

## 2011 AND 2012 BUDGET

### APPENDIX

Revenue memos are placed first  
Followed by Expense memos

**2012 BUDGET MEMORANDUM - PROJECTED REVENUES**

**DATE:** October 24, 2011  
**TO:** File  
**FROM:** Jim Miskis  
**SUBJECT:** PROJECTED 2012 RESIDENTIAL WATER CONSUMPTION ESTIMATE

**Accuracy of 2011 Consumption Estimate**

The total projected residential water consumption for 2011, after adjustments and deduct meter refunds, was 328,798,300 gallons, which is 4,798,300 gallons more than the 324,000,000 gallons that were projected in the 2011 budget estimate. That is 1.5% more than projected.. The first and second quarters' water consumption were more or less on target, and during the third quarter water consumption was 5.9% greater than the target quarterly consumption. We anticipate fourth quarter consumption will be the target value of 87,480,000 gallons. The fourth quarter consumption period is between August 16<sup>th</sup> and November 15<sup>th</sup>.

We had based the 2011 residential water consumption on the 2010 consumption, with only a 0.03% increase for new customers, expecting that water reduction could not drop much further. (Prior to 2009 we normally projected a 1% increase in water consumption for new customer growth).

Attached are two charts that compare the quarterly residential water consumption from 2007 through 2011. The chart at the top of the page compares total water consumption before applying deduct meter credits, and the chart at the bottom shows after the credits are applied. Water consumption this year, after deduct meter adjustments, is 5.3% less than in 2007.

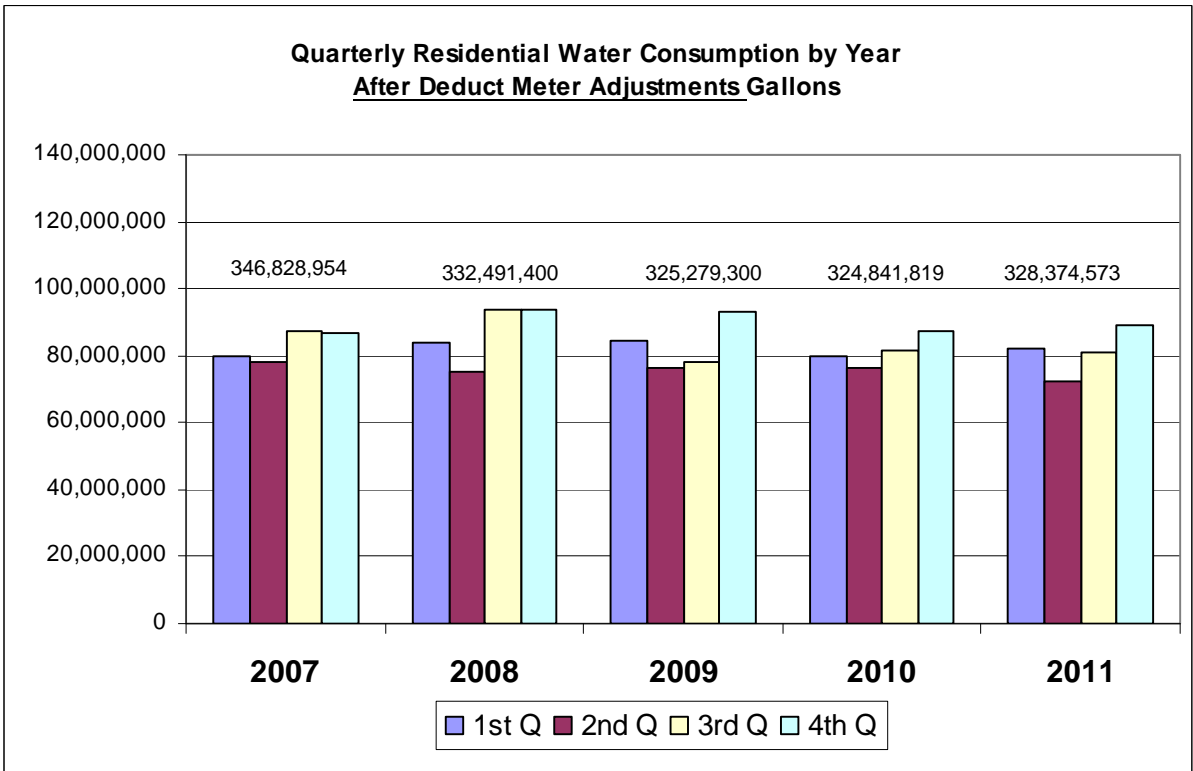
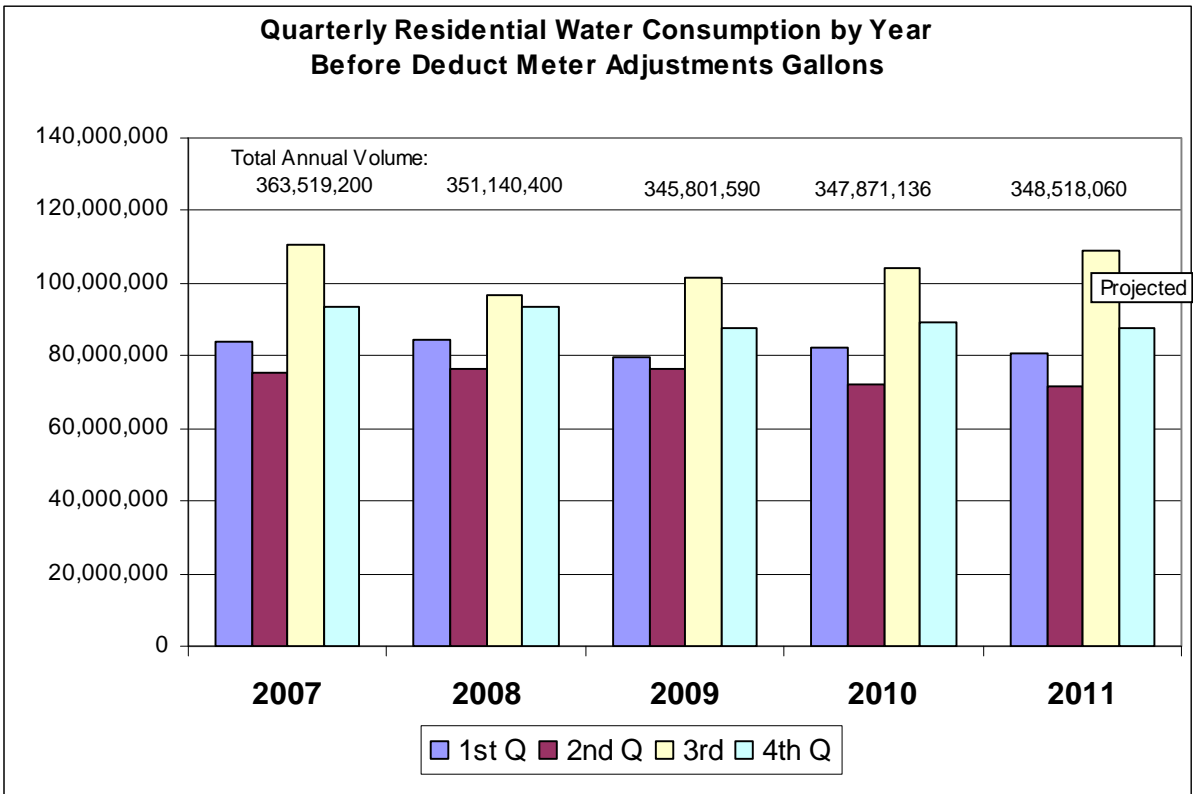
Our guess is that the combination of an increased number of patio homes, the gradual shrinking of the persons/household over time, the gradual replacement of out dated plumbing fixtures in existing homes with water saving devices, and the stagnant economy results in a gradual reduction of water consumption, even though we add a moderate number of new connections each year.

We should expect to see continued declining water consumption due to Energy Star products designed to use substantially less water. Previously water saving devices were largely limited to low flush toilets and shower heads. Today, however, washers and dishwashers are designed to use considerably less water than they used five years ago. Furthermore, there are now products available to retrofit toilets to be able to select even a lower water use flush, or the normal flush volume. As a result, we will have to adjust to declining revenues each year instead of increasing revenues from water consumption.

The 2011 average annual residential water consumption was 58,038 gallons/EDU, equivalent to 14,510 gallons/quarter, or 159 gpd based upon the following 2011 quarterly consumption data:

*\* Indicates quarter with deduct meter adjustments applied.*

<b>Quarter Ending</b>	<b>EDUs</b>	<b>Gallons Quarterly</b>	<b>% Change from 2010</b>	<b>Gallons Consumption/EDU</b>
March 31, 2011	5,641	80,474,000	-2.4%	14,266
June 30, 2011	5,646	71,498,867	-0.8%	12,663
September 30, 2011	5,654	88,921,706 *	-9.7%	15,727
December 31, 2011	5,658 est.	87,480,000 <i>est</i>	- 2.1%	15,461
<b>Total</b>		328,374,573	+1.0%	58,038 Annual 14,510Ave/Qtr



### **Projected 2012 Consumption**

Residential water consumption has been relatively flat since 1991, and the economy at this time remains slow, therefore we expect residential water consumption to remain flat for 2012. Our total projected water consumption for 2012 is 328,800,000 gallons, which is the same as 2011 consumption.

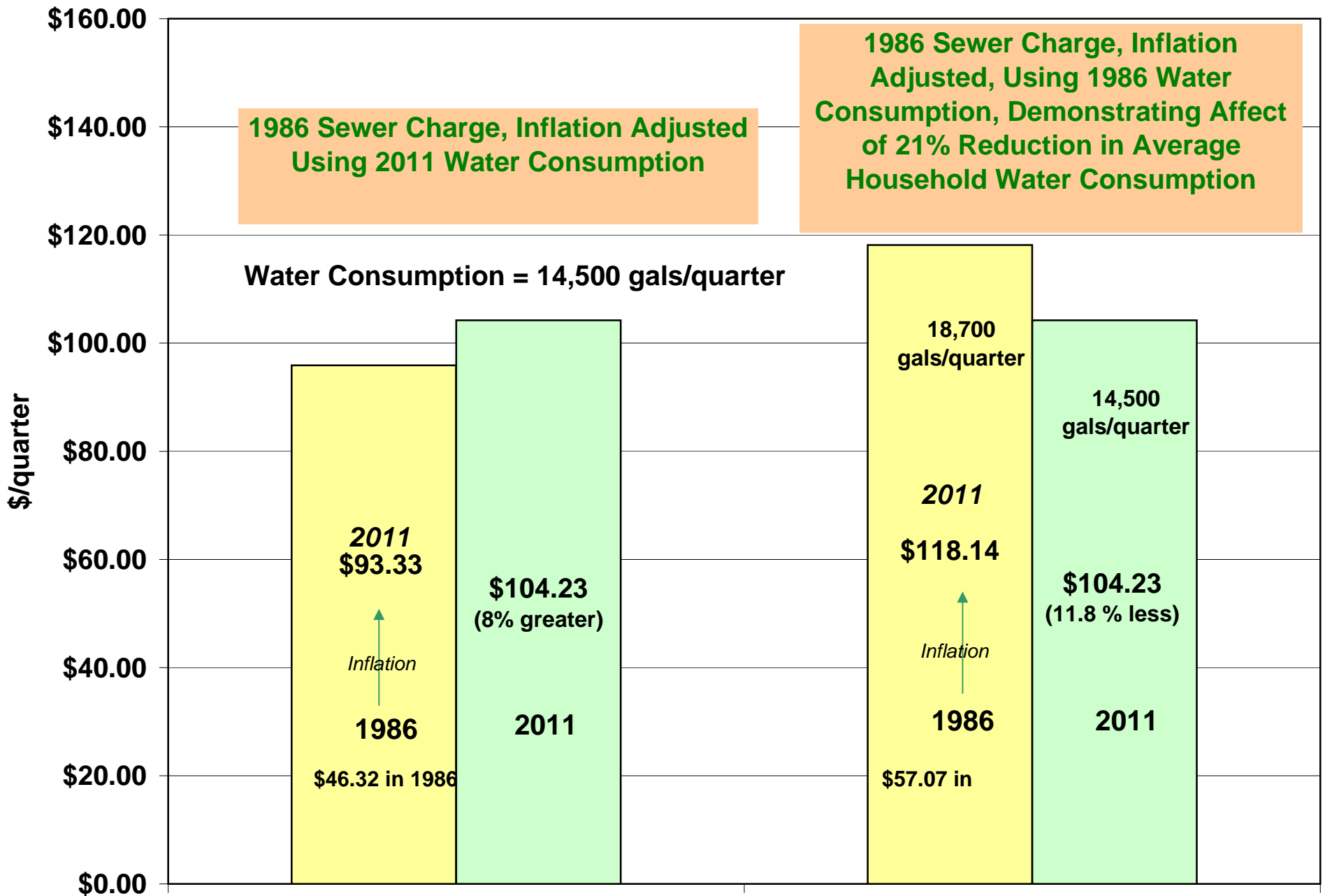
At \$5.05/1,000 gallons, this provides for residential sewer rentals of \$1,660,440.

### **Rate Increase Considerations**

A \$0.05/1,000 gallons increase in the sewer use rate would provide \$16,400 in additional revenue, based on four quarters.

If we were to target a 5% overall sewer charge increase, increasing the average residential customer's bill from \$104.23/quarter (14,500 gals/Qrt) to \$109.304/quarter, and keeping the Minimum Service Charge at \$31.00/quarter, the sewer use charge would increase to \$5.40/1,000 gallons. This would yield approximately \$113,700 of residential revenue, based on four quarters of water consumption.

Considering the rate increase is usually only effective for three quarters in the year it is enacted because of the need to provide notice to the customers, a 5% increase would yield about \$85,000 additional residential sewer rental revenue. (Combined residential and non-residential would be about \$105,000).



## 2012 BUDGET MEMORANDUM – PROJECTED REVENUES

**DATE:** October 28 2011

**TO:** File

**FROM:** Jim Miskis

**SUBJECT:** NON-RESIDENTIAL REVENUES AND WATER CONSUMPTION

### Accuracy of 2011 Consumption Projection

The 2011 budget projection for Non-Residential water consumption was gallons 74,262,000.

The actual 2011 Non-Residential consumption, after deduct meter adjustments, was 73,644,657 gallons. Water consumption was 0.8% less than our budget projection, mostly due to first quarter consumption, which was 8.4% less than the quarterly target consumption. Since then second quarter consumption was greater than target, and third quarter was just slightly under target. Therefore, fourth quarter consumption is predicted to be on target.

Non-Residential water consumption is highly variable, and in most years we have seen small to moderate growth in non-residential consumption each year, typically 2% to 7%, for 2011 we were anticipating a 2% increase in consumption, largely due to Healthcare REIT which we expected to begin occupying in 2011. This facility will only begin occupying in November 2011, therefore most of its consumption will occur in the 2012 first quarter consumption.

### Projected 2012 Consumption and Revenue

For 2012, with the economy slowly recovering, we believe that Non-Residential water consumption will increase slightly from the 2011 volume, on the order of 1.5%. Additional water consumption will occur due to increased occupancy of the Healthcare REIT facility, which will start to be occupied in November 2011. Hence for 2011 our estimate is 75,650,000 gallons. The revenue generated would be 75,650,000 gals @ \$5.05/1,000 gals = **\$382,000**.

### Projected 2012 Minimum Service Charge Revenue

The revenue from the Minimum Service Charge, which covers debt & administration costs, varies from quarter to quarter, based on water consumption, and typically yielded \$42,800/quarter during 2011. The projected 2012 annual revenue from the Minimum Service Charge is **\$174,000**, and with the \$14,000 expected from the water meter size charge, the total 2012 forecast is **\$188,000**.

### Rate Increase Considerations

If a 5% rate increase were enacted increasing the water consumption charge to \$5.40/1,000 gallons, the 2012 revenue would increase by \$20,000, based on the rate increase being in effect for three quarters. (Combined Residential and Non-Residential would add about \$105,000 in revenue),

TABLE-IV

**PETERS TOWNSHIP SANITARY AUTHORITY  
TAP & ASSESSMENT RECEIPTS  
2011**

<i>Per EDU</i>							
2008 Sept increase	\$3,200	\$3,460					
			<b>Brush Run</b>		<b>Donaldsons Crossroads</b>		
			Residential	Non-Residential	Residential	Non-Residential	
<b>1 QTR</b>							
January			4	0.0	0	0.0	
February			3	0.0	0	0.0	
March			0	0.0	1	0.03	
<b>Total Taps</b>			<u>7</u>	<u>0.0</u>	<u>1</u>	<u>0.03</u>	
Tap Reim - Brookwood Villa							
<b>Total Receipts</b>			<u>\$ 22,660</u>	<u>\$ -</u>	<u>\$ 3,200</u>	<u>\$ 91</u>	
<b>2nd QTR</b>							
April			2	0.0	1	0.0	
May			0	0.0	0	0.0	
June			2	0.0	0	0.0	
<b>Total Taps</b>			<u>4</u>	<u>0.0</u>	<u>1</u>	<u>0.0</u>	
Tap Reim - Overlook Developmt			1				
<b>Total Receipts</b>			<u>\$ 12,800</u>	<u>\$ -</u>	<u>\$ 3,200</u>	<u>\$ -</u>	
<b>3rd QTR</b>							
July			1	1.55	0	0.03	
August			2	0.03	0	0.0	
September			1	0.0	0	0.0	
<b>Total Taps</b>			<u>4</u>	<u>1.58</u>	<u>0</u>	<u>0.03</u>	
Tap Reim - Overlook Developmt							
Tap Reim - Brookwood Villa							
<b>Total Receipts</b>			<u>\$ 9,600</u>	<u>\$ 5,075</u>	<u>\$ -</u>	<u>\$ 91</u>	
<b>4th QTR</b>							
October			1	0.0	0	0.0	
November			2	0.0	0	0.0	
December			1	0.0	0	0.0	
<b>Total Taps</b>			<u>4</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>	
Tap Reim - Overlook Developmt							
<b>Total Receipts</b>			<u>\$ 12,800</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	
<b>TOTAL TAPS</b>			<b>19</b>	<b>1.58</b>	<b>2</b>	<b>0.06</b>	
<b>TOTAL RECEIPTS</b>			<u>\$ 57,860</u>	<u>\$ 5,075</u>	<u>\$ 6,400</u>	<u>\$ 182</u>	
Total Tap Reimbursements			\$ (3,200)				
<b>Total per Watershed</b>			Receipts	Taps	Total Receipts & Taps minus Reim		
Brush Run			\$ 62,935	20.6	\$ 59,735	18.0	
Donaldsons Crossroads			6,582	2.1	6,582	2.1	
<b>Grand Total</b>			<u>\$ 69,517</u>	<u>22.64</u>	<u>\$ 66,317</u>	<u>20.06</u>	
<b>Balance of Credit Taps Owed to Developer</b>							
					Tap Fee Reim Fair Acres = 50% of 3 Taps expires 12-15-2014		
<b>Outstanding Assessments &amp; Liens</b>					O/S		
Agriculture Deferment					\$ 94,672		
Assessments - Ivy Lane Project & 2007 E. McMurray Project					\$ 46,233		
Liens - Sewage & Tap Fee					\$ 2,073		

**2011 BUDGET MEMORANDUM WORKSHEET - REVENUES**

**RESIDENTIAL / NON-RESIDENTIAL SERVICE CHARGE REVENUE FORECAST**

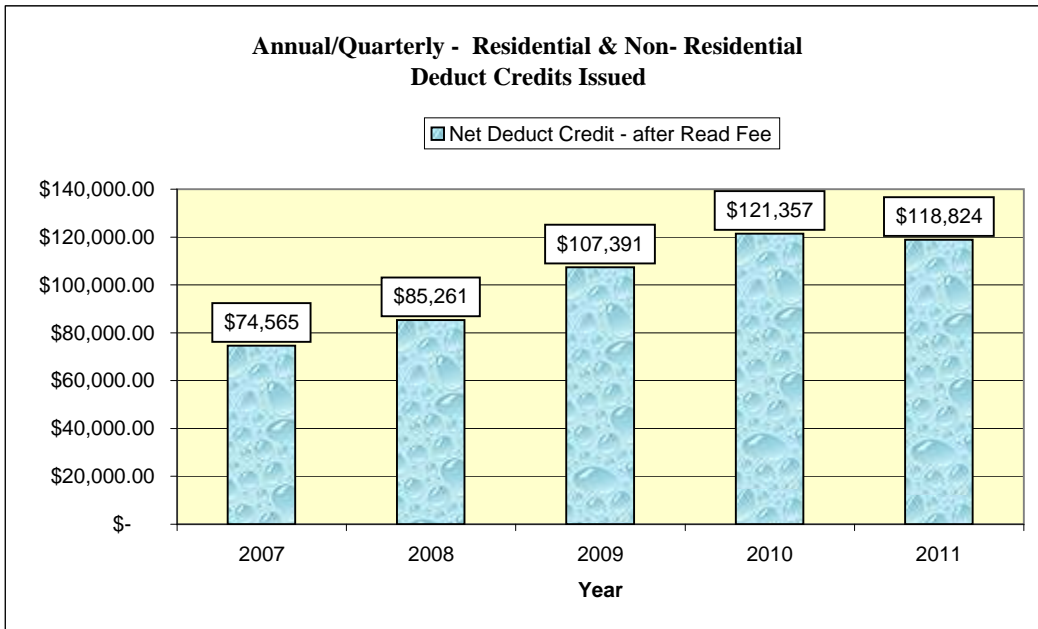
Minimum Service Charge: \$31.00 Per Quarter

	<b>Accounts /EDUs</b>			
	<b>Brush Run</b>	<b>DC</b>	<b>Total</b>	<b>Revenue</b>
Residential EDUs			5,652	
Non-Residential Billing Units			1,391	
Total as of 10/31/11			7,043	
<i>Dec 2011 New Customers</i>				
Residential EDUs	6	0	5,658	\$175,398
Non-Residential Accounts	0	0	1,391	\$43,121
YTD Quarterly Total	6	0	7,049	\$218,519
<i>March 2012 New Customers</i>				
Residential EDUs	3	1	5,662	\$175,516
Non-Residential Accounts	0	10	1,401	\$43,431
YTD Quarterly Total	9	11	7,063	\$218,947
<i>June 2012 New Customers</i>				
Residential EDUs	2	2	5,666	\$175,643
Non-Residential Accounts	0	22	1,423	\$44,113
YTD Quarterly Total	11	35	7,089	\$219,756
<i>Sept 2012 New Customers</i>				
Residential EDUs	6	0	5,672	\$175,829
Non-Residential Accounts	0	20	1,443	\$44,733
YTD Quarterly Total	17	55	7,115	\$220,562
<i>Dec 2012 New Customers</i>				
Residential EDUs	10	0	5,682	\$176,139
Non-Residential Accounts	0	20	1,463	\$45,353
YTD Quarterly Total	27	75	7,145	\$221,492
<b>New 2012 Customers</b>	<b>21</b>	<b>75</b>		
Grand Total Residential				\$703,127
Grand Total Non-Residential				\$177,630
Non-Res Meter Charge				\$14,000
<b>Combined Grand Total</b>				<b>\$894,757</b>

## 2011 Budget Memorandum - Deduct Credit Yearly Comparison

Date: 10/24/2011  
 To: File  
 From: Patricia L. Mowry

	2007	2008	2009	2010	2011
<b>Deduct Customers</b>					
Annual					
Residential	416	445	451	452	452
Non Residential	11	11	11	11	10
Quarterly -Non Residential	4	4	4	4	4
<b>Total Deduct Customers</b>	<b>431</b>	<b>460</b>	<b>466</b>	<b>467</b>	<b>466</b>
<b>Meter Fees</b>					
Meter Read Fee	\$ 5,244.00	\$ 5,598.00	\$ 5,798.05	\$ 5,918.63	\$ 5,490.00
Inspection Fee	2,160.00	1,862.00	2,160.00	2,240.00	-
Application Fee	1,260.00	1,780.00	1,080.00	1,560.00	920.00
	<b>\$ 8,664.00</b>	<b>\$ 9,240.00</b>	<b>\$ 9,038.05</b>	<b>\$ 9,718.63</b>	<b>\$ 6,410.00</b>
<b>Deduct Credits Issued</b>					
	<i>Sewer Rate</i>	<i>\$4.15</i>	<i>\$4.15</i>	<i>\$5.05</i>	<i>\$5.05</i>
Residential					
Consumption in gallons	16,599,111	18,491,072	20,225,368	22,749,461	20,092,487
<b>Deduct Credit</b>	<b>\$ 68,886.31</b>	<b>\$ 76,738.74</b>	<b>\$ 102,138.11</b>	<b>\$ 114,884.78</b>	<b>\$ 101,468.13</b>
Non Residential - includes Qtrly					
Consumption in gallons	2,631,875	3,317,780	2,188,240	2,453,586	4,523,850
<b>Deduct Credit</b>	<b>\$ 10,922.28</b>	<b>\$ 14,119.90</b>	<b>\$ 11,050.61</b>	<b>\$ 12,390.61</b>	<b>\$ 22,845.45</b>
Total Consumption	19,230,986	21,808,852	22,413,608	25,203,048	24,616,337
<b>Total Deduct Credit</b>	<b>\$ 79,808.59</b>	<b>\$ 90,858.64</b>	<b>\$ 113,188.72</b>	<b>\$ 127,275.39</b>	<b>\$ 124,313.58</b>
<b>Net Deduct Credit - after Read Fee</b>	<b>\$ 74,564.59</b>	<b>\$ 85,260.64</b>	<b>\$ 107,390.67</b>	<b>\$ 121,356.76</b>	<b>\$ 118,823.58</b>



## 2011 Deduct Summary

### Annual

Active Customers	451
New Deduct Customers	15
	466

### Inspections 0

All meters were inspected over the 6-year cycle. Change resolution to inspected when ownership changes and will re-inspect every 10-years.

Passed  
Violations/Discrepancies

### Annual Deduct Credit Summary

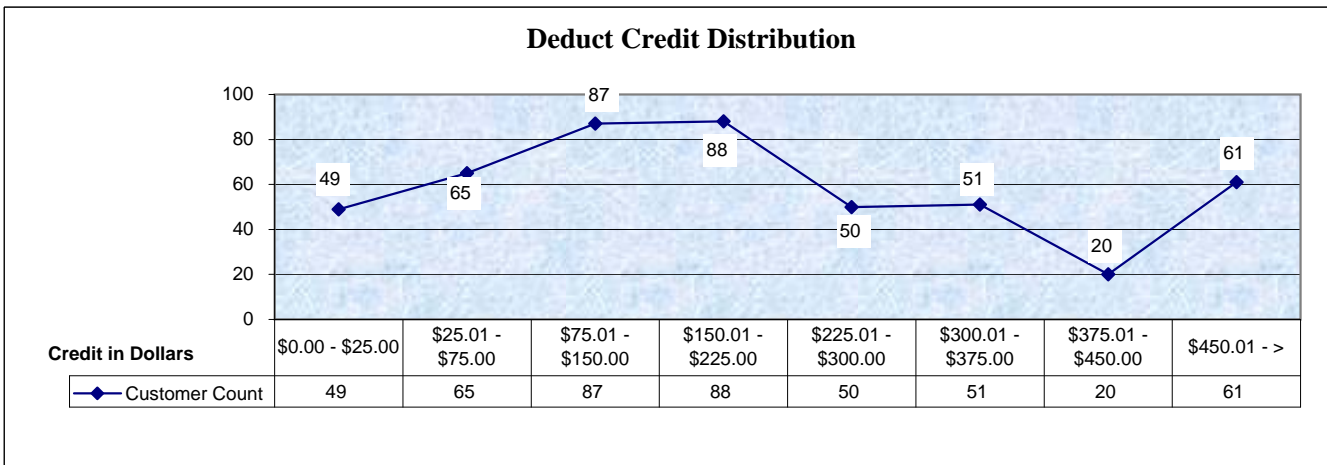
	Residential	Non Residential
Total Consumption	20,092,487	2,911,850
Total Deduct Credit	<b>\$ 101,468.13</b>	<b>\$ 14,704.85</b>

Credit in Dollars	Customer Count		Quarterly
	Residential	Non Residential	
\$0.00 - \$25.00	47	1	1
\$25.01 - \$75.00	65	-	-
\$75.01 - \$150.00	86	1	-
\$150.01 - \$225.00	88	-	-
\$225.01 - \$300.00	50	-	-
\$300.01 - \$375.00	51	-	-
\$375.01 - \$450.00	17	3	-
\$450.01 - >	53	5	3
	457	10	4

### Quarterly Deduct Credit Summary

Active Non-Residential Customers - 4

	Consumption	Deduct Credit
1st Qtr 2010	-	\$ -
2nd Qtr 2010	33,802	\$ 170.70
3rd Qtr 2010	1,578,198	\$ 7,969.90
	<b>1,612,000</b>	<b>\$ 8,140.60</b>



## 2012 BUDGET MEMORANDUM- EXPENSES

**DATE:**            **October 7, 2011**  
**TO:**               **File**  
**FROM:**           **Jim Miskis**  
**SUBJECT:**       **Sludge and Screenings Disposal Expense**

### Accuracy of 2011 Estimate

Our projection for 2011 sludge production was 1,820 wet tons. Actual production from September 1, 2010 through August 31, 2011 was 1,777 wet tons, which is 43 tons less than projected (2.4% less). The cake concentration averaged 14.6% over this period.

As of September 30, 2011 we were under budget, based on the previous 12-months of performance with a total 2011 sludge disposal cost estimated at \$68,800 compared to \$71,040 budgeted for this purpose. Overall, 2011 sludge, screenings and grit disposal is projected to cost \$72,300, compared to the budget amount of \$75,415.

### 2012 Projected Volume and Cost Estimate

Our sludge production tends to be highly variable, so in order to be conservative we estimate the 2012 tonnage based on the previous 12 months of sludge production plus a 5% safety factor, for a total 2012 production of **1,865 tons**.

Our current sludge hauling and disposal contract was bid in October 2011. The contract is a one-year contract with four optional years, providing us the ability to not pick up a future optional year if we discover disposal prices are dropping. The optional years extend through September, 2016. The disposal rate through for the first nine months of 2012 will be \$40.75/ton, then it will increase to \$41.97/ton for the remaining three months of 2012. Note that the \$4.00/ton Environmental Impact Fee is included in the cost/ton shown below. The estimated volume and cost for sludge disposal is:

Jan through Sep:	1,400 tons x \$40.75/ton = \$57,050.00
Oct through Dec:	465 tons x \$41.97/ton = \$19,500.00

For a total sludge disposal cost of \$76,550 (\$6,380/month). This is an increase of 11.3% from the 2011 projected cost of \$68,800 due to the increased disposal rate.

The sludge disposal contract includes screenings disposal. The washed screenings at Brush Run allows us to have a pick up frequency of only 1/week, whereas 3/week are required at the Donaldson's Plant

The 2012 screenings disposal cost is estimated at:

Jan through Sep, 9 months x \$271.37/month (for both plants) = \$2,442.00
Oct through Dec, 3 months x \$279.51/month x (for both plants) = \$839.00

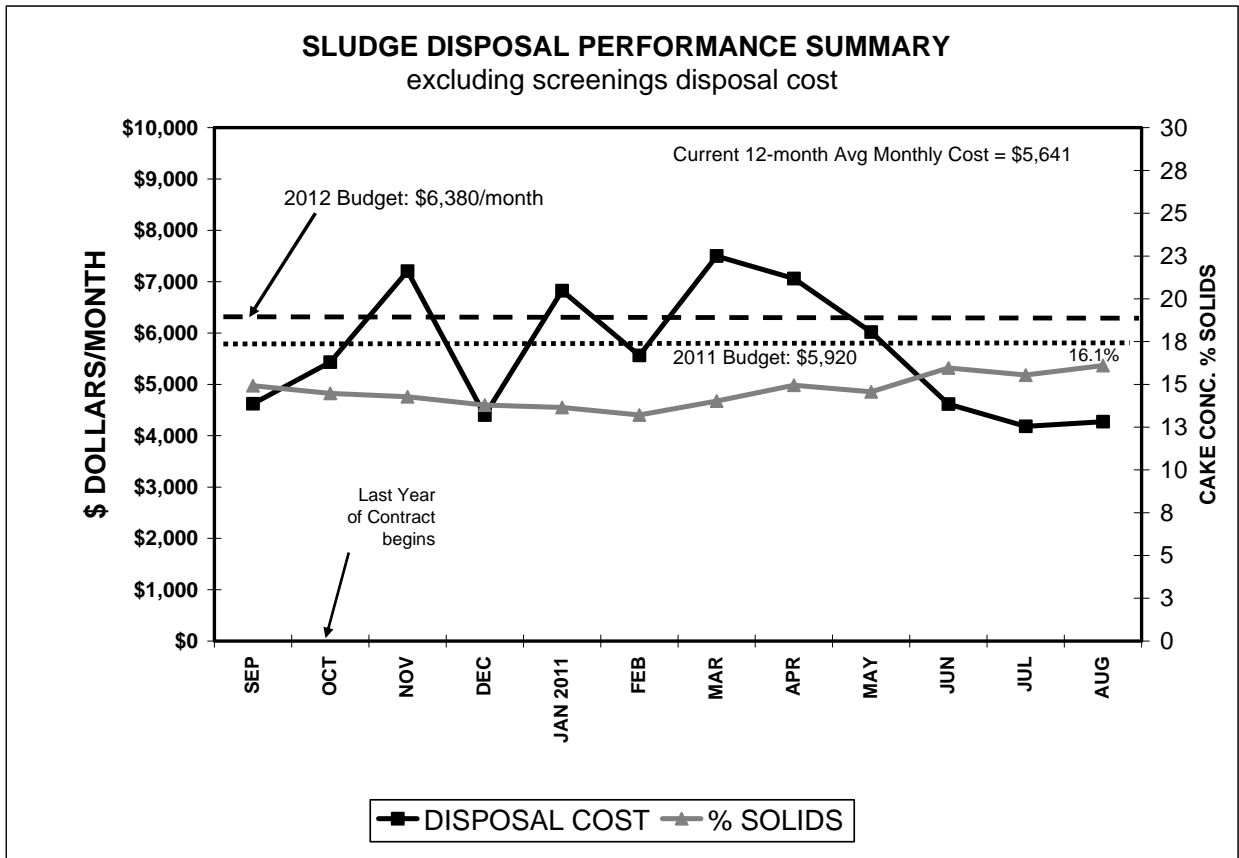
For a total screenings annual disposal cost of \$3,281.00.

**Grit disposal cost estimate:**

Our grit removal program includes once every other year for the aeration tanks at Brush Run, and we clean the digesters yearly. At DC we try to clean all tanks yearly but seldom get to every tank.

The vacuum truck is used in cleaning the tanks, with the grit disposed of in the biosolids dumpster. Since the grit removed from the tanks is discharged into the sludge dumpster, the sludge disposal cost includes the cost for grit disposal also. However, to guard against unknowns, an additional \$1,000 is included in the 2011 estimate for this purpose.

**Total estimated sludge, screenings, and grit disposal cost for 2012 is estimated at \$80,831.00.**



**2012 BUDGET MEMORANDUM- EXPENSES AND REVENUE**

**DATE:**           **October 7, 2011**

**TO:**             **File**

**FROM:**          **Jim Miskis**

**SUBJECT:**      **TREATMENT PLANTS - ELECTRICAL POWER EXPENSE**  
                  **And DEMAND CURTAILMENT REVENUE**

**YEAR 2011 Actual Electrical Expense**

Attached is the 12-month running electrical cost summary chart for both treatment plants through September. We are running over budget at Brush Run, but under budget at DC.

Our total kilowatt-hours (kWh) for the previous 12-month period for both plants combined is 2,216,800 kWhs, which is a 5.3% decrease from the same period in 2010. The decrease in kWhs at the DC Plant however was 16.1%.

Our cost per kilowatt, inclusive of the demand charge, is equal to \$0.070/kWh. Our cost per kWh has decreased 2.8%, compared to the same period in 2010. Our most recent cost/kWh in September 2011 was \$0.066/kWh, which is 5.7% less.

Comparison of 2011 Projected Year End with 2011 Budget			
	2011 Projected	2011 Budget	Variance
Brush Run	\$83,000	\$78,600	5.6% over budget
DC Plant	\$65,500	\$76,000	13.8% under budget
Total	\$148,500	\$154,000	3.6% under budget

Brush Run power is over budget primarily due to efforts to reduce odors at the treatment plant by supplying excess air to the aerobic digesters.

**YEAR 2012 Projected Cost Estimate**

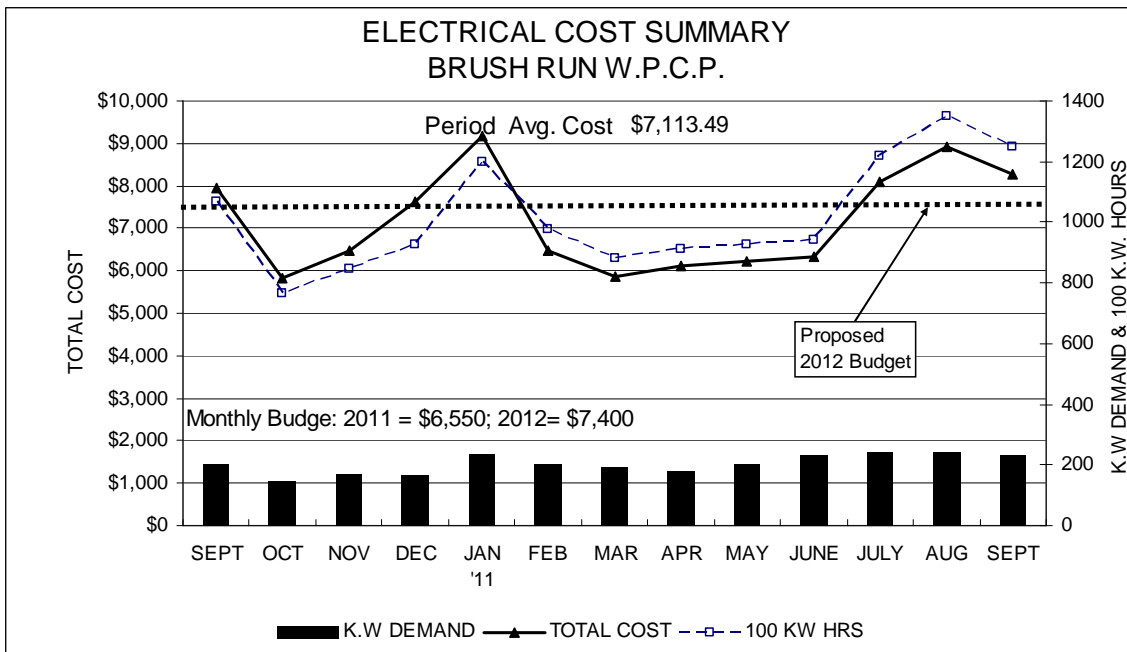
**Brush Run Plant:** The majority of equipment is required to operate continuously, therefore there is little opportunity to minimize power consumption, beyond steps already taken. The single largest electric motors are the 150-hp aeration blowers. Only one aeration blower operates at a time, and its speed is controlled by a signal from a dissolved oxygen sensor located in one of the aeration tanks. This sensor causes the blower to operate at lower speeds to obtain a dissolved oxygen set point, usually set at 3.5 mg/L.

The other factors that establish the power consumption at the Brush Run Plant are 1) the frequency of operation of the digester blower; and 2) air diffuser plugging.

Digester Blower Operation: We should continue to expect the need to operate the second blower to provide air to the aerobic digesters more frequently in the future, as customers are added, and to avoid odor complaints from the restaurant next door. A Variable Frequency Drive (VFD) was installed on the Digester Blower in early 2011 as part of the Conservation Works grant.

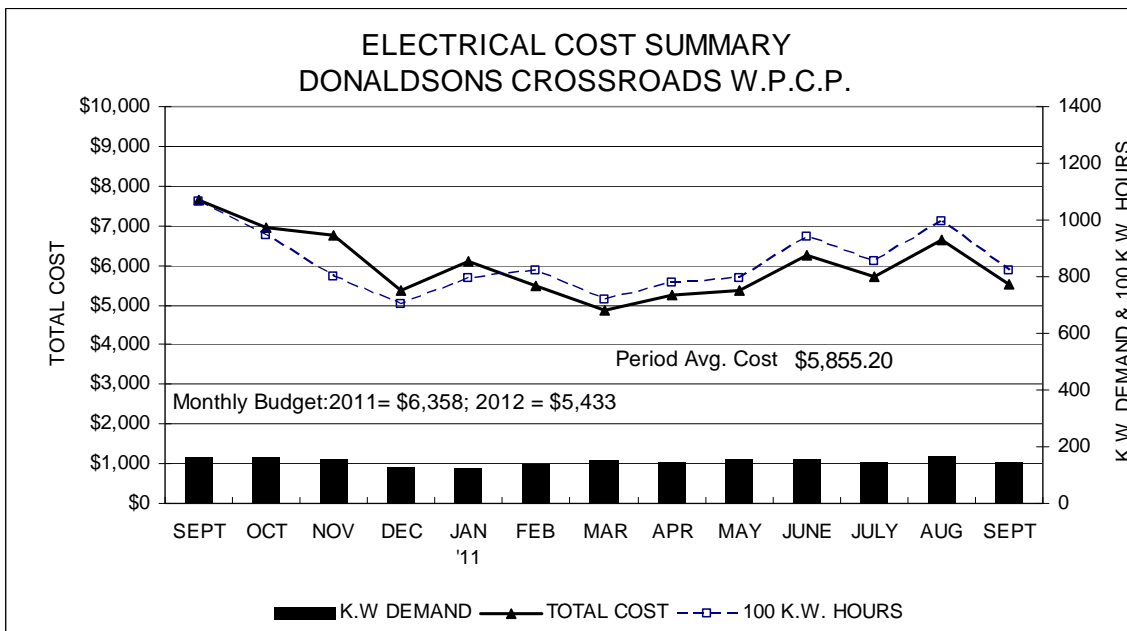
Air Diffuser Plugging: The aeration tank ceramic air diffusers slowly plug overtime due to carbonate fouling. We cleaned the aeration tank air diffusers in October 2010 using the HCL gas cleaning system, and will plan to clean them again in 2012.

**Power Cost Estimate for Brush Run Plant:** The Authority has locked in our power generation price with First Energy at \$0.0558/Kwh through January 2014. The \$0.0664/kWh includes transmission and distribution costs. Based on using 1,350,000 kWh at \$0.066/kWh, we expect the total Brush Run power expense to be \$89,000, including data access charges. This is an increase of \$6,000 over that projected for 2011.



**DC Plant:** The Conservation Works grant added VFDs to all four 60-Hp aeration blowers at DC. We expect the 2011 power consumption to be repeated in 2012.

**Power Cost Estimate for DC Plant:** The Authority has locked in our power generation price with First Energy at \$0.0564/kWh through January 2014. Using the cost of \$0.0664/kWh, and based on using 982,300 kWh, we expect the total DC power expense to be \$65,200, including data access charges.



**Total treatment plant power cost for 2012** is estimated at \$154,200, which is essentially the same that was

budgeted for 2011.

### **2011 Curtailment Revenue**

During 2011 we participated in the PJM Energy Demand Curtailment Program through Comverge and the Pa. General Services contract. We contracted to the following curtailment in 2011:

Brush Run Plant	30 Kw Full Service Load (FSL)( we would drop to 30 kw or lower)
DC Plant	0 Kw Full Service Load (FSL) (we would drop to 0 kW)

During the curtailment test Brush Run operated at 27 kW, and we dropped to 0.5 kW at DC. Our total revenue earned was \$9,913.20.

We received the remaining payments from ClearChoice Energy (prior provider) totaling \$8,356.89. Payments for the 2011 participation in the State contract are paid in 12 monthly installments beginning in July 2011 through June 2012. Note however that payments from Comverge have been delayed but are expected to begin in October 2011.

	ClearChoice	
January 2011	\$2,785.63	received
May 2011	\$2,755.02	received
August 2011	\$2,816.24	received
	Comverge	
July–Dec 2011	\$ <u>\$4,956.60</u>	projected based on 6 of 12 installments
Total 2011 Revenue	\$13,313.49	(\$975 less than budgeted due to reduced PLC)

The expenses associated with the curtailment program will be an on-going \$6.95/month data access charge for each plant, and a \$34.00/month communications and processing for each plant, for an annual data expense of \$491.40/year per plant. This cost is included in the projected cost per kWh.

### **2012 Curtailment Capacity**

The contract with Comverge provides for annual adjustments in the curtailment capacity, based on actual performance, changes in facility's operations, and program rules. The peak load contribution, which sets the maximum curtailment available, is reset each January representing the previous year's energy demand. Therefore, in January we will be provided an opportunity to identify the Curtailment Capacity that we agree to.

Because it will be our second year with Comverge, our share of the revenue increases from 85% to 88%, and remains at 88% for future years.

#### **Brush Run Plant Recommended Curtailment Capacity**

As stated above we were able to reduce our kW to 27 kW during the curtailment test by stopping all blowers, and temporarily diverting all influent flow to the empty digester. After the 1-hour test was completed, the raw sewage was then pumped back to the plant influent. Therefore, we can be assured that we can make 27 kW in the future provided we have the empty digester available.

Management recommends enrolling for a Full Service Load of 30 kW, the same as 2011. Assuming our peak load contribution is 175 kW, we will be compensated on a capacity curtailment of 145 kW. The Curtailment Capacity (contract price) for 2012 that we would receive from Comverge is \$5,287/ megawatt

or 1,000 kW. (2010's contract price was \$34,127.50, and 2010's was \$38,169/megawatt). 145 kW is 14.5% of a megawatt, therefore, we could expect an annual payment of \$767, barely enough to pay the \$491/year in expenses.

#### DC Plant Recommended Curtailment Capacity

In 2009 we installed an emergency generator connection to power the entire in-ground plant with our 100 kW trailer mounted generator, provided only one blower is operated. This provides the ability to route all plant influent flow to the in-ground plant, and provide complete treatment for the curtailment period, and shutting down all power from the power company. Under this scenario, airflow to the aerobic digester would be stopped. Assuming our peak load contribution remains at 203 Kw, we could drop 203 Kw, and we could expect an annual payment of \$1,073.

#### Total 2012-2013 Curtailment Capacity Revenue

The 2012 combined annual payments for both plants equals \$1,840, paid in 12 monthly installments of \$153.00, beginning July 2012 through June 2013. The six installments for 2012 will total only \$920. We will also receive the last six monthly installments from the 2011 curtailment which total \$4,956.60.

Total curtailment revenue expected to be received in 2012 is \$5,876.60.

Please note that the Capacity Credit available (or contract price) in 2013 increases to \$8,801/megawatt (our 88% share). The credit for 2014 then jumps to \$40,300/megawatt, at which time we would be earning \$14,000 in total curtailment revenue that year.

## 2012 BUDGET MEMORANDUM – CHEMICALS

**Date:** September 19, 2011  
**To:** File  
**From:** Mark A. Chucuddy  
**Subject:** Line Item 01-4222 - Chemicals

In addition to chlorine, this line item encompasses all wet stream process chemicals: diffuser cleaning chemicals, sodium bisulfite, and lime and sodium bicarbonate for pH adjustment.

**CHLORINE:** The amount required has been estimated based upon the actual usage for the past 12 month period. With no indication that process changes will be required, these values have been used. The usage at Brush Run increased 11% from the previous year, with Donaldson Crossroads remaining the same as the previous year. (BR = 40.1 – 44.7 lbs/day, DC = 20 – 20 lbs/day)

Brush Run	\$ 5200 (\$32.50/CWT)	9 1-ton containers (1575lb contingency)
Donaldson	<u>\$ 4050</u> (\$50.00/CWT)	54 150lb cylinders (800 lb contingency)
TOTAL \$ 9250 an increase of 0% over last year's amount		

The price quoted, by our current supplier reflects no price increase. The price for 150lb cylinders is based on a 6 cylinder minimum per delivery. Again this year, our quote included the potential for a fuel surcharge to be added to each delivery, however we were not charged a surcharge on any of our deliveries last year.

By attempting to coordinate chlorine and sulfite deliveries together, we are able to keep the number deliveries to 10 to 12 per year. I have used 12 to calculate the fuel surcharge at \$480.

Total including fuel charge = \$9730

**DIFFUSER CLEANING:** The amount for DC is based upon the amount purchased in previous years. The Brush Run diffusers were cleaned in 2010. Due to construction activities, the cleaning did not occur this year.

Donaldson	\$250 (45 gallon, enough for ½ to ¾ of all the tanks)
Brush Run	\$3825 (includes chemical, rental and return of cylinders) [based on 3% increase]
TOTAL \$ 4075	

**LIME:** General purpose uses through out both plants and collection system. Cost represents the purchase of one pallet containing fifty 50# bags. This usually satisfies our demand.

Total \$275.00 the same as last year's amount

**2012 BUDGET MEMORANDUM – CHEMICALS Cont..**

**SODIUM BISULFITE:** The amount required is based upon the actual annual average usage per day for the preceding 12 months. At Brush Run our actual usage of 8.0 GPD is 9.5% greater than the 7.3 GPD used the previous year. The actual average usage at Donaldson crossroads is 1.23 GPD, a 13.8% increase over the 1.08 GPD the previous year. We use the same 38% solution at each location, it is delivered in bulk to BR, and in 30 gallon drums for DC.

The price of \$0.250 per lb. in bulk is an increase of 6.38% (1.5 cent) over last year's cost. The price of \$0.33 per lb. for the drums represents a 10% (3 cents) price increase over last years cost.

Brush Run:

8.0 gal X 11 lb/gal = 88 lbs per day X 365 days = 32,120 lbs

8.0 gal X 365 days = 2,920 gallons

9 tote deliveries @ ~335 gallons = 3015 gal or 33,165 lbs (builds in a 95 gal. contingency)

33,165 lbs @ \$0.25 /lb= **\$8291.25** a 19.6 % increase over last year

DC:

1.23 gal X 11 lb/gal = 13.5 lb/day x 365 days = 4939 lbs.

1.23 gal X 365 days = 449 gallons

16 30 gallon drums = 480 gal or 5280 lbs (builds in 31 gallon contingency)

5280 lbs @ \$ 0.33 /lb = **\$1742.40** a 25% increase over last year

**SODIUM BICARBONATE:** This is used to condition the biosolids prior to dewatering on the BFP and also as pH adjustment of the aeration tanks and digester. This item was estimated last year at 250 bags. So far, year to date we have purchased 109 bags in addition to what we had on stock. Not being able to estimate when or for what period we may have to condition the biosolids or adjust the pH, this item is budgeted at 200 bags to be conservative. The price per bag is \$14.99 per bag, up \$2.34 per bag from last year.

200 50# bags @ \$14.99 = **\$2998**

**TOTAL LINE ITEM : \$ 27,112**

An increase of 6.4% over last years budgeted amount of \$25,477

**2011 BUDGET MEMORANDUM**

**DATE:**           **October 7, 2011**  
**To:**               **File**  
**FROM:**           **Mark A. Chucuddy**  
**SUBJECT:**       **Lab Supplies**

2011 Expenses

The unplanned expenditures occurring this year were the purchase of the DC pH meter and purchase of the BR BOD probe. While these were unplanned, we do have a line item for lab instruments.

2012 Expenses

The 2012 expenses are estimated at: **\$21,760** a 9.1% increase over last year's budgeted amount of \$19,940 (exclusive of lab instruments). Most is attributed to increase in routine chemical cost. Note that Lab Instruments is shown below for comparison, but is included in a separate line item.

Lab instruments include \$1500 for general probe replacements, as well as \$560 for a specific ION probe to analyze Nitrates. The probe is a high performance NH3-N probe to be used with a Nitrate test kit. The Nitrate kit runs \$488, enough material to analyze 100 samples.

The break down of expenses is:

	Planned <u>2011</u>	YTD <u>2011</u>	Projected <u>2012</u>
Routine Chemicals/supplies	\$10000	\$7245	\$ 11000
Annual calibration of lab equipment	\$ 1000	\$ 900	\$ 1000
Annual calibration of flow meters	\$ 550	\$ 560	\$ 570
Annual Form 43 Biosolids Analysis	\$ 1240	\$1228	\$ 1240
Sampler supplies/glassware	\$ 1500	\$1470	\$ 1500
QA/QC samples (incl proficiency testing)	\$ 2400	\$3163	\$ 3200
Outside lab analysis	\$ 1000	\$ 133	\$ 1000
Special Analysis (TKN, FOG, Copper)	\$ 0	\$ 0	\$ 0
Lab equipment repairs	\$ 1000	\$ 554	\$ 1000
Unplanned expenditures	\$ 0	\$ 0	\$ 0
Lab Accreditation fees	<u>\$ 1250</u>	<u>\$ 1250</u>	<u>\$ 1250</u>
Sub Total	<b>\$19,940</b>	<b>\$16,503</b>	<b>\$21,760</b>
 Lab Instruments	 <u>\$ 1800</u>	 <u>\$ 1351</u>	 <u>\$ 2055</u>
TOTAL	<b>\$21,740</b>	<b>\$17,854</b>	<b>\$23,815</b>

Notes for 2011 YTD:

Included in instruments are the new DC pH meter and the BR BOD probe.

Outside analysis (COD & TSS) was on unusual BR WPCP influent. As well as the required metals analysis on our lab grade water.

Glassware included 2 cases of BOD bottles which is atypical.

**2012 BUDGET MEMORANDUM – PLANT POLYMERS**

**Date:** November 7, 2011  
**To:** File  
**From:** Mark A. Chucuddy  
**Subject:** Line item 01-4222, Plant Polymers

This line item encompasses not only the polymer used for the Belt Filter Press operation, but also for sludge thickening at Donaldson prior to transport to BR for processing.

**Donaldson Sludge Conditioning:** Based upon the preceding 12 months, the amount of polymer consumed ranges from 14 to 36 lbs./month or a period average of 27 lbs./month. This is 58% more than the usage from last year. We continue to utilize dry polymer at this location.

27 lbs./month X 12 Months = 324 lbs.  
324 lbs / 55 lbs per bag = 5.9 bags  
6 55 lb bags = 330 lbs (Builds in 6 lb contingency)  
330 lbs x \$2.69/lb = **\$888**

The price of \$2.69 per pound is for material only. As long as we order this along with the emulsion, it will fall under the same single pallet charge.

**Belt Filter Press Operation:** Amount required calculated upon current usage rates. Currently we are averaging 511 lbs. per month. This is up 44% from the previous value of 355 lbs. used to calculate the 2011 budget values. For comparison, the average monthly values for the first 9 months of each year are shown below.

	<u>Lbs. polymer used</u>	<u>% cake solids obtained</u>	<u>lbs. polymer per dry ton processed</u>	
2001	186	14.9%	9	
2002	125	14.3%	6.5	
2003	143	15.2%	7	
2004	140	15.5%	7	
2005	141	15.5%	7	
2006	155	14.5%	7	
2007	136	14.5%	7	
2008	190	13.7%	9	
2009	206	13.5%	10	
2010	392	14.6%	(Active) 9	Began utilizing Emulsion
2011	511	14.5%	(Active) 11	(45% active content)

511 lbs/month X 12 months = 6132 lbs  
6132 lbs / 475 lb per drum = 12.9 drums  
14 drums = 6650lbs (Builds in a 518 lb. contingency)  
6650 lb x \$1.79 lb = **\$11,903.50 + 7 pallet charges @ \$1,306.13 = \$13,210**

**TOTAL LINE ITEM : \$ 14,098**

You will note that the planned budget amount is 38.2% over last years budget amount, however only 6.1% over the actual amount expended during 2011.

There are several factors that attribute to this. The largest being that during February 2010 we switched from using dry polymer to emulsion, thereby requiring the staff to convert the liquid measurement to a weight. For whatever reason, sometime during 2010, staff arbitrarily changed the formula used to calculate the weight, this resulted in the amount utilized to calculate the budget being some 45% less than actual. I was able to go back and correct the values for 2011, and 2010 values back to the point where I believe the error to have begun.

Throughout 2011 we have seen the price of polymer increase \$0.20/lb (12.5% increase) over the \$1.50 used to calculate the budget number.

We have also experienced a change in the way the freight is charged. The shipper has transitioned from strictly a weight base to a minimum pallet charge. We now are ordering two drums at a time, paying nearly the same shipping resulting in saving 7 shipping charges of nearly \$1300.

## 2012 BUDGET MEMORANDUM

**DATE:** August 29, 2011  
**To:** File  
**FROM:** Mark A. Chucuddy  
**SUBJECT:** Administration Building

Lawn care maintenance: Our current contract contains provisions for 2 option years at the same rate of **\$3288.00** per year. This would be our first option year.

Custodial Services: Our current contract contains provisions for 2 option years at the same rate of **\$5076.00** per year. This would be our first option year.

Supplies (Paper towels, toilet tissue, hand soap, etc.):

These items are purchased in bulk, for both the plant sites as well as the office. Supplies are taken as needed from the plant when required for use here at the office. A percentage of the invoice is charged against the administration janitorial supplies. To date this year we have charged **\$334.00** to this category.

During 2011 we utilized stock of anti-icing materials for the parking lot. This stock has been depleted therefore we have included **\$500** for replenishment in 2012.

Utilities:

Natural Gas: Current twelve month average to date is \$172.11 which equates to \$2065.32 annually. During 2010 the monthly average was \$190.00. Considering Columbia Gas just had a small rate reduction utilizing current averages should suffice. **\$2065.00**

Electric: Current twelve month average to date is \$278.96 per month for an annual total of \$3347.52. During 2010 the monthly average was \$326.27. The lower monthly average is attributed to switching suppliers. **\$3350**

Water: We are averaging \$46.37 per month to date. At the average, the annual total cost would be **\$556.50**. Note that PAWC has proposed a 13 to 16% price increase, representing an additional \$72.35 to \$89.04 (**\$628.85 - \$645.54**).

Trash Service: The current 12 month contract expires at the end of October. Our current price is \$29.00 per month plus a fuel surcharge which they have held for two years. The new quoted rate is \$31.00 plus the fuel surcharge. The fuel surcharge has ranged from \$5.97 to the current \$8.38. Allowing for a fuel surcharge of \$9.00 per month plus the \$2.00 admin fee per month, the total will be **\$505.00** (A 2.6% increase)

Fire & Security Monitoring: We are required to have 24/7 monitoring of the fire alarm system. We incorporated the security monitoring into the same contract in order to achieve a better rate. That combined rate is \$34.95/month. For an annual cost of **\$419.40**. We do however receive a 5% discount for paying annually as opposed to monthly, for a net of **\$398.43 say \$400.00**

## 2012 BUDGET MEMORANDUM

Date: November 1, 2011  
TO: File  
FROM: Gary A. Parks  
SUBJECT: Projected Budget: Inflow & Infiltration, Dye Testing and Grease Trap Inspection Programs

### **BACKGROUND:**

Historically, the Authority has been proactive in removing Inflow and Infiltration (I/I) from the sanitary sewer system. Documents from the inception of the Authority show it has been inspecting downspouts for improper connection to the sewers at the time of construction, sale, and through area-wide testing.

In 2006, the Authority had drafted a white paper on policy development and implementation of a Building Sewer Inspection Program. The paper stated that the Authority has operated a sewer system rehabilitation program since 1997. The program target was to televise 24,000 feet of public sewer and rehabilitate or replace 12,000 feet annually. The primary objective was to reduce both inflow and infiltration. The program did not reduce peak rain-induced flow. The data strongly indicates that the vast majority of water entering the system during significant rain events originates in the private plumbing systems, which are the building sewer and building drain. Industry wide data indicates that approximately half of the collection is privately owned, or for every mile of Authority-owned sewer, there is a mile of private building sewer and drains. Therefore, if the Authority fixes all the defects in its sewers, only part of the problem will be fixed.

### **DYE TESTING/CCTV PROGRAM:**

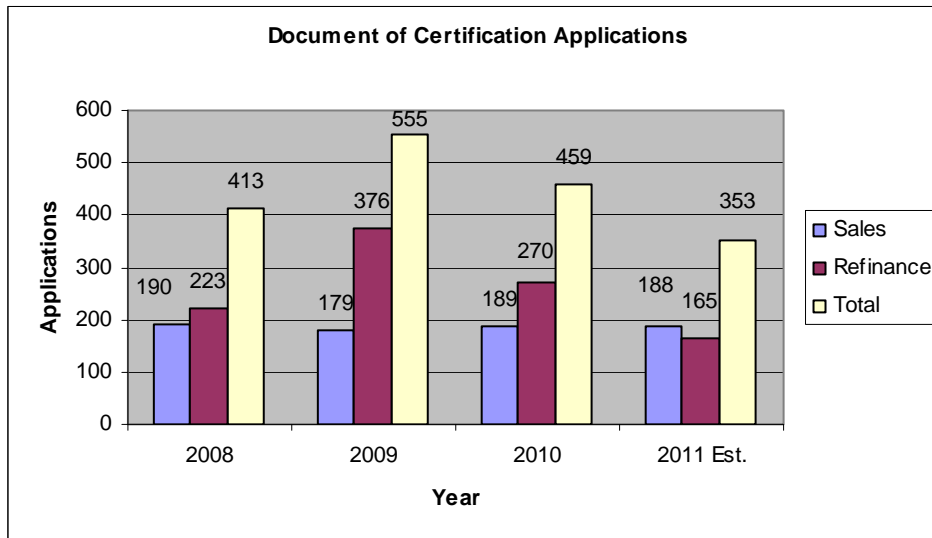
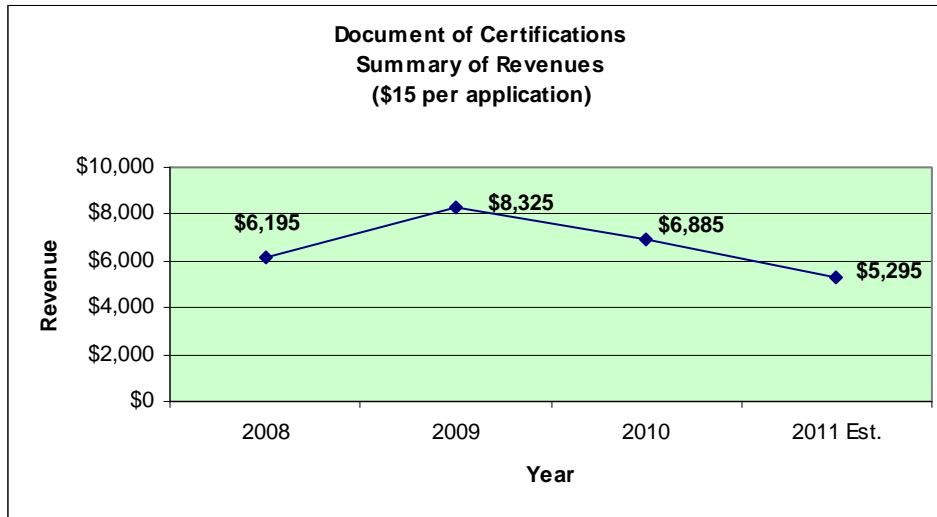
The Dye Testing/CCTV Program has been in development since the hiring of a full-time project manager to develop and implement the building sewer inspection program. The manager was hired in March 2008 and has been working to fulfill the objectives set forth in the Building Sewer Inspection Program. The first task of the manager was to develop Rules & Regulations for Dye Test Procedures. This procedure was adopted by the Board on May 13, 2008. In July of 2008, the Authority began performing dye testing at time of sale to help develop the program and prepare for more aggressive testing in the future. Prior to July 2008 private plumbers were performing the dye tests. In July of 2009, the Authority purchased a new CCTV camera capable of pushing through the building trap. Use of this camera, when necessary, will help to build a strong case for employing the CCTV camera during all future dye tests for property transfer.

### **ACCOMPLISHMENTS:**

Dye Test Inspection Results: During the first three quarters of 2011, the Authority performed 152 Dye Test Inspections with an estimated 36 additional tests to be completed in the fourth quarter. Of the total properties tested: 52% of the properties passed, 45% had at least one deficiency identified and 3% failed due to a major infraction. All deficiencies and failures are required to be corrected, even if the property transfer does not take place.

Refinance Certifications: During the first three quarters of 2011, the Authority processed 125 Documents of Certification for the refinancing of property. This decline, from an actual of 194 for the same period in 2010, was due to the recession and uncertainty of the economy. This process entails checking the database for liens on each property, researching as-built drawings for manholes located on the property, and sending field staff to verify if the manhole on the property is free and clear. Many times the manhole is buried or obstructed and a letter needs to be sent to the owner to uncover the manhole. This again requires field staff to verify the corrective action taken and management to mail a letter to the property owner indicating the repair meets our specifications.

Document of Certification Revenue:



Manhole Inspection Results: As part of the dye test inspection process, the downstream manhole is observed for the presence of dye from the property. This confirms that the property is connected to the sanitary sewer and if a prohibited connection exists. During the dye testing process, a visual inspection is made as to the integrity of the manhole and surrounding conditions.

- If infiltration is observed, either active or signs of prior infiltration, notation is made and forwarded to the assistant manager to follow-up.
- If the manhole is buried in excess of 4”, staff notifies the special projects manager of the condition. A letter is then sent to the property owner to uncover the manhole as per Authority rules and regulations. If the manhole is buried less than 4”, the field staff will clear the manhole.
- As part of the Pennsylvania One Call Program, buried manholes are also identified.
- During the above inspections in the first three quarters of 2011, 19 buried/obstructed manholes were identified with 37%, or 7 manholes corrected. The 12 remaining manholes are in the notification or repair stages.
- Manhole Inflow Protectors: During inspections noted above, the manholes are checked for inflow from surface water runoff. If it is believed that surface water inflow is a problem, a plastic pan, or inflow protector, is installed. In the first three quarters of 2011, field staff installed 14 inflow protectors.

**PROGRESS TO GOALS:**

The Authority took over dye testing at time of sale as of July 1, 2008. This was the target date. The transition was smooth with dye tests being performed as scheduled and minimal paperwork delay experienced by closing agents. This was due to realtors and closing companies being notified as to the changes before they took effect. The Authority sent direct mailings to all known agents and closing companies informing them of impending changes in procedures. The notices also referred them to the Authority’s website where the new forms are available for download.

Internal and field procedures have been drafted, implemented and refined to document the process and ensure the timely flow of paperwork. This has resulted in zero missed appointments and documents of certification completed in a timely manner for all property transfer closings.

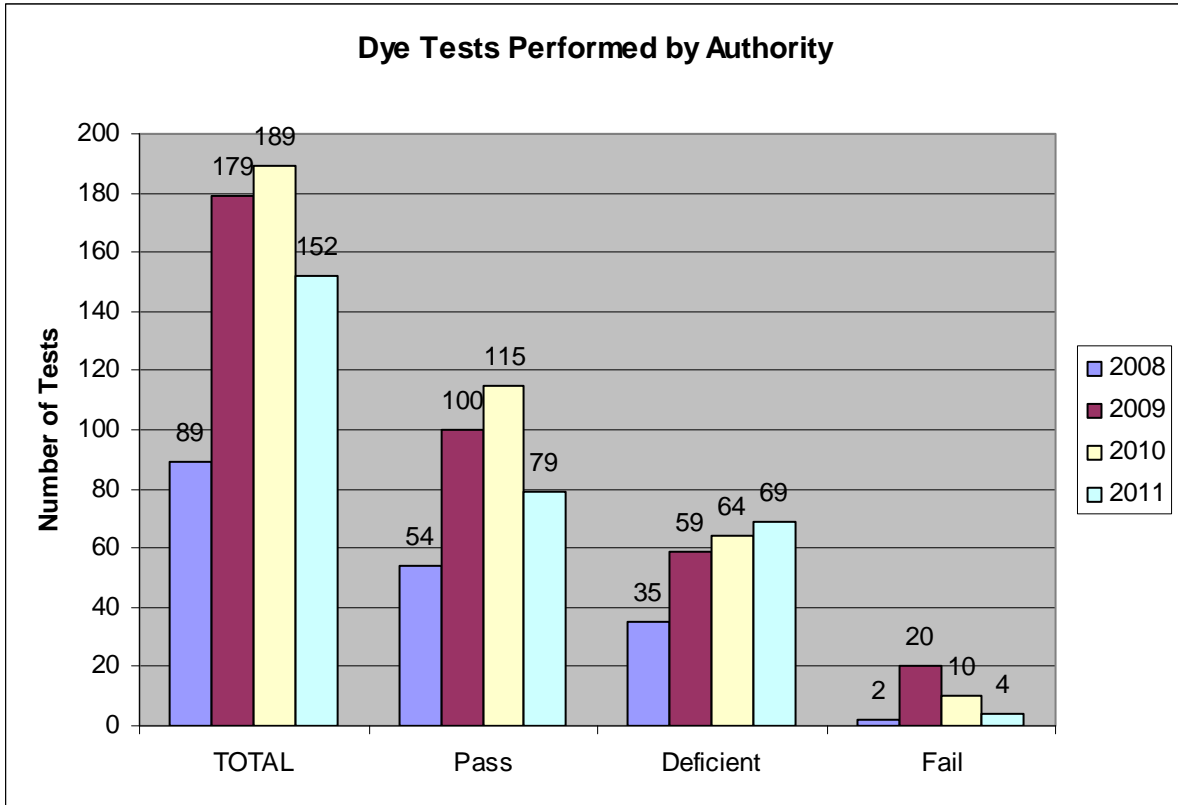
**2012 REVENUE PROJECTION:**

Requests for Dye Testing have increased 3% in the first three quarters of 2011 vs. last year. The forecast for year end total sales is conservative as per the chart below. It is recommended that the fee for Dye Testing remain at \$150 per test with an additional charge of \$50 if water service is not available and our Vactor truck needs to be dispatched to supply water.

In 2012 we anticipate performing 178 Dye Tests, generating revenue of \$28,200 as follows:

Time of Sale Dye Tests:

<b>MONTH</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
January	14	11	15	12	4	8	<i>6 est.</i>
February	14	13	13	4	4	11	<i>8 est.</i>
March	22	20	21	7	21	18	<i>16 est.</i>
April	15	26	20	20	19	17	<i>16 est.</i>
May	31	28	23	20	21	16	<i>19 est.</i>
June	31	35	22	18	26	24	<i>21 est.</i>
July	24	34	15	23	20	16	<i>18 est.</i>
August	26	37	15	17	16	22	<i>23 est.</i>
September	24	20	19	8	27	20	<i>21 est.</i>
October	22	25	13	21	15	<i>16 est.</i>	<i>14 est.</i>
November	16	24	5	18	9	<i>11 est.</i>	<i>8 est.</i>
December	12	17	9	11	7	<i>9 est.</i>	<i>8 est.</i>
<i>Total Tests</i>	<b>251</b>	<b>290</b>	<b>190</b>	<b>179</b>	<b>189</b>	<i>188 est.</i>	<i>178 est.</i>
<i>Charges/Revenue</i>			<b>\$28,500</b>	<b>\$26,850</b>	<b>\$28,350</b>	<i>\$28,200 est.</i>	<i>\$26,700 est.</i>



### PASS/FAIL RATE

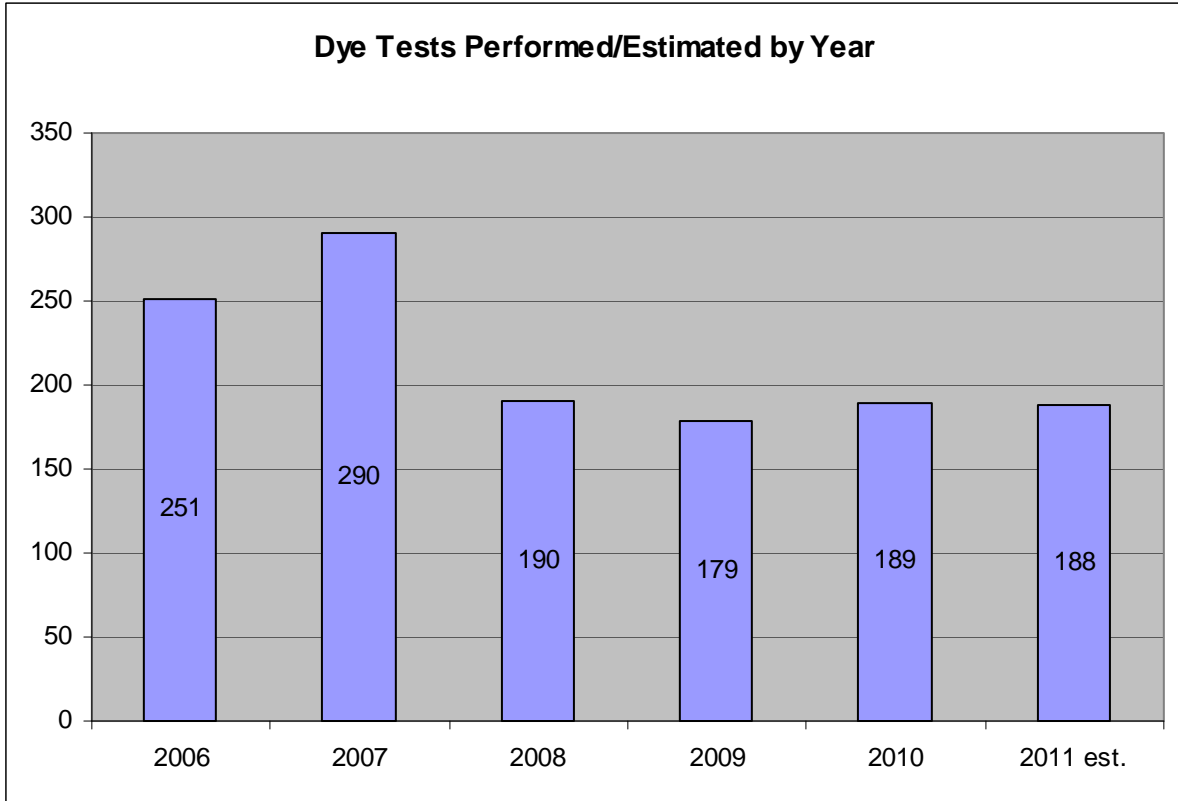
YEAR	PASS	DEFICIENCY	FAIL
<b>Tests Performed by Plumbers</b>			
2005	96%		4%
2006	97%		3%
2007	98%		2%
2008 (first six months)	93%		7%
<i>Average</i>	96%		4%
<b>Tests Performed by the Authority</b>			
2008 (last six months)	54%	35%	2%
2009 (twelve months)	56%	33%	11%
2010 (twelve months)	61%	34%	5%
2011 (first 3 quarters)	52%	45%	3%
<i>Average</i>	55.75%	36.75%	5.25%

Deficiency: A deficiency is a defect such as a low vent, missing/broken vent or inspection port cap, or a clogged drain. These are relatively minor infractions but may lead to inflow and or infiltration.

Failure: A failure is defined as a major violation such as prohibited connection(s), indirect connection(s) or a defect in the sewer pipe that allows groundwater into the sanitary sewer system.

Program Evaluation:

In reviewing the above data, it can be concluded that the decision by the Authority to perform dye testing in house at time of sale was the right thing to do. The Authority has identified more defects and failures than private plumbers. In all fairness to the plumbers, we are inspecting more items than we asked the plumbers to inspect.



**RECOMMENDED CCTV PURCHASE:**

**PUSH CAMERA PURCHASE:** In 2009 the Authority purchased a new SeeSnake Push Camera and monitor. By pushing the camera into the building sewer, we can locate the point(s) of infiltration in the building sewer when dye presents itself in the sewer during a dye test. Visually locating the defect gives us positive proof of the location and type of defect. The defect can be accurately marked on the surface using the internal footage counter as well as built-in Sonde, which transmits a location signal to the surface, assisting the homeowner in repairing the defect.

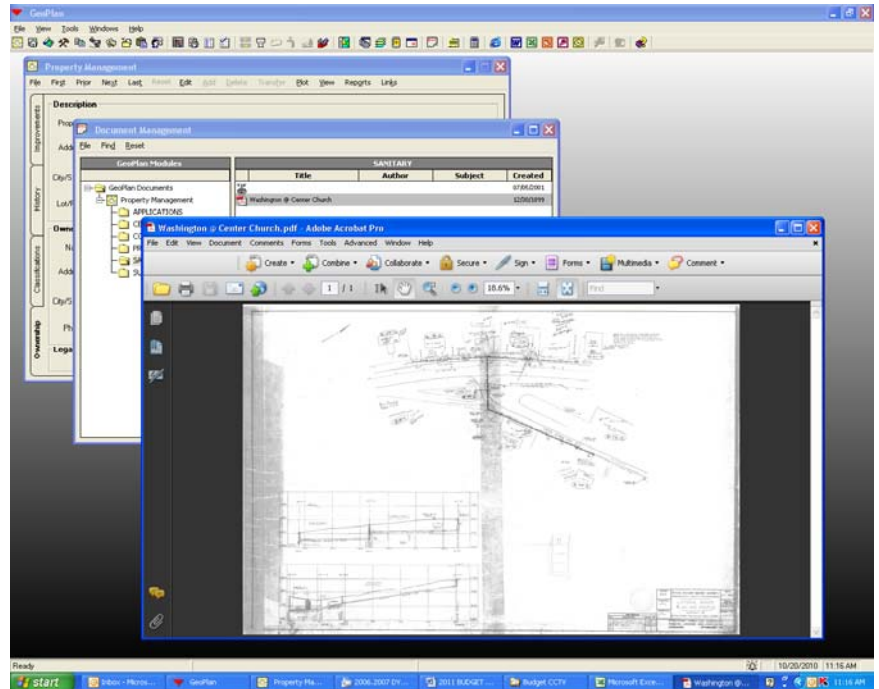
It is recommended that, as the Authority moves forward with CCTV at time of sale, an additional Mini-SeeSnake Plus push camera be purchased. This camera has a smaller head and will more easily navigate the building trap. In performing dye tests in 2011, we have found that our current camera can not push through certain 4” VCP traps. This camera will enable us to do so. This will also enable the Authority to properly conduct CCTV inspections, which the homeowner will have paid for, in the event the current camera would need repair. A complete system would not need to be purchased, only the camera and reel portion. The estimated cost for the camera would be under \$5,000.

**RECOMMENDED VEHICLE PURCHASE:**

The current 2000 GMC Cargo Van used for dye testing and mainline CCTV camera inspection has reached its useful life. A larger van would enable staff to properly carry the necessary equipment and create a better work environment. As well as carrying equipment and staff to the work site, the van also serves as a mobile office where the camera operator views the camera image on a computer screen and completes a paper CCTV log. The attached 2012 Vehicle Budget Memorandum outlines choices for a replacement vehicle.

## GEOGRAPHIC INFORMATION SYSTEM (GIS):

In 2009, the Assistant Manager had our existing sewer drawings scanned into PDF files. In 2010 and 2011, the assistant manager and I began the time consuming task of attaching the drawings to each individual property within GeoPlan. This increased productivity as drawings for a specific property were available with a few clicks of the mouse. This also eliminated looking up the hanger location of a property, flipping through multiple sheets to locate the proper drawing, then taking the hanging file to the copier to copy the needed section. Having the files digitized allows the drawing, or a portion of the drawing, to be printed or emailed to others directly from the GIS system.



Ongoing maintenance will be attaching drawings missed as we look up individual properties. In 2011, we have attached missing drawings to a few properties that were missed or added drawings for clarification. It is estimated that 99% of the drawings are attached to the corresponding properties.

## GREASE TRAP INSPECTION PROGRAM:

**ESTABLISHMENT OF THE GREASE TRAP PROGRAM:** During 2009, the Special Projects Manager drafted new Rules & Regulations for the program. These rules and regulations provided a uniform process of inspection, reinspection and installation of grease traps. During 2010 and 2011 grease traps were inspected on a regular basis to ensure compliance.

### Inspection Tracking:

Inspections are tracked with our existing GeoPlan GIS system. This program was modified in 2010 to include grease trap tracking. Scheduling for grease trap inspections are entered into Microsoft Outlook with reoccurring reminders. This program is at no additional cost as it is installed on all office computers.

### Grease Trap Inspection Results:

In the last quarter of 2010 and the first three quarters of 2011, 70% of the food service establishments within our service area were inspected by Authority staff for compliance. Results of the inspections as follows:

In the first three quarters of 2011, the following activities took place:

- Routine Inspections: Forty-Five
- Follow-up Inspections: None
- Courtesy Notices: One
- Notice of Violations: None
- Defective trap replaced: Two
- Permits Issued: Eight.
- Pump out slips received. Twenty-nine pump out slips received. Five establishments had multiple pump outs due to scheduled service with an outside vendor.

Due to one of the field staff being off work on long-term disability, we have curtailed grease trap inspections for the last five months of the year.

Program Evaluation:

The grease trap inspection program is considered to be a success. This is attributed to increased inspections and public relations. The restaurant owners have been made aware of the importance of regular cleaning and maintenance of their grease traps.

Friar Lane Pilot Program:

The Authority Board approved initiating a Pilot Program in the Friar Lane Sewershed at the May 2011 meeting. As of this date, we have a formal commitment from 60 property owners to participate. This was the target number. The program provides a \$200 stipend to property owners whose property was tested to not be contributing excess RDII, to provide repairs of up to \$3,000 to the building sewer and to pay for all testing.

The total budget is as follows:

**Friar Lane Pilot Program Budget**

	TOTAL	COST	SUBTOTAL	TOTAL
No repairs needed (39%)	23	200	4,600	
>1 GPM (35%)	22	1,000	22,000	
> 3 GPM (18%)	10	2,000	20,000	
> 8 GPM (8%)	5	3,000	<u>15,000</u>	
				61,600
C & K Rainfall Testing	60	250	15,000	15,000
Water for tests (\$7.90 per 1,000)	42	8	331	331
C & K Retest	40	250	10,000	10,000
Water for retests (\$7.90 per 1,000)	28	7.89	221	221
Minor Parts: Caps/vents			1,000	<u>1,000</u>
Total Estimated Program Cost				<b>\$88,152.30</b>
<b>2011 Budget</b>				
C & K Rainfall Testing	60	250	15,000	15,000
Water for tests (\$7.90 per 1,000)	42	8	331	331
Minor Parts: Caps/vents			1,000	<u>1,000</u>
				<b>\$16,331</b>
<b>2012 Budget</b>				
C & K Retest	40	250	10,000	10,000
Water for retests (\$7.90 per 1,000)	28	7.89	221	221
Repairs to building sewers				<u>61,600</u>
				<b>\$71,821</b>

**AREA-WIDE TESTING:**

The Authority conducts area-wide testing in areas that have defects identified and have been scheduled for rehabilitation. In July of 2011 we tested 57 properties in various areas that were identified as having high levels of inflow and infiltration. This testing was scheduled in advance of rehabilitation of the Authority's collector sewer line and grouting of wye connections which had defects identified during prior testing.

Of the 45 homes tested, 60% passed, 27% had deficiencies and 13% failed. There are 12 properties that still need tested. Of the houses that failed we calculated the RDII at 32.68 GPM. This project is ongoing and results will be finalized once the homeowner and Robinson Pipe complete repairs. This indicates that area-wide testing in areas identified as high in RDII is successful and worthwhile. Cost to the Authority is limited to repairing the collector sewers as well as field staff and office staff time. Defects identified on residential property are funded by the owners.

## 2011 Vehicle Budget Memorandum

Date: November 1, 2011  
To: File  
From: Gary A. Parks  
Subject: Cargo Van Replacement

### **BACKGROUND:**

The Authority currently uses a 2000 GMC Cargo Van for mainline CCTV inspections and general maintenance use. The vehicle has 97,484 miles.

Although this type of van has served the Authority well, a larger van should be considered to better carry the equipment needed for testing and to allow more room for staff to function inside the van. The van has been up fitted with a desk area for the operator to control the CCTV mainline camera, record pipe inspections and complete inspection reports as the camera inspects the sewer line. Rear air conditioning and heat would be a welcomed addition during inspections as the field staff is in the van for many hours at a time.

If a replacement van is purchased, the trade-in value of the current vehicle is minimal. Sprinter has offered \$500 as a trade-in. With this in mind, the GMC van could be repurposed as a limited use vehicle for running errands and transportation between plants. This would essentially provide an extra vehicle at no additional cost and may prolong the life of other vehicles.

### **OPTIONS AVAILABLE:**

#### **Used Van/Government Surplus:**

The Federal Government offers surplus vehicles to eligible entities under their Fixed Price Vehicle Sales Program. Vehicles are reconditioned and offered to local agencies at a fixed cost. We are eligible to participate in this program.

I have identified the following vehicle that will suit our needs in a cost efficient manner. The vehicle is a 2003 Ford F350 Extended Passenger Van with 30,803 miles offered at **\$11,200**. It is identified as in "good" condition.

#### **New Van Purchased Through COSTARS Program:**

COSTARS is a government program that secures pricing from vendors and is offered to all eligible agencies to purchase without going through the bidding process for individual items. This saves us time, money and the hassle of preparing bid documents.

I have identified the following vehicle which closely matches our current and the above surplus vehicle for comparison. The vehicle is a 2012 Ford E350 Cargo Super Duty Extended Van at the contract price of **\$22,334.62**. To gain additional headroom and storage space, it is recommended to add a "camper van" 24-inch raised roof. This aftermarket upgrade would cost an additional \$3,800 in white or add \$700 to paint the roof to match the vehicle. The extended roof would be installed by Keystone Coachworks of Bethel Park.

**Mercedes Benz Sprinter:**

Sprinter is a commercial duty vehicle widely used by plumbers and delivery services. This vehicle is not available through any governmental contracts therefore we would have to seek bids for vehicles in this class. Cost for this vehicle is **\$45,150** with an extended body and high roof.

**VEHICLE COMPARISON**

	<b>Used 2003 Ford</b>	<b>New 2012 Ford</b>	<b>2012 Sprinter</b>
Cost	\$11,200 Fixed Price \$15,000 w/roof*	\$22,334.62 Quote \$26,134.62 w/roof*	\$45,150 Quote Includes \$500 trade-in
Retail “Sticker” Price	NA	\$32,695 w/o roof \$36,495 w/roof*	\$48,710
“Blue Book” Price	\$13,145 Retail \$11,395 Private Party	NA	NA
Engine	5.4 L V-8 Gasoline	5.4 L V-8 Gasoline	3.0 L V-6 Turbo Diesel
Aux. Heater/Rear AC	Yes	Yes	Yes
Max Payload	3,920	3,920	2,988
Cargo Volume	309.4 C.F.	278 C. F.	494 C. F.
Interior Length	132.3”	140.06” (11.6’)	169” (14’)
Interior Height	52.5”	52” base, 74” raised	76.4
Vehicle Length	231.9”	236.7”	273”

*\*NOTE ON FORD VANS: The after market raised roof is installed in standard white color. Paint to match the color of the van, if desired, is an additional \$700 to the price noted in the above chart.*

**RECOMENDATIONS**

**Long Term:**

If money were no object, the Mercedes Benz Sprinter is recommended as the best choice in the long term based on the following:

Pros:

- Maximum interior space while maintaining maneuverability in residential areas. This will enable us to efficiently carry all needed equipment in an orderly manner.
- Additional interior space will allow for a better desk area during CCTV inspections.
- 56% more interior space than the standard Ford E350 extended van.
- V-6 Diesel engine will be more fuel efficient than a V-8 gasoline engine especially during long periods of idling during CCTV inspections.
- Rear heat and air conditioning package.
- New vehicle warranty



Cons:

- Highest purchase price. Approximately \$12,000 over 2012 budget.
- Not available under governmental contracts. Purchase must be bid thus incurring additional staff and or legal time.

**Direct Replacement:**

The Ford E-350 Super Duty Commercial Extended Van would be a direct replacement for the current van and be within the \$30,000 budget amount for vehicle replacement for 2012.



Pros:

- Direct replacement for the current van.
- This is within budget for purchase and transfer of equipment.
- State COSTARS contract makes purchasing easy. No bidding.
- New vehicle warranty.

Cons:

- Limited interior space to efficiently carry needed all needed equipment in an orderly manner. The camper roof aftermarket option would help make this van more useful.
- V-8 gasoline engine is not as efficient as a diesel

**Lowest Cost:**

The used 2003 Ford E-350 Extended Passenger Van would be a direct replacement for the current van and be well below the \$30,000 budget amount for vehicle replacement for 2012.



Pros:

- Direct replacement for the current van.
- This is well below budget for purchase and transfer of equipment.
- Purchase through Federal Surplus Program. No bidding.

Cons:

- Nine-year old vehicle with 30,803 miles
- Window van that would need the windows covered with tinting or a vehicle wrap to obscure contents from view. Cost under \$250.
- As-is where-is. No warranty. Government vehicles are not inspected.
- Would need two people to pick up in Hermitage, PA distribution center with an additional delivery charge from Harrisburg.