht	37000	21,077	17,371	19,862	18,856	16,847	22,903	0,967	15,008	21,658	17,833	18,045	25,343	21,068	12,417	249
Total	227380	111,864	111,558	102,921	98,104	94,230	113,399	26,938	97,363	108,260	83,156	98,203	110,586	106,286	89,820	1353	
East Qena	Luxor	42850	22,100	24,160	19,119	16,480	15,599	13,675	0,000	12,427	10,684	9,181	9,855	11,095	6,966	6,564	178
	Qous	36010	8,598	8,707	9,082	2,526	0,000	1,950	0,117	0,000	9,149	13,406	6,578	23,646	11,044	1,275	96
	Qena	49400	21,162	23,693	21,297	22,216	22,283	24,488	3,082	15,294	24,393	23,056	26,489	25,345	27,043	23,243	303
	Deshna	50100	13,774	14,826	14,393	12,442	11,661	10,855	7,571	12,424	10,662	11,661	12,140	12,952	12,577	16,100	174
Total	178360	177,499	182,945	166,813	151,768	143,773	164,368	37,708	137,509	163,148	140,460	153,264	183,624	163,917	137,002	751	
Aswan	Aswan	14350	7,130	6,707	4,772	4,885	5,227	4,624	3,355	5,246	4,800	4,045	5,058	5,990	5,771	5,655	73
	Kom Imbou	39768	32,300	33,815	26,654	24,521	26,552	27,371	12,148	27,410	21,667	21,621	26,547	28,604	26,875	26,692	363
	Tweissa	30210	21,413	22,879	19,835	19,048	19,171	16,972	8,877	18,867	18,219	16,016	19,475	19,592	17,603	17,654	256
	Selsela	29390	17,553	19,427	15,463	16,061	15,102	19,058	1,352	15,075	16,995	16,153	15,219	15,768	14,204	13,961	211
	Idfou East	28105	23,320	25,622	18,665	18,759	17,953	21,194	11,757	22,664	16,607	17,651	20,757	23,024	20,640	20,392	279
	Edfou West	31385	23,381	24,178	16,113	12,958	13,918	13,443	8,759	13,824	9,048	8,866	13,472	3,140	12,352	14,227	188
	Saayda	30000	19,296	20,430	12,330	12,204	14,886	13,140	13,374	12,996	14,364	11,826	19,440	20,628	19,440	16,038	220
	Total	203208	144,394898	153,057615	113,831963	108,43572	112,808637	115,8018	59,6210108	116,081174	101,699699	96,1778503	119,968334	116,744507	116,885446	114,618862	1590

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Summer 2006 (m.m3)

	Area f	May - 06		Jun - 06		Jul - 06		Aug - 06		Sep - 06		Total	
		1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end		
Zifta	North Zifta	43,230	11.512	10.713	14.141	17.632	21.158	19.379	15.061	11.911	9.772	8.023	139
	El Santa	55,810	20.730	27.874	37.229	27.205	32.413	32.699	25.095	28.748	27.236	27.293	287
	Quesna	53,250	6.339	16.711	19.243	10.739	6.392	16.391	13.473	15.388	9.025	11.391	125
	South Zifta	39,650	13.760	18.300	14.800	17.160	16.630	19.130	15.170	18.240	15.460	13.640	162
	Berket El Sabaa	39,490	11.004	12.199	11.508	10.917	10.660	12.296	9.767	10.486	9.096	8.124	106
	Total	231,430	63.346	85.797	96.921	83.653	87.253	99.895	78.565	84.774	70.589	68.471	819
Sharkia	Abo Kebir	58882	13.540	16.197	24.764	18.916	25.319	24.297	24.297	23.836	23.633	16.244	211
	Kafr Sakr	54070	25.556	29.984	31.341	26.147	30.390	30.863	26.125	26.227	25.946	21.343	274
	Wlad Sakr	68000	15.813	22.059	24.975	34.290	35.667	36.018	32.049	32.067	21.090	11.070	265
	Ibrahimia	59214	20.204	25.752	25.383	28.715	24.089	28.401	26.611	27.583	25.003	15.741	247
	Zagazig	63685	14.035	24.625	27.440	29.567	30.514	29.987	28.093	28.157	25.847	13.178	251
	Total	303,851	89.148	118.617	133.903	137.635	145.979	149.566	137.175	137.870	121.519	77.576	1249
West Qena	Esna	59970	26.955	31.024	31.564	30.432	29.704	34.570	34.264	37.349	34.399	31.548	322
	Arment	34200	10.977	15.633	18.340	19.603	20.202	20.973	20.972	22.241	18.775	21.274	189
	Nakada	32210	11.088	15.149	15.062	14.112	14.458	16.042	15.206	16.272	14.602	8.813	141
	Nagaa Hammadi	64000	32.089	35.726	33.765	38.263	37.596	40.170	36.082	38.183	38.143	38.117	368
	Abu Tesht	37000	18.503	22.501	22.692	20.961	20.241	20.734	22.049	23.170	20.029	21.047	212
	Total	227,380											1232
East Qena	Luxor	42850	5.720	10.548	6.742	12.474	16.687	16.107	17.018	17.769	14.613	12.541	130
	Qous	36010	27.737	39.446	24.586	23.806	21.373	21.590	18.325	17.884	10.448	10.793	216
	Qena	49400	18.511	22.999	22.893	21.214	22.274	23.001	22.278	19.633	20.607	20.779	214
	Deshna	50100	15.987	16.430	15.683	20.559	18.061	20.301	19.472	21.525	18.443	17.957	184
	Total	405,740	67.955	89.422	69.905	78.054	78.396	80.999	77.093	76.811	64.111	62.070	745
Aswan	Aswan	14350	6.238	8.549	7.394	8.099	7.862	8.204	8.283	8.500	8.457	7.794	79
	Kom Imbou	39768	27.076	28.751	28.317	28.258	26.165	28.089	28.541	29.406	27.839	28.039	280
	Tweissa	30210	18.173	17.325	18.869	21.988	24.434	26.010	22.111	25.177	21.758	18.669	215
	Selsela	29390	14.824	16.351	15.018	17.553	17.128	17.637	18.058	16.543	15.046	17.616	166
	Idfou East	28105	19.197	18.208	19.364	19.896	19.688	21.142	20.674	22.699	20.284	22.923	204
	Idfou West	31385	13.731	18.320	20.907	20.194	18.846	22.320	21.204	21.718	20.054	22.058	199
	Saayda	30000	13.731	18.320	20.907	20.194	18.846	22.320	21.204	21.718	20.054	22.058	199
	Nokra	30000	6.659	8.181	7.283	8.693	9.326	10.469	6.024	8.233	4.944	8.777	79
Total	233208	119.62875	134.00415	138.05724	144.87423	142.29665	156.19146	146.09768	153.9931	138.43616	147.93467	1422	

Determination of Biweekly Supplies to IWMDs

Actual Water Supply for Winter 2006-2007 (m.m3)

Directorate	IWMD	Area f	Oct - 06		Nov - 06		Dec - 06		Jan - 07		Feb - 07		Mar - 07		Apr - 07		Total
			1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	
Zifta	North Zifta	43,230	6.613	5.894	5.241	6.495	6.865	6.822	10.173	7.940	4.278	6.128	6.527	10.156	14.064	11.055	108
	El Santa	55,810	15.500	17.900	17.600	22.900	1.770	4.850	7.830	10.690	8.220	10.220	11.220	12.220	15.850	15.390	172
	Quesna	53,250	7.500	8.190	10.380	11.040	7.520	8.370	5.740	5.740	11.160	11.160	12.160	14.320	13.670	15.180	142
	South Zifta	39,650	15.07	12.38	13.74	12.65	13.69	9.42	12.17	11.06	11.51	9.75	14.61	15.66	14.36	12.92	179
	Berket El Sab	39,490	6.200	10.100	5.900	7.600	8.500	9.012	9.100	5.600	3.650	5.410	6.940	9.300	5.900	8.040	101
Total	231,430	50.883	54.464	52.861	60.685	38.345	38.474	45.013	41.030	38.818	42.668	51.457	61.656	63.844	62.585	703	
Sharkia	Abo Kebir	58882	14.110	9.659	8.567	16.020	12.743	12.625	14.018		0.594	12.034	18.275	14.541	15.814	15.792	165
	Kafr Sakr	54070	6.840	4.950	8.136	10.830	8.990	5.711	8.540			5.677	6.942	7.132	11.088	12.619	97
	Wlad Sakr	68000	16.600	10.980	17.800	22.000	12.000	11.590	9.650	10.990		9.000	13.770	13.830	14.840	7.400	170
	Ibrahimia	59214	5.000	6.000	10.850	12.320	6.050	5.460	7.860			9.350	13.750	11.410	8.900	11.820	109
	Zagazig	63685	3.802	7.604	11.716	12.168	7.319	7.268	15.954			9.803	15.568	15.699	15.223	9.466	132
Total	303851	46.352	39.193	57.069	73.337	47.102	42.655	56.021	10.990	0.594	45.864	68.304	62.611	65.865	57.098	673	
West Qena	Esna	59970	33.550	32.014	29.350	26.482	24.028	19.549	27.769	2.517	29.760	19.241	26.174	31.623	28.444	27.997	358
	Arment	34200	19.325	20.721	17.803	15.048	13.478	14.958	15.877	0.872	12.014	7.801	12.282	11.634	11.877	11.091	185
	Nakada	32210	11.200	10.360	4.700	7.400	4.550	5.840	7.600		8.830	7.430	11.950	11.840	10.600	9.380	112
	Nagaa Hammadi	64000	26.779	23.707	24.005	20.790	16.994	19.121	18.640		11.387	13.561	11.197	16.201	19.828	19.991	242
	Abu Tesht	37000	23.508	20.412	19.207	17.143	16.661	1.929	12.660	14.659	20.649	14.514	20.193	20.649	19.976	21.042	243
Total	227380	114.362	107.214	95.065	86.864	75.712	61.396	82.546	18.048	82.640	62.547	81.796	91.947	90.725	89.501	1140	
East Qena	Luxor	42850	11.876	10.784	10.581	8.634	12.276	12.533	13.796		7.292	11.740	11.694	10.747	13.539	11.933	147
	Qous	36010	24.723	26.191	11.344	12.903	4.937	3.609	2.330		10.210	12.345	5.464	4.732	5.549	10.811	135
	Qena	49400	20.764	21.471	18.759	19.178	22.283	24.488	18.546		21.564	19.328	23.176	21.420	19.079	21.559	272
	Deshna	50100	16.210	18.000	17.850	15.900	14.920	14.730	11.980	1.720	9.020	12.500	15.580	20.880	18.250	19.080	207
	Total	178360	187.934	183.660	153.600	143.479	130.128	116.757	129.198	19.768	130.727	118.460	137.710	149.725	147.141	152.884	761
Aswan	Aswan	14350	7.919	7.150	6.703	6.478	5.819	5.019	3.610	6.027	5.686	5.862	6.055	6.552	6.268	6.462	86
	Kom Imbou	39768	17.900	19.900	16.400	15.700	13.900	13.300	11.070	9.100	10.300	13.700	15.240	16.370	14.300	16.200	203
	Tweissa	30210	17.030	16.063	14.880	15.064	16.360	14.937	11.402	8.117	10.834	14.300	15.479	15.482	15.493	15.788	201
	Selsela	29390	14.282	14.171	13.720	13.350	13.240	11.160	0.000	9.486	13.551	8.542	10.840	11.904	10.546	10.936	156
	Idfou East	28105	16.650	16.650	15.850	15.850	18.156	18.308	12.181	13.914	15.178	15.890	16.887	19.612	15.430	15.690	226
	Edfou West	31385	20.397	14.800	17.914	13.130	13.007	11.869	0.000	15.353	10.939	8.424	10.892	12.207	14.951	14.276	178
	Saayda	36802	17.370	18.250	18.830	19.440	17.820	14.000	15.210	14.330	14.940	15.550	18.250	19.800	17.140	15.590	237
	Nokra	68516	9.004	9.503	11.068	10.818	10.909	10.841	10.350	9.860	9.570	8.700	9.570	8.700	8.450	7.000	134
Total	278526	111.548	106.984	104.297	99.012	98.302	88.593	53.473	76.327	81.428	82.268	93.643	101.927	94.128	94.942	1421	

Determination of Biweekly Supplies to IWMDs

Actual Water Allocation for Summer 2007 (m.m3)

	Area f	May - 07		Jun - 07		Jul - 07		Aug - 07		Sep - 07		Total	
		1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end	1 - 15	16 - end		
Zifta	North Zifta	43,230	10.696	15.575	21.271	23.618	23.838	24.745	22.066	17.690	19.859	16.659	196
	El Santa	55,810	15.430	17.060	19.200	27.700	20.920	19.550	18.540	13.300	13.660	11.390	177
	Quesna	53,250	13.800	13.800	18.550	19.950	17.680	19.930	19.880	20.150	16.770	15.740	176
	South Zifta	39,650	14.214	17.454	16.790	18.208	17.510	19.919	19.366	20.418	18.781	13.973	177
	Berket El Sabaa	39,490	8.200	8.400	10.400	11.400	9.700	11.000	10.500	9.160	9.550	9.000	97
	Total	231,430	62,340	72,289	86,210	100,875	89,648	95,143	90,351	80,717	78,619	66,762	823
Sharkia	Abo Kebir	58882	17.183	16.832	20.255	19.819	18.501	17.207	18.478	17.913	15.648	13.709	176
	Kafr Sakr	54070	10.766	13.818	17.488	16.808	16.459	17.871	15.880	17.220	17.470	22.450	166
	Wlad Sakr	68000	9.940	12.300	36.720	28.590	34.540	36.030	35.000	34.110	19.980	11.840	259
	Ibrahimia	59214	7.100	9.300	18.447	24.019	18.484	19.688	25.328	24.338	14.430	10.080	171
	Zagazig	63685	14.451	16.891	14.071	14.071	37.901	38.531	36.527	22.287	11.051	6.131	212
	Total	303,851	59,440	69,141	106,981	103,307	125,885	129,327	131,213	115,868	78,578	64,210	984
West Qena	Esna	59970	24.690	30.670	31.383	29.660	31.383	29.660	32.441	36.391	35.317	31.589	313
	Arment	34200	13.440	13.533	17.059	17.200	19.000	20.510	22.317	20.250	19.220	20.738	183
	Nakada	32210	9.630	10.900	13.140	12.600	13.608	14.100	14.535	13.200	12.300	11.400	125
	Nagaa Hammadi	64000	24.264	23.295	24.630	24.440	29.760	30.190	31.530	27.030	25.290	26.070	266
	Abu Tesht	37000	17.600	15.160	20.400	17.370	20.950	20.220	19.790	20.710	21.280	16.280	190
	Total	227,380											1078
East Qena	Luxor	42850	11.050	12.700	18.700	19.200	19.200	19.700	20.700	21.000	18.450	17.050	178
	Qous	36010	11.120	19.410	19.050	32.010	18.540	20.120	17.240	18.620	16.020	17.340	189
	Qena	49400	24.836	24.836	20.336	18.236	20.806	19.736	26.306	21.776	18.646	16.196	212
	Deshna	50100	18.465	18.842	19.775	22.055	21.385	25.535	21.515	25.085	18.915	17.985	210
	Total	405,740	65,471	75,788	77,861	91,501	79,931	85,091	85,761	86,481	72,031	68,571	788
Aswan	Aswan	14350	5.891	6.406	5.840	5.802	6.260	7.054	6.466	7.173	6.843	5.821	64
	Kom Imbou	39768	16.300	17.500	17.850	17.960	18.040	18.880	17.640	17.750	16.880	16.560	175
	Tweissa	30210	15.590	15.880	16.150	16.140	15.150	16.200	15.800	17.250	14.000	12.600	155
	Selsela	29390	11.987	9.685	11.699	13.699	13.629	13.246	12.475	13.423	11.672	13.789	125
	Idfou East	28105	16.877	16.178	17.344	17.344	18.850	19.370	18.120	18.860	16.270	16.465	176
	Idfou West	31385	15.066	15.941	19.307	18.528	19.205	20.787	15.220	15.752	14.878	14.813	169
	Saayda	30000	12.370	18.300	17.510	16.970	16.590	17.590	16.740	17.310	16.240	16.170	166
	Nokra	30000	7.100	6.680	8.120	8.550	8.840	9.550	10.190	9.060	8.630	7.900	85
	Total	233208	101.1809738	106.5697605	113.8203845	114.9927754	116.5636076	122.6765983	112.6512518	116.5782841	105.4129172	104.1180156	1115