



LEHIGH COUNTY AUTHORITY

August 22, 2011

BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
 - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
 - *July 25, 2011 Regular Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

FINANCE AND ADMINISTRATION

- *Audit Service Extension (Approval)*
- *2nd Quarter Unaudited Financial Statements (Acceptance)*
- *Mid-year Benchmarking Report (Acceptance)*

WATER

- *None*

WASTEWATER

- *Wet Weather Optimization – Emergency Declaration for Pipe Cleaning Services (Approval)*
 - *WTP Energy Audit Report (Presentation)*
7. System Operations Overview
 8. Staff Comments
 9. Solicitor's Comments
 10. Other Comments
 11. Adjournment

SEPTEMBER MEETINGS

Workshop Meeting
Board Meeting

September 12 – 12:00 p.m.
September 26 – 12:00 p.m.

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. Members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

REGULAR MEETING MINUTES
July 25, 2011

The Regular Meeting of the Lehigh County Authority was called to order at 12:19 p.m. on Monday, July 25, 2011, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Tom Muller, Emrich Stellar, Scott Bieber, Brian Nagle, and Norma Cusick. Authority Staff present were: Aurel Arndt, Bradford Landon, Pat Mandes, Frank Leist, Douglas Young, Joseph McMahon, Liesel Adam, and Cristin Keppel.

Bruce Gordon from Johnson, Mirmiran, & Thompson and Gary Birks from Senator Pat Browne's office were also in attendance. Jeanine Bauer, member of the public from Jordan Road, North Whitehall Township, was also present.

REVIEW OF AGENDA

Mr. Arndt stated there were no additional items following the scheduled agenda.

EXECUTIVE SESSION

Mr. Arndt stated there were no executive sessions planned.

APPROVAL OF MINUTES

June 27, 2011 Regular Meeting Minutes

On a motion by Ms. Cusick, seconded by Mr. Nagle, the Board unanimously approved the minutes of the June 27, 2011 Regular Meeting (6-0).

PUBLIC COMMENTS

Ms. Bauer stated that she is a resident of North Whitehall Township, specifically residing on Jordan Road, and she was present to represent all residents of Jordan Road and the surrounding area around the proposed wastewater treatment plant on the KidsPeace property. She stated that all residents on Jordan Road are opposed to the proposed sewage plant. Ms. Bauer posed questions to the Board regarding when the Jordan Creek dries up, as it does frequently during summer months. She asked if it was a typical practice to discharge to a dry stream and who monitors that practice.

Mr. Arndt stated that existing regulations state that discharges may not harm existing water quality or life. He also indicated that the DRBC and PA-DEP are involved in permitting and monitoring the operations. Discussion followed.

Mr. Hughes asked Ms. Bauer to submit any other questions via writing so they may be properly addressed.

ACTION AND DISCUSSION ITEMS

Interconnection with City of Allentown (COA), Phase 2 (Approval)

Mr. Arndt explained that Livengood Excavators, Inc. has provided a signed agreement and acceptable bonds and insurance certificate, but access to certain portions of the project area has not yet been secured from the COA. Because the COA Interconnection agreement states that the Authority must take water in 2012, it is recommended that the Board amend its earlier action and authorize the staff to award the construction contract, limiting the work to the areas outside of City property and City street rights-of-way, and proceeding with the balance of the work as access is secured. If the Authority continues to hold off awarding the contract until access to the City properties and streets is secured, the current completion deadline may not be feasible.

On a motion by Mr. Muller, seconded by Mr. Stellar, the Board unanimously approved to amend the Livengood Excavators, Inc. contract award and issue a Notice to Proceed on the portions of the project area that do not require Rights of Way from the City (6-0).

Mr. Birks exited the meeting at 12:45 p.m.

Budget Amendment – Laboratory Services (Approval)

Mr. McMahon stated that the Pennsylvania Department of Environmental Protection changed required monitoring frequency for SOC's and VOC's in 2011 instead of in 2012 as previously planned, well after the Authority's budget approval process. In February, previously State waived SOC contaminants were also added to the required monitoring list. He indicated that most entry points require quarterly monitoring of 30 contaminants at a cost of \$1,060 per quarter, per entry point, which is a considerably larger increase than the budgeted amount.

On a motion from Ms. Cusick, seconded by Mr. Nagle, the Board unanimously approved a Budget Amendment addition for \$78,000 for required laboratory services (6-0).

Long-term Wastewater Capacity

Mr. Nagle asked for some clarification regarding the notes in the agenda on this subject.

Ms. Mandes stated that the Long-term Wastewater Capacity Plan approach ultimately selected will require Board approval; however, an RFP will be issued for Act 537 Planning before a final decision is made because all three options will need to be evaluated in the planning process.

SYSTEM OPERATIONS OVERVIEW

Mr. McMahon stated a water main break at Meadowyck Condominiums late during the night of July 24, 2011 is being repaired. He also noted that usage is up to 10.7 mgd because of the summer weather.

Ms. Adam reviewed 2010 and current water usage data.

Mr. McMahon stated that 2 MGD is coming from Schantz Spring, which helps to lessen the stress on other wells during these high demand periods.

Ms. Adam also noted there are currently no drought warnings at this time from DEP or DRBC.

STAFF COMMENTS

Budget Comparative

Mr. Young indicated that there was an error on the Wastewater Treatment Plant Operating Report section of the new budget comparative and distributed corrected information to Board members.

Mr. Arndt stated that the Comparative shows modest growth in the area and there is little increase in revenue other than the water rate increase that went into effect recently.

SOLICITOR'S COMMENTS

None.

OTHER COMMENTS

Draft CFO Job Description

Mr. Arndt referred to the draft job description previously distributed for the new CFO position that will replace the Business Manager position. He stated that the job advertisement and recruitment process will start shortly so that a candidate is hired and has some overlap time with Doug Young before his

retirement. Mr. Arndt stated that the goal is to bring the new CFO on board by January 1, 2012. He explained the list of key deliverables and discussed the screening process with Board members.

Messrs. Nagle and Stellar suggested that strategic planning deliverables are extremely important given the current economic forecast, as well as more detailed financial aspects of the description. Discussion followed.

EXECUTIVE SESSION

The Chairman called for an Executive Session at 1:33 p.m. to discuss issues surrounding the Jordan Creek Wastewater System. Ms. Bauer and Mr. Gordon exited the meeting.

The session ended at 2:21 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:22 p.m.

Brian C. Nagle
Assistant Secretary

FINANCE & ADMINISTRATION

ACTION ITEMS

1. **Audit Service Extension** (Approval)

The staff recommends that we extend the audit service contract (**blue**) with Zelenkofske Axelrod, LLC for the 2011 and 2012 audits. The 2011 cost will be \$24,855, which includes a 3% increase over 2010 costs while the 2012 cost will include another 2% increase. The extension is in keeping with our Request for Proposal, which included extending for two optional years beyond the initial 3 year period. The quality of their work and timeliness in meeting deadlines and other requests has been very satisfactory.

2. **2nd Quarter Unaudited Financial Statements** (Acceptance)

The 2nd Quarter unaudited financial statements are attached separately for your review. Acceptance of the statements by the Board is required.

3. **Mid-year Benchmarking Report** (Acceptance)

The 2011 mid-year benchmarking report is attached for review (**tan**).

DISCUSSION ITEMS

1. ***None.***

INFORMATION ITEMS

1. **Recently Purchased Investments – Certificates of Deposit (CDs)**

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	PSDLAF Collateralized Flex Pool (B)		1,150,000.00	7/19/11	10/25/11	0.210
LLRI CR	New York Community Bank	New York, NY	216,535.43	7/20/11	7/19/13	0.800
LLRI CR	OrientalB & T (A)	San Juan, PR	233,000.00	7/20/11	7/22/13	0.850
LLRI CR	Compass Bank	Birmingham, Al	245,000.00	7/29/11	1/29/13	0.550
LLRI CR	Huntington National Bank	Columbus, Oh	150,000.00	8/4/11	8/5/13	0.700
LLRI CR	First Trust Bank	Charlotte, NC	245,000.00	8/15/11	2/15/13	0.500

Fund Descriptions for Investments:

LLRI CR	Little Lehigh Relief Interceptor Capital Reserves
Cons Wtr (2)	Consolidated Water 2

WATER

ACTION ITEMS

1. *None.*

DISCUSSION ITEMS

1. *None.*

INFORMATION ITEMS

1. Water Meter Replacement Project

Phase 1 - After determining that the potential cost to LCA is minimal to address the nine non-read accounts identified in the QC, we will not pursue any recovery of costs from Vanguard. Vanguard has submitted a revised final application for payment. We sent Vanguard documentation to sign prior to release of the final payment. The documentation included a compensating change order to adjust the estimated quantities to reflect actual quantities.

Phase 2 - TSE, Inc. started work on July 18 to replace approximately 3,300 aging meters, and install radio-read units and backflow preventers. Their schedule anticipates completing the first milestone prior to the September 23 deadline date. They are also making appointments to move into the second of seven milestone areas.

2. Interconnection with Allentown

Phase 1 - Connection at Schantz Spring – Testing of the emissions from the emergency generator engine proved compliance with EPA regulations. The third-party testing service sent their report to DEP for review. DEP has said that the report will probably be reviewed in July. *Update?*

Phase 2 - Connection to City Transmission System at 26th and Chew Streets – Livengood Excavators has been authorized to proceed - the contract deadline for substantial completion is May 13, 2012. Livengood has started pipelaying in the area of Schantz Spring. Although the City of Allentown has not yet signed the easement agreements, we've been told that they have been approved by the City Solicitor's office. The City has issued a permit for excavation in their streets, waiving its permit fees as we requested per our service agreement.

3. Water Main Replacement Project 2011 – Oakland Park (UMT)

Due to changes in the NPDES permit requirements effective as of 2011, this project will require that we complete an E&S plan for review by the Lehigh County Conservation District and possibly apply for a NPDES permit prior to the start of construction. We have solicited proposals from engineering firms to complete this work for us. As NPDES approvals typically take multiple months, if a NPDES is required, we will have to delay the start of this project until we have a permit in hand. We anticipate a spring 2012 start date.

4. Water Main Relocation Project – Slatedale

Our water facilities on West Grant Street were successfully relocated in June. Work on Main Street has been scheduled for 2012. Our exposure, by PaDOT Agreement, is about \$25,000.

5. **CLD Water System Model**

Gannett Fleming has submitted a model development and calibration report that incorporates integration of GIS, Munis and SCADA data into the model that we have returned comments on. They also submitted an analyses report for the interconnection with the City of Allentown, pressure deficiencies, fluoride and hardness concentrations, and water age that we are currently reviewing. LCA training in use of the model must be scheduled.

6. **WL-1 Tank Replacement**

Additional, unanticipated work at the facility has caused an increase beyond the approved project budget. Staff is reviewing expenses and time charged and will seek approval for the increase.

7. **Arcadia West Pumping Station Modifications**

A Request for Proposals (RFP) is being prepared for design, permitting and construction-related engineering services for improvements to the pumping station. The selected firm will investigate future growth and demands in the service area, design domestic and fire pumps to meet those demands, design any building improvements necessary, as well as design corrosion control, metering, additional emergency power and other improvements to the station as outlined in the RFP. The system, which currently operates under a Brief Description Form, will also be permitted as a Community Water System. We expect to receive proposals in October.

8. **Developments**

Water system construction is occurring at the following developments:

Trexler Fields, Phases 2/3/7, 38 residential lot, UMT
Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT *(There has not been any construction activity at this development in over a year.)*

Water system plans are being reviewed for the following developments:

Diocesan Pastoral Center, 2 commercial lots, 3 additional lots, & residual lot for existing cemetery, LMT
Hamilton Crossings, 3 commercial lots, LMT
Hickory Park Estates, 3 residential lots (sfd), UMT
Hillview Farms, 31 residential lots (sfd), LMT/SWT
Indian Creek Industrial Park, 6 commercial lots, UMT, water and sewer
Lehigh Hills, 247 residential lots (sfa/sfd), UMT
Morgan Hills, 40 residential lots (sfd), Water & Sewer, WeisT
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water and sewer
Rabenold Farms, 205 residential lots (sfd), (Portion south of I-78), UMT
Rabenold Farms II, 288 apartment units and clubhouse, (Portion north of I-78), UMT
Red Maple Acres Expansion, 29 units, LMT
Shepherd's Corner, 1 commercial lot, LMT
Spring Creek Properties Subdivision 1, 14 commercial and industrial lots, LMT
Trexler Business Center, Lot 1, 1 commercial building, LMT
Trexler Senior Living Center, 2 commercial lots, LMT *(In bankruptcy)*
Weilers Road Twins, 82 residential lots (sfa), UMT
West Hills Business Center, 5 industrial lots, WeisT
Woodmere Estates, 60 residential units (sfd), UMT
Wotring North Development, 20 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

1. **Wet Weather Optimization Project -Emergency Declaration for Pipe Cleaning Services** (Approval)

Pipe cleaning services were required to clean the 4 inverted siphons on the Keck's Bridge Relief Interceptor to prevent blockage of the interceptor. The severity of the grease and grit accumulation in the pipes was unanticipated. Recognizing the potential blockage, it is requested that the board declare the situation an emergency. Please refer to the attached memorandum (*green*).

DISCUSSION ITEMS

1. **WTPs Energy Audit Report Presentation**

Phase I of the study included an economic evaluation of the excess biogas production including a comparison of selling the excess biogas to Kraft Foods or utilizing the biogas on-site at the WTP. Thereafter Kraft indicated that they were no longer interested in purchasing the LCA biogas due to the project not being economically feasible for them.

Phase II of the study looked at the potential for producing additional biogas as well as an evaluation of other energy improvement/energy efficiency measures, and ways to optimize digester performance.

The LCA package wastewater treatment plants were also evaluated in Phase III. It does not appear from the draft report that any energy improvements will be cost effective at the small plants.

The Final Engineering Report on the Energy Audit and Bioenergy Recovery Evaluation will be presented at the Board Meeting with specific recommendations. The recommendations include the construction of a waste receiving station to convey high strength waste directly into the digesters, replacement of the digester mixers, and installation of a combined heat and power system. Justification for the recommendations will be presented at the Board Meeting. The Report is included.

INFORMATION ITEMS

1. **Vera Cruz Area Sewer Project**

Work continues, with directional boring progressing within Vera Cruz Road. Progress has been slow due to rock in the area. The Contractor, the Engineer and LCA staffing will be meeting to determine the best course of action to regain the schedule. Substantial Completion and Final Completion are December 30, 2011 and February 28, 2012, respectively.

2. **Infiltration and Inflow (I&I) Program Update**

The 537 plan revisions and SCARP submitted to the DEP in March of 2010 were approved in June including the revision to Chapter 4. How the allocation flow credits are handled is the subject matter of Chapter 4.

The WLI Optimization Study field trials were completed in July. Cleaning of the four siphons at the interceptor stream crossings were required as part of the field study prep work.

The majority of the SSES field work has been completed in the Signatory municipalities including basement inspections. Malcolm Pirnie will soon begin the evaluation of the results.

The semi-annual EPA Report was submitted in July.

3. Wastewater Treatment Capacity

The life cycle costs for the LCA options were completed by Malcolm Pirnie and reviewed by the LCA staff. Malcolm Pirnie is currently making some minor changes to the report. The final report will be presented to the City for review.

The life cycle costs for the City have been provided to LCA. A meeting has been scheduled between LCA and the City to discuss the cost estimates. The cost estimates will be presented to the Board once both parties agree with the estimates.

The Project Findings report will be presented to the WLI Advisory Committee in early September followed by the steering committee.

Two steering committee meetings will be held to update the committee on the various activities that have taken place since the committee last met. Updates will be provided on the DRBC effluent standards, cost estimates, life cycle costs, Natural Treatment and Non-Stream Discharge Wastewater Alternatives Report, short term allocation leasing and a wet weather update.

An RFP for completing the Act 537 Planning has been prepared by Malcolm Pirnie. It is expected that the RFP will be issued after the Steering Committee presentation.

4. Arcadia West Wastewater Treatment Plant Upgrade

Bids were received on March 17 for the General Construction, Electrical Construction and Mechanical and Plumbing Construction contracts. The General Construction bid was designed as a Base Bid with Add/Deduct Alternates. PaDEP concluded that the bid documents do not comply with PennVEST's "or-equal" policy. Although we responded with a detailed explanation, DEP will not reconsider their position. We are planning our approach to re-bidding.

5. Northern Lehigh Wastewater System

The project is proceeding in a number of areas:

Wastewater Treatment Plant (on a 5 acre tract at Kids Peace)

(1) A Special Exception must be granted by the Zoning Hearing Board for the proposed property use. The hearing before the Zoning Hearing Board began on May 18, was continued on June 22, and July 7, but was not completed. The hearing will resume on September 13. Opponents of the WTP vow to oppose it every step of the way.

(2) Work is continuing to prepare for submission of permit applications.

Barring any regulatory delays we expect to have the wastewater treatment plant operational by October 2013. The total cost of the WTP including soft costs and Kids-Peace acquisition costs is estimated at \$4.69 million.

Offsite Conveyance Facilities (OSCF)

(1) Wal-Mart's engineer, the Newton Engineering Group is proceeding with the preliminary design of the necessary conveyance facilities, which includes gravity sewers, a pump station and force main to deliver the wastewater from their proposed development and other future wastewater customers to the wastewater treatment facilities. Wal-Mart at this late date has proposed that LCA assume the responsibility of designing, permitting and constructing the OSCF, which is a change from the previous plan where Wal-Mart had the responsibility. A cost-sharing agreement is still being negotiated with Wal-Mart.

August 22, 2011

The construction cost of the conveyance facilities is estimated at \$1.354 million.

(2) An amendment to the agreement with KidsPeace is being negotiated to reflect the changed circumstances since the original agreement was signed in 2006.

Zelenkofske Axelrod LLC

October 11, 2010

Mr. Douglas A. Young
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106-0348

RE: Annual Authority Audit Extension

Dear Mr. Young:

As a follow-up to your conversation with Patrick Kirk of our firm, Zelenkofske Axelrod LLC is writing this letter in the form of a contract to extend our audit services to Lehigh County Authority ("Authority") for the years ending December 31, 2011, and 2012.

Our audit of Lehigh County Authority's financial statements as of December 31 each year will be in accordance with generally accepted auditing standards as included in *Statements on Auditing Standards* published by the American Institute of Certified Public Accountants.

The annual fees for these services will be as follows:

<u>Year</u>	<u>Financial and Single Audit</u>
2011	\$24,855

The 2011 fee includes a 3% inflationary adjustment and each year thereafter, we will also include a 3% inflationary adjustment for the years ended December 31, 2012 in order to allow us to continue to provide salary adjustments to our staff.

If additional time is necessary (e.g. due to changes in professional standards, changes in laws and regulations, establishment of new funds, new federal or state programs, new bond issues, etc.), we will discuss it with you and arrive at a new fee estimate before we incur the additional costs.

<u>Harrisburg</u>	<u>Lehigh Valley</u>	<u>Philadelphia</u>	<u>Pittsburgh</u>
830 Sir Thomas Court, Suite 100 Harrisburg, PA 17109 717.561.9200 Fax 717.561.9202	1101 West Hamilton Street Allentown, PA 18101-1043 610.871.5077 Fax 717.561.9202	2370 York Road, Suite A-5 Jamison, PA 18929 215.918.2277 Fax 215.918.2302	3800 McKnight E. Drive, Suite 3805 Pittsburgh, PA 15237 412.367.7102 Fax 412.367.7103

Zelenkofske Axelrod LLC

Mr. Douglas A. Young
Lehigh County Authority
October 11, 2010
Page 2

If Lehigh County Authority accepts this contract to provide audit services for the years ending December 31, 2011, and 2012 please indicate by signing the acknowledgment on the next page, and we will formalize the terms of our agreement in an engagement letter.

Thank you for the opportunity to present this contract to Lehigh County Authority, and we look forward to continuing our relationship with Lehigh County Authority.

If you have any questions, please call Patrick Kirk at (717) 561-9200 extension 5003.

Sincerely,

A handwritten signature in cursive script, appearing to read "Zelenkofske Axelrod LLC", written in dark ink.

ZELENKOFKSKE AXELROD LLC

PERFORMANCE BENCHMARKING UPDATE

2011 BUDGET

Performance Benchmarking Metric Measurements

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Performance Benchmarking Overview – Through June 2011

2011 is the fourteenth year of the Authority's Benchmarking program. A number of measurements that span the organization have been established. Goals, or benchmarks, for these measurements have been set, either reflecting our Strategic Plan, an "Industry standard", or our past experience where historical data exists to allow for comparison.

This benchmarking report provides:

1. Year 2011 measurements reported through June or another month as indicated.
2. Comments on the organization's performance relative to the goals.
3. Measurements for 2007 through 2010.

SUMMARY

Page	Issue	Factor	Comment
KEY BENCHMARKS			
3	Financial Management	Water System Bond Coverage	Although our coverage factor has decreased the past several years, we are still above our goal of 1.2. A water rate increase effective 4/1/11 should improve the coverage factor.
4	Financial Management	Budgeted Wastewater Charges	For the past 4 ½ years operating costs have tracked below cumulative inflation.
5	Financial Management	Budgeted Water Charges	Rates have tracked below cumulative inflation over the past 5 years.
BONUS CRITERIA			
6	Service Reliability	Water Service Outages	Outages have sharply decreased since 2008. We expect to meet the Level 2 Goal for 2011.
7	Customer Service Satisfaction	Customer Service Satisfaction	Beginning in 2006, semiannual postcard surveys of customers having contact with LGA personnel were used to determine satisfaction with our customer service. For the past 4 ½ years we are meeting our Level 2 Goal.
8	Safety	Number of Claims Reported to Workers' Compensation	Through June 2011, there have been no reportable Worker's Compensation claims.
9	Efficiency	# of Customer Accounts per Fulltime Employee Equivalent	This benchmark was revised beginning in 2011 to include the total number of retail accounts for both water and the Collector Systems as a ratio to fulltime employees for the water and wastewater operating systems. Through June 2011 we are slightly exceeding the level 2 goal.
10	Capital Project Execution	Net Final Project Costs as % of Project Authorization Amount	Through June 2011, there have been no projects totally completed. From 2008 through 2010, level 2 goals have been met.

SUMMARY

Page	Issue	Factor	Comment
BONUS CRITERIA (CONTINUED)			
OTHER BENCHMARKS – GOALS NOT MET			
12	Financial Management	% of Customers not receiving a delinquency notice	Although the benchmark goal has not been met for the past 4 ½ years, we have seen a reversal in the downward trend during the first half of 2011.
13	Service Reliability	Water Main Breaks	The chart shows a significant reduction in breaks in 2011, which we believe is a result of several main replacement projects over the past few years. We have met the goal for total main breaks per 100 miles of pipe but are still not meeting the goal for Cast Iron main breaks.
22	Leakage	Unaccounted-for-Wastewater flow	Primarily due to several high precipitation events in 2011, non-billable wastewater flow has increased. Once the repair phase of the Signatory I/I project gets underway, we believe that the leakage ratio should be diminished.
ALL OTHER GOALS WERE MET – SELECTED COMMENTS			
11	Financial Management	Controlling Overhead Costs	We continue to maintain overhead costs well below the CPI-adjusted costs.
15	Water Quality	Total Coliform Bacteria Monitoring	Through June 2011, there have been no positive samples in our water systems.
16	Water Quality	Wastewater Treatment Effectiveness	Through June 2011, there have been no NPDES permit violations at our four collection system treatment plants. (The Arcadia West treatment plant is still shutdown with the wastewater being hauled out.)
17	Water Supply Adequacy	Safe Yield of Water Supply	With the additional supplies obtained through upgrades to Wells # 8 and 12 and the completion of the Schantz Spring Pump Station, we should have adequate supplies for the next several years.
18	Wastewater Allocation Availability	Years of Allocation available for LCA	With the slowdown in the new housing market and industrial expansions, available allocation should last 4 to 5 years. Purchasing or leasing additional allocation from other municipalities and the brewery together with I/I removal to recapture capacity should provide LCA with available time to find a more permanent solution.
19 & 20	Asset Maintenance	% Unplanned Maintenance – Water/Wastewater	We continue to meet our goals for minimizing unplanned maintenance.

Issue: Bond Coverage

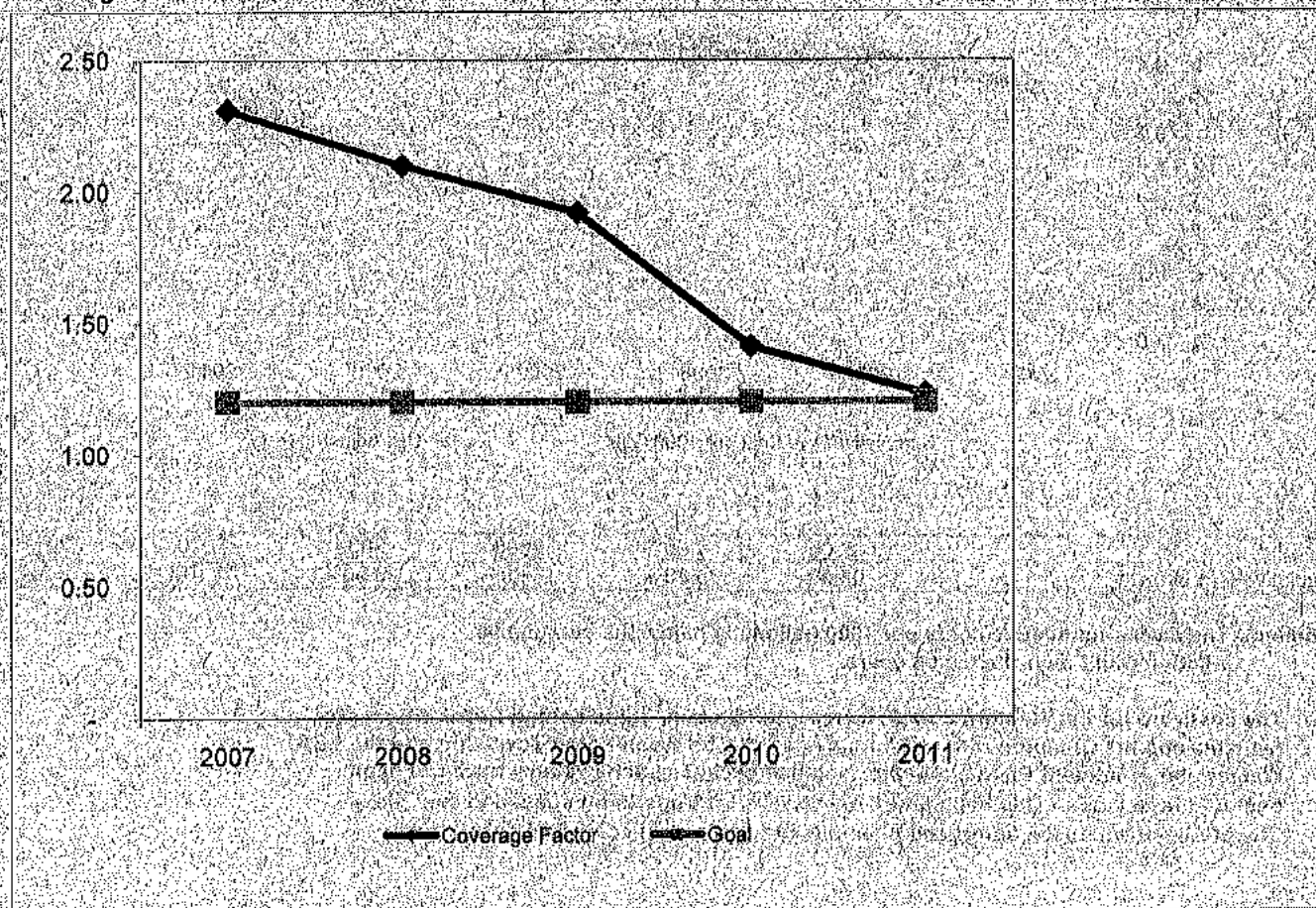
Benchmark Factor: Water System Bond Coverage

Measurement Objective: To determine the factor of net operating revenues divided by debt service

Goal: To exceed a 1.20 water system operating coverage

	2007	2008	2009	2010	2011
Coverage Factor	2.31	2.10	1.92	1.41	1.23
Goal	1.20	1.20	1.20	1.20	1.20

* Through June



Comment: The Authority is slightly exceeding its coverage requirements through June 2011, but with a rate increase taking effect with the July billing, the coverage factor is expected to improve.

Issue: Financial Management

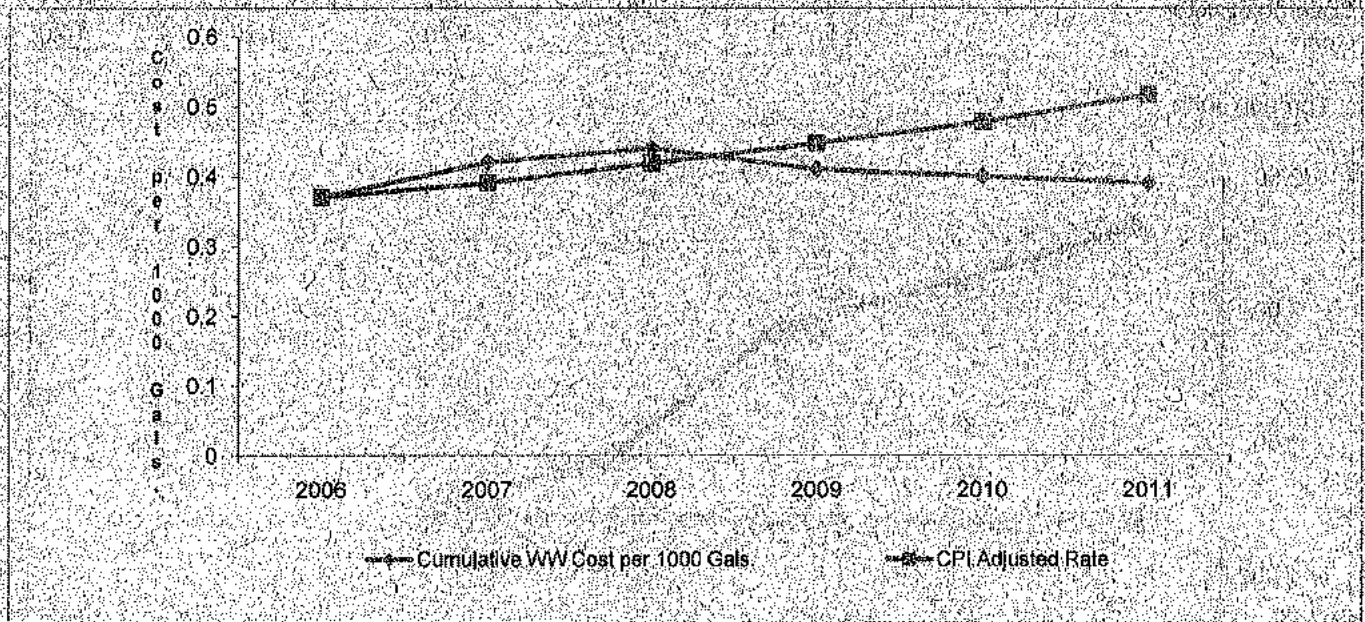
Benchmark Factor: Actual Wastewater Costs - Interceptor System

Measurement Objective: To measure effectiveness in maintaining cost stability

Goal: To maintain the cumulative costs per 1000 gallons at a level less than the increase in the CPI Index - Utility Component for Water and Sewer Line Maintenance over a 5 year period.

	2006	2007	2008	2009	2010	2011
Cumulative WW Cost per 1000 Gals	0.37 \$	0.42 \$	0.44 \$	0.41 \$	0.40 \$	0.39
CPI Adjusted Rate	0.37 \$	0.39 \$	0.42 \$	0.45 \$	0.48 \$	0.52

Through June



Year	2006	2007	2008	2009	2010	2011
Cumulative CPI Growth	0.00%	5.60%	13.00%	20.90%	29.10%	32.20%

Comment: The 5 year cumulative costs per 1000 gallons is below the cumulative Inflation trend over the past 5 years.

Note: The costs are for the Western Lehigh Interceptor System, Little Lehigh Relief Interceptor Systems and the Common rate collector systems. The Washington Township and the LCA Wastewater Treatment Plant costs are excluded because such systems have not been operated for 5 years. This benchmark only tracks LCA operating costs and excludes City of Allentown costs, amortized planning and equipment costs and debt service.

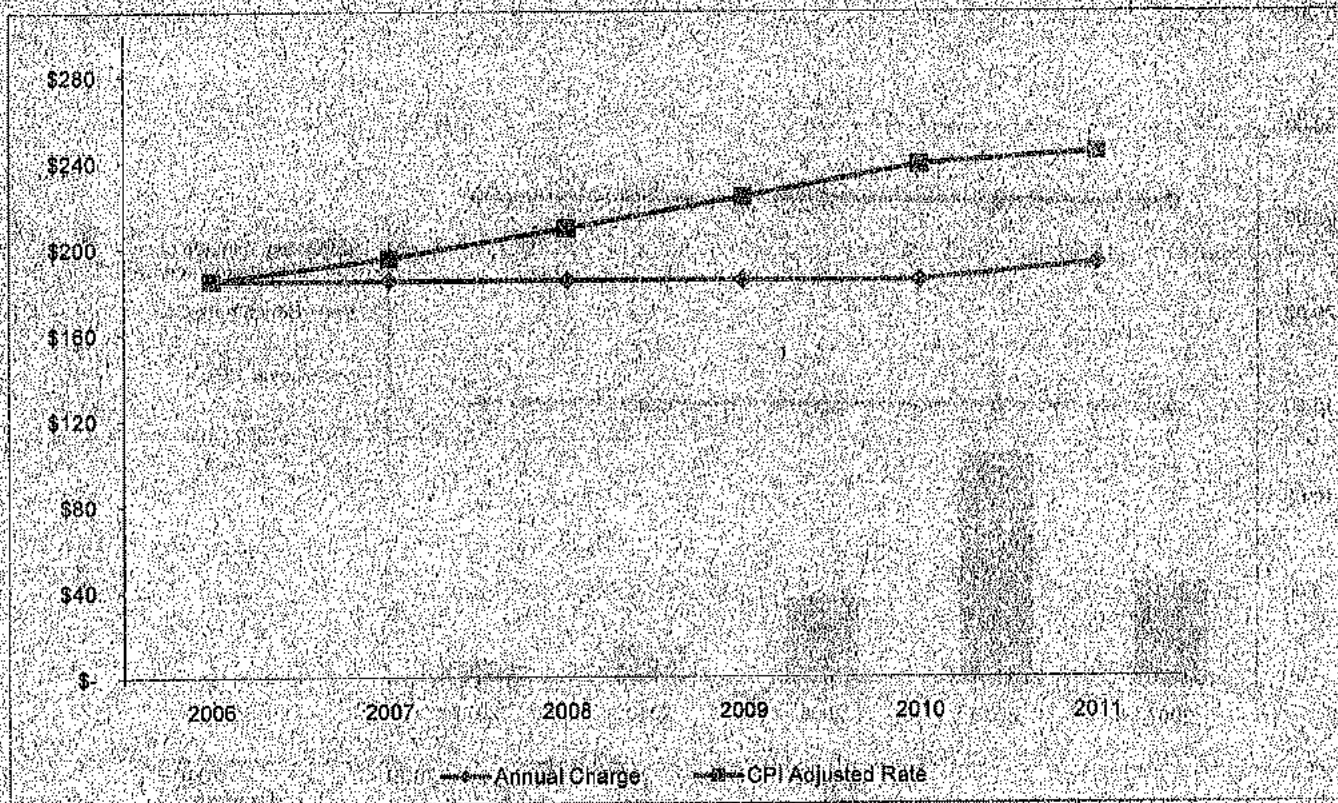
Issue: Financial Management

Benchmark Factor: Budgeted Water Charges

Measurement Objective: To measure effectiveness in maintaining cost stability

Goal: To maintain rates at a level less than the increase in the CPI Index - Utility Component for Water and Sewer Line Maintenance over a 5 year period

	2006	2007	2008	2009	2010	2011
Annual Charge	\$ 185.04	\$ 185.04	\$ 185.04	\$ 185.04	\$ 185.04	\$ 193.14
CPI Adjusted Rate	\$ 185.04	\$ 195.41	\$ 209.18	\$ 223.68	\$ 238.79	\$ 244.71



Comment: As shown above, charges to the typical residential customer have tracked well below cumulative inflation. In 2011 a rate increase took effect 4/1. The prior rate increase was effective 4/1/01.

Note: The annual charge is for the typical residential customer using 18,000 gallons per quarter under common rates.

Criteria: Service Reliability

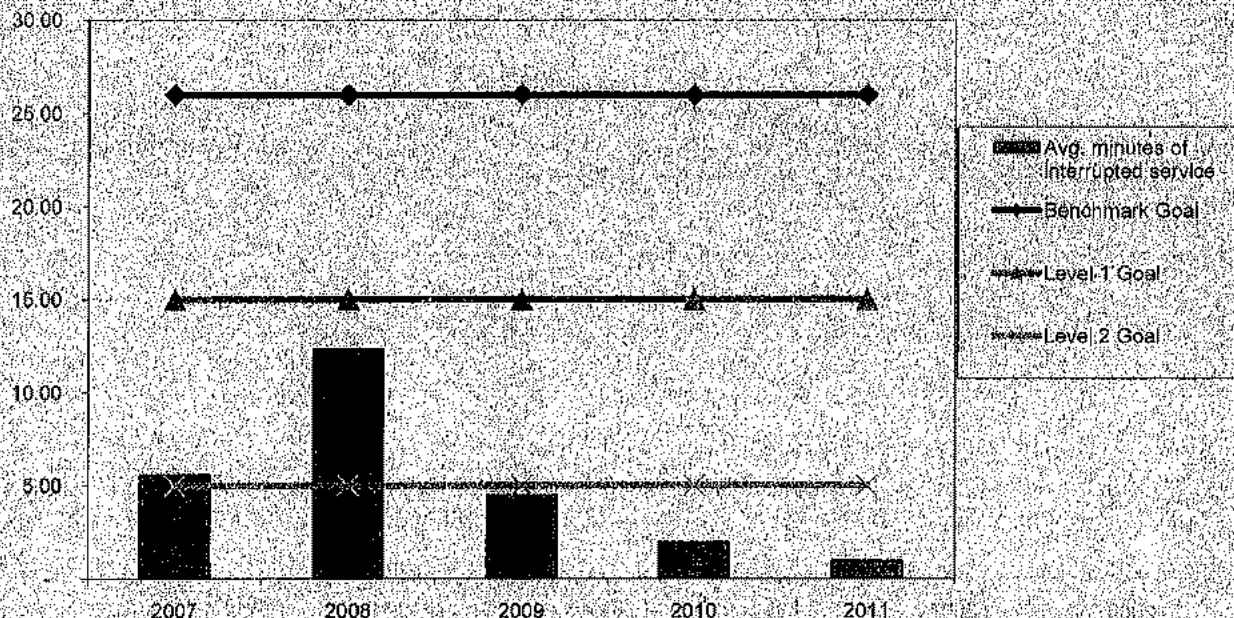
Benchmark Factor: Water Service Outages

Measurement Objective: % of time customers are provided with water service

Benchmark Goal: 99.995% reliability or less than 26 minutes of outages per customer per year

	2007	2008	2009	2010	2011
Avg. minutes of interrupted service	5.56	12.34	4.48	1.96	0.94
Benchmark Goal	26.00	26.00	26.00	26.00	26.00
Level 1 Goal	15.00	15.00	15.00	15.00	15.00
Level 2 Goal	5.00	5.00	5.00	5.00	5.00

Through June



	2007	2008	2009	2010	2011
Total Customer Hours	158,170,560	163,470,240	167,701,440	172,746,624	86,515,104
Total Customer Outage Hrs.	1,672	3,826	1,431	646	311
Total Customers	18,056	18,606	19,144	19,780	19,916

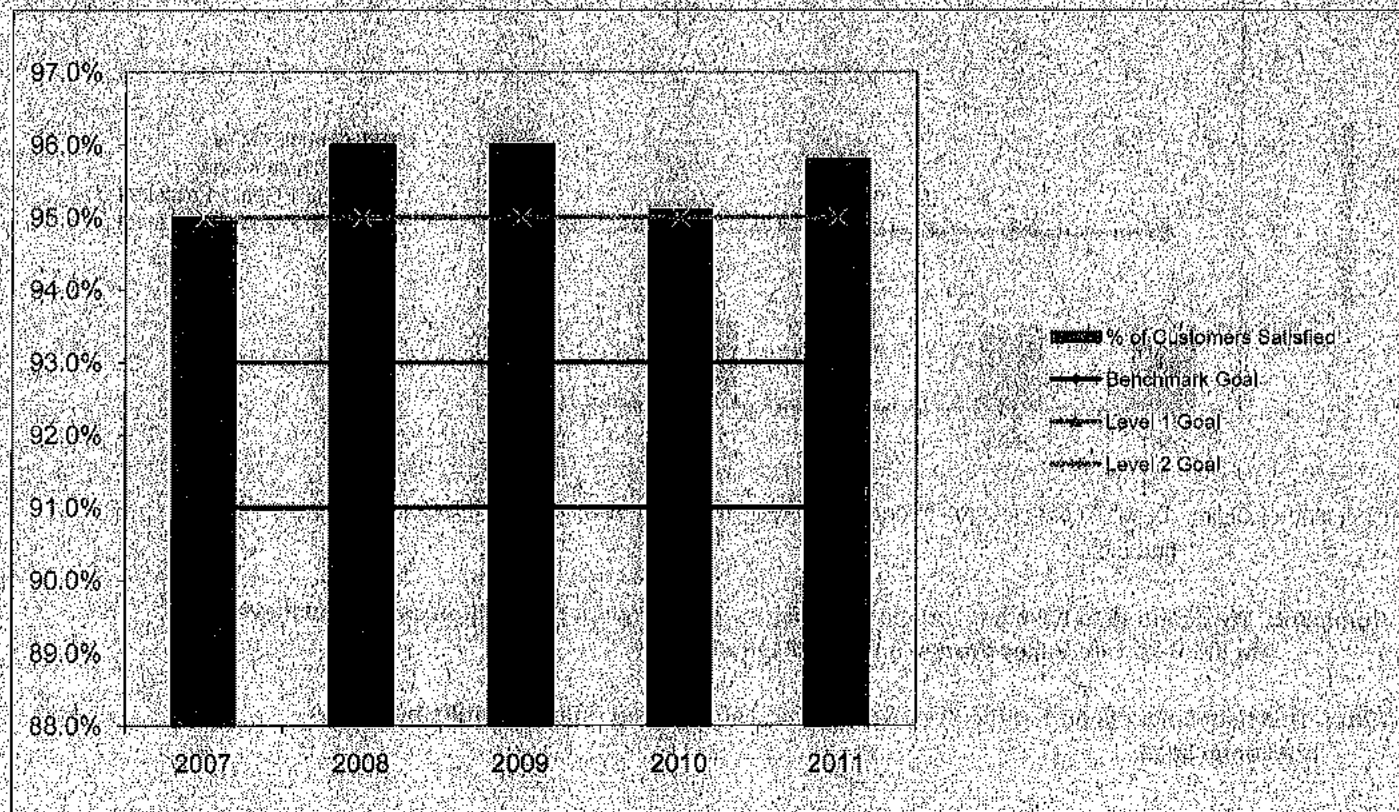
Comment: An Alburty Crossing Subdivision connection in 2008 placed 452 customers out-of-service for 4.5 hours. Through advanced planning we have minimized downtime.

Note: This is a bonus program benchmark. Achievement reflects results below the horizontal lines. Level 1 and 2 goals reflect downward adjustment changes agreed to for 2007. As shown in the graph, the reliability factor has continued to improve in 2011.

Criteria:	Customer Satisfaction
Benchmark Factor:	Customer Service satisfaction as measured by a Survey
Measurement Objective:	Using semiannual postcard surveys to customers with recent contact with LCA personnel, determine the level of customer satisfaction with LCA's customer service.
Goal:	91% of responses satisfied or above

	2007	2008	2009	2010	2011
% of Customers Satisfied	95.0%	96.0%	96.0%	95.1%	95.8%
Benchmark Goal	91.0%	91.0%	91.0%	91.0%	91.0%
Level 1 Goal	93.0%	93.0%	93.0%	93.0%	93.0%
Level 2 Goal	95.0%	95.0%	95.0%	95.0%	95.0%

Through June



Comment: This graph reflects tracking customer service satisfaction for those having contact with LCA personnel. Achievement reflect results above the horizontal lines.

Criteria: Safety

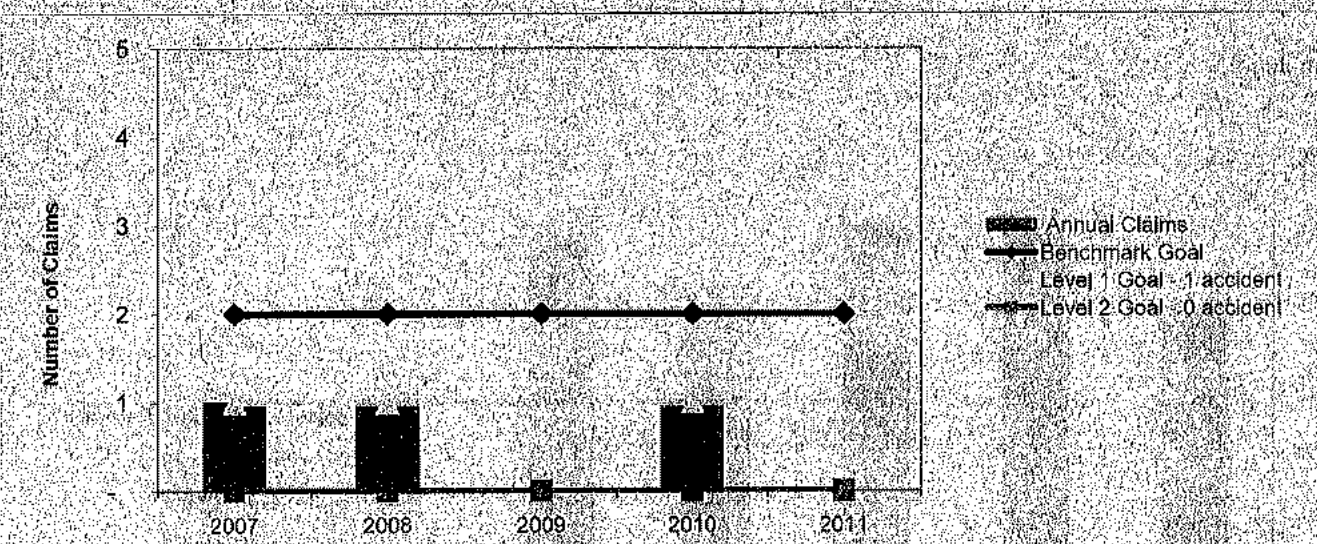
Benchmark Factor: Number of claims reported to Worker's Compensation

Measurement Objective: To measure the effectiveness of the Safety program

Goal: To have no more than 2 chargeable injuries per year with with an ultimate goal of no claims.

	2007	2008	2009	2010	2011
Annual Claims	1	1	-	1	-
Benchmark Goal	2	2	2	2	2
Level 1 Goal - 1 accident	1	1	1	1	1
Level 2 Goal - 0 accident	-	-	-	-	-

* Through June



Definition of Claim: Loss of consciousness, one day of lost time or Medical treatment beyond first aid.

Comment: We continue to have a favorable loss history with frequent recognition as a top achiever in the Delaware Valley Worker's Compensation Trust.

Note: This benchmark is part of the bonus program. Achievement reflects results below the horizontal lines.

Criteria:

Efficiency

Benchmark Factor:

of Customer Retail Accounts per Fulltime Employee Equivalent (FTE) - Water & Wastewater Systems

Measurement Objective:

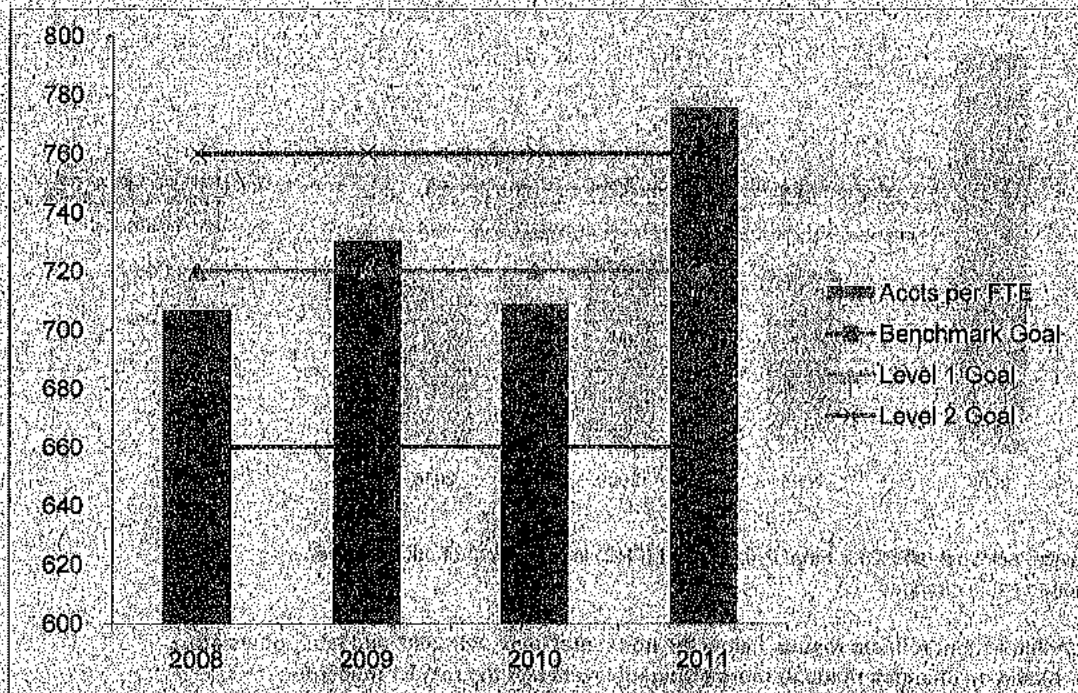
To determine the efficiency of LCA operations on a per customer basis

Goal:

To achieve a ratio of 660 Customer accounts per employee

	2008	2009	2010	2011
Accts per FTE	707	730	709	776
Benchmark Goal	660	660	660	660
Level 1 Goal	720	720	720	720
Level 2 Goal	760	760	760	760

* Through June



	2008	2009	2010	2011
# of Customer Accounts (A)	18,892	19,388	20,065	20,166
Number of Fulltime FTE's	26.73	26.55	28.31	26.00

(A) Includes number of customer accounts for water & collector systems

Comment: Prior to 2011 this benchmark was calculated by dividing the number of units served by fulltime equivalent units (FTE) of the water operations. For 2011, the calculation uses the total number of water system and wastewater collector system accounts divided by total water and wastewater operations FTE's. Prior year numbers have been recalculated using the current formula.

Criteria:

Capital Project Execution

Benchmark Factor:

Net Final Project Costs

Measurement Objective:

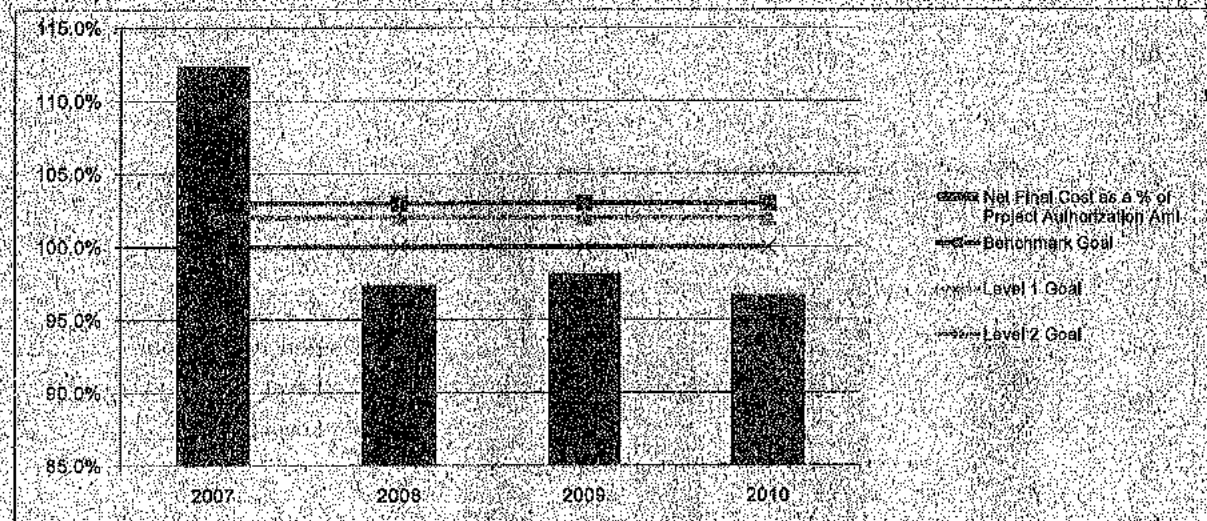
To measure Net Final Project Cost (1) as a percentage of the Project Authorization Amount to determine the effectiveness of controlling overall project costs.

Goal:

Net Final Project Costs should not exceed 105.0% of the Project Authorization Amount

	2007	2008	2009	2010	2011
Net Final Cost as a % of Project Authorization Amt	112.4%	97.41%	98.2%	96.7%	
Benchmark Goal	103.0%	103.0%	103.0%	103.0%	103.0%
Level 1 Goal	102.0%	102.0%	102.0%	102.0%	102.0%
Level 2 Goal	100.0%	100.0%	100.0%	100.0%	100.0%

* No projects have been totally completed through June.



(1) Net Final Project Cost (NFPC) = Final Project Cost (FPC) less the cost of out-of-scope and/or added value changes.

Comment: Achievement reflects results below the horizontal lines. For 2007 and later, goals are based on changes made to more stringent levels and the results reflect the removal of contingencies in calculating final results.

Projects Completed:

2010 - Flow Equalization Basin, Office Operation Center, City of Allentown Interconnection - Ph 1

WL-8 Upgrade, S. 7th St Ph 2 and FIS Purchase & Implementation

2009 - Green Hills Pump Station Upgrade, Rts 222/100 Main Relocations, 2006 WLI Rehabilitation,

Future Water Supply - Test Wells, South 7th Street - Ph 1, S. Hills/Ancient Oak Main

Replacements, Well W-12 Upgrade.

2008 - Future Water Supply - Capece Wells, Future water Supply - Immediate term (Study & Testing)

Reservoir # 5 and Applewood Pump Station Modification.

2007 - Heidelberg Heights Water System Improvements

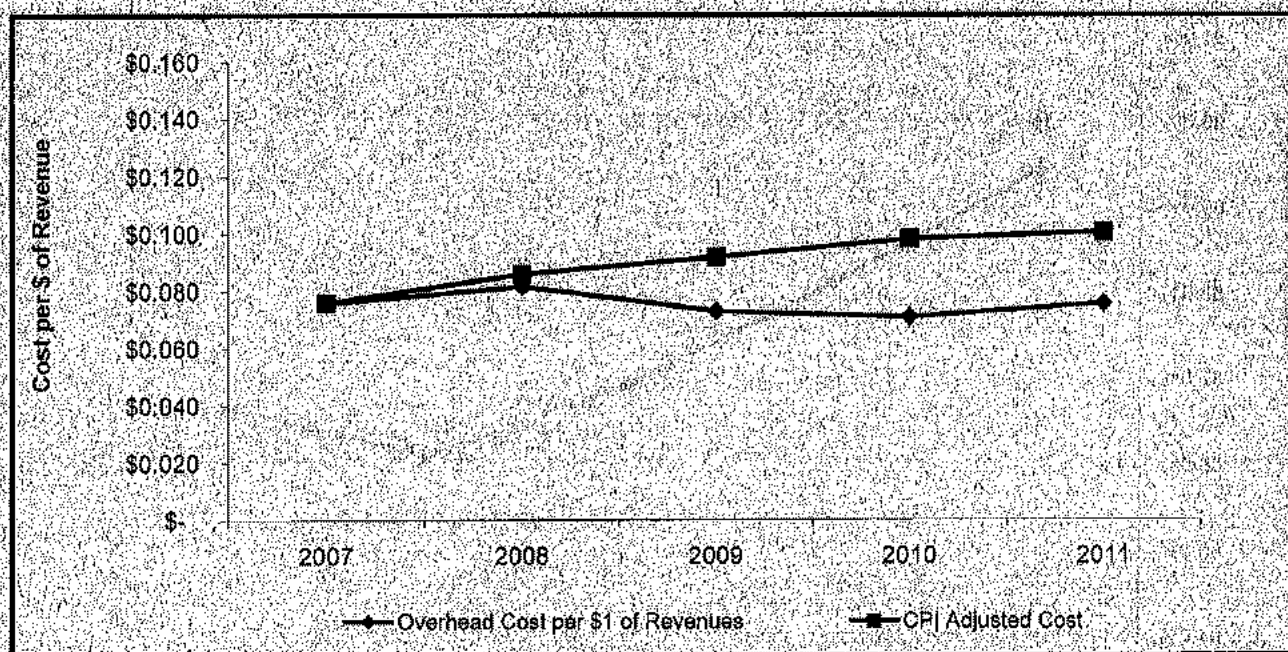
Issue: Financial Management

Benchmark Factor: Overhead Costs per \$1 of Total Revenues

Measurement Objective: To determine the efficiency of controlling Internal Service costs

Goal: To maintain costs at a level less than the increase in the CPI Index - Water and Sewer Line Maintenance

	2007	2008	2009	2010	2011
Overhead Cost per \$1 of Revenues	\$ 0.076	\$ 0.082	\$ 0.073	\$ 0.071	\$ 0.076
CPI Adjusted Cost	\$ 0.076	\$ 0.086	\$ 0.092	\$ 0.098	\$ 0.100



	2007	2008	2009	2010	2011
Overhead Costs	\$ 1,489,835	\$ 1,659,646	\$ 1,586,538	\$ 1,528,447	\$ 819,511
Total Revenues	19,695,123	20,325,887	21,729,157	21,574,718	10,837,626
Cumulative CPI Growth	5.62%	18.06%	20.89%	29.06%	32.2%

Comment: Overhead costs per \$1 of revenue has remained below inflation adjusted costs.

Issue: Financial Management

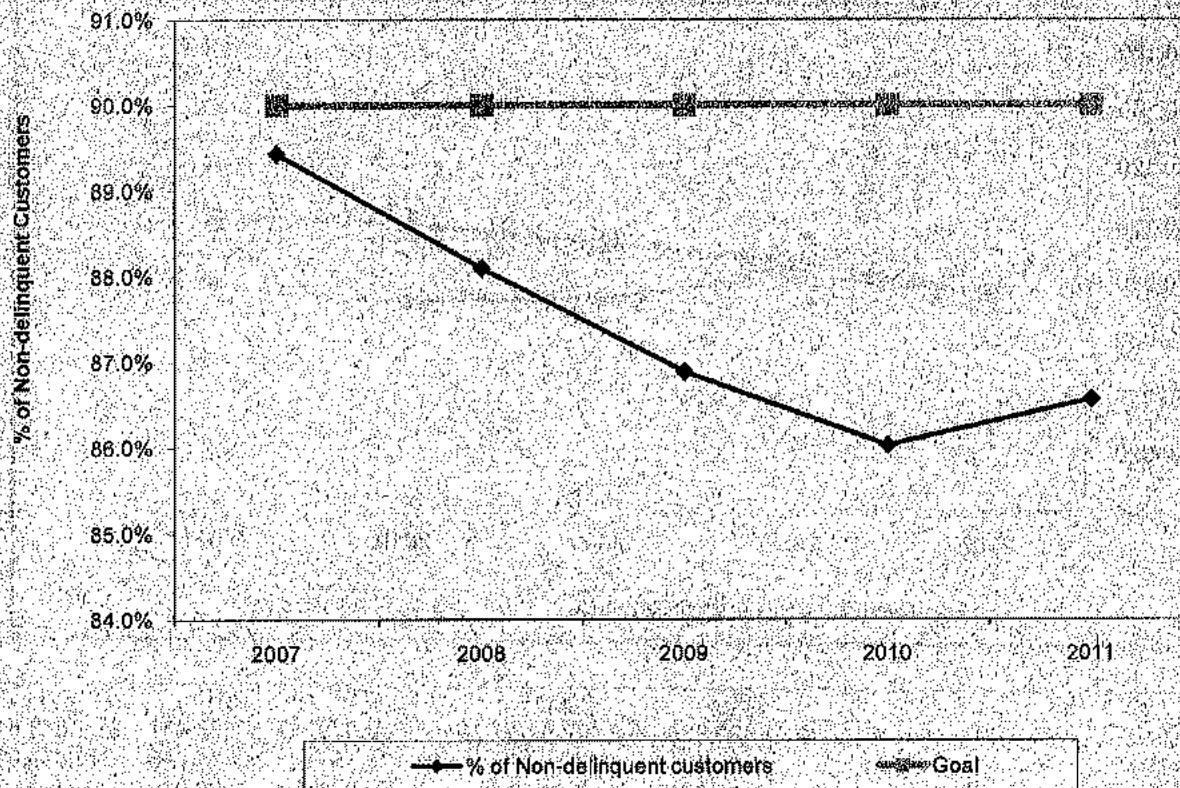
Benchmark Factor: % of Customers not receiving a delinquency notice

Measurement Objective: To measure the efficiency of the collection process for the Water System

Goal: To maintain non-delinquent customer level to 90.0% or more of initial billings

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
% of Non-delinquent customers	89.4%	88.1%	86.9%	86.0%	86.6%
Goal	90.0%	90.0%	90.0%	90.0%	90.0%

* Through June



Comment: As shown, 2011 results through June have reversed the downward trend.

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
# of Past Due Notices	7,109	8,346	10,143	10,846	5,309
# of Initial Billings	67,261	70,093	77,338	77,616	39,522

Issue:

Service Reliability

Benchmark Factor:

Water Main Breaks

Measurement Objective:

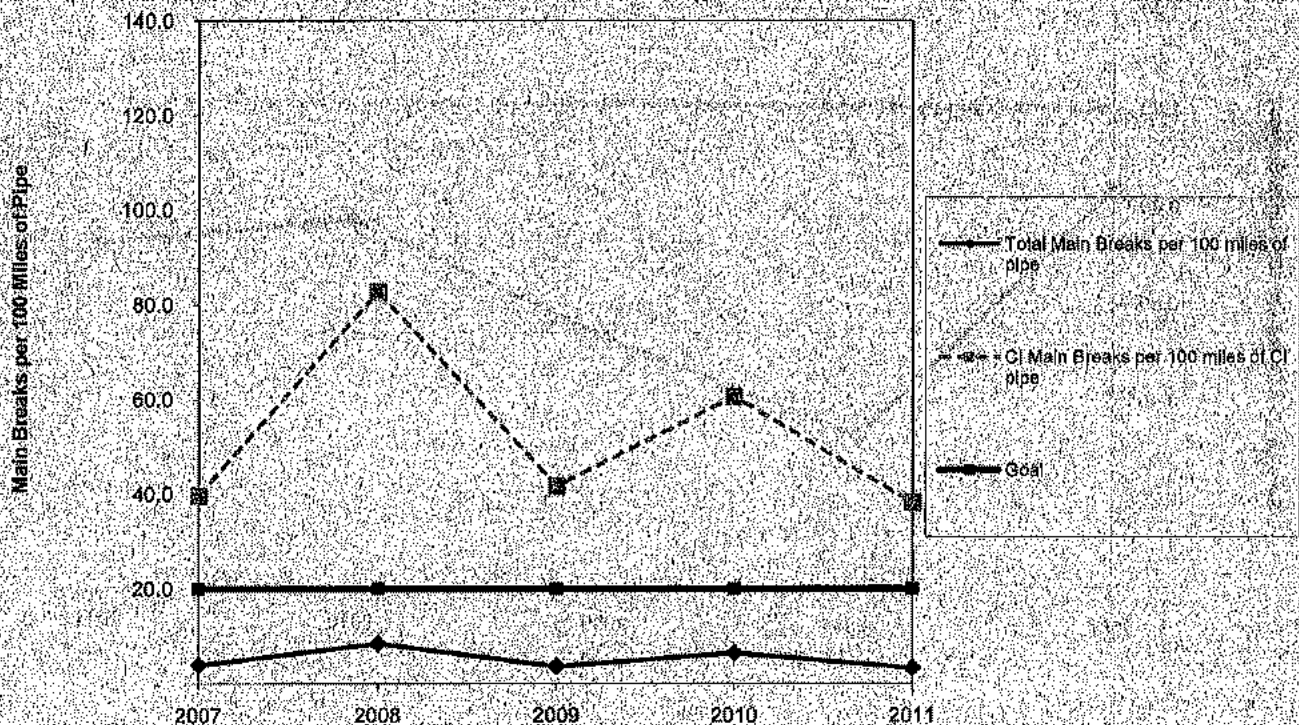
Number of Water Main Breaks per 100 Miles of Pipe

Goal:

20 or Fewer per Year

Year	2007	2008	2009	2010	2011
Total Main Breaks per 100 miles of pipe	3.9	8.4	3.6	6.4	3.2
CI Main Breaks per 100 miles of CI pipe	39.6	82.7	41.7	60.6	38.1
Goal	20.0	20.0	20.0	20.0	20.0

Through June



	2007	2008	2009	2010	2011
CI Main Breaks	11	23	11	16	5
Total Main Breaks	11	26	11	20	5
Miles of Water Main	284.8	297.5	306.0	311.3	311.3
Miles of CI Water Main	27.8	27.8	26.4	28.4	26.4

Comment: As shown, cast iron mains accounted for most of the Authority's main breaks during the past 4 1/2 years. The ongoing main replacement project should further reduce such breaks as the amount of CI pipe diminishes.

Note: The miles of CI pipe were determined per a system inventory all water divisions.
All years presented include adjustments for acquisitions and main replacements.

Issue: Service Reliability

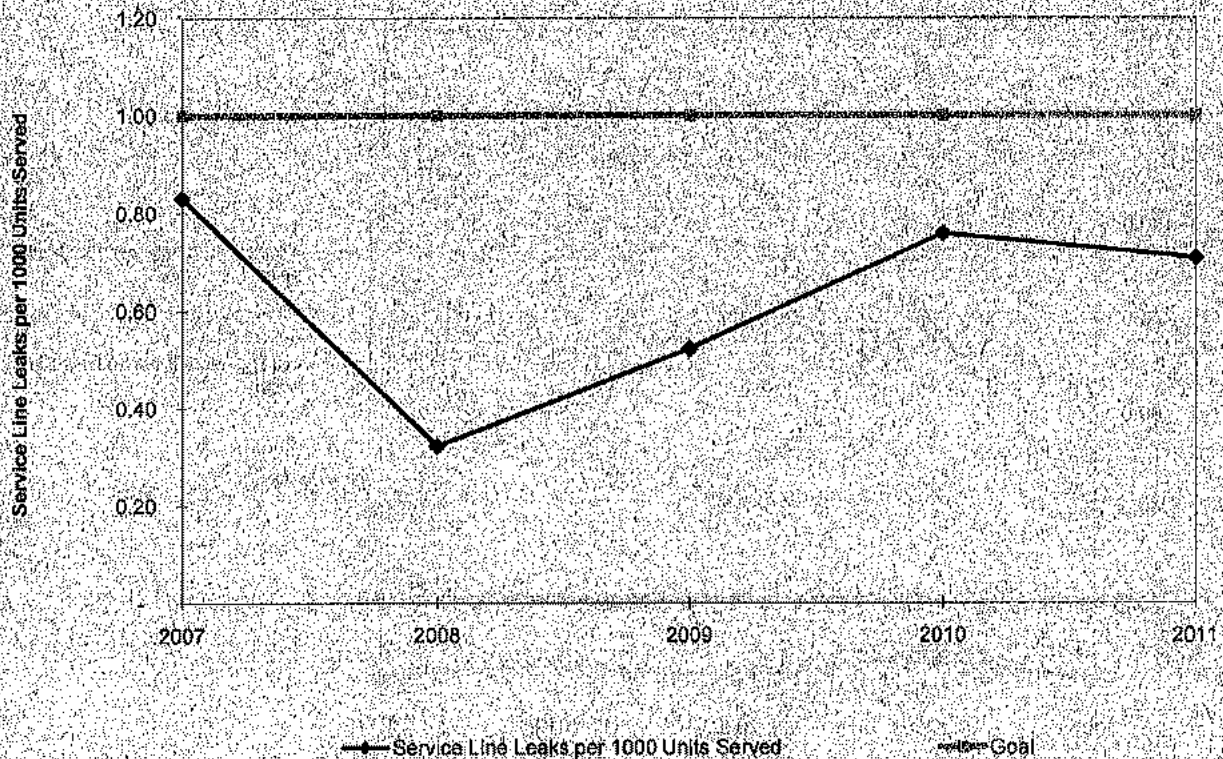
Benchmark Factor: Service Line Leaks

Measurement Objective: Number of Service Line Leaks per 1000 Units Served Services per Year

Goal: 1.00 Service Line Leak per 1000 Units Served

Year	2007	2008	2009	2010	2011
Service Line Leaks per 1000 Units Served	0.83	0.32	0.52	0.76	0.71
Goal	1.00	1.00	1.00	1.00	1.00

* Through June



Year	2007	2008	2009	2010	2011
Service Line Leaks	15	6	10	15	7
Number of Units Served	18,055	18,607	19,141	19,780	19,916

Comment: As shown, we have met our goals.

Issue:

Water Quality

Benchmark Factor:

Total Coliform Bacteria Monitoring

Measurement Objective:

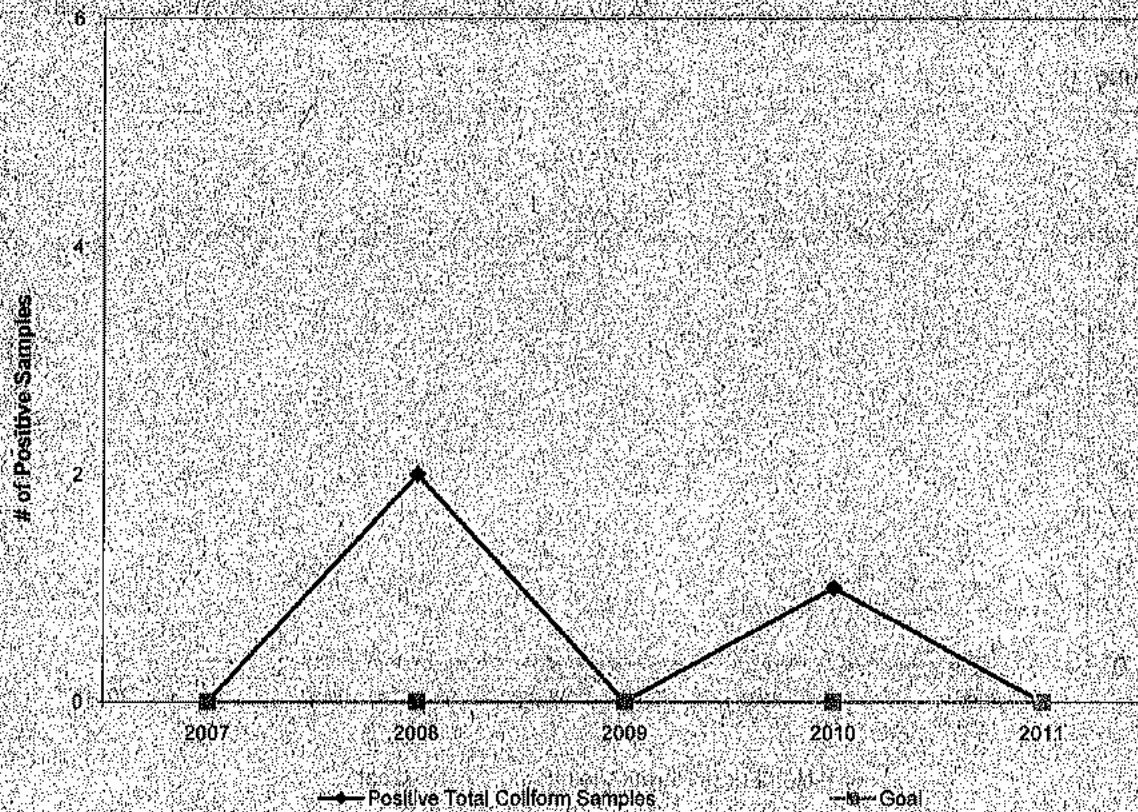
To measure water quality delivered to the customer using the number of Positive Total Coliform Samples as an Indicator

Goal:

Zero Positive Total Coliform Samples

	2007	2008	2009	2010	2011
Positive Total Coliform Samples	0	2	0	1	0
Goal	0	0	0	0	0

* Through June



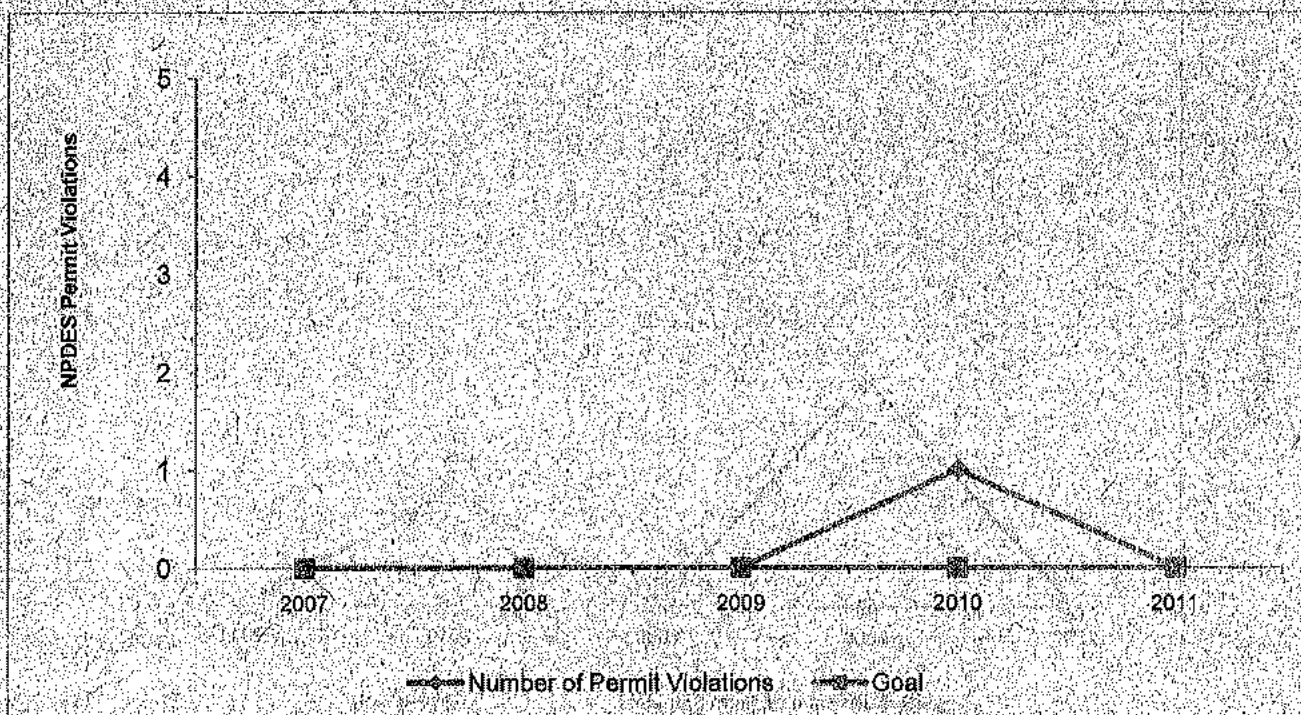
Year	2007	2008	2009	2010	2011
Pos. Tot. Coliform Samples - GLD	0	2	0	1	0
Pos. Tot. Coliform Samples - NWD	0	0	0	0	0
Pos. Tot. Coliform Samples - WTD	0	0	0	0	0
Pos. Tot. Coliform Samples - MCD	0	0	0	0	0
Pos. Tot. Coliform Samples - UMD	0	0	0	0	0
Pos. Tot. Coliform Samples - PLD	0	0	0	0	0
Pos. Tot. Coliform Samples - HHD	0	0	0	0	0
Pos. Tot. Coliform Samples - AWD	0	0	0	0	0
Pos. Tot. Coliform Samples - BHD	0	0	0	0	0
Pos. Tot. Coliform Samples - EMM	0	0	0	0	0
Pos. Tot. Coliform Samples - UCD	0	0	0	0	0
Pos. Tot. Coliform Samples - CFD	0	0	0	0	0
Pos. Tot. Coliform Samples - MPN					0

Comment: In 2008, initial samples from two sample stations showed positive coliforms but re-tests came back negative. In 2010, a sample within the Highgate subdivision tested positive for total coliform bacteria but a check sample and source water samples tested negative.

Issue:	Water Quality
Benchmark Factor:	Wastewater Treatment Effectiveness
Measurement Objective:	Number of NPDES Permit Violations Annually at the LCA collector system treatment plants.
Goal:	Zero per Year

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Number of Permit Violations	0	0	0	1	0
Goal	0	0	0	0	0

* Through June



	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Number of Permit Violations - HHWWTP	0	0	0	0	0
Number of Permit Violations - AW WWTP	0	0	0	0	0
Number of Permit Violations - WTWWT	0	0	0	1	0
Number of Permit Violations - SSWWT	0	0	0	0	0

HHWWTP = Heidelberg Heights Wastewater Treatment Plant, NPDES Permit No. PA-0036102

AWWWTP = Arcadia West Wastewater Treatment Plant, NPDES Permit No. PA-0064149

WTWWTP = Wynnewood Terrace Wastewater Treatment Plant, NPDES Permit No. PA-0036081

SSWWTP = Sand Spring Wastewater Treatment Plant, NPDES Permit No. PA-0034029

Comment: The Wynnewood violation was for an overflow event. Visiting the site on weekends and drawing down solid levels to ensure more tank space seems to have corrected the issue.

Issue: Water Supply Adequacy

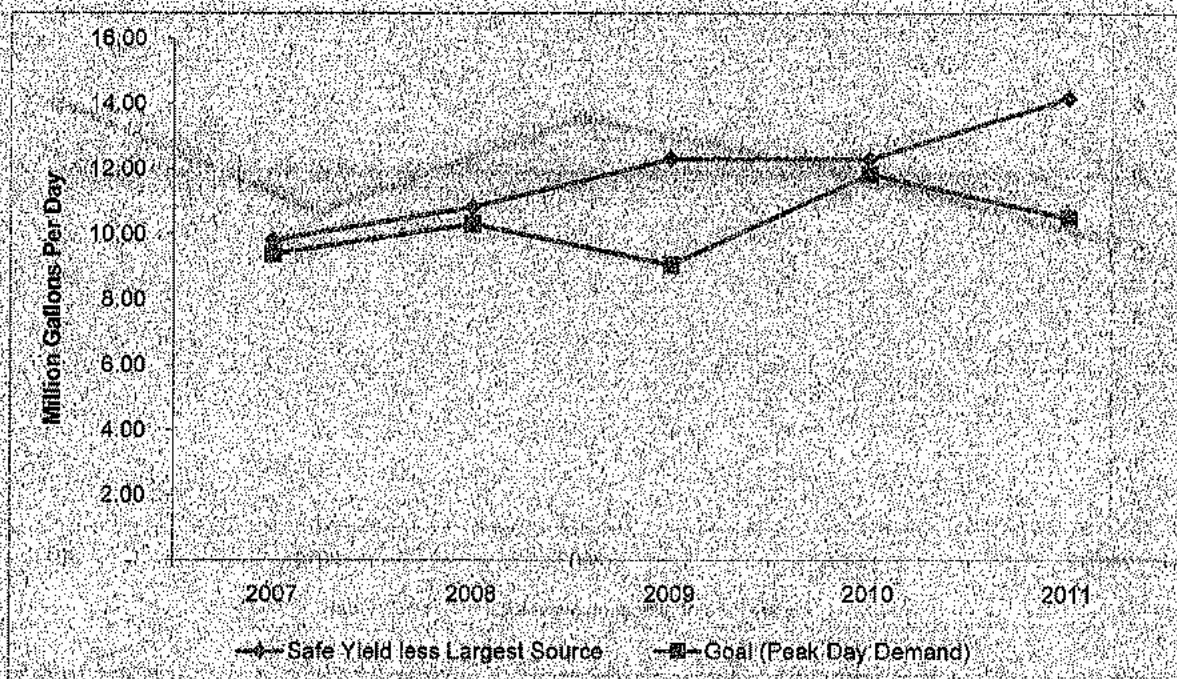
Benchmark Factor: Safe Yield Water Supply

Measurement Objective: Determine adequacy of existing water supplies under extreme conditions

Goal: Maintain supply capacity, excluding the largest single groundwater source, greater than or equal to the Peak Day Demand

	2007	2008	2009	2010	2011
Safe Yield less Largest Source	9.82	10.82	12.30	12.30	14.18
Goal (Peak Day Demand)	9.40	10.31	9.06	11.83	10.50

*Thru June 30



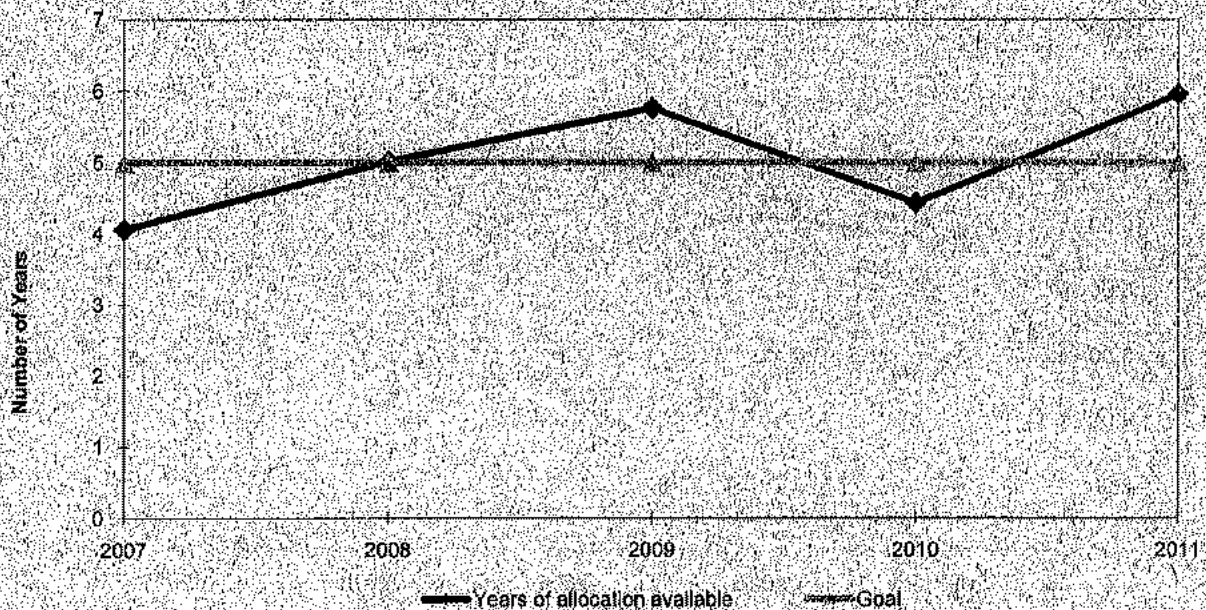
	2007	2008	2009	2010	2011
Total Safe Yield Supply Capacity (MGD)	11.69	12.60	14.48	14.62	16.62
Peak Daily Demand (MGD)	9.40	10.31	9.06	11.83	10.50

Comment: The graph above reflects figures for all LCA water systems. With additional supplies obtained through upgrades to wells 8 and 12 and the completion of the interconnection with the City of Allentown, we should have adequate supplies to meet peak demands in the next several years.

Issue:	Wastewater Allocation Availability
Benchmark Factor:	No. of years of allocation available for LCA to distribute, including unpurchased from the City, based on most recent 5 years of sales
Measurement Objective:	Determine adequacy of existing treatment facilities and agreements to meet long-term future demands
Goal:	Maintain a minimum of 5 years worth of allocation capacity available

Year	2007	2008	2009	2010	2011
Years of allocation available	4.06	5.01	5.76	4.43	5.95
Goal	5.00	5.00	5.00	5.00	5.00

* Thru June 30



	2007	2008	2009	2010	2011
Year-end allocation in pool (gpd)	154,962	257,653	622,959	509,938	422,251
Recaptured Allocation estimate (gpd) (A)	481,000	889,300	1,084,200	694,500	694,500
Est. Alloc. at City for possible purchase (gpd) (B)	750,000	500,000			
Total Alloc. possible to distribute (gpd)	1,385,962	1,646,953	1,707,159	1,204,438	1,116,751
Avg. Sales of Allocation in past 5 years (gpd/yr)	341,527	328,557	296,620	272,109	187,627

Comment: The estimate of available allocation can vary widely from year to year depending on precipitation, I/I efforts and the resulting change in wastewater flows. Removing Infiltration and Inflow from the Interceptor system is the main focus of current activity to recapture wastewater allocation. Other alternatives such as an upgrade of the LCA WTP to full treatment are being studied to ensure future allocation availability.

- (A) Represents the lowest monthly estimate of uncommitted, non-flowing allocation during the year.
 (B) Represents allocation amount expected to be remaining at year-end, not including 1 mgd of buffer capacity held by the City.

Issue: Maintenance of Assets - Water System

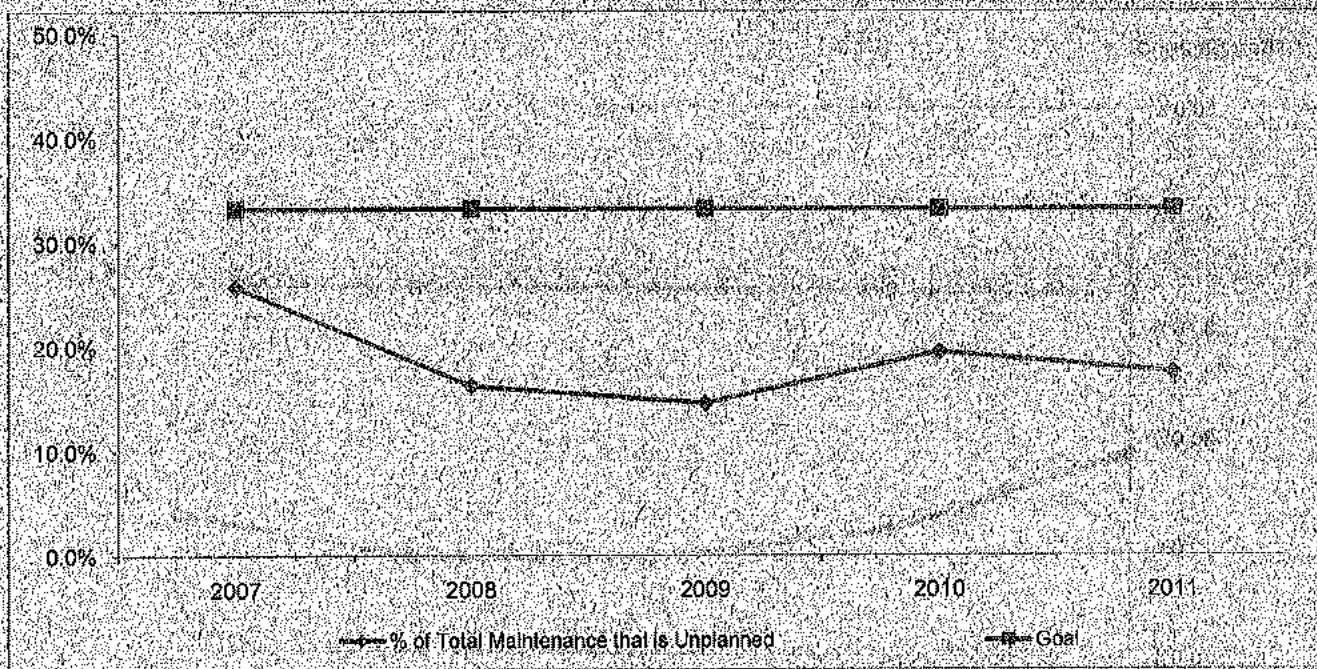
Benchmark Factor: Planned vs. Unplanned Maintenance

Measurement Objective: Unplanned Maintenance as a Percent of Total Maintenance Labor

Goal: 33.3% or less of all Maintenance Performed

	2007	2008	2009	2010	2011
% of Total Maintenance that is Unplanned	25.6%	16.3%	14.6%	19.5%	17.6%
Goal	33.3%	33.3%	33.3%	33.3%	33.3%

* Through June



Year	2007	2008	2009	2010	2011
Total Maintenance Labor In Hours	8,190	9,327	8,711	10,404	4,798
Unplanned Maintenance Labor In Hours	2,111	1,521	1,272	2,030	844

Comment: We continue to achieve our goal.

Issue: Maintenance of Assets - Wastewater System

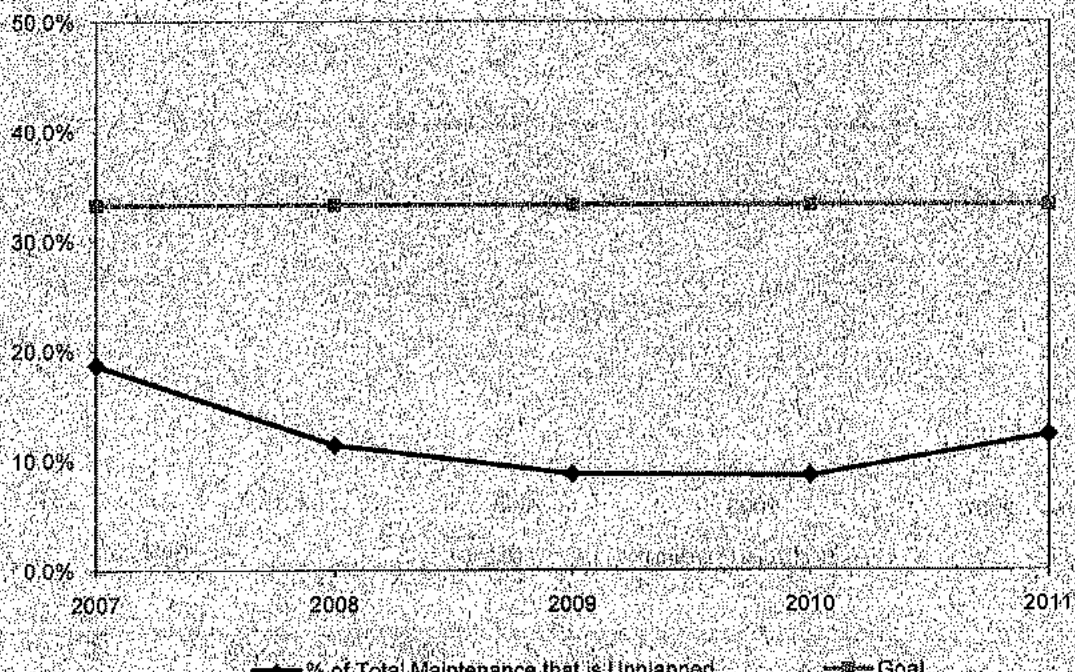
Benchmark Factor: Planned vs. Unplanned Maintenance

Measurement Objective: Unplanned Maintenance as a Percent of Total Maintenance Labor

Goal: 33.3% or less of all Maintenance Performed

Year	2007	2008	2009	2010	2011
% of Total Maintenance that Is Unplanned	18.7%	11.4%	8.8%	8.6%	12.4%
Goal	33.3%	33.3%	33.3%	33.3%	33.3%

* Through June



Year	2007	2008	2009	2010	2011
Total Maintenance Labor In Hours	3,836	4,204	4,481	4,206	2,356
Unplanned Maintenance Labor In Hours	716	318	393	362	291

Comment: We continue to meet our goal.

Issue: Leakage

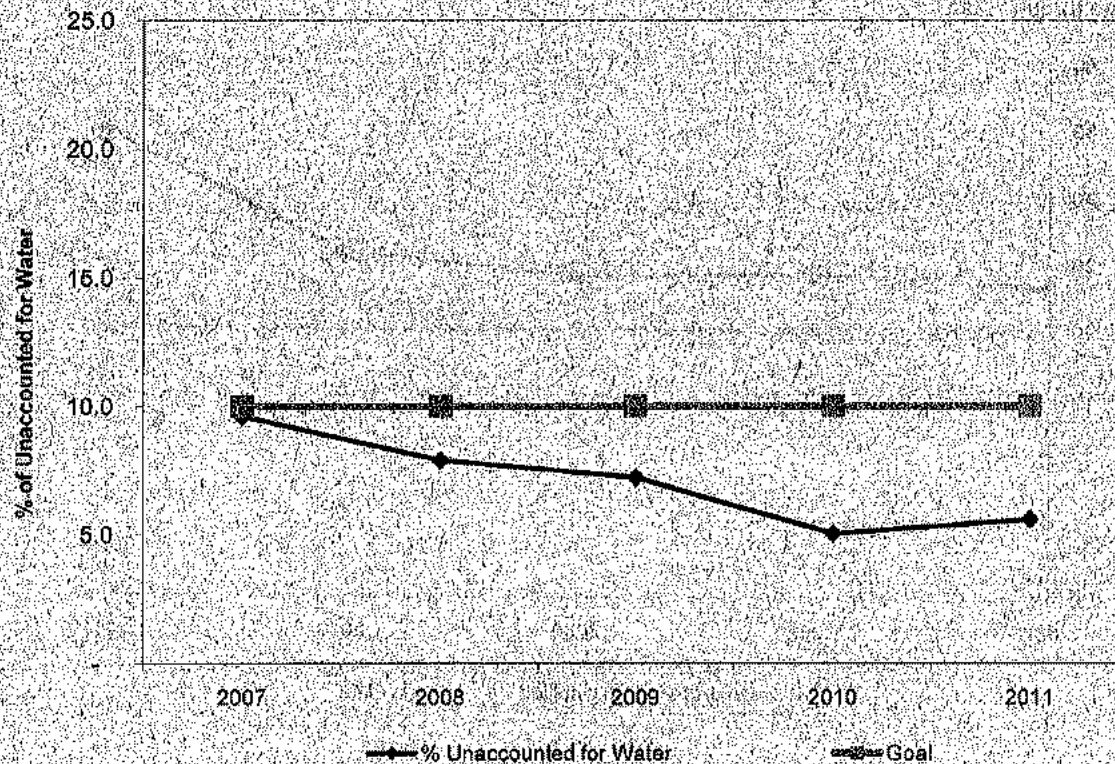
Benchmark Factor: Unaccounted for Water

Measurement Objective: % of Water Produced and/or Purchased not accounted for in Sales or other accounted for uses.

Goal: 10.0% or Less

	2007	2008	2009	2010	2011
% Unaccounted for Water	9.6	7.9	7.2	5.0	5.6
Goal	10.0	10.0	10.0	10.0	10.0

* Through April



Year	2007	2008	2009	2010	2011
Water Produced/Purchased (mgd)	6,307	6,716	6,790	7,244	6,564
Unaccounted for Water (mgd)	0.606	0.530	0.490	0.365	0.367

Comment: In 2007, the unaccounted for water calculation was changed to follow the DEP definition, which takes metered water produced and purchased less metered sales and other quantifiable use. Unreliable estimates of water loss are no longer considered as accounted for water.

Issue: Leakage

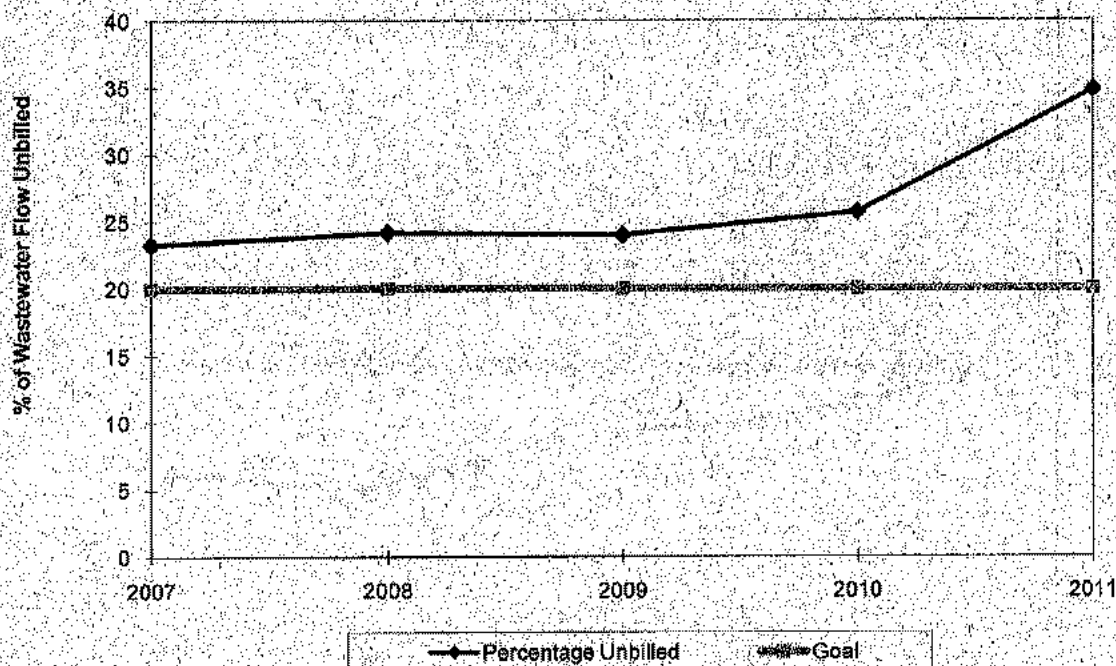
Benchmark Factor: Unaccounted for Wastewater Flow

Measurement Objective: Non-billable Wastewater Flow as % of Billable Flow

Goal: 20.0% or less

Year	2007	2008	2009	2010	2011
Percentage Unbilled	23.3	24.2	24.0	25.7	34.8
Goal	20.0	20.0	20.0	20.0	20.0

* Estimate through June



Year	2007	2008	2009	2010	2011
Total Gallons Discharged	2,325,348	2,461,920	2,468,366	2,594,982	1,478,180
Total Gallons Billed	1,784,417	1,867,355	1,876,388	1,928,740	963,689
Total Gallons Unbilled	540,931	594,565	591,978	666,242	514,491

Note: Wastewater flow in thousands of gallons.

Comment: Recognizing the importance of effectively utilizing the remaining capacity in the Allentown Treatment Plant, we are working with the signatories to identify and eliminate I/I sources. Higher than average precipitation is the primary reason for the increase in 2011 unbilled flow.

MEMORANDUM

Date: August 17, 2011

To: Board of Directors
From: Joe McMahon
Re: Emergency Declaration for Pipe Cleaning Services

Wet Weather Operations Protocol Analysis

As you may recall this project was approved to provide LCA with optimized operating schemes for LCA's wet weather relief facilities (WWRFs). The LCA WWRFs are composed of 5 inter-related components: the Flow Equalization Basin (FEB), the air decks at the WWPTP, Spring Creek Pump Station, the Park Pump Station, and the interconnecting piping. This task will evaluate how to best use these components to prepare the WLI system before a storm hits and to manage flows and storage during a storm to minimize SSOs. The project included field hydraulic evaluations for fine tuning the existing hydraulic model. In order to ascertain the system hydraulics, the consulting engineers requested an inspection and cleaning, if necessary, of the inverted siphons for a more accurate measurement of the pipe capacity.

On July 11th Operations personnel had scheduled Mobile Pumping and Dredging Company (MPDC) to be onsite to assist in inspecting and cleaning the four Keck's Bridge Relief Interceptor inverted siphons (each siphon has a 20 inch and a 36 inch pipe and 1 siphon blow-off manhole). The expectation was that the job would take one to two days for the cleaning. Once the work began on July 11th, it became obvious that there were severe blockages and substantial sewer jetting and vacuuming was required to clear the pipes. The siphon pipes at Devonshire and Keystone Avenues were 75% clogged with hardened grease and grit. Ten tons of this material were removed for disposal at a landfill. To clean the 4 siphons, 6 days of work by our staff and MPDC personnel and equipment (66.5 hours) was required. The cost for MPDC services totaled \$19,136.88.

In accordance with LCA Financial guidelines and the Municipalities Authorities Act, purchases of \$10,000 or greater require formal bid solicitation with the following exceptions: emergency purposes which call for an immediate action, a limited market for specialized goods or services, and professional consulting and expert services.

This work met two of the required exceptions. The primary justification is that this situation is an emergency in that we are required to take immediate corrective action if we find a situation that could cause a discharge of wastewater from our facilities. A 75 % blockage of an interceptor can be reasonably expected to cause a discharge in higher flow conditions or if the grease and grit shifted it could cause a full blockage. Secondly, there is a limited market for the specialized service of cleaning large diameter sewer pipes, especially inverted siphons with significant elevation changes in a short run.

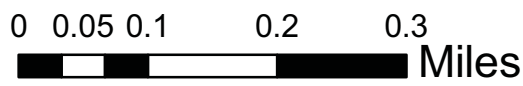
Board action is requested to retroactively declare this an emergency situation.

Attachments:

Map of the Keck's Bridge Relief Interceptor inverted siphons
Drawings and photos of the inverted siphons



Lehigh County Utilities Authority
WWOL Field Visit - Siphon Location Overview Map



**MALCOLM
PIRNE**





