



BOARD MEETING AGENDA – August 8, 2016

1. Call to Order
 - *Public Participation Sign-In Request*
2. Review of Agenda / Executive Sessions
3. Approval of Minutes
 - *July 11, 2016 Board meeting minutes*
4. Public Comments
5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2015 Audit & Financial Statement*
- *2016-2021 Capital Plan – to be distributed*

WATER

WASTEWATER

- *Rainstorm Ready – Administrative Order Planning*

6. Monthly Project Updates / Information Items (1st Board meeting per month)
7. Monthly Financial Review (2nd Board meeting per month) – **3rd Quarter Forecast attached**
8. Monthly System Operations Overview (2nd Board meeting per month) - **June 2016 report attached**
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Executive Sessions
13. Adjournment

UPCOMING BOARD MEETINGS

Meetings begin at Noon at LCA's Main Office, unless noted otherwise below.

August 22, 2016
September 12, 2016
September 26, 2016

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. During the Public Comment portions of 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 11, 2016

The Regular Meeting of the Lehigh County Authority was called to order at 12:11 p.m. on Monday, July 11, 2016, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Tom Muller, Richard Bohner, Norma Cusick, and Deana Zosky. Ted Lyons called in and was listening to the meeting on the conference phone, but did not remain connected for the entire meeting. Authority Staff present were Liesel Gross, Ed Klein, Pat Mandes, Frank Leist, Brad Landon, Chuck Volk, John Parsons, Robert Kerchusky and Lisa Miller.

REVIEW OF AGENDA

Liesel Gross stated that there will be a discussion, under the Water section, regarding the water problems that occurred in the Mink Estates/Farm View Farms and Arcadia West water systems. There will also be an Executive Session to discuss potential litigation.

APPROVAL OF MINUTES

June 27, 2016 Regular Meeting Minutes

Richard Bohner noted that under the heading Organizational Goal #2 – Asset Management, *John Parsons* name is misspelled.

On a motion by Richard Bohner, seconded by Linda Rosenfeld, the Board approved the Minutes of the June 27, 2016 Regular meeting as corrected (5-0). Tom Muller and Deana Zosky abstained because they did not attend the June 27 meeting.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Chairman Nagle asked for an update on the 2015 Audit. Ed Klein reported that PMRS still has not provided the background information for the statements to the Auditors. An extension has been granted until July 31, 2016.

Organizational Goal #3 – Environmental & Regional Leadership

Liesel Gross explained that this discussion has two purposes. One is the focus of the goal raising LCA's leadership in planning a response to the Administrative Order (AO) and bringing the municipalities together to develop a comprehensive collaborative and integrated solution. And second, to share the status of plans that are being developed and presented to EPA/DEP and give an update on the technical information. No decisions regarding the project will be made today and the same presentation will be given at tonight's public meeting.

Pat Mandes introduced the project consultant, Jim Shelton from Arcadis. Mr. Shelton provided the Board with a PowerPoint presentation and an update on the full technical scope of the project. The objective is to reduce the wet weather flows and eliminate sanitary sewer overflows (SSOs). In addition, the program is designed to ensure the system will be properly maintained and maintain the system capacity in the Western Lehigh Interceptor in the future so that this problem will not be repeated in the future. Mr. Shelton explained the process used to evaluate 12 different alternatives, utilizing a hydraulic system model for the Kline's Island Sewer System (KISS). He explained the municipalities in the Western Lehigh Sewerage Partnership have jointly selected the alternative that includes a phased approach whereby Phase 1 focuses on rehabilitating existing infrastructure to remove the source of the I & I within the municipal collector systems and the LCA interceptor system, and future phases would include larger infrastructure projects that would be sized after additional flow metering and modeling to account for leakage reductions achieved in Phase 1.

Deana Zosky asked how the Authority will monitor performance and quantify the success of the projects. Jim Shelton explained that flow meters will be used throughout the system. For specific projects that can be accurately metered, the control basin methodology will be used to determine wet-weather flows before and after a project is completed, as compared to other flow basins under similar conditions. He stated that with these methods, the Authority and its partners will know if the goals are being met well in advance of 2025, which is the end of Phase 1.

Scott Bieber arrived at 1:04 p.m.

Jim Shelton said that signatory meetings and communication will continue and the Capital Plan development process will be ongoing. The Authority Board will make decisions regarding memorandums of cooperation, WLI project authorizations and Authority bonding and rate analysis. The project will be branded as Rainstorm Ready.

Deana Zosky asked how the Authority could have prevented this. Jim Shelton said that all of the systems have benefited from very good engineering practices and very good financial advice in terms of reinvestment. The system has not been ignored and has not been leaking terribly. The system is suffering from old age and is also near the original wastewater carrying capacity so that there is limited room in the pipe for wet weather flows. In addition, sewer systems were previously designed to allow for SSOs and treatment plant bypasses as an accepted method to deal with wet-weather flows and system leakage that is normal for sewer systems. This practice is no longer acceptable and systems across the nation are all working toward addressing similar issues.

Deana Zosky asked if we have a system we know is overflowing and we know we don't have capacity, why do we have to keep accepting more development until we fix it? Jim Shelton explained that new connections to the sewer system are controlled by the Pennsylvania Department of Environmental Protection (DEP) and the municipalities, not the Authority. Currently there is some system capacity remaining for dry-weather flows for new connections. The problem is related to wet-weather flows which can be four times greater than dry-day flows, or even greater in severe weather. Because the Western Lehigh Sewerage Partners and LCA have been taking a proactive and collaborative approach to addressing the problem, DEP has determined that new connections are acceptable using a system of calculating flow credits for improvements made to the system.

Ted Lyons left the meeting by disconnecting his phone at 1:32 p.m.

Chris Becker of Macungie Borough was present and commented that the Borough is wholeheartedly behind this project but cost is a factor as they do not want to place a burden on their residents. Mr. Becker asked if there is a plan for increased flow into the system. He also asked if the Authority has spoken to the County for financial assistance. Jim Shelton responded that the plan is designed to eliminate SSOs by reducing wet-weather flows and leakage into the system, as well as add 4 million gallons of new development flow by 2040, as projected in the 537 planning process that all the Western Lehigh County municipalities participated in. Liesel Gross said that cost-allocation methods for this work is still under review by the municipalities and the Authority. She explained that certain infrastructure improvement costs will be allocated and be recovered through tapping fees for new connections.

Deana Zosky asked if developers are helping to pay for all of this. Frank Leist explained that the municipalities are responsible for their own systems and portions of the tapping fees, as well as monitoring the quality and specifications of new infrastructure being constructed by developers. Liesel Gross added that as new connections are made, developers will be paying for their portion of costs to expand the system through a combination of tapping fees and ongoing user rates.

PROJECT UPDATES/INFORMATION ITEMS

Liesel Gross brought to the attention of the Board items listed in the report for upcoming meetings.

STAFF COMMENTS

John Parsons updated the Board on two water operational problems that recently occurred. The system at Mink Estates/Far View Farms had an estimated 50 gallon per minute leak that drained 40,000 gallons of water storage. A Boil Water notice was issued and potable water was brought in to fill the tanks and bottled water was distributed to the residents. The Authority did not receive a signal through its control system regarding the low level of the tank. Mr. Parsons said that LCA Staff are investigating software and hardware upgrades to improve the Telog system to avoid future reoccurrence of this communications issue.

The Arcadia West water system had a Do Not Consume notice issued due to a high pH alarm received on July 10th. He explained the operational issues that lead to this event and noted that additional standard operating procedures would be prepared to avoid future reoccurrence. In response to the incident, operational staff were on site on Sunday to isolate, drain and refill the storage tank that was impacted. Several local hydrants were checked and the pH level was within normal limits, confirming that the water with the high pH levels did not enter the distribution system.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

EXECUTIVE SESSION

Chairman Nagle called an Executive Session at 1:49 p.m. to discuss potential litigation.

The Executive Session ended at 2:00 p.m.

Chairman Nagle reminded the Board of Ms. Gross' upcoming performance evaluation. He will be sending an evaluation form to each of the Board members for their comments.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:01 p.m.

Richard H. Bohner
Secretary

FINANCE & ADMINISTRATION

ACTION ITEMS

1. 2015 Audit & Financial Statements – August 8, 2016

The Authority has received all required information from the Pennsylvania Municipal Retirement System in order to complete the audit and financial statements. The statements, notes, and all CAFR documents are being reviewed and put together to send out by Friday, July 29, 2016. The Finance Committee is expected to meet the first week of August, and the audit report and financial statements will be presented to the Board for acceptance.

DISCUSSION ITEMS

1. 2016-2021 Capital Plan – August 22, 2016

The draft plan will be distributed to the Board at the August 8, 2016 meeting, and presented in more detail at the August 22, 2016 meeting. Comments from municipalities, the City of Allentown, and other external agencies will be accepted and reviewed with the Board prior to plan adoption in September.

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
27-Jul-16			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
Cons Wtr (2)	Bank Rhode Island	Providence, RI	245,000.00	6/27/16	6/27/18	1.00
Cons Wtr (2)	Parkway Bank and Trust Co	Harwood Heights, IL	245,000.00	6/28/16	12/28/17	0.90
Cons Wtr (2)	GNB Bank	Grundy Center, IA	245,000.00	6/30/16	12/29/17	0.90
LLRI CR	PSDLAF Collateralized CD		400,000.00	6/21/16	12/13/16	0.30
Cons Wtr (2)	PSDLAF Collateralized CD		155,000.00	6/21/16	12/13/16	0.30
Cons LL2 (314)	PSDLAF Collateralized CD		245,000.00	6/21/16	12/13/16	0.30
WW Capac	PSDLAF Collateralized CD		600,000.00	6/21/16	12/13/16	0.30
2010 Wtr Cons A	PSDLAF Flex Pool		2,000,000.00	6/21/16	12/13/16	0.30
Wtr R&R	PSDLAF Collateralized CD		1,000,000.00	6/21/16	12/13/16	0.30

Fund Descriptions for Investments:

Cons Wtr (2)	Consolidated Water (2)
LLRI CR	Little Lehigh Relief Interceptor Capital Reserves
Cons LL2 (314)	Consolidated Little Lehigh Relief Interceptor 2
WW Capac	Wastewater Capacity
2010 Wtr Cons A	2010 Water Construction, Series A Bond
Wtr R&R	Renewal and Replacement

2. Organizational Goals – Schedule of Status Reports

- Financial Health – 8/22/2016

WATER

ACTION ITEMS

1. **Suburban Division – Capece Tract, WL #20 and Res #3 Improvements – August 22, 2016**

WL #20 will be switched over to a variable frequency drive motor to better control power usage and maintain steady output. Reservoir #3 will receive a motor activated control valve to maintain filling capabilities and chlorine contact levels. Both facilities will receive an upgrade to their SCADA systems. The PLC has been upgraded at Reservoir #3. HMI screens have been modified to include the new MOV and the VFDs. Bids were received on July 12, 2016 and are currently under review. Award of the construction contract to Blooming Glen in the amount of \$47,900.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Suburban Division – CLD Auxiliary Pump Station Project**

The project will feature the installation of a new booster station and water main extension to pump water from the Lower System to the Upper System. The project will also involve installation of a SCADA system. We are reviewing the revised Public Water Supply (PWS) permit application.

2. **Suburban Division – Pine Lakes Pumping Station Improvements**

The project will feature the conversion of the existing hydro-pneumatic station to a variable frequency drive controlled double pumping system (along with other miscellaneous improvements) and installation of a SCADA system. Bids were received on July 20, 2016 and are currently under review.

3. **Suburban Division – Crestwood Alternate Water Supply**

The project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the main North Whitehall Division System. The project will also involve installation of a SCADA system. The design phase is underway. The DEP Water Supply Permit has been obtained. We are reviewing the 100% design plans and specifications.

4. **Suburban Division – Route 309 Crossing at Sand Spring Road**

A 12" water line will cross Route 309 through a previously installed 24" casing. Completion of this line will bring public water to the property line of Lehigh Carbon Community College. The design phase is under way. PennDOT Highway Occupancy Permits have been obtained. **(No change)**

5. **Allentown Division – Prelease Valve Replacements**

The project is the replacement of approximately 55 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. Design is currently under way. This project is identified as Un-Completed Work and will be funded by the City. **(No Change)**

6. **Suburban Division - Water Main Replacement Program Cycles 1 & 2**

The project consists of the replacement of 2.85 miles of aged and/or failing Cast Iron water main. The Construction phase was approved at the 4/11/16 Board meeting. Anrich Inc., our contractor has started construction in many areas throughout the project and is progressing according to schedule.

7. **Allentown Division – Water Main Replacement Program- Cycle 3**

The project is the replacement of 4.39 miles of aged and/or failing Cast Iron water main in multiple locations throughout the City. The Construction phase was approved at the 4/11/16 Board meeting. JOAO & Bradley, Inc. our contractor is progressing according to schedule and has approximately 90% of all water mains and 65% of all service laterals installed to date. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division.

8. **Allentown Division – Water Filtration Plant: Filter Room Ceiling Improvements**

This project will involve the installation of a new ceiling system at the Water Filtration Plant's filter room. This system was already installed above the filters themselves approximately 10 years ago. The project is needed for both a combination of aesthetic (highly visible location to guests) and operational issues (to eliminate the possibility of chipped paint to enter the filters). Bids were received on 4/26/16 and Board approval for the construction phase was granted at 5/23/16 Board Meeting. Construction began in the middle of July and will be completed by the end of September. **(No Change)**

9. **Allentown Division - Miscellaneous Water Filtration Plant / Water Distribution**

- WFP Stormwater Pump/Control - Upgrades to the existing stormwater pump/control for the WFP and D&C parking lot is needed due to equipment age. Design is currently underway with a likely December 2016 construction start date. **(No Change)**
- WFP 20 Ton A/C and 40 Ton Chiller Replacement – Delivery of the AC unit occurred on 4/25/16 and delivery of the chiller unit occurred on 4/26/16. Installation was completed in the second week of May. **(No Change)**
- WFP Painting Phase II – Work began in the filter pipe gallery in mid-April and painting was completed in late June. **(No Change)**

All of these capital projects are funded by the LCA Allentown Division.

10. **Allentown Division – Water System Master Plan**

This project involves the creation of a Master Plan for the Allentown Water Plant, water storage tanks, water storage reservoirs, pressure booster stations, raw water springs, and surface water intakes. The Master Plan will involve several key sections including, but not limited to: full-scale condition assessments, treatment process optimization, and development of short term/long term capital plans. The Master Plan is a requirement included within the City of Allentown lease, and it also needs to be updated every 5 years throughout the life of the lease. The project kick-off meeting with Arcadis was held on May 4, 2016. Multiple workshops have been scheduled. Condition Assessments are underway and process control audit/optimization has begun. The project is scheduled to be finished early in 2017. The project will be funded by the LCA Allentown Division.

11. **Developments**

Water system construction is occurring in the following developments:

Fields at Indian Creek, Phase 1, 43 private, age-restricted/senior residential units (sfd), with a community clubhouse, UMiIT & LMT, water & sewer
Hamilton Crossings, 2 commercial lots with 20 buildings having retail, financial, convenience and restaurant uses, LMT
Spring Creek Properties Settlement Subdivision, 14 commercial/industrial lots, LMT

Water system plans are being reviewed for the following developments:

67 Werley Road, 112 apartments & clubhouse, UMT
Ciocca Subaru, 1 additional commercial building at existing business, LMT
Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT
Farr Tract, 17 residential lots (sfd), LMT
Grant Street Townes, 18 residential lots (sfa), WashT
Hickory Park Estates, 3 residential lots (sfd), UMT
Hillview Farms, 31 residential lots (sfd), LMT/SWT
Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer
Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT
Mary Ann's Plaza, 1 lot with 12 commercial units, NWT
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer
Shepherd's Corner, 1 commercial lot, LMT
Stone Hill Meadows, 24 residential lots (sfd), LMT
Trexler Business Center, 1 Commercial Lot with 6 commercial buildings, LMT
Weilers Road Twins, 82 residential lots (sfa), UMT
West Hills Business Center, 2 industrial lots, WeisT, water & sewer
Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

DISCUSSION ITEMS

1. **Rainstorm Ready – Administrative Order (AO) Planning – August 8, 2016**

Staff will present information on the “flow credit” process approved by the Pa. Department of Environmental Protection relating to demonstrated removal of wet-weather flows from the system. In addition, the results of municipal meetings on the AO work plan will be discussed, and additional Board comments and questions recorded for the purposes of gathering additional information for future Board discussions on this important topic.

INFORMATION ITEMS

1. **Wastewater Treatment Capacity**

The PaDEP has suggested that a 537 Plan for the additional 4 MGD of capacity be submitted to them at the time when the 4 MGD is needed or after the SCARP improvements are made. They anticipate that if the 537 Plan is submitted in the near term, the Department will require a revised Plan prior to any capital improvements. The 537 planning process has currently been side-lined until such time as the wastewater capacity is limited or a 537 plan update is needed for an Administrative Order project must be submitted. A 537 Planning summary report is being drafted by our consultant and will be distributed to the Board. **(No change)**

2. **Suburban Division - Lynn Township – WWTP Improvements, Phases 1 & 2**

The project will upgrade the WWTP head works. Comments on the specifications were returned to the consultant. The project is being funded by the Lynn Township Suburban Division.

3. **Allentown Division – Sanitary Sewer Manhole Lining: Cycle 3**

This annual project will install a lining system (to eliminate infiltration) in approximately 111 aged brick manholes identified by LCA staff. The City approved the Conceptual Design Report and the project was advertised on May 17, 2016. Board approval of the construction phase was granted at the 6/27/16 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City. Construction began in mid-July and is expected to be complete in mid-September. **(No change)**

4. **Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 3**

This project will permanently secure the frame and cover of approximately 57 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. The City approved the Conceptual Design Report and the project was advertised on May 17, 2016. Board approval of the construction phase was granted at the 6/27/16 Board Meeting. The project is identified as Administrative Order and will be funded by the City. Construction to begin in early August and is expected to be complete in late September.

5. **Allentown Division – WWTP: Replacement of Motor Control Centers**

This Project replaced five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The project was approved by the City as a Major Capital Improvement (MCI). Except for some minor punchlist items the project is complete. This Project is identified in the Lease as Schedule 7 (required) project and was funded by the LCA Allentown Division. **(No change)**

6. **Allentown Division – Roof Rehabilitation and Replacements: Phase 1**

The Project consisted of replacing 26 facility roofs that were identified as in need of immediate replacement in the Roof Evaluation report performed by D'Huy Engineering. The project was presented to the City for review/approval as a Major Capital Improvement (MCI), but the city rejected it as such. The project has been completed. The project was funded by the LCA Allentown Division.

7. **Allentown Division – Wastewater Treatment Plant: Miscellaneous Improvements**

- Main Pump Station Suction Piping – LCA staff is in the process of acquiring quotes from contractors to repair this piping. This project involves either the lining or replacement of the suction piping for Pump #1 at the Main Pumping Station. Holes have developed in the suction piping and without this repair, the ability to operate this pump properly may be compromised in the future. **(No change)**
- Main Pump Station Locker Room Renovation – Except for some minor punchlist items the project is complete.
- Chlorine Building Permanent Generator – Construction has been completed and all punchlist items have been addressed. **(No change)**
- Trickling Filter Odor Control Tower Repairs – Construction has been completed and all punchlist items have been addressed. **(No change)**
- Locker Room Phase II Renovation – A design memorandum study was completed in the May of 2016. The locker room design is on hold pending Capital Plan preparation. **(No change)**
- Disinfection Alternative Study – A RFP was being developed to solicit Engineering Firms to study disinfection alternatives at the WWTP. This study is now on hold pending Capital Plan preparation.
- Substation No. 1 & 2 Replacement – A study is currently underway to investigate the need to replace Substation No. 1 & 2 at the WWTP. **(No change)**
- Condition Assessment of Trickling Filters and Clarifiers – A study has been proposed to investigate the need to repair the exterior and interior components of the trickling filters and clarifiers. This study is awaiting internal administrative approval. **(No change)**

All of these capital projects are funded by the LCA Allentown Division.

8. **Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements**

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). A Major Capital Improvement (MCI) Conceptual Design has been approved by the City. Board approval of the construction phase was received at the 2/8/16 Board Meeting. The new Secondary Digester cover is expected to be installed by October 2016 and the new Primary No. 1 Digester is expected to be installed by October 2017. This Project is

identified in the Lease as a Schedule 7 (required) project and will be funded by the LCA Allentown Division. **(No change)**

9. **Consolidated Systems - SharePoint**

GHD conducted training on June 9, 2016 for the Board/Staff notes workflow. We plan to role the site out to employees in the coming weeks beginning with the Board/Staff notes workflow for August.

10. **Suburban Division – Spring Creek Pump Station**

This project involves the following upgrades to the existing pumping station: Evaluate the feasibility of installing a comminutor to reduce buildup of debris on the bar screens, replace the manually operated weir gates with new motorized weir gates, and upgrades to the SCADA system. The project has been identified as a Major Capital Improvement (MCI). Design of the project was awarded to JMT. A kickoff meeting was held with the engineer to begin the design phase.

11. **Suburban Division – Western Weisenberg Wastewater Treatment Plant Improvements**

This project includes the improvements necessary to rectify the cold weather nitrification issue at the WWTP. The Board approved the construction phase of the project at the May 9, 2016 meeting. Notices to Proceed have been issued to both the general and electrical contractors. A pre-construction meeting was held on June 24, 2016. Given the long-lead time equipment construction is expected to start in late September 2016. This project will be funded by the LCA Suburban Western Weisenberg Division. **(No change)**

12. **Suburban Division - Heidelberg Heights Sanitary Sewer Lateral Rehabilitation**

Project involves the installation of an internal cured in place liner on four (4) sewer laterals and approximately 320 feet of sewer main line. The lateral lining requires construction of permanent cleanout on each lateral. The project targets previously identified pipe damage areas and is part of continuing effort to reduce groundwater infiltration into the sewer system. The pre-construction meeting was held on 7/22/16 and construction will be completed by the end of summer.

13. **Suburban Division – Test & Seal Project. Western Lehigh Interceptor Service Area**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to leakage. This project is part of the SCARP program. Contract has been awarded; pre-construction meeting is scheduled for 8/2/16, and construction will begin in late August 2016.

14. **Suburban Division – Test & Seal Project. Wynnewood Terrace**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in the Wynnewood Terrace development in North Whitehall Township, previously identified as areas subject to leakage. This project is part of the single contract Test & Seal project. Contract has been awarded; pre-construction meeting is scheduled for 8/2/16, and construction will begin in August 2016.

15. **Suburban Division – SCARP**

Monthly meetings with the LCA Suburban Division Signatories began in January to negotiate a Memo of Cooperation for completion of the SCARP Capital Improvements Plan. Cash flow

plans prepared by the Program Consultant have been presented to the Signatories so they can begin analyzing their borrowing needs and schedule. A communications plan has been developed to help the Signatories with discussions with their Boards and the public. The LCA AO Program Consultant will be making a presentation at both LMT and Macungie Borough at their request.

LCA participated in a meeting between the City and the City Signatories to present the City's Phase 2 Study and to present a concept for allocation of costs associated with the City's AO CIP.

A meeting was held with EPA and DEP for the Partners and the City to present the draft Capital Improvements Plan, Basis of Design, a tentative schedule and an update on the work and being performed. The objective of the meeting was to get a general approval of the LCA/City approach. A submission of information was requested by EPA before they can provide an answer to us.

A public meeting was held on July 11th. The AO Program Consultant gave a presentation on the background of the AO and lay-out the plans for compliance. The public questions and comments will be posted on the LCA website.

LEHIGH COUNTY AUTHORITY 2016 Q3 FORECAST REPORT

1. SUMMARY

This is a report of the 2016 Q3 Forecast. The forecast covers the entire year and is based upon the actuals through June of this year with a forecast for the remaining month of the year. The forecast figures for the second half of the year are based upon historical trends adjusted for the impacts of any anticipated changes to trends and any anticipated economic impacts. The forecast was done for the two divisions, City Division and Suburban Division. A summary of the forecast for the year compared to the last forecast (Q2 Forecast) and Budget for the year is in the following table (all figures in \$000's):

SUMMARY	2016 Q3	2016 Q2	Forecast	2016	Budget
	Forecast	Forecast	Variance	Budget	Variance
Increase (Decrease) in Net Position					
City	(9,059)	(4,350)	(4,709)	(3,597)	(5,462)
Suburban	(1,194)	(940)	(254)	(578)	(616)
Total LCA	(10,253)	(5,290)	(4,963)	(4,175)	(6,078)
Cash Flows					
City	2,244	3,287	(1,043)	4,040	(1,796)
Suburban	3,658	1,220	2,438	1,582	2,076
Total LCA	5,902	4,507	1,395	5,622	280

Total LCA change in net position for this forecast of a loss of \$10.3m is worse than the previous forecast by \$4,963k and is worse than budget by \$6,078k with both City & Suburban at higher loss positions compared to the previous forecast and both worse to budget as well.

Total LCA cash flow of \$5.9m is up to the previous forecast by \$1,395k and up to budget by \$280k. The City cash flows are down to last forecast and budget but are more than offset by Suburban cash flow increases against both last forecast and budget.

Each division change in net position and cash flows are detailed in the following sections.

2. CITY

A. Increase (Decrease) in Net Position (\$000's)

CITY	2016 Q3	2016 Q2	Forecast	2016	Budget
	Forecast	Forecast	Variance	Budget	Variance
INC (DEC) IN NET POSITION					
Customer Charges	30,344	31,521	(1,177)	31,529	(1,185)
Other	293	293	-	303	(10)
Total Revenues	30,637	31,814	(1,177)	31,832	(1,195)
Operating Expenses					
Salaries, Wages, and Benefits	8,511	8,561	50	8,136	(375)
General & Administrative	552	586	34	549	(3)
Utilities	1,981	2,094	113	2,105	124
Materials & Supplies	2,426	2,562	136	2,614	188
Miscellaneous Services	1,943	1,643	(300)	1,546	(397)
Treatment & Transportation	5	-	(5)	-	(5)
Depreciation and Amortization	5,400	5,400	-	5,400	-
Total Operating Expenses	20,818	20,846	28	20,350	(468)
Operating Income (Loss)	9,819	10,968	(1,149)	11,482	(1,663)
Non-Operating Rev (Exp)	271	115	156	277	(6)
CW Projects Being Expensed	(3,666)	-	(3,666)	-	(3,666)
Interest Income	302	353	(51)	430	(128)
Interest expenses	(15,785)	(15,786)	1	(15,786)	1
INC (DEC) IN NET POSITION	(9,059)	(4,350)	(4,709)	(3,597)	(5,462)

The change in net position of \$9,059k is worse than forecast by \$3,597k and worse than budget by \$5,462k.

Against forecast, change in net position is lower due to lower operating revenues along with higher capital works project costs charged to expenses.

Operating revenues are forecasted to be down by \$1,177k with most of the variance already realized in the first half of the year. H1 operating revenues were down by \$956k and the forecast variance in the second half of the year is \$221k. Historically, we have 47.7% of revenues for the entire year on the books in the first half. This was used as a guideline for forecasting the remainder of the year.

Operating expenses were just slightly lower than forecast and the only major variance to last forecast was in services with higher legal costs associated with the City dispute. The unfavorable services variances was more than compensated for by favorable variances across employee costs, administrative costs, utilities, and materials & supplies.

The other major variance unfavorably impacting change in net position is the \$3,666k of capital works project costs that will be booked to expenses bases upon the accounting requirements for the lease concession. The amount was based upon the projects in progress and the estimated amount that will ultimately go to expenses based upon that project profile. These costs were not in the Q2 forecast as expenses as they are originally budgeted as capital spending.

B. Cash Flows (\$000's)

CITY	2016 Q3 Forecast	2016 Q2 Forecast	Forecast Variance	2016 Budget	Budget Variance
CASH REQUIREMENTS REPORT					
Operating Revenues	30,637	31,814	(1,177)	31,832	(1,195)
Operating expenses (excluding Depreciation)	(15,418)	(15,446)	28	(14,950)	(468)
Net available for Debt Service	15,219	16,368	(1,149)	16,882	(1,663)
Debt Service Paid	(13,048)	(13,049)	1	(13,049)	1
Net available after debt service	2,171	3,319	(1,148)	3,833	(1,662)
Non-operating revenues (expenses), net	271	115	156	277	(6)
Concession Lease Payment	(500)	(500)	-	(500)	-
Interest Income	302	353	(51)	430	(128)
Net Available for Capital Works	2,244	3,287	(1,043)	4,040	(1,796)
Capital Works Spending	(10,190)	(10,352)	-	(16,697)	6,507
Funding from Project Reserve	10,190	10,352	-	16,697	(6,507)
NET CASH IN (OUT)	2,244	3,287	(1,043)	4,040	(1,796)
PROJECT RESERVE BALANCE					
Beginning Balance of Project Reserve	17,304	17,304	-	17,304	-
Capital Works Spending	(10,190)	(10,352)	162	(16,697)	6,507
New Borrowing	-	-	-	-	-
Ending Balance	7,114	6,952	162	607	6,507
OPERATING CASH BALANCE					
Beginning Balance	2,159	2,159	-	2,159	-
Current Year Flows	2,244	3,287	(1,043)	4,040	(1,796)
Ending Balance	4,403	5,446	(1,043)	6,199	(1,796)

Cash flows are forecasted to be down to last forecast by \$1,043k and down to budget by \$1,796.

Compared to forecast, cash is down due to the lower operating revenues.

Projects reserve balance at the end of this year are forecasted to be \$7,114k.

C. Debt Service Coverage

	2016 Q3	2016 Q2	2016
	Forecast	Forecast	Budget
DEBT SERVICE RATIO			
Operating income	9,819	10,968	11,482
Add: Depreciation Expense	5,400	5,400	5,400
Add: Non-Operating Revenues	271	115	277
Add: Interest Income	302	353	430
Available For Debt Service	<u>15,792</u>	<u>16,836</u>	<u>17,589</u>
Debt Service:			
Interest Expense	15,785	15,786	15,786
Less: Capitalized Interest	(675)	(675)	(675)
Less: Bond Accretion	(2,737)	(2,737)	(2,737)
Principal Payments	-	-	-
Total Debt Service	<u>12,373</u>	<u>12,374</u>	<u>12,374</u>
RATIO USING NON-OPERATING REVENUES	<u>1.28</u>	<u>1.36</u>	<u>1.42</u>

Forecast of 1.28 is lower than last forecast and budget but still above target of 1.20.

3. SUBURBAN

A. Increase (Decrease) in Net Position (\$000's)

SUBURBAN	2016 Q3	2016 Q2	Forecast	2016	Budget
	Forecast	Forecast	Variance	Budget	Variance
INC (DEC) IN NET POSITION					
Customer Charges	24,353	24,336	17	24,302	51
Other	583	637	(54)	788	(205)
Total Revenues	24,936	24,973	(37)	25,090	(154)
Operating Expenses					
Salaries, Wages, and Benefits	2,725	2,728	3	2,392	(333)
General & Administrative	242	256	14	234	(8)
Utilities	701	762	61	771	70
Materials & Supplies	1,668	1,929	261	2,029	361
Miscellaneous Services	8,581	8,545	(36)	7,997	(584)
Treatment & Transportation	5,623	5,336	(287)	5,333	(290)
Depreciation and Amortization	6,875	6,875	-	6,875	-
Total Operating Expenses	26,415	26,431	16	25,631	(784)
Operating Income (Loss)	(1,479)	(1,458)	(21)	(541)	(938)
Non-Operating Rev (Exp)	1,673	1,589	84	1,594	79
CW Projects Being Expensed	(300)	-	(300)	-	(300)
Interest Income	169	186	(17)	38	131
Interest expenses	(1,257)	(1,257)	-	(1,669)	412
INC (DEC) IN NET POSITION	(1,194)	(940)	(254)	(578)	(616)

Suburban Division change in net position is forecasted to be a loss of \$1194k. This is \$254k lower than the last forecast and \$616k lower than the budget.

Against forecast, change in net position is down due to slightly lower revenues and due to forecasted expenses from capital works projects.

There are no major forecast variances on the operating revenue side as total revenues are down only by \$37k to last forecast.

Operating expenses are slightly better than last forecast with unfavorable variances on services and treatment & transportation more than offset by favorable variances on employee costs, admin costs, utilities, and materials & supplies.

The capital works expenses were not forecasted in the previous forecast and are in the budget as capital. Similar to the City Division but smaller in magnitude.

B. Cash Flows (\$000's)

SUBURBAN	2016 Q3	2016 Q2	Forecast	2016	Budget
	Forecast	Forecast	Variance	Budget	Variance
CASH REQUIREMENTS REPORT					
Operating Revenues	24,936	24,973	(37)	25,090	(154)
Operating expenses (excluding Depreciation)	(19,540)	(19,556)	16	(18,756)	(784)
Net available for Debt Service	5,396	5,417	(21)	6,334	(938)
Debt Service Paid	(3,580)	(3,221)	(359)	(3,633)	53
Net available after debt service	1,816	2,196	(380)	2,701	(885)
Non-operating revenues (expenses), net	1,673	1,589	84	1,594	79
Concession Lease Payment	-	-	-	-	-
Interest Income	169	186	(17)	38	131
Net Available for Capital Works	3,658	3,971	(313)	4,333	(675)
Capital Works Spending	(5,969)	(11,249)	-	(11,249)	5,280
Funding from Project Reserve	5,969	8,498	-	8,498	(2,529)
NET CASH IN (OUT)	3,658	1,220	(313)	1,582	2,076
PROJECT RESERVE BALANCE					
Beginning Balance of Project Reserve	8,498	8,498	-	8,498	-
Capital Works Spending	(5,969)	(8,498)	2,529	(8,498)	2,529
Ending Balance	2,529	-	2,529	-	2,529
OPERATING CASH BALANCE					
Beginning Balance	11,900	11,900	-	11,900	-
Current Year Flows	3,658	1,220	2,438	1,582	2,076
Ending Balance	15,558	13,120	2,438	13,482	2,076

Suburban cash flows of \$3,658k is down by \$313k to last forecast but better than budget by \$2,076k. Against forecast, the cash flows are down, mainly, to the capital works expenses.

Project reserves are forecasted to be at \$2,529k at the end of the year.

C. Debt Service Coverage

	2016 Q3	2016 Q2	2016
	Forecast	Forecast	Budget
DEBT SERVICE RATIO			
Operating income	(1,479)	(1,458)	(541)
Add: Depreciation Expense	6,875	6,875	6,875
Add: Non-Operating Revenues	1,673	1,589	1,594
Add: Interest Income	169	186	38
Available For Debt Service	<u>7,238</u>	<u>7,192</u>	<u>7,966</u>
Debt Service:			
Interest Expense	1,257	1,257	1,669
Less: Capitalized Interest	<u>2,323</u>	<u>1,964</u>	<u>1,964</u>
	<u>3,580</u>	<u>3,221</u>	<u>3,633</u>
RATIO USING NON-OPERATING REVENUES	<u>2.02</u>	<u>2.23</u>	<u>2.19</u>

Forecast of 2.02 is lower than last forecast and lower than budget.

Lehigh County Authority

System Operations Review - June 2016

Presented: August 8, 2016

<u>Critical Activities</u>	<u>System</u>	<u>Description</u>	<u>Jun-16</u>	<u>2016-to-Date</u>	<u>2015 Totals</u>	<u>Permit</u>
			<u>Daily Avg (MGD)</u>	<u>Daily Avg (MGD)</u>	<u>Daily Avg (MGD)</u>	<u>Daily Max (MGD)</u>
Water Production	Allentown	Total	21.46	20.26	19.99	39.0
		Schantz Spring	5.95	6.31	6.16	9.0
		Crystal Spring	3.92	3.91	3.88	4.0
		Little Lehigh Creek	11.50	9.83	9.85	30.0
		Lehigh River	0.09	0.20	0.10	28.0
	Central Lehigh	Total	10.30	9.06	9.08	19.04 MGD Avg
		Feed from Allentown	6.17	6.05	4.95	6.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	4.14	3.01	4.13	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.19	0.17	0.17	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	29.20	30.76	30.44	40.0
		Pretreatment Plant	4.45	4.40	4.34	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.15	0.19	0.21	0.36
			<u>Jun-16</u>	<u>2016-to-Date</u>	<u>2015 Totals</u>	
Precipitation Totals (inches)			1.87	17.7	40.24	
Compliance Reports Submitted to Allentown			18	138	246	
Notices of Violation (NOVs)		(Allentown + Suburban)	1	3	3	
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	12	13	
Main Breaks Repaired		Allentown	2	12	29	
		Suburban	0	3	12	
Customer Service Phone Inquiries		(Allentown + Suburban)	2,332	15,283	35,983	
Water Shutoffs for Non-Payment		(Allentown + Suburban)	188	740	1,844	
Injury Accidents		(Allentown + Suburban)	2	5	9	

Significant Repairs:

The secondary digester cover at KIWWTP has been removed and a new cover is being erected. Completion is expected by the beginning of November, 2016. Reservoir 3 (Central Lehigh Division) was taken out of service on June 7 for exterior renovations. All work has been completed and the reservoir was placed back into service on June 21.

Description of NOVs and/or SSOs:

There was another NOV on the Central Lehigh water system resulting from a delinquent payment for fuel tank registrations, similar to the one we received in May. Because a fuel tank registration fee was not received by PaDEP by the deadline, PaDEP issued an NOV. A follow up invoice has since been paid and PaDEP has indicated that the NOV will be removed. LCA staff has discussed this problem with PaDEP and precautions are being set up to help prevent any additional NOVs.

Other Highlights: