

THE CITY OF HARRISBURG  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF WATER  
  
**MONTHLY REPORT**



The hydro-electric turbine being removed for preventative maintenance.

**June 2011**

Linda D. Thompson, Mayor  
City of Harrisburg

J. Marc Kurowski ,Chairman  
The Harrisburg Authority

Ernest Hoch, Director  
Department of Public Works

Raly Bey, Director  
Bureau of Water

## **GENERAL**

During the month of June 2011, the Bureau of Water met all Federal Safe Drinking Water Act Primary Water Quality Standards. Shown in Exhibit B, a total of 257.42 million gallons (MG) of water were treated and distributed to the Harrisburg Water System. A total of 271.77 MG were withdrawn from our water supply sources. A total of 271.77 MG were withdrawn from DeHart Reservoir; 0 MG were withdrawn from Susquehanna River; and United Water of Pennsylvania withdrew 0 MG via their raw water interconnect. Data collected through March is presented in Exhibit B with flows in MGD. The data is broken down into the DeHart Reservoir and Susquehanna River sources.

## **OPERATIONS**

During the month of June 1, 2011 through June 30, 2011, the DeHart Water Treatment Train was in service thirty (30) days and the Susquehanna Water Treatment Train was in service zero (0) days. An estimated 904.9 million gallons were released from the DeHart to Clark's Creek, averaging 31 MGD during the month. This down stream flow, which is received, by remote flow monitoring from the weir location and actual staff gauge readings, exceeded the flow required by the State Water Allocations Permit (Exhibit E).

During the month of June, the Hydro-Turbine generator was off-line awaiting parts for repair (refer to Exhibit G).

The DeHart watershed had below average rainfall in June (Exhibit C). The pH of the rainfall during this period was acidic, averaging 6.27 units, which is not uncommon in the Northeast Atlantic States. The DeHart water level decreased (Exhibit D).

## June 2011 Accomplishments

### Operations Division

- Attended monthly Bureau Safety Committee and Staff meetings.
- Analyzed data gathered from reservoir and stream monitoring.
- Cleaned and calibrated all meters and probes used for sampling as required.
- Continued monitoring flow of Clark Creek entering the reservoir.
- Ran River pumps.
- Completed Annual Partnership for Safe Water report.

### Water Quality Division

- Attended monthly Bureau Safety Committee and Staff meetings.
- Maintained the water quality control and assurance schedules.
- Prepared monthly reports for submittal to the DEP.
- Assisted other divisions as needed.
- 2010 CCR mailed to consumers and posted on THA and the City's website.
- Annual Proficiency test perform and results submitted to ERA.

### Maintenance Division

- Attended monthly Bureau Safety Committee and Staff meetings
- Prepared work schedules and supervised personnel assigned to the DeHart Dam Complex.
- Continued scheduled preventive maintenance, and repaired equipment as required.
- Continued seasonal grass cutting and lawn maintenance.
- Installed the new temperature probes on the Hydro-Turbine.
- Constructed cinderblock walls on remaining open stairwell on turbine building, and installed a 36" steel entry door.
- Finished remaining pallet racking in the 6 bay maintenance garage.
- Performed scheduled cleaning duties at Bureau Facilities.
- Continued Pulpwood Harvest 8, and 9.
- Cut up and removed all downed trees at DeHart from storm.
- Removed the air/vacuum release in A/V pit # 5.
- Continued to pick up trash along Route 325.
- Continued to locate the mountain line.
- Assisted other bureau divisions as required.

### Distribution Metering Division

- Attended monthly Bureau Safety Committee and Staff meetings.
- Continued the sale of bulk water.
- Continued to work on the meter report forms and the vacant coded list.
- Assisted other Bureaus and Departments as required.
- Performed (512) service calls.
- Elmerton Ave street restoration
- Trench training with Hbg. fire dept.
- Removed steam line Cameron St. & Paxton St.

- Schoolhouse & Wood St. street restoration
- 26<sup>th</sup> St. & Boas St. replaced damage fire hydrant
- Replaced leaking water service 616 S. 20<sup>th</sup> St
- Assisted filling both city swimming pools
- Cold patch valve box at Front & Paxton St
- Installed hydrants connections Riverfront Park 4<sup>th</sup> July weekend

### Goals for July 2011

#### Operations Division

- Attend monthly Bureau Safety Committee and Staff meetings.
- Monitor the reservoir for pH, algae and levels of stratification in order to determine appropriate intake levels and possible treatment.
- Continue to analyze data collected from stream and reservoir sampling.
- Place Hydro-Turbine back in service.
- Continue to update Operations SOP's
- Complete the annual Hazardous Substance Survey Form (HSSF).

#### Water Quality Division

- Attend monthly Bureau Safety Committee and Staff meetings.
- Continue to maintain the water quality control and assurance schedules.
- Assist other Bureau divisions as needed.
- Collect and submit third quarter samples for TTHM's, HAA5's and TOC's ,SOC's, Dioxins and PCB's.

#### Maintenance Division

- Attend monthly Bureau Safety Committee and Staff meetings.
- Prepare work schedules and supervise personnel assigned to the DeHart Dam Complex.
- Continue scheduled preventive maintenance, and repair equipment as required.
- Continue seasonal grass cutting and lawn maintenance.
- PM the wicket gates and place the Hydro-Turbine back online.
- Lay cinderblock wall for the wash bay, in the 6 bat garage.
- Run conduit and install 3 phase wiring for the Landa pressure washer in the new wash bay.
- Replace the 4" gate valve and air/vacuum release in A/V pit # 5.
- Drain the 42" mountain line from Middle Paxton Elementary School to the underpass in Dauphin and inspect the source of the leak and repair same day if possible.
- Perform scheduled cleaning duties at Bureau Facilities.
- Continue Pulpwood Harvest 8, and 9.
- Continue to pick up trash along Route 325.
- Continue to locate the mountain line.
- Assist other bureau divisions as required.

### **Distribution Metering Division**

- Attend monthly Bureau Safety Committee and Staff meetings.
- Continue bulk water sales.
- Continue to work on the meter report forms, the vacant coded list, and street restorations.
- Continue to repair or replace fire hydrants as required.
- Continue to assist other departments and divisions as required.
- Continue to perform tap removals based on the demolition list

EXHIBIT A

Process Control/Water Quality Analysis - 2011

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average	MCCL Limits
<b>Total Coliform Presence/Absence</b>														
DeHart Influent	P	P	P	P	P	P							P	
Susquehanna Influent	NA	NA	NA	NA	NA	NA							N/A	
Distribution System	A	A	A	A	A	A							<1	< 5% Positive
<b>Chlorine Residual, mg/l Free</b>														
Filter Plant Effluent	1.79	1.79	1.77	1.84	1.60	1.60							1.60	
Distribution System	1.09	0.99	1.00	1.00	0.95	0.89							0.99	> 0.02
<b>Turbidity, NTU</b>														
Influent from DeHart	0.65	0.52	0.77	0.78	0.85	0.69							0.74	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	0.06	0.06	0.65	0.04	0.05	0.04							0.05	<0.30
<b>pH, Std Units</b>														
Influent from DeHart	5.95	5.77	5.65	5.60	5.54	5.51							5.67	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	7.78	7.60	7.83	7.83	7.83	7.82							7.82	
Distribution System	7.18	7.15	7.17	7.68	7.43	7.30							7.32	
<b>Total Alkalinity, mg/l</b>														
Influent DeHart, as CaCO3	5.31	5.32	5.05	4.41	4.46	5.54							5.01	
Influent Susquehanna, as CaCO3	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent, as CaCO3	14.35	14.59	14.56	13.38	13.74	14.87							14.25	
Distribution System	11.20	12.45	13.70	12.60	11.47	12.90							12.39	
<b>Temperature, C</b>														
Influent from DeHart	5.44	5.46	7.00	9.50	12.66	14.99							9.16	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	5.12	5.46	6.76	9.33	12.12	13.77							8.76	
Distribution System	9.75	10.50	11.68	12.49	16.42	19.63							13.35	
<b>Fluoride, mg/l</b>														
Filter Plant Effluent	0.96	0.93	0.88	0.82	0.81	0.65							0.87	2.00
<b>Ammonium, mg/l</b>														
Filter Plant Effluent	0.03	0.02	0.02	0.03	0.02	0.02							0.02	0.20
<b>Iron, mg/l</b>														
Influent from DeHart	0.11	0.10	0.08	0.08	0.09	0.15							0.10	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	0.01	0.01	0.01	0.01	0.01	0.01							0.01	0.30
Distribution System	0.03	0.09	0.03	0.04	0.05	0.12							0.06	0.30
<b>Total Dissolved Solids, mg/l</b>														
Influent from DeHart	14.89	15.68	15.15	14.21	13.71	13.83							14.58	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	34.58	36.12	37.38	36.99	37.01	39.76							39.97	
Distribution System	35.20	36.64	37.70	37.56	38.03	39.96							37.52	
<b>Total Hardness, mg/l</b>														
Influent from DeHart	7.98	8.07	7.84	7.73	7.32	7.18							7.69	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	15.42	15.56	16.42	16.45	16.40	18.47							16.45	
Distribution System	13.50	15.87	19.50	16.17	16.39	18.65							16.67	
<b>Orthophosphate, mg/l</b>														
Filter Plant Effluent	1.12	1.08	1.11	1.13	1.20	1.13							1.13	
Distribution System	1.16	1.13	1.20	1.36	1.28	1.31							1.24	
<b>Total Trihalomethanes, mg/l</b>														
Distribution System	0.03	NA	NA	NA	0.05	NA							0.04	0.08
<b>Total Hepatic Acids, mg/l</b>														
Distribution System	0.04	NA	NA	NA	0.05	NA							0.04	0.06
<b>Total Organic Carbon, mg/l</b>														
Influent from DeHart	1.90	NA	NA	NA	2.30	NA							2.10	
Influent from Susquehanna	NA	NA	NA	NA	NA	NA							N/A	
Filter Plant Effluent	1.20	NA	NA	NA	1.40	NA							1.30	
Average Filter Run, Hours	83.30	81.91	82.08	78.13	84.00	83.39							82.14	

Note: Total Hardness = Calcium Hardness + Magnesium Hardness, mg/l as CaCO3

\* Running Annual Quarterly Average

EXHIBIT B

Flow Monitoring and Water Withdrawal Information 2011

Month	DeHart Total (MG)	DeHart Average (MGD)	River Total (MG)	River Average (MGD)	* U.W.P.A. Interconnect (MG)	Total Water Withdrawn (MG)	Total Water Withdrawn Avg. (MGD)	Finished Water (MG)	Finished Water (MGD)	Ten Year Average (MGD)	Process Water (MG)	Waste to Sewer (MG)
January	261.66	8.44	0.00	0.00	0.00	261.66	8.44	245.77	7.93	8.47	2.86	5.92
February	239.64	8.56	0.00	0.00	0.00	239.64	8.56	225.70	8.06	8.52	2.82	5.46
March	246.93	7.97	0.00	0.00	0.00	246.93	7.97	235.66	7.60	8.36	2.87	5.44
April	257.70	8.59	0.00	0.00	0.00	257.70	8.59	239.24	7.97	8.17	3.24	4.94
May	263.55	8.50	0.00	0.00	0.00	263.55	8.50	250.32	8.07	8.39	4.13	5.49
June	271.77	9.06	0.00	0.00	0.00	271.77	9.06	257.42	8.58	8.75	5.46	5.85
July										8.82		
August										8.83		
September										8.56		
October										8.06		
November										7.81		
December										7.85		
Total	1,541.25	51.12	0.00	0.00	0.00	1,541.25	51.12	1,454.11	48.22	100.59	21.38	33.10
Average	256.87	8.52	0.00	0.00	0.00	256.87	8.52	242.35	8.04	8.38	3.56	5.52

\* U.W.P.A. Denotes United Water Pennsylvania

Peak Day Water Use for Report Month (MGD) 9.46 on 6/13/11

Minimum Day Water Use for Report Month (MGD) 8.64 on 6/1/11

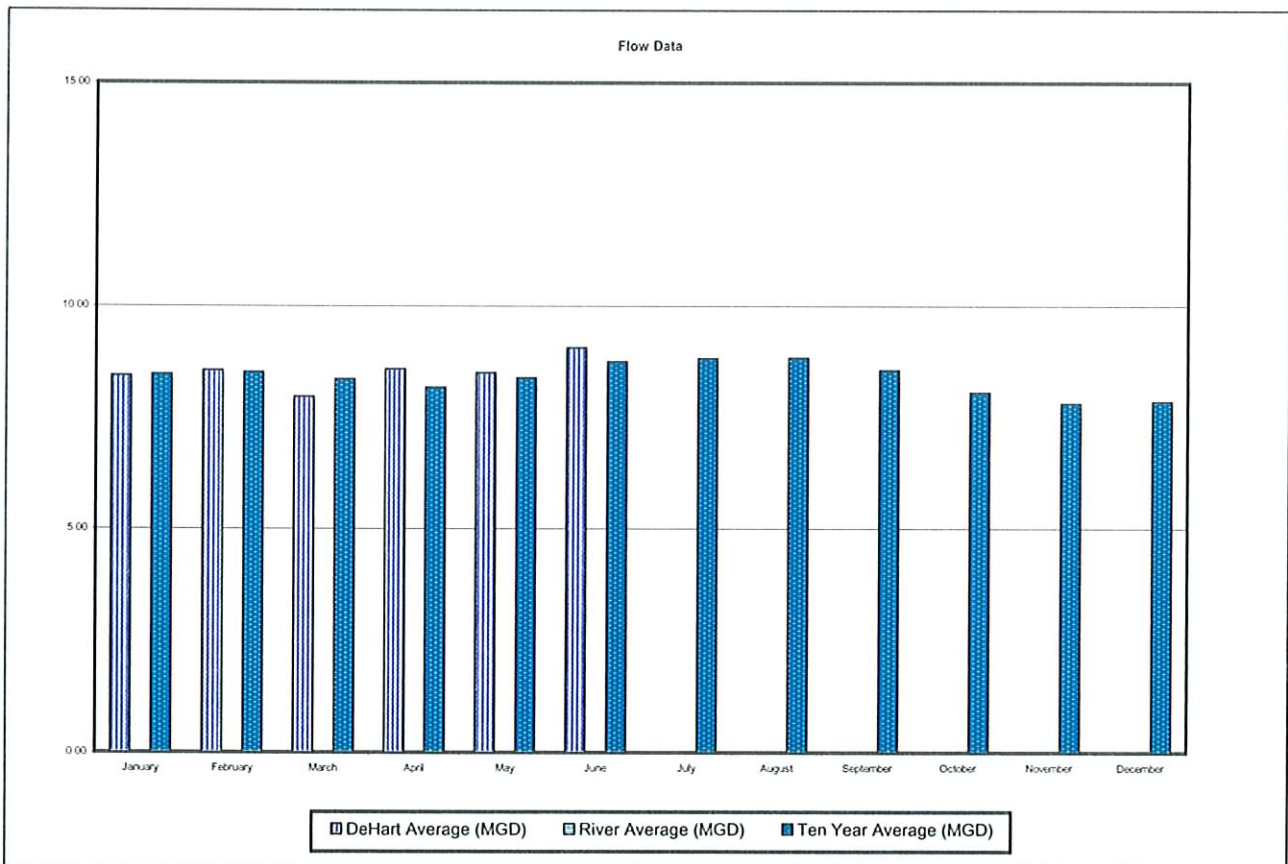
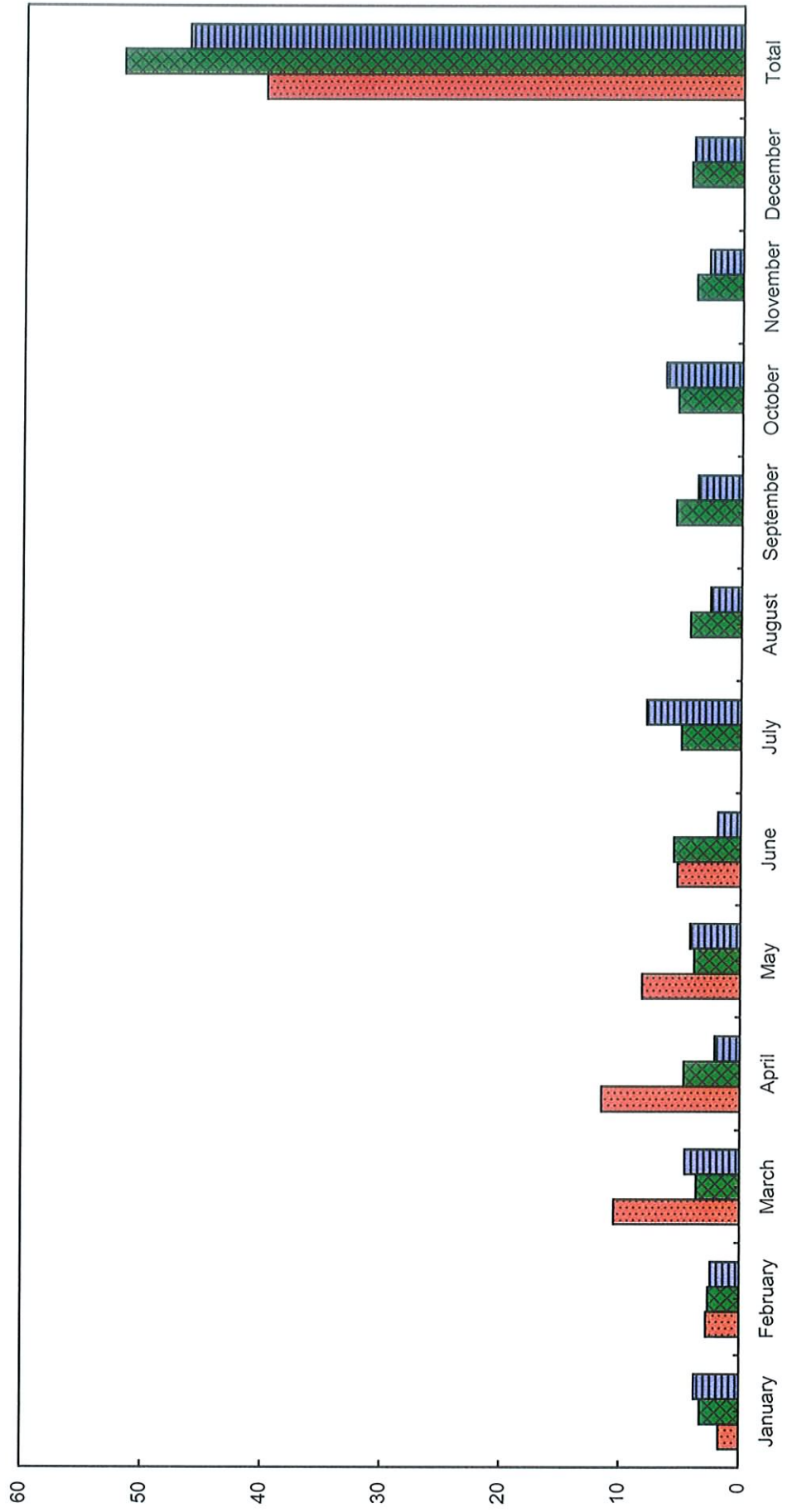


EXHIBIT C

Rainfall at the DeHart Reservoir - 2011

Date	January	February	March	April	May	June	July	August	September	October	November	December
<b>2011 Total</b>	1.71	2.77	10.49	11.53	8.18	5.27						
<b>Daily Average</b>	0.055	0.098	0.338	0.384	0.263	0.175						
<b>Ten Year Average</b>	3.29	2.62	3.62	4.68	3.84	5.59	4.96	4.25	5.5	5.34	3.84	4.31
<b>2010 Total</b>	3.78	2.41	4.57	2.11	4.19	1.9	7.89	2.59	3.68	6.38	2.78	4.08

Rainfall Trends  
2011



2011 Total    Ten Year Average    2010 Total

EXHIBIT D

Water Level at the DeHart Reservoir - 2010

Date	January	February	March	April	May	June	July	August	September	October	November	December
2011 AVG	-74.3	-83	-9.61	6.23	5.16	3.43						
Ten Year AVG	-43.59	-41.06	-30.96	-16.62	-14.38	-17.01	-29.03	-45.54	-63.99	-76.78	-81.38	-68.66
2010 AVG	3.83	3.03	4.93	3.1	2.06	-9.93	-29.41	-53.25	-84.03	-97.16	-114.3	-78.6

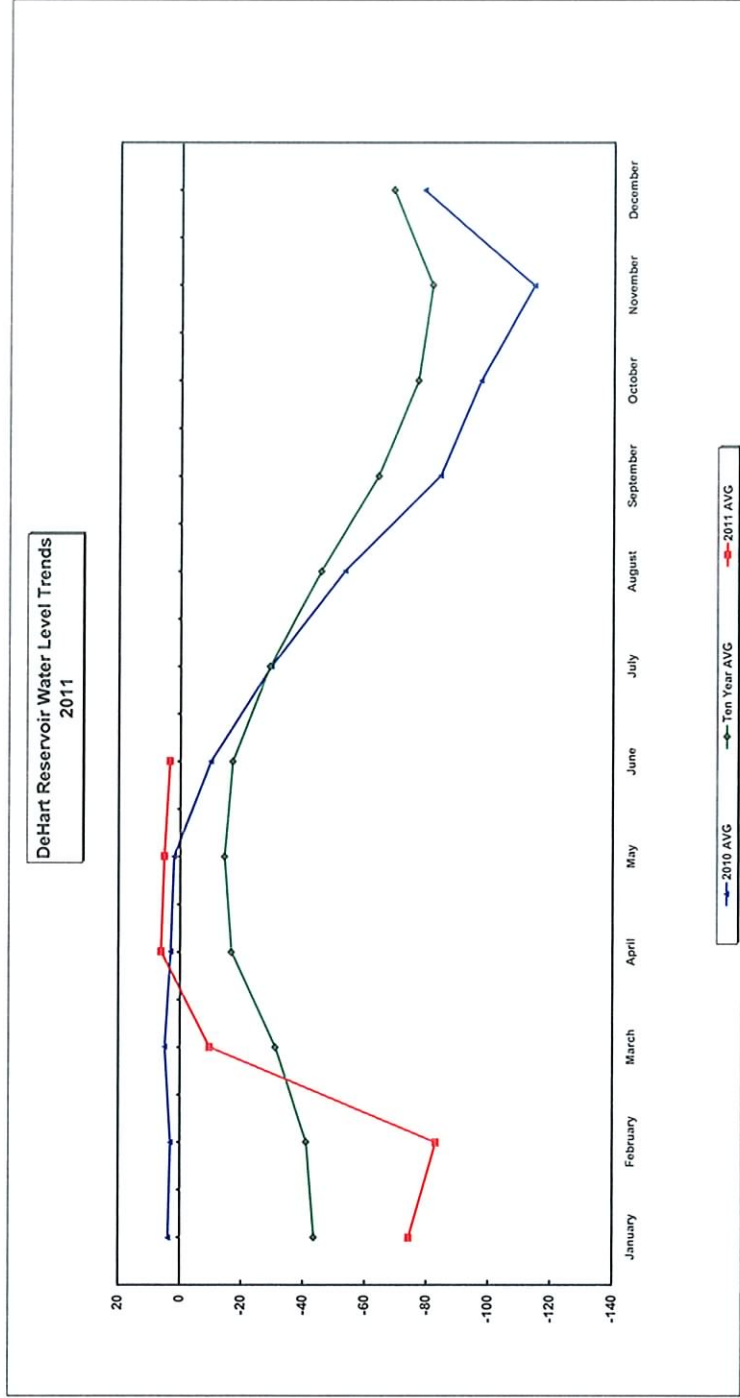


EXHIBIT E

Maintenance of Minimum Daily Conservation Release - 2011

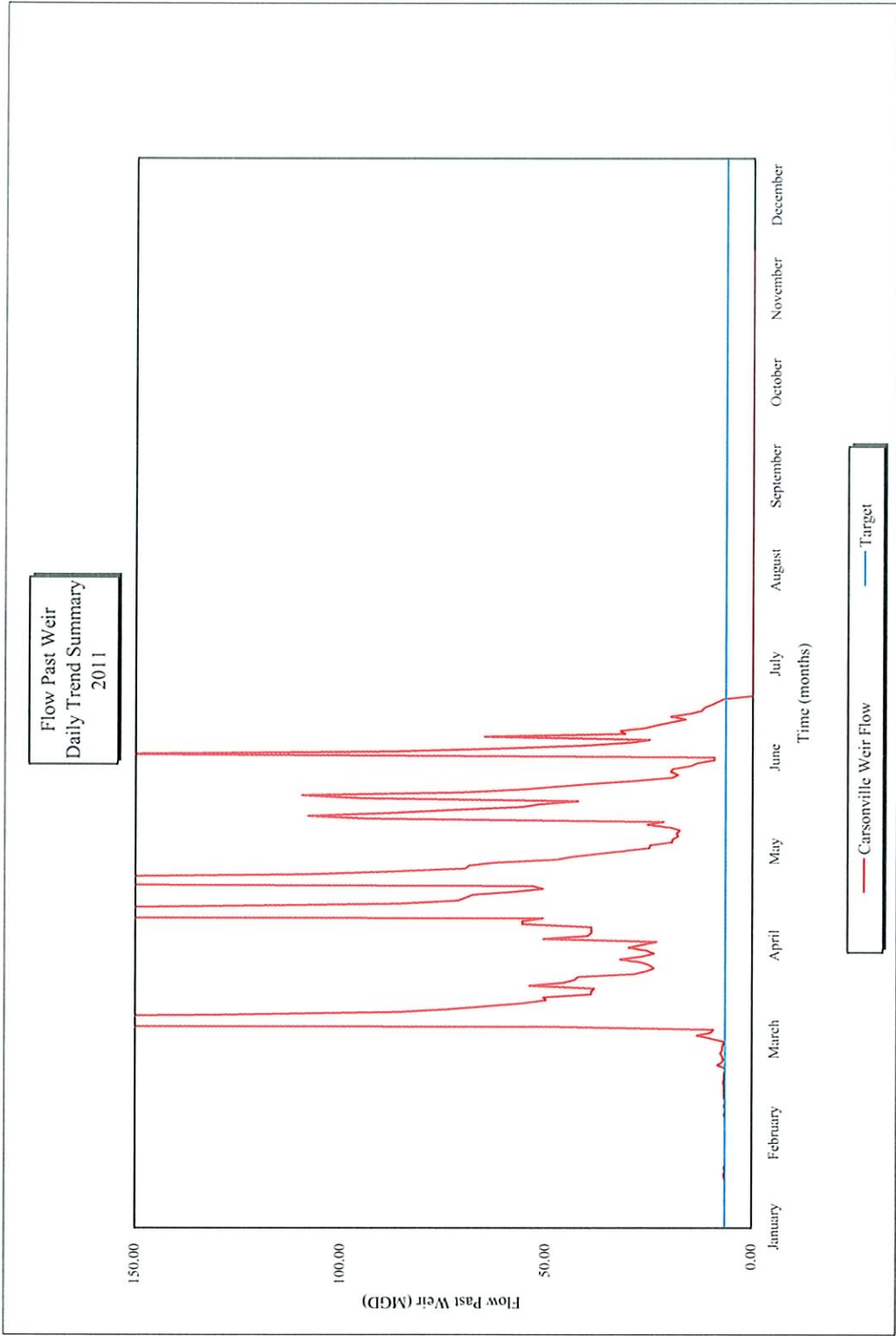


EXHIBIT F  
Utility Usage - 2011

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
<u>Dr. Robert E. Young Water Services Center</u>														
Electric														
Total, kWh	133,200	118,800	127,800	122,400	217,800								144,000	720,000
Average, kWh/Day	4,297	4,243	4,123	4,080	7,026								4,754	4,754
Cost, Dollars	\$11,349.28	\$13,450.63	\$12,056.92	\$11,818.52	\$16,932.88								\$13,221.65	\$66,108.23
Natural Gas														
Total, Cu Ft	1,411,000	1,285,000	1,019	549	232								539,560	2,697,800
Average, Cu Ft/Day	45,516	45,893	33	18	7								18,294	18,294
Cost, Dollars	\$17,714.97	\$12,430.49	\$6,257.01	\$2,943.26	\$1,268.04								\$8,122.75	\$40,613.77
Potable Water														
Total, Gal	6,200	5,300	7,700	5,700	52,300	276,000							58,867	353,200
Average, Gal/Day	200	189	248	190	1,687	9,200							1,952	1,952
Cost, Dollars	\$31.46	\$23.38	\$33.97	\$25.15	\$230.75	\$1,217.71							\$260.40	\$1,562.42
<u>Reservoir Park Pump Station</u>														
Electric														
Total, kWh	84,800	96,000	84,400	86,000	99,200								90,080	450,400
Average, kWh/Day	2,735	3,429	2,723	2,867	3,200								2,991	2,991
Cost, Dollars	\$8,304.58	\$8,613.94	\$12,365.29	\$8,938.90	\$6,983.94								\$9,041.33	\$45,206.65
Natural Gas														
Total, Cu Ft	48	41	29	6	5	0							22	129
Average, Cu Ft/Day	2	1	1	0	0	0							1	1
Cost, Dollars	\$592.01	\$335.75	\$154.46	\$34.36	\$20.20	\$13.77							\$191.76	\$1,150.55
Potable Water														
Total, Gal	9,673	5,597	830	550	854	976							3,080	18,480
Average, Gal/Day	312	200	27	18	28	33							103	103
Cost, Dollars	\$49.08	\$24.69	\$3.66	\$2.43	\$3.77	\$4.31							\$14.66	\$87.94
<u>Susquehanna River Pump Station</u>														
Electric														
Total, kWh	600	600	600	600	600								600	2,400
Average, kWh/Day	19	21	19	20	19								20	20
Cost, Dollars	\$73.44	\$91.79	\$96.28	\$94.22	\$33.85								\$77.92	\$316.14
Natural Gas														
Total, Cu Ft	7,600	7,600	63		14	70							3,069	15,347
Average, Cu Ft/Day	245	271	2		2	2							104	104
Cost, Dollars	\$923.29	\$621.51	\$334.38		\$66.71	\$220.11							\$433.20	\$2,166.00
Potable Water														
Total, Gal	200	100	200	1,600	200	400							450	2,700
Average, Gal/Day	6	4	6	53	6	13							15	15
Cost, Dollars	\$1.01	\$0.44	\$0.88	\$7.06	\$0.88	\$1.76							\$2.01	\$12.04
<u>Union Square Booster Station</u>														
Electric														
Total, kWh	3,084	3,168	2,850	1,907	792								2,360	11,801
Average, kWh/Day	99	113	92	62	26								78	78
Cost, Dollars	\$331.64	\$422.05	\$330.73	\$236.32	\$43.46								\$272.84	\$1,364.20
DeHart Facilities														
Electric														
Total, kWh	7,019	4,022	6,055	5,285	4,063								5,289	26,444
Average, kWh/Day	226	144	195	170	131								173	173
Cost, Dollars	\$757.32	\$390.72	\$695.17	\$610.22	\$430.93								\$576.87	\$2,884.36
Fuel Oil														
Total, Gals.	1,500	1,000	1,000	750	375	100							788	4,725
Average, Gals/Day	48	36	36	25	12	3							27	27
Cost, Dollars	\$4,485.00	\$2,990.00	\$2,990.00	\$2,242.50	\$1,121.25	\$299.00							\$2,354.63	\$14,127.75
<u>City Island Heat Trace</u>														
Electric														
Total, kWh	397	350	351	325	314								347	1,737
Average, kWh/Day	13	13	11	10	10								11	11
Cost, Dollars	\$56.60	\$81.42	\$75.46	\$72.96	\$14.92								\$60.27	\$301.36
Expenditures YTD	\$45,169.68	\$39,476.82	\$35,394.22	\$27,025.89	\$27,151.58	\$1,756.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14,664.57	\$175,974.85

## Exhibit G

### Hydro-Turbine Generator Performance 2011

Month	Kilowatt-hour (KWH)	Anticipated Savings *
January	71,232	\$6,409
February	89,183	\$8,025
March	70,728	\$6,364
April	28,412	\$2,557
May	0	\$0
June	0	\$0
July		
August		
September		
October		
November		
December		
Average	43,259	\$3,892
Year to Date	259,555	\$23,355

\* Anticipated savings calculated by multiplying the KWH by the average electrical rate of \$0.08998

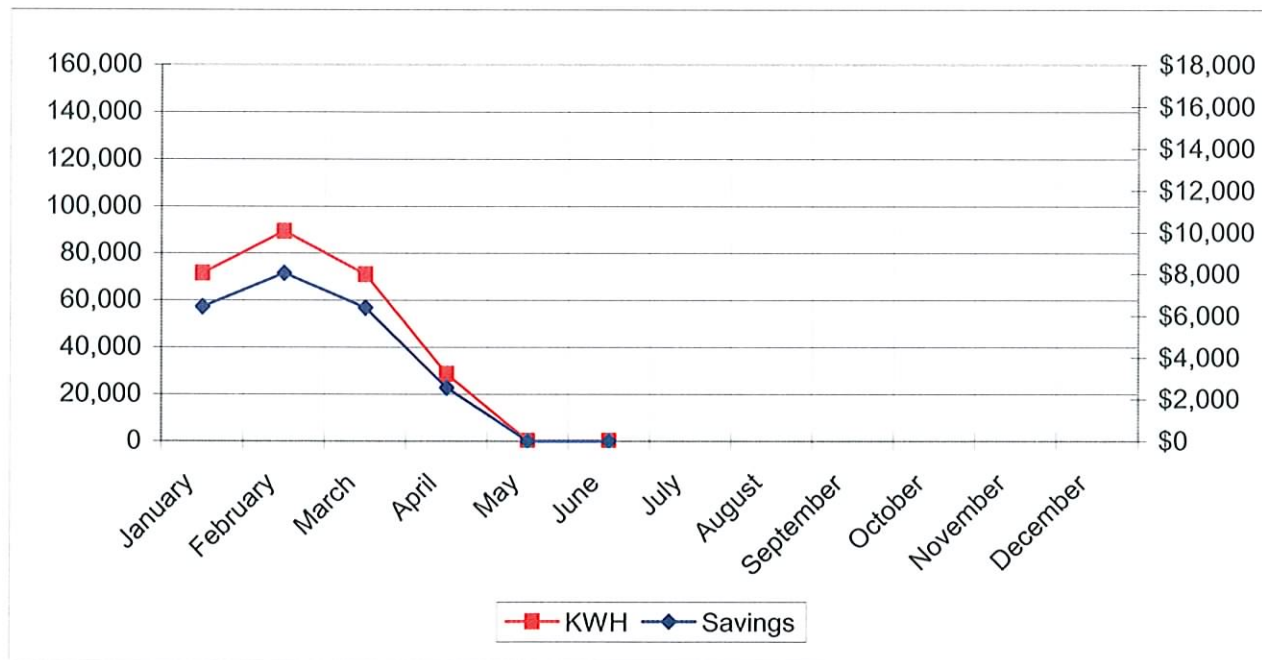


EXHIBIT H

Treatment Chemical Usage - 2011

Chemical	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
<b>Chlorine</b>														
Total, Lbs.	5,660	5,130	5,460	5,949	5,820	7,660							5,947	35,679
Average, Lbs./Day	183	183	176	198	188	255							197.2	
Dose, mg/l	2.6	2.6	2.7	2.8	2.6	3.4							2.8	
Cost, \$/Lbs.	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33							\$0.33	
Total Cost, Dollars	\$1,839.50	\$1,667.25	\$1,774.50	\$1,933.43	\$1,891.50	\$2,489.50							\$1,932.61	\$11,595.68
<b>Alum</b>														
Total 50 wt.% Al <sub>2</sub> SO <sub>4</sub> *14.3 H <sub>2</sub> O	5,314	4,715	5,423	6,649	6,917	6,891							5,985	35,909
Avg. Alum, Gals./Day	171	168	175	222	223	230							198.2	
Alum, mg/l	13.1	12.7	14.1	16.6	16.9	16.3							15.0	
Alum Cost, \$/Gal.	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64	\$0.64							\$0.64	
Alum Total Cost, Dollars	\$3,414.08	\$3,029.24	\$3,484.11	\$4,271.78	\$4,443.96	\$4,427.25							\$3,845.07	\$23,070.42
<b>Lime</b>														
Total Ca(OH) <sub>2</sub> , Lbs.	10,230	9,077	10,440	12,800	13,316	13,266							11,522	69,129
Average Lime, Lbs./Day	330	324	337	427	430	442							381.6	
Lime Dose, mg/l	4.7	4.5	5.1	6.0	6.1	5.9							5.4	
Lime Cost, \$/Lbs.	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08							\$0.08	
Lime Total Cost, Dollars	\$849.09	\$753.39	\$866.52	\$1,062.40	\$1,105.23	\$1,101.08							\$956.28	\$5,737.71
<b>Soda Ash</b>														
Total Na <sub>2</sub> CO <sub>3</sub> , Lbs.	15,500	16,000	17,700	14,480	15,900	16,200							15,963	95,780
Avg Soda Ash, Lbs./Day	500	571	483	513	513	540							529.7	
Soda Ash Dose, mg/l	7.1	8.0	8.6	6.7	7.2	7.1							7.5	
Soda Ash Cost, \$/Lbs.	\$0.23	\$0.23	\$0.23	\$0.23	\$0.23	\$0.23							\$0.23	
Soda Ash Total Cost, Dollars	\$3,548.73	\$3,663.20	\$4,052.42	\$3,315.20	\$3,640.31	\$3,708.99							\$3,654.81	\$21,928.83
<b>Fluoride</b>														
Total 59.8 wt. % Na <sub>2</sub> SIF <sub>6</sub> Lbs	2,665	2,475	2,505	2,430	2,460	2,910							2,574	15,445
Average, Fluoride Lbs./Day	86	88	81	79	81	97							85.4	
Fluoride (F-) Dose, mg/l	0.7	0.7	0.7	0.7	0.7	0.8							0.7	
Fluoride Cost, \$/Lbs.	\$0.44	\$0.44	\$0.44	\$0.44	\$0.44	\$0.44							\$0.44	
Fluoride Total Cost, Dollars	\$1,177.56	\$1,093.61	\$1,106.87	\$1,073.73	\$1,086.98	\$1,285.82							\$1,137.43	\$6,824.57
<b>Sodium Hydroxide</b>														
Total 50 wt.% NaOH Gals	593	493	653	772	755	931							700	4,197
Avg NaOH, Gals./Day	19	18	21	26	24	31							23.2	
NaOH, mg/l	1.7	1.6	2.0	2.3	2.2	2.6							2.1	
NaOH 50 wt. % Cost, \$/Gal.	\$2.66	\$2.66	\$2.66	\$2.66	\$2.66	\$2.66							\$2.66	
NaOH Total Cost, Dollars	\$1,578.51	\$1,312.32	\$1,738.22	\$2,054.99	\$2,009.74	\$2,478.23							\$1,862.00	\$11,172.02
<b>Zinc Orthophosphate</b>														
Total Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> , Lbs.	7,363	6,891	7,309	7,490	8,099	8,083							7,539	45,235
Avg Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> , Lbs./Day	238	246	236	250	261	269							250.0	
Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> Dose, mg/l	3.4	3.4	3.5	3.5	3.7	3.6							3.5	
Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> Cost, \$/Lbs.	\$0.47	\$0.47	\$0.47	\$0.47	\$0.47	\$0.47							\$0.47	
Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> Total Cost, Dollars	\$3,460.61	\$3,238.77	\$3,435.23	\$3,520.30	\$3,806.53	\$3,799.01							\$3,543.41	\$21,260.45
<b>Potassium Permanganate</b>														
Total KMnO <sub>4</sub> , Lbs.	0	0	0	0	0	0							0	0
Avg KMnO <sub>4</sub> , Lbs./Day	0	0	0	0	0	0							0.0	
KMnO <sub>4</sub> Dose, mg/l	0.0	0.0	0.0	0.0	0.0	0.0							0.0	
KMnO <sub>4</sub> Cost, \$/Lbs.	\$2.10	\$2.10	\$2.10	\$2.10	\$2.10	\$2.10							\$2.10	
KMnO <sub>4</sub> Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00							\$0.00	\$0.00
<b>Expenditures YTD</b>														
	\$15,868.08	\$14,757.78	\$16,457.86	\$17,231.81	\$17,984.24	\$19,289.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,931.61	\$101,589.67
Average Flow Withdrawn (MGD)	8.44	8.56	7.97	8.59	8.50	9.06	0.00	0.00	0.00	0.00	0.00	0.00	51.12	





**EXHIBIT K**

**Miscellaneous Water Usage (gals) 2011**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Main Leaks	265,491	0	0	11,750,508	0	0							12,015,999	2,002,667
Service Leaks	1,812,384	264,600	310,032	88,704	399,168								2,874,888	574,978
Fires	9,895	4,650	5,609	3,250	3,600	300							27,304	4,551
Street Sweepers	4,240	7,180	12,580	10,260	13,580	10,960							58,800	9,800
AWTF unmetered	0	2,700	3,200	0	6,300	5,800							18,000	3,000
Special Events	0	0	0	0	8,000								8,000	1,600
Lab and Instr. taps	557,256	475,951	581,866	468,808	536,922	533,738							3,154,541	525,757
High Resvr Leakage	527,497	548,104	530,008	613,980	488,869	597,718							3,306,176	551,029
Bulk Water	12,080	20,869	67,268	253,200	949,811	2,445,101							3,748,329	624,722
Flushing	0	0	0	0	7,207,870	0							7,207,870	1,201,312
Flow Tests	0	1,500	1,000	500	1,000	500							4,500	750
Vacancies/service leaks	0	2,571,480	2,268,000	4,412,520	907,200	1,360,800							11,520,000	1,920,000
Hydrant connections	0	2,000	0	0	19,000								21,000	4,200
<b>Total</b>	<b>3,188,843</b>	<b>3,899,034</b>	<b>3,779,563</b>	<b>17,601,730</b>	<b>10,541,320</b>	<b>4,954,917</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43,965,407</b>	<b>571,105</b>

EXHIBIT L

Revenue Report For The Year Ending December 31, 2011

<u>Account Description</u>	<u>Adjusted Budget</u>	<u>June Revenue</u>	<u>Year to Date Revenue</u>	<u>Budget Balance</u>
Interest - Savings Account	\$0.00	\$0.00	\$542.75	-\$542.75
Interest - Other	\$0.00	\$0.00	\$0.07	-\$0.07
<b>Total Interest Income</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$542.82</b>	<b>-\$542.82</b>
Sale of Assets	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Rental Revenue</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
Metered/Unmetered Water Sales Ready to Serve	\$0.00	\$7,940.75	\$33,828.44	-\$33,828.44
Metered Water Sales	\$0.00	\$1,648.47	\$7,039.41	-\$7,039.41
Mtrd Wat Ready to Serve	\$0.00	\$820,936.79	\$4,645,528.28	-\$4,645,528.28
Meter Sales Revenue	\$0.00	\$354,585.76	\$2,092,289.33	-\$2,092,289.33
Sale of Water Parts	\$0.00	\$0.00	\$14.00	-\$14.00
Water Conservation Device Sales	\$0.00	\$0.00	\$0.00	\$0.00
Fire Line Charges	\$0.00	\$1,020.98	\$280,706.57	-\$280,706.57
Other Hbg. Water Operational Revenue	\$0.00	\$13,891.17	\$39,145.45	-\$39,145.45
Water Tapping Fees	\$0.00	\$0.00	\$3,600.00	-\$3,600.00
Water Service Initiation Fee	\$0.00	\$0.00	\$200.00	-\$200.00
Water Restoration	\$0.00	\$10,559.14	\$45,004.99	-\$45,004.99
Water Termination Fee	\$0.00	\$0.00	\$100.00	-\$100.00
Harrisburg Water Liens-Principal Revenue	\$0.00	\$5,906.90	\$34,139.30	-\$34,139.30
Hbg. Water Liens-Interest Revenue	\$0.00	\$401.44	\$4,962.16	-\$4,962.16
<b>Total Hbg. Water Utility Fund</b>	<b>\$0.00</b>	<b>\$1,216,891.40</b>	<b>\$7,186,571.93</b>	<b>-\$7,186,571.93</b>
Metered/Unmetered Susq. Water Sales	\$0.00	\$106,895.89	\$676,035.31	-\$676,035.31
Susquehanna Ready to Serve	\$0.00	\$36,396.23	\$207,528.54	-\$207,528.54
<b>Total Susquehanna Water Revenue</b>	<b>\$0.00</b>	<b>\$143,292.12</b>	<b>\$883,563.85</b>	<b>-\$883,563.85</b>
Reimbursement for Loss	\$0.00	\$0.00	\$14,622.01	-\$14,622.01
Refund of Expenditures	\$0.00	\$100.00	\$300.00	-\$300.00
<b>Total Miscellaneous</b>	<b>\$0.00</b>	<b>\$100.00</b>	<b>\$14,922.01</b>	<b>-\$14,922.01</b>
<b>Total THA Water Utility Fund</b>	<b>\$0.00</b>	<b>\$1,360,283.52</b>	<b>\$8,085,600.61</b>	<b>-\$8,085,600.61</b>

**EXHIBIT M**

**Expenditure Report For The Year Ending December 31, 2011**

Account Description	Adjusted Budget	June Expenditure	June Encumbrance	Year to Date Expenditure	Budget Balance
<b>Administration Division</b>					
Salaries & Wages	\$287,600.00	\$18,089.83	\$0.00	\$113,886.79	\$173,713.21
Fringe Benefits	\$154,789.00	\$6,497.63	\$1,338.50	\$40,076.09	\$113,374.41
Communications	\$25,000.00	\$891.72	\$4,195.00	\$15,560.10	\$5,244.90
Professional Fees	\$52,500.00	\$750.00	\$6,200.00	\$8,750.00	\$37,550.00
Insurance	\$118,072.00	\$23,545.60	\$0.00	\$76,239.03	\$41,832.97
Maintenance & Repairs	\$65,200.00	\$375.00	\$1,030.92	\$27,816.81	\$36,352.27
Contracted Services	\$319,584.92	\$190.00	\$5,019.96	\$169,349.05	\$145,215.91
Supplies & Expenses	\$79,230.08	\$2,917.72	\$14,622.76	\$17,465.66	\$47,141.66
Payments Other Transfers - THA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Outlay	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment - Lease/Purchase	\$72,533.00	\$29,849.36	\$0.00	\$65,206.04	\$7,326.96
<b>Total Administration Division</b>	<b>\$1,174,509.00</b>	<b>\$83,106.86</b>	<b>\$32,407.14</b>	<b>\$534,349.57</b>	<b>\$607,752.29</b>
<b>Distribution/Metering Division</b>					
Salaries & Wages	\$551,380.00	\$40,834.80	\$0.00	\$280,044.53	\$271,335.47
Fringe Benefits	\$209,519.00	\$13,336.59	\$0.00	\$78,715.89	\$130,803.11
Communications	\$2,550.00	\$5.28	\$0.00	\$293.87	\$2,256.13
Rentals	\$2,700.00	\$0.00	\$0.00	\$0.00	\$2,700.00
Maintenance & Repairs	\$17,000.00	\$500.00	\$4,645.11	\$1,854.89	\$10,500.00
Contracted Services	\$746,802.00	\$0.00	\$0.00	\$399,909.90	\$346,892.10
Supplies & Expenses	\$186,950.00	\$26,670.15	\$102,478.50	\$41,356.33	\$43,115.17
Equipment - Lease/Purchase	\$30,749.00	\$0.00	\$0.00	\$15,374.64	\$15,374.36
<b>Total Distribution/Metering Division</b>	<b>\$1,747,650.00</b>	<b>\$81,346.82</b>	<b>\$107,123.61</b>	<b>\$817,550.05</b>	<b>\$822,976.34</b>
<b>Operations:</b>					
Salaries & Wages	\$917,517.00	\$64,872.52	\$0.00	\$415,376.60	\$502,140.40
Fringe Benefits	\$279,649.00	\$18,833.22	\$0.00	\$106,744.83	\$172,904.17
Communications	\$1,725.00	\$40.18	\$0.00	\$307.81	\$1,417.19
Professional Fees	\$4,000.00	\$0.00	\$0.00	\$0.00	\$4,000.00
Utilities & Service	\$672,000.00	\$36,171.19	\$13,435.95	\$330,421.85	\$328,142.20
Rentals	\$350.00	\$41.94	\$0.00	\$160.85	\$189.15
Maintenance & Repairs	\$51,350.00	\$11,247.86	\$11,969.44	\$31,556.89	\$7,823.67
Contracted Services	\$367,631.00	\$430.02	\$0.00	\$197,505.08	\$170,125.92
Supplies & Expenses	\$306,350.00	\$11,421.46	\$186,424.47	\$98,897.65	\$21,027.88
Equipment - Lease/Purchase	\$51,842.00	\$0.00	\$0.00	\$25,921.12	\$25,920.88
Capital Outlay	\$20,000.00	\$0.00	\$0.00	\$0.00	\$20,000.00
<b>Total Operations/Maintenance Division</b>	<b>\$2,672,414.00</b>	<b>\$143,058.39</b>	<b>\$211,829.86</b>	<b>\$1,206,892.68</b>	<b>\$1,253,691.46</b>
<b>Total Expenditure</b>	<b>\$5,594,573.00</b>	<b>\$307,512.07</b>	<b>\$351,360.61</b>	<b>\$2,558,792.30</b>	<b>\$2,684,420.09</b>