



## LEHIGH COUNTY AUTHORITY

August 26, 2013

### BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
  - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
  - *June 24, 2013 Regular Meeting*
  - *July 8, 2013 Workshop Meeting*
5. Public Comments
6. Action / Discussion Items

#### **FINANCE AND ADMINISTRATION**

- *LCA By-Laws Amendment (Approval)*
- *Allentown Division 2013-2016 Capital Plan (Approval)*

#### **WATER**

- *None*

#### **WASTEWATER**

- *Western Lehigh Interceptor Manhole Inspection*

7. System Operations Overview
8. Staff Comments
9. Solicitor's Comments
10. Other Comments
11. Adjournment

#### **SEPTEMBER MEETINGS**

Workshop Meeting  
Board Meeting

September 9 – 12:00 p.m.  
September 23 – 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**  
**June 24, 2013**

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The Regular Meeting of the Lehigh County Authority was called to order at 12:26 p.m. on Monday, June 24, 2013, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Richard Bohner, Emrich Stellar, Scott Bieber, and Norma Cusick. Authority Staff present were: Aurel Arndt, Bradford Landon, Liesel Adam, Ed Bielarski, Frank Leist, Pat Mandes, and Cristin Keppel.

Nate Swartz and Chris Seyler from Zelenkofske Axelrod, LLC were in attendance.

Angelica Forndran of Cowan Associates and George Maniatty member of the public, was also in attendance.

**REVIEW OF AGENDA**

Mr. Arndt stated there would be one additional item for approval after the regularly listed agenda items.

**PUBLIC COMMENTS**

None.

**EXECUTIVE SESSION**

Mr. Arndt stated there would be an Executive Session regarding personnel following the regular agenda.

**APPROVAL OF MINUTES**

**April 8, 2013, Workshop Meeting Minutes**

On a motion by Mr. Bohner, seconded by Ms. Cusick, the Board unanimously approved the minutes of the April 8, 2013 Workshop Meeting (5-0).

**April 22, 2013, Regular Meeting Minutes**

On a motion by Mr. Bohner, seconded by Ms. Cusick, the Board unanimously approved the minutes of the April 22, 2013 Regular Meeting (5-0).

**May 13, 2013, Regular Meeting Minutes**

On a motion by Mr. Bohner, seconded by Mr. Stellar, the Board unanimously approved the minutes of the May 13, 2013 Workshop Meeting (5-0).

**ACTION AND DISCUSSION ITEMS**

**2012 Financial Statements and Independent Auditor's Report** (Acceptance)

Mr. Bielarski stated that Mr. Swartz and Ms. Seyler performed the audit for 2012 and will be presenting their findings.

Ms. Seyler gave a brief overview of the audit report, stating that this was a clean audit. She noted that balance sheets reflecting any net assets are now labeled as net position, per Government Accounting Standards Board Rule 67. Ms. Seyler noted there is a change in Authority assets in 2012 because of the acquisition of Lynn Township Sewer Authority. She stated that all assets are healthy and that a single audit was required for all federal funds the Authority received, which was also a clean audit. Some discussion followed.

On a motion from Mr. Stellar, seconded by Ms. Cusick, the Board unanimously accepted the 2012 Financial Statements and Independent Auditor's Report (5-0).

Mr. Swartz and Ms. Seyler left the meeting at 12:42 p.m.

**Resolution 6-2013-1 – National Penn Bank Transactions** (Approval)

Mr. Landon explained this Resolution is needed as part of PennVEST loan closing; a separate debt service reserve account is required for the loan. He stated the account has been established with National Penn Bank, listing Authority officials who sign for all other transactions. Mr. Landon also noted that this Resolution complies with Authority Financial Guidelines.

Ms. Mandes left the meeting at 12:47 p.m.

On a motion from Mr. Stellar, seconded by Ms. Cusick, the Board unanimously approved Resolution 6-2013-1, designating staff members approved to execute transactions and perform other functions on behalf of the Authority with National Penn Bank.

**Wastewater Capital Recovery Fees – Resolution 6-2013-2** (Approval)

Mr. Arndt distributed a corrected summary sheet and noted that this is the annual update to the capital recovery charges for a new customer connected to the system, or in the event that an industrial customer increases their capacity needs. He highlighted some of the charges for various systems. Mr. Arndt explained that charges need to be approved via a Resolution per the Pennsylvania Municipality Authorities Act.

On a motion from Mr. Bohner, seconded by Ms. Cusick, the Board unanimously approved Resolution 6-2013-2 (5-0).

**Wynnewood Terrace Pump Station and Main Replacement** (Approval)

Mr. Leist referred to the attached memorandum and explained the Authority acquired the Wynnewood Terrace Sewer System located in the northeastern part of North Whitehall Township in July of 2003. He noted that the system was not built well, as there have been many breaks throughout the system and pump station problems since it was acquired. As part of the previously approved work, Cowan Associates, Inc. (CA) evaluated the existing aged force main resulting in a recommendation to replace the line with a new 6-inch line. He explained the existing line is not capable of handling the peak flow requirements of the proposed new pump station. In addition, this line has experienced a number of failures, the most recent in April 2013, resulting in a sanitary sewer overflow. Because presently access to the line is difficult as it is located along the back and side yards of properties, the proposed line will be constructed within public right-of-way. Mr. Leist said approval is needed for the design to move forward with the replacement of approximately 3,000 linear-feet of existing 4-inch force main with 6-inch pipe. Two types of construction methods will be considered: conventional open cut and the use of “no dig” technology, such as horizontal drilling.

On a motion from Mr. Stellar, seconded by Mr. Bieber, the Board unanimously approved a Capital Project Authorization Amendment, including a Professional Services Authorization for Cowan Associates, Inc., in the amount of \$74,670 (5-0).

**SYSTEM OPERATIONS OVERVIEW**

None.

**STAFF COMMENTS**

None.

**SOLICITOR’S COMMENTS**

None.

**OTHER COMMENTS****City of Allentown Concession Lease Update**

Mr. Arndt provided an update of Concession activities. He noted there are a plethora of meetings between LCA and City Transition team members and between LCA and the consultants that have been engaged to aide with the financial closing of the Lease. He also stated that he met with City of Allentown Signatories to discuss future service. Mr. Arndt gave a brief overview of the financing process, specifically regarding obtaining credit ratings for the Authority. He also noted that interest rates have gone up since the signing of the Lease Agreement; therefore, the Concession payment may be different because it is depended on the interest rate. Extensive discussion followed.

**EXECUTIVE SESSION**

The Chairman called for an Executive Session at 1:34 p.m. to discuss personnel, at which time members of the public exited the meeting.

The session ended at 2:16 p.m.

Mr. Hughes left the meeting during Executive Session at 2:08 p.m.

Mr. Arndt continued his update regarding the Concession Lease. He noted that additional costs for consultant fees and other closing expenses have been incurred and asked for approval of said costs.

On a motion from Mr. Bieber, seconded by Ms. Cusick, the Board unanimously approved a Budget Amendment for Concession Lease costs in the amount of \$71,836.62 (4-0).

**ADJOURNMENT**

There being no further business, the Secretary adjourned the meeting at 2:17 p.m.

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Richard H. Bohner  
Secretary

**WORKSHOP MEETING MINUTES**  
**July 8, 2013**

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The Workshop Meeting of the Lehigh County Authority was called to order at 12:30 p.m., on Monday, July 8, 2013, Vice Chairman Tom Muller presiding. Other Members present at the commencement of the meeting were: Brian Nagle, Richard Bohner, Norma Cusick, and Scott Bieber. Authority Staff present were: Aurel Arndt, Patricia Mandes, Liesel Adam, Ed Bielarski, Frank Leist, Bradford Landon and Cristin Garger.

Donna Kreiser of McNees, Wallace and Nurick was in attendance.

Member of the public, George Maniatty was also in attendance.

**Agenda Review**

Mr. Arndt stated there would be no additional items.

**Public Comments**

None.

**Executive Session**

Mr. Arndt stated there would be an Executive Session before the regular agenda items to discuss property acquisition and litigation.

The Vice Chairman called for an Executive Session at 12:32 p.m., at which time, Mr. Maniatty left the meeting.

The Session ended at 1:31 p.m.

The Vice Chairman called for a recess at 1:31 pm. The meeting resumed at 1:50 p.m., at which time Emrich Stellar joined the meeting via phone and Mr. Maniatty reentered the meeting.

**Water and Sewer Bonds (Allentown Concession) Resolution 7-2013-1 (Approval)**

Mr. Arndt stated that Ms. Kreiser would review the Resolution for the financing of the City of Allentown Concession bonds.

Ms. Kreiser reviewed the parameters of the Resolution and summarized each section of the Consent Agreement, noting that all parameters were unique to the specific transaction.

Mr. Bohner inquired as to why one of the bonds is taxable.

Ms. Kreiser stated one of the bonds is taxable because of how the money is being spent.

Mr. Bielarski followed up, stating that money for future capital projects is included in the financing and those funds do not meet the criteria for tax exempt bonds. Extensive discussion followed.

On a motion from Mr. Bohner, seconded by Ms. Cusick, the Board unanimously approved Resolution 7-2013-1, which among other approvals, authorized the undertaking of the concession, established parameters for bond financing as well as issuance of the bonds within those parameters, empowered certain staff members to negotiation and execute necessary documents, and approved the printing of the Preliminary Official Statement (6-0).

There being no further business, the Vice Chairman adjourned the meeting at 2:14 p.m.

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Richard H. Bohner  
Secretary

## FINANCE & ADMINISTRATION

### ACTION ITEMS

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1. **By-Laws Amendment** (Approval)

The staff recommends the amendments to the By-Laws set forth in the 16 August 2013 notice provided to all Board members, a copy of which notice is attached (**gold**).

2. **Allentown Division – 2013 through 2016 Capital Plan** (Approval)

The staff recommends the approval of the Allentown Division Capital Plan. The Plan is a separate attachment.

### DISCUSSION ITEMS

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1. **None.**

### INFORMATION ITEMS

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Consolidated (2)	PSDLAF Flex Pool		155,000.00	7/1/13	8/27/13	0.150
LLRI 2	PSDLAF Flex Pool		245,000.00	7/1/13	8/27/13	0.150
2010 DSR	PSDLAF Flex Pool		150,000.00	7/1/13	8/27/13	0.150
Water Renew & Repl	PSDLAF Flex Pool		1,000,000.00	7/1/13	8/27/13	0.150
LLRI Cap Reserves	PSDLAF Flex Pool		400,000.00	7/1/13	8/27/13	0.150
WW Capacity	PSDLAF Flex Pool		600,000.00	7/1/13	8/27/13	0.150

Fund Descriptions for Investments:

WW Capac	Wastewater Capacity
Cons Wtr (2)	Consolidated Water 2
LLRI CR	Little Lehigh Relief Interceptor Capital Reserves
2010 DSR	2010 Bond Debt Service Reserves
Wtr R & R	Renewal and Replacement
LLRI (2)	Consolidated Little Lehigh Relief Interceptor 2

## **WATER**

### **ACTION ITEMS**

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1. *None*

### **DISCUSSION ITEMS**

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1. *None.*

### **INFORMATION ITEMS**

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1. **Phase 2 Interconnection with Allentown**

Livengood Excavators intends to address restoration at Schantz Road this fall. All other punch-list items have been addressed. ***No Current Activity***

2. **Water Main Replacement Project – Oakland Park**

Final paving, lawn and driveway restoration was completed in early June. The project is complete and now in the 18-month warranty period.

3. **Arcadia West Pumping Station Modifications**

Bids are scheduled to be opened on August 22<sup>nd</sup>. T&M Associates estimates that the general and electrical contracts will total \$863,000.

4. **Upper Milford Central Division Radon Mitigation Study**

Board authorized this project in June and our consultant Cowan Associates (CA) is currently evaluating the existing wells in the Upper Milford Central Division (a/k/a Buss Acres). A Draft report was received in late December and a Draft Final report was received in early April. The final report is currently being reviewed by LCA staff. The report findings will be presented to the Board later this year.

5. **LCA Facilities Emergency Power Project**

The Board authorized the construction phase of this project at the April 8, 2013, Work Shop meeting. Notices of Award were issued on April 9, 2013 to Barry J. Hoffman Co., Inc. – Electrical Construction and Lisbon – General Construction. All required documentation from the contractors has been received and Notices to Proceed (NTP) were issued on May 20, 2013. A pre-construction meeting was held on June 11, 2013. Construction is underway the site work is completed at a majority of the facilities. Long lead items provided by the electrical contractor such as transfer switches and generators are scheduled to be delivered by the end of September. The Agreement requires substantial completion of the project no later November 16, 2013.

6. **Developments**

Water system construction is occurring at the following developments:

Trexler Fields, Phases 2, 3, 4 & 5 (Partial), 28 residential lots (sfa & sfd), UMT

Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT. We were notified that construction will resume after no activity in over four years.

Water system plans are being reviewed for the following developments:

Above & Beyond (personal care facility), 2 commercial lots, UMT

Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT

Grant Street Townes, 18 residential lots (sfa), WashT

Hamilton Crossings, 2 commercial lots with 20 buildings having retail, financial, convenience and restaurant uses, LMT  
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, 247 residential lots (sfa/sfd), UMT  
Liberty at Mill Creek, 2 industrial lots, UMT  
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer  
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water and sewer  
Woodmont at Upper Macungie (formerly Rabenold Farms II), 288 apartment units and clubhouse, (Portion north of I-78), UMT  
Route 100 Bypass & Cetronia Road Proposed Commercial Development, 1 commercial lot with 4 buildings having auto, convenience, financial and day care uses, UMT  
Shepherd's Corner, 1 commercial lot, LMT  
Spring Creek Properties Subdivision I, 14 commercial and industrial lots, LMT  
Trexler Business Center, Lot 1, 1 commercial building, LMT  
Weilers Road Twins, 82 residential lots (sfa), UMT  
Woodmere Estates, 60 residential units (sfd), UMT



## WASTEWATER

### **ACTION ITEMS**

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1. **Western Lehigh Interceptor Manhole Inspection** (Approval)

A Capital Project Authorization Amendment and a Professional Services Authorization for Arcadis (Malcolm Pirnie) will be presented for consideration for the inspection of 700 manholes in the WLI Interceptor System to identify structural and leakage issues. This work is part of the SCARP and is a requirement of the EPA Administrative Order.

### **DISCUSSION ITEMS**

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1. **None.**

### **INFORMATION ITEMS**

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

The following is work planned for 2013:

- Submission of reports to EPA and DEP.
- CCTV work in areas identified as have high leakage to determine the extent of the leakage. Malcolm Pirnie will review the CCTV video and determine a Basis of Rehab.
- Keystone Consulting Engineers (KCE) is generating the population projections for the LCA service area to be used in the Level of Service modeling.
- Completion of the Level of Service Modeling for future growth.
- Rehab effectiveness metering in Phase 1 pipe lining project areas to determine the reduction in peak flows as a result of the rehab work.
- Phase 2 of Signatory pipe lining projects as determined by KCE.
- Rehab effectiveness metering in Phase 2 pipe lining project areas.
- Alternative Modeling and feasibility analysis to evaluate the various alternatives to achieve the preliminary objectives. The alternatives will include various combinations of I & I elimination, storage and capacity increases.
- Long term flow meters will continue on a limited basis. Two rain gauges and meters remain in the system.
- Preliminary Program Objectives Evaluation Report will be submitted to DEP by the end of 2013. This document will define the current system performance and assess what it will take to achieve the system preliminary objectives. The report will include a discussion of the investigation and evaluation work completed including flow evaluation, SSES prioritization, modeling, current and future level of service, current and future system sizing requirements, and will propose the Level of Control for system operation.
- The development of the Capital Improvements Plan is scheduled to begin by the end of the year. This will identify the rehab needs, replacement needs, expansion requirements, costs of improvements and schedule for implementation to achieve the program objectives. **No Current Activity.**

**2. Wastewater Treatment Capacity**

The Memo of Understanding (MOU) regarding working together on a joint Act 537 Plan with the City was never executed with the City.

A Communications Plan was developed by the consultant with input from LCA and the City. A stakeholder's group has been formed and the kick-off meeting was held in mid-January at the Lehigh County Administration Building. The stakeholders Advisory Committee (SAC) consists of either Municipal Managers or Municipal Officials from each of the City and LCA Signatories. It is expected that there will be 5 meetings with the SAC during the Study to keep the Committee up to date on Plan with the expectation that the adoption of the plan with the various Signatories will be completed in a short period of time.

Talks continue with DEP on the effluent standards applicable to a discharge to the Jordan Creek. A meeting was held with DEP in late May to discuss the Jordan Creek discharge. DEP indicated water quality standards will be applicable to the plant effluent. We had requested Reuse Standards which are less stringent but DEP will require the secondary drinking water standards. We have since received a letter from DEP with the specific requirements for performing a study of the Jordan Creek that must be completed prior to the issuance of final effluent standards. We have recently completed Total Dissolved Solids (TDS) testing and have compared them to TDS data from several years ago. The trend is an increase in the TDS in the plant effluent. This could potentially mean that an upgraded Pretreatment Plant would require TDS removal such as Reverse Osmosis.

A meeting was held with the DRBC to discuss updating the prospective effluent limits for the various alternatives. The model will be refined and the grandfathered loads for Phosphorus and Ammonia will be updated based on the actual Kline's Island data. A model run will be completed in the near future.

LCA purchased 100,000 gallons of allocation from Salisbury Township at \$6.00 per gallon.

**3. Northern Lehigh Wastewater System**

The project is composed of the following:

**Wastewater Treatment Plant (on a 5-acre tract at KidsPeace)**

In March, LCA representatives met with North Whitehall Township (NTW) Supervisor, Steve Pany; Solicitor, Lisa Young; and Township Manager, Jeff Bartlett to discuss the Act 537 Plan. In summary, for the westside of Rt. 309 (the 1-5 year service area) LCA has agreed to limit the size of the Wastewater Treatment Plant (WTP) to 200,000 GPD which in essence reflects the need for this area. Any expansion beyond 200,000 GPD would require NWT approval.

September 18, 2012, after six months of hearings, the Supervisors granted approval of the Conditional Use for the proposed WTP with nine conditions. We have received the written decision from the Township and have accepted all conditions. In late November 2012 the opposition, the Friends of the Jordan, appealed the Township decision to Lehigh County Court of Common Pleas. Legal Briefs were filed by the Voice of the Jordan (Voice), NWT and LCA. Argument took place on Wednesday May 29, 2013 with Judge Edward Reibman presiding. On June 5, 2013 the Court ordered "that the decision of the NWT Board of Supervisors dated October 23, 2012 is hereby reaffirmed". However, on July 29, 2013 the Voice filed an appeal of the previous Court ruling.

The total cost of the WTP including soft costs and KidsPeace acquisition costs is estimated at \$4.69 million.

**Offsite Conveyance Facilities (OSCF)**

Wal-Mart has stopped 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 until a cost sharing agreement is reached with LCA. Wal-Mart 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. Ongoing cost-sharing negotiations are still on hold. **No current activity.**

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

**Kids Peace Agreement**

A revised amendment to the Agreement has been sent to KidsPeace. It primarily focuses the financial impact on the Jordan Creek Wastewater system because of KidsPeace's sale of the 101 Acre parcel to Lehigh Carbon-Community College (LCCC). The 101 Acre parcel was an integral economic component for LCA in the 2006 Agreement. **No current activity.**

**Act 537 Plan (Plan) Revision**

NWT continues to work on developing an alternate a solution for the wastewater treatment needs for a revised 1-5 year service area which would include a WTP located on the eastside of Route 309 that would discharge to the Coplay Creek. LCA has agreed to provide support and expertise. Recent discussions with NWT indicate that the Pennsylvania Department of Environmental Resources (PADEP) has agreed to allow data from the on-site sewer system evaluations and water testing conducted for the current Plan to be used for any Plan revisions. NWT has requested and will receive shortly preliminary wastewater effluent discharge standards from DEP and has met with the Delaware River Basin Commission (DRBC) has verified that water quality modeling will be required for effluent discharge on the Coplay Creek. A conceptual short term service area collector system layout has also been developed. NWT continues discussions to secure a site for the proposed WTP and to secure commitments to connect from property owner along the proposed route.

**4. Arcadia West WWTP Improvements**

Construction activity continues at the site with about 50% of the work completed by the end of July. Most of the block work will be complete by the end of August. The total project cost estimate is \$3,502,300.

**5. Wynnewood Terrace Pump Station & Force Main Replacement**

Staff has completed review of the Preliminary Technical Memorandum and returned comments to our consultant Cowan Associates, Incorporated (CA). Design work is proceeding on a below grade self-contained pump station with submersible pumps and a new 6" force main.

**6. Park Pump Station Improvements**

Fuel Tank Replacement – Staff has received and is reviewing the final specifications and plans for replacement of the fuel tank at the Park Pump Station. We expect to place the work to bid by the end of September and award the work at the October Board Meeting.

**7. LCA WTP- Truck Waste Receiving Station**

**Truck Waste Receiving Station (TWRS):**

The Board awarded the General and Electrical construction contracts at the January workshop meeting. The contractors have returned the construction Agreements for our execution. Notices to Proceed (NTP) to the respective contractors were issued on February 26, 2013 and a pre-construction meeting was held on March 7, 2013. Construction is underway; the

Agreement requires substantial completion of the facility no later than 270 days from the date of the NTP.

*Digester Mixer Replacements:*

Notice to Proceed for the Construction Phase of the project was issued to both the General and Electrical contractors on October 8, 2012. Electrical construction work is approximately 80% complete, as most of it could be accomplished without draining the digesters. The General contractor has completed the installation of mixers in the first digester and the digester is currently being filled. After this digester is put back in service, the 2<sup>nd</sup> digester will be drained and mixers installed. As a note; the mixers will be installed one digester at a time, as it is necessary to always have two digesters operating. Assuming no major difficulty in draining the remaining digesters we expect the project will be completed in the 1<sup>st</sup> quarter of 2014 however additional issues with draining the digesters may extend the completion date

*PPL E-Power Customizable Energy Program:*

Applications have been submitted for energy savings rebates and verification methodologies for both the Digester Mixer Replacements and Truck Waste Receiving Station. PPL has finally responded and is requiring that temporary sub-meters be installed to set a base line and verify estimated energy savings for the digester mixers.

## BY-LAWS AMENDMENT NOTICE

16 August 2013

In order to meet the seven days written notice requirement of Article V, §1 of the By-Laws, notice is hereby given that consideration of various amendments to the Lehigh County Authority By-Laws will be considered at the Lehigh County Authority Board meeting on 26 August 2013:

1) To reflect the numerous position title and responsibilities changes among the Authority management staff as a result of the successful transition under the City of Allentown Concession Agreement arrangement, all references in the Authority By-Laws to the prior staff position of General Manager shall be amended to the current staff position of Chief Executive Officer.

**[Hereinafter, amendments are reflected with italicized language being added language and strikethrough language being deleted language]**

### 2) ARTICLE I, SECTION 5. SPECIAL MEETINGS

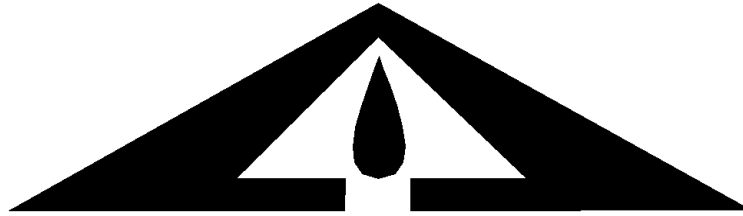
Special meetings of the Board shall be held whenever called by the Chairman or by not less than three members of the Board. Calls for special meetings shall be in writing, shall be served upon the General Manager, as designees for the Secretary, and shall specify the purpose or purposes of the special meeting.

Notice shall be given of the time, place and purpose of each special meeting by telephone or delivery at least 24 hours before the meeting to each member of the Board, but such notice may be waived by any member. Notice shall also be publicized in accordance with statutory requirements.

*This provisions shall not be the exclusive manner for calling special meetings, but this section is intended as a procedure for board members to institute the calling of a special meeting.*

### 3) ARTICLE I, SECTION 6. QUORUM AND TRANSACTION OF BUSINESS

... For purposes of quorum and transaction of business in this section, "present" shall include all or any member of the Board which can hear and participate in a meeting through a telephone conference call *or other technology which allows participation from a location distant from the board meeting*, which ~~telephonic~~ connection must be for the length of the entire meeting and must allow all persons present in the meeting room to hear any comments made by members participating by telephone...



**LEHIGH COUNTY AUTHORITY**

**ALLENTOWN, PA**

**CAPITAL PLAN**

**ALLENTOWN DIVISION**

**2013 – 2016**

**AUGUST 2013**



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN DIVISION  
CAPITAL PLAN  
2013 – 2016**

The Allentown Division Capital Plan (Plan) covers the period August 8, 2013 through December 31, 2016. In addition to typical annual Lehigh County Authority (LCA) capital expenditures the Plan includes both water and wastewater projects identified in the City of Allentown's (City) Capital Improvement Program, projects developed with the input of key City Bureau of Water Resources personnel and other projects deemed necessary by LCA. During the Plan period additional projects may be identified as the result of studies and/or a more in-depth investigation of the system needs and when applicable will be added to the current Plan or the 5-year Plan based upon priority.

The projects identified in the Plan fall into two primary categories, those funded by LCA and those funded by the City; with the latter further categorized as Administrative Order (AO) projects and Uncompleted Work (UW).

**AO Projects:** The AO project is necessary to bring the City's wastewater system into compliance with the US Environmental Protection Agency (USEPA) Administrative Order to eliminate Sanitary Sewer Overflows / By-passes at Outfall 003 of the wastewater treatment plant. Pursuant to the Concession Lease Agreement (Lease) the City is responsible for making all decisions related to this work and for funding said work. LCA is responsible for the execution of the work.

**UW Projects:** UW projects are the City's responsibility to fund and complete prior to closing the Concession Lease, however at this juncture the majority of the projects were not started and none have been completed. The City has requested that LCA execute these projects. Funding will be provided by the City.

Funding by system and category is as follows:

System	Capital Funding 2013-2016				
	LCA	City			Totals
		UW	AO	Sub-Total	
Water	\$12,837,500	\$ 3,806,000	N/A	\$3,806,000	\$ 16,643,500
Wastewater	\$ 8,172,000	\$ 1,075,000	\$ 2,231,000	\$3,306,000	\$ 11,478,000
<b>Totals</b>	<b>\$21,009,500</b>	<b>\$ 4,881,000</b>	<b>\$2,231,000</b>	<b>\$7,112,000</b>	<b>\$ 28,121,500</b>

Water projects focus on regulatory compliance, future needs and addressing the Lease operating standards. Projects include the rehabilitation of the 28<sup>th</sup> Street elevated tank, placing the City's three steel reservoir tanks in an on-going maintenance and rehabilitation program with a national company that specializes in these services, permitting un-permitted equipment in a water booster station, construction of a chlorine booster station on the Schantz Spring main, and replacing a leaking segment of the Schantz Spring main. Funding is also provided for both spun cast and pit cast water main replacements including coordination of main replacements with the annual City Streets Program. To assist in future planning needs, an "all pipe" City



water system model is included in the Plan. Finally, studies will be conducted to pilot test the change in coagulants at the Water Filtration Plant (WFP) to identify any issues prior to the changeover; evaluate the impact and options when PaDEP declares the Schantz Spring water supply under the influence of surface water; and to evaluate both operational and capital improvements options to minimize water age in the reservoirs.

Wastewater projects focus on regulatory compliance, critical needs at the Wastewater Treatment Plant (WWTP), and addressing the Lease operating standards. Projects include a new bar rack at the WWTP Head-works, Sanitary Sewer Evaluation Study (SSES), additional flow metering, and a wastewater hydraulic model upgrade. Funding is also provided for the replacement of five motor control centers, replacement and/or rehabilitation of the three belt filter presses and the replacement of two digester covers all at the WWTP; and for the replacement and/or rehabilitation of defective sewer mains that are located within streets that are included in the annual City Streets Program.

Additional information regarding these projects can be found in the Plan's individual detail sheets.

**WATER**



LEHIGH COUNTY AUTHORITY  
ALLENTOWN DIVISION  
August 8, 2013 - 2016 CAPITAL PROGRAM  
WATER

Project #	Name or Title of Proposal	(1) Type	Approvals	Project Cost		(3) By City Prior to August 8, 2013	This Capital Program					Dept. Priority	Funding
				Total Cost			2013 (From August 8, 2013)	2014	2015 (For named projects)	2016 (For named projects)	Total		
CA-W-12	28th Street Elevated Steel Tank Rehabilitation	UW											
CA-W-13	Schantz Spring Chlorine Booster Station	UW											
CA-W-14	WFP- Chemical Building Roof Replacement	UW											
CA-W-15	AMR Meter Project	UW											
	Sub-Total City Funded Projects												

(1) UW= "Uncompleted Work" City Projects that were supposed to be complete by the time of settlement or executed by City personnel after settlement.  
The City will fund these projects but has requested that LCA execute them.

AO= "Administrative Order" Projects as per the Agreement are to be Funded by the City and executed by LCA.

- (2) A= Annual Item, S= Study/Planning, D= Design, C= Construction / Implementation, P = Pending Approval, E = Entire Project Approved  
(3) Estimated City expenditures (consultant, contract and equipment) for City Funded Projects prior to settlement.



Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-1  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 7/27/13

1. **Proposal Title:** New & Replacement Meter Installations (non AMR project)      2. **Location:** Allentown

3. **Description:**  
Covers meters for new water customers and also includes funds annually to cover routine meter and radio reading equipment replacement

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
Regulatory agencies require metering of all properties connected to the water system. The costs associated with meters for new customers are recovered through customer paid meter fees.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$ _____
Sub-Total	\$ -

8. **Estimated Costs:**

Capital Works (Staff)	\$	
Land Acquisition	\$	
Construction/Equip.	\$ 95,000	
Professional Services	\$	
Other (Labor)	\$ 45,000	\$ 45,000
Contingencies	\$	
Total Project Cost	\$ 140,000	
Requested in this Capital Program	\$ 140,000	

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 2,730
Sub-Total	2,730
Total Operating Costs	\$ 2,730

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ 98,000
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 20,000	\$	\$ 6,000	\$ 14,000	\$
2nd Year	\$ 40,000	\$	\$ 12,000	\$ 28,000	\$
3rd Year	\$ 40,000	\$	\$ 12,000	\$ 28,000	\$
4th Year	\$ 40,000	\$	\$ 12,000	\$ 28,000	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated X

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-2  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water Capital

Date: 7/27/13

1. **Proposal Title:** Distribution Mains & Service Connections

2. **Location:**

3. **Description:**

Plan review and construction inspection of extensions and connections to the water system. Also included are general planning expenses.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

To assure that development water lines and service connections to the City water system are designed and constructed according to the applicable specifications. Also allows for planning expenses.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$ _____
Sub-Total	\$ -

8. **Estimated Costs:**

Capital Works (Staff)	\$ 210,000
Land Acquisition	\$
Construction/Equip.	\$
Professional Services	\$
Other (Labor)	\$
Contingencies	\$
Total Project Cost	\$ 210,000
Requested in this Capital Program	\$ 210,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 8,200
Sub-Total	\$ 8,200
Total Operating Costs	\$ 8,200

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ 84,000
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper.	Borrowing	Assess.,	Reserves
		Revenues		Contr.-in-Aid	
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 30,000	\$	\$ 18,000	\$ 12,000	\$
2nd Year	\$ 60,000	\$	\$ 36,000	\$ 24,000	\$
3rd Year	\$ 60,000	\$	\$ 36,000	\$ 24,000	\$
4th Year	\$ 60,000	\$	\$ 36,000	\$ 24,000	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-3  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 7/27/13

1. **Proposal Title:** Distribution Mains Upsizing

2. **Location:** Allentown

3. **Description:**

Contribute to developer-installed systems to increase pipe diameters to provide additional flow capabilities ; or the extension of water mains to serve a development all pursuant to the LCA Main Extension Policy.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

To economically provide proper pipe capacities and extensions to meet future service needs.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify)  
\_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ -

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

Capital Works (Staff)	\$ 4,000
Land Acquisition	\$
Construction/Equip.	\$ 66,000
Professional Services	\$
Other (Labor)	\$
Contingencies	\$
Total Project Cost	\$ 70,000

Requested in this Capital Program	\$ 70,000
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Indirect Operating Costs:

Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 4,550
Sub-Total	\$ 4,550

Total Operating Costs	\$ 4,550
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 10,000	\$	\$ 10,000	\$	\$
2nd Year	\$ 20,000	\$	\$ 20,000	\$	\$
3rd Year	\$ 20,000	\$	\$ 20,000	\$	\$
4th Year	\$ 20,000	\$	\$ 20,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_



Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-4  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 8/2/13

1. **Proposal Title:** Other Equipment

2. **Location:** Allentown

3. **Description:**

Generally utilized for individual equipment greater than \$5000

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

Replacement and new equipment is required from time to time to maintain and improve service integrity and reliability. Items include electric and electronic equipment, pumping equipment, leak detection equipment and other equipment as needed.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

Capital Works (Staff)	\$	
Land Acquisition	\$	
Construction/Equip.	\$	200,000
Professional Services	\$	
Other (Labor)	\$	
Contingencies	\$	
Total Project Cost	\$	200,000

Requested in this Capital Program	\$	200,000
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Indirect Operating Costs:		
Overhead Costs	\$	-
Debt Service (5%-30yr.)	\$	11,380
Sub-Total	\$	11,380
Total Operating Costs	\$	11,380

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	
Assessment, Contribution-in-Aid-of-Construction	\$	-
Grants & Other	\$	

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Need					
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 50,000	\$	\$ 25,000	\$	\$
2nd Year	\$ 50,000	\$	\$ 50,000	\$	\$
3rd Year	\$ 50,000	\$	\$ 50,000	\$	\$
4th Year	\$ 50,000	\$	\$ 50,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High ☒ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-5  
 Preparer: JP/BK

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water Capital

Date: 7/27/13

1. **Proposal Title:** Water Filtration Plant (WFP) General Improvements      2. **Location:** Allentown

3. **Description:**

Funding to cover the on-going replacement of equipment that is nearing the end of its useful life and to address unforeseen equipment failures. Equipment will be constantly evaluated and repaired or replaced as needed.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The Water Filtration Plant was constructed in the 1920's with a large retro-fit in mid 1990, still some of the equipment is aged. The WFP and associated pumping facilities provides the water for City of Allentown and a large portion for LCA central Lehigh Division. A breakdown of critical equipment could lead to regulatory violations and/ or interruption or reduction the water supply.

5. **Status of Proposal:**

☐ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☐ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$ 5,000
Land Acquisition	\$
Construction/Equip.	\$ 520,000
Professional Services	\$
Other (Labor)	\$
Contingencies	\$
Total Project Cost	\$ 525,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 34,150
Sub-Total	\$ 34,150

Total Operating Costs	\$ 34,150
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Requested in this Capital Program	\$ 525,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 75,000	\$	\$ 75,000	\$	\$
2nd Year	\$ 150,000	\$	\$ 150,000	\$	\$
3rd Year	\$ 150,000	\$	\$ 150,000	\$	\$
4th Year	\$ 150,000	\$	\$ 150,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X      Medium \_\_\_\_\_      Low \_\_\_\_\_      Legally Mandated \_\_\_\_\_

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-6  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 8/1/13

1. **Proposal Title:** Steel Tank Reservoir Rehabilitation / Maintenance Contract

2. **Location:** Allentown

3. **Description:**

To contract with a national tank maintenance firm for inspection, maintenance and rehabilitation services for the City three above ground steel water tanks. *Note: The remaining City reservoirs tanks are concrete and are not included in the program*

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The reservoirs are in need of regular inspection, maintenance and rehabilitation as they age. The contracted firm will be responsible for these continuous on going services for as long a LCA deems the costs to be justifiable. This arrangement takes the work load off of existing staff, both Operational and Capital Works, in planning and implementing these critical programs. *Note: The Operating Standards of the Concession Agreement require this work.*

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	
Supplies & Equipment	\$	
Maintenance Svcs	\$	
Other	\$	
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	30,000
Land Acquisition	\$	-
Construction/Equip.	\$	-
Professional Services	\$	355,000
Misc	\$	10,000
Contingencies	\$	60,000
Total Project Cost	\$	455,000

Requested in this  
Capital Program \$ 455,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 29,600
Sub-Total	\$ 29,600
Total Operating Costs	\$ <u>29,600</u>

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	
Assessment, Contribution-		
in-Aid-of-Construction	\$	-
Grants & Other	\$	

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ -	\$	\$	\$	\$
2nd Year	\$ 150,000	\$	\$ 150,000	\$	\$
3rd Year	\$ 150,000	\$	\$ 150,000	\$	\$
4th Year	\$ 155,000	\$	\$ 155,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-7  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water Capital

Date: 7/29/13

1. **Proposal Title:** Water Main Replacements  
 ( Spun Cast, Pit Cast & City Streets Program Areas)

2. **Location:** Allentown

3. **Description:**  
 A good part of the City's water distribution system is pit cast iron or spun cast iron mains. Some of the pit cast mains date back to the turn of the century, however the spun cast mains have a higher failure. Although the entire system will be evaluated, LCA will work closely with the City Streets department to coordinate main replacements in advance of the annual City Street paving schedule.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
 The Operating Standards of the Concession Agreement require replacement of 2-miles of pipe per year (1-mile in the first year). Until such time as the City deems it not necessary.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
 \_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

Capital Works (Staff)	\$ 795,000
Land Acquisition	\$
Construction/Equip.	\$ 6,360,000
Professional Services	\$ 735,000
Other	\$ 225,000
Contingencies	\$ 1,000,000
Total Project Cost	\$ 9,115,000
Requested in this Capital Program	\$ 9,115,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 592,940
Sub-Total	\$ 592,940
Total Operating Costs	\$ 592,940

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

		Source			
		Oper.		Assess.,	
		Revenues	Borrowing	Contr.-in-Aid	Reserves
		Need			
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 145,000	\$	\$ 145,000	\$	\$
2nd Year	\$ 1,900,000	\$	\$ 1,900,000	\$	\$
3rd Year	\$ 3,535,000	\$	\$ 3,535,000	\$	\$
4th Year	\$ 3,535,000	\$	\$ 3,535,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High ☒ Medium ☐ Low ☐ Legally Mandated ☐

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-8  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water Capital

Date: 7/18/13

1. **Proposal Title:** Miscellaneous Minor Water Facility Permitting Amendments      2. **Location:** Allentown

3. **Description:**

In accordance with PADEP requirements, apply for permit amendments where equipment has been added and/or other changes made in a facility without obtaining the required permit amendment.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

Regulatory requirement, failure to obtain the required amendment(s) may result in DEP enforcement action.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

Capital Works (Staff)	\$	5,000
Land Acquisition	\$	-
Construction/Equip.	\$	5,000
Professional Services	\$	10,000
Other (Labor)	\$	5,000
Contingencies	\$	2,500
Total Project Cost	\$	27,500

Indirect Operating Costs:

Overhead Costs	\$	-
Debt Service (5%-30yr.)	\$	1,790
Sub-Total	\$	1,790

Total Operating Costs	\$	1,790
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Requested in this	
Capital Program	\$ 27,500

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	-
Assessment, Contribution-		
in-Aid-of-Construction	\$	-
Grants & Other	\$	-

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 7,500	\$	\$ 7,500	\$	\$
2nd Year	\$ 20,000	\$	\$ 20,000	\$	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated X

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-9  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water Capital

Date: 7/19/13

1. **Proposal Title:** Various Water System Related Studies      2. **Location:** Allentown

3. **Description:** The following studies are included in this Project  
 (1) Water Filtration Plant (WFP) -Conduct a study to assure that the change in the type of coagulants will not impact the quality of the finished water; (2) Schantz Spring- Identify the impact of and improvements necessary at the WFP when DEP designates Schantz Spring "as under the influence of ground water"; (3) Reservoirs- Identify physical improvements and/or operating changes to minimize water age in the reservoirs

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
 To assure the highest quality water and to plan for future upgrades to the WFP to assure the continued use of the Schantz Spring water supply source.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
 \_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**  
 Add. Personnel Man-Hrs. \$ -  
 Personnel Services \$ -  
 Supplies & Equipment \$ -  
 Maintenance Svcs \$ -  
 Other \$ -  
 Sub-Total \$ -

8. **Estimated Costs:**  
 LCA Staff \$ 60,000  
 Land Acquisition \$ -  
 Construction/Equip. \$ -  
 Professional Services \$ 200,000  
 Other \$ 25,000  
 Contingencies \$ 15,000  
 Total Project Cost \$ 300,000  
  
 Requested in this  
 Capital Program \$ 300,000

Indirect Operating Costs:  
 Overhead Costs \$ -  
 Debt Service (5%-30yr.) \$ 19,520  
 Sub-Total 19,520  
  
 Total Operating Costs \$ 19,520

10. **Revenue Impact:**  
 Gain/Loss in Annual Revenue \$ -  
 Assessment, Contribution-  
 in-Aid-of-Construction \$ -  
 Grants & Other \$ -

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 30,000	\$	\$ 30,000	\$	\$
2nd Year	\$ 200,000	\$	\$ 200,000	\$	\$
3rd Year	\$ 70,000	\$	\$ 70,000	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**  
 High X      Medium \_\_\_\_\_      Low \_\_\_\_\_      Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-10  
 Preparer: FJL

**DEPARTMENT:** CAPITAL WORKS  
**Sub-Organizational Unit:** Water Capital

**Date:** 7/18/13

**1. Proposal Title:** City Water System Hydraulic Model

**2. Location:** Allentown

**3. Description:**

Develop a calibrated all-pipe, hydraulic model of the City water system. It is envisioned that the model will utilize, when applicable the semi-automated data update programming that was developed for the LCA Central Lehigh Division model.

**4. Justification (need, function, selection of time, specific relationship to any long-term work program):**

There is no model of the City water system, as such there is no dynamic way to evaluate the capabilities of the water system, identify areas where pipe sizes or network configuration impacts fire flow ability. A model would be a useful tool in evaluating sections of aged mains that have not structurally failed to determine if replacement is warranted.

**5. Status of Proposal:**

☐ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

**6. Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

**7. Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☐ No Land Involved

**9. Annual Oper. Cost Impact: Incr./((Decr.))**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

**8. Estimated Costs:**

Capital Works (Staff)	\$ 75,000
Land Acquisition	\$
Construction/Equip.	\$
Professional Services	\$ 200,000
Other	\$ 35,000
Contingencies	\$ 30,000
Total Project Cost	\$ 340,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 22,120
Sub-Total	\$ 22,120
Total Operating Costs	\$ 22,120

Requested in this  
 Capital Program \$ 340,000

**10. Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

**11. Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ -	\$	\$	\$	\$
2nd Year	\$ 40,000	\$	\$ 40,000	\$	\$
3rd Year	\$ 300,000	\$	\$ 300,000	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

**12. Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-11  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 7/29/13

1. **Proposal Title:** Schantz Spring Main Replacement      2. **Location:** Allentown

3. **Description:**

Replacement of approximately 2,000 l.f. of 1903 vintage, 30-inch diameter main in Martin Luther King, Jr. Boulevard from Schribers Bridge to the Water Filtration plant

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

To maintain the integrity of the Schantz Spring water supply transmission main. A previous smartball survey conducted by the City indicated some leakage in this the segment of main.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$ 60,000
Land Acquisition	\$
Construction/Equip.	\$ 1,200,000
Professional Services	\$ 60,000
Other	\$ 15,000
Contingencies	\$ 120,000
Total Project Cost	\$ 1,455,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 94,650
Sub-Total	\$ 94,650

Total Operating Costs	\$ 94,650
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Requested in this Capital Program	\$ 1,455,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$	\$	\$	\$	\$
2nd Year	\$ 50,000	\$	\$ 50,000	\$	\$
3rd Year	\$ 1,405,000	\$	\$ 1,405,000	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_



Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-12  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water Capital

Date: 8/1/13

1. **Proposal Title:** 28th Street Elevated Steel Tank Reservoir Rehabilitation      2. **Location:** Allentown

3. **Description:**  
The project will repair structural deficiencies, make improvements and will recoat (paint) both interior and exterior surfaces

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
The City retained Mumford Bjorkman Associates to inspect concrete and steel reservoir tanks. The 28th street elevated tank deficiencies were identified in the report. Secondly the deficiencies regarding this tank were noted in the 2010 annual water system inspection conducted by DEP. Reservoirs are in need of regular inspection, maintenance and rehabilitation as they age.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./ (Decr.)**  
Add. Personnel Man-Hrs. \$ -  
Personnel Services \$ -  
Supplies & Equipment \$ -  
Maintenance Svcs \$ -  
Other \$ -  
Sub-Total \$ -

8. **Estimated Costs:**  
LCA Staff \$ 30,000  
Land Acquisition \$ -  
Construction/Equip. \$ 310,000  
Professional Services \$ 40,000  
Misc \$ 5,000  
Contingencies \$ 45,000  
Total Project Cost \$ 430,000  
  
Requested in this  
Capital Program \$ 430,000

Indirect Operating Costs:  
Overhead Costs \$ -  
Debt Service (5%-30yr.) \$ -  
Sub-Total \$ -  
  
Total Operating Costs \$ -

10. **Revenue Impact:**  
Gain/Loss in Annual Revenue \$ -  
Assessment, Contribution-  
in-Aid-of-Construction \$ 430,000  
Grants & Other \$ -

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Need					
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ -	\$	\$	\$	\$
2nd Year	\$ 430,000	\$	\$	\$ 430,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**  
High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Uncompleted Work (UW) Project that will be funded by the City of Allentown

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-13  
 Preparer: JP

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Water-Capital

Date: 8/1/13

1. **Proposal Title:** Schantz Spring Chlorine Booster Station

2. **Location:** Allentown

3. **Description:**

Construction of Chlorine Booster Station, located on City park property north of Honochick Drive, between Ott Street and the park pavilions along a section of the Schantz Spring water transmission main. The project will include a pre-cast building and applicable equipment and a chlorine injection structure over the top of the transmission main.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

Schantz Spring is a inexpensive groundwater supply source for the City and as such is subject to the EPA Ground Water Rule , which requires that a specified minimum chlorine residual be maintained at all times. If the residual is not maintained the water in the 30-inch diameter 5-mile long Schantz Spring transmission main must be wasted otherwise a boil water notice might be required . Currently there is only one chlorination station located at the Spring site

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☒ Partly Acquired  
☐ LCA Owned  
☐ No Land Involved

9. **Annual Oper. Cost Impact: Incr./Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	30,000
Land Acquisition	\$	-
Construction/Equip.	\$	165,000
Professional Services	\$	25,000
Other	\$	5,000
Contingencies	\$	25,000
Total Project Cost	\$	250,000

Requested in this  
 Capital Program \$ 233,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ -
Sub-Total	-
Total Operating Costs	\$ -

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	-
Assessment, Contribution-		
in-Aid-of-Construction	\$	250,000
Grants & Other	\$	-

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$ 17,000	\$	\$	\$ 17,000	\$
1st Year	\$ 18,000	\$	\$	\$ 18,000	\$
2nd Year	\$ 215,000	\$	\$	\$ 215,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Uncompleted Work (UW) Project that will be funded by the City of Allentown

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-14  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water-Capital

Date: 8/1/13

1. **Proposal Title:** WFP- Chemical Building Roof Replacement

2. **Location:** Allentown

3. **Description:**

Modifications to the roof of WFP chemical storage area, removal and replacement of (2) 8,000 gallon chemical storage tanks, replacement of rubber membrane roof system.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The existing roof is approximately **20 years** old, has been repaired over the years . Replacement of the aged rubber membrane roofing system is required to assure the integrity of the building and it's contents. Modifying the roof by installing a hatchway to allow access for easy replacement of the chemical storage tanks.

5. **Status of Proposal:**

☐ Preliminary Estimate  
☒ Plans and Specs Completed  
☐ Other (Specify)  
\_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	50,000
Land Acquisition	\$	-
Construction/Equip.	\$	625,000
Professional Services	\$	30,000
Other	\$	5,000
Contingencies	\$	95,000
Total Project Cost	\$	805,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ -
Sub-Total	-
Total Operating Costs	\$ -

Requested in this  
Capital Program \$ 788,000

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	-
Assessment, Contribution-		
in-Aid-of-Construction	\$	805,000
Grants & Other	\$	-

11. **Source of Funds:**

		Source			
		Oper.		Assess.,	
		Revenues	Borrowing	Contr.-in-Aid (1)	Reserves
		Need			
Prior Years	\$	17,000	\$	17,000	\$
1st Year	\$	53,000	\$	53,000	\$
2nd Year	\$	735,000	\$	735,000	\$
3rd Year	\$		\$		\$
4th Year	\$		\$		\$
5th Year	\$		\$		\$
6th thru 10th Years	\$		\$		\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Uncompleted Work (UW) Project that will be funded by the City of Allentown

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-W-15  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Water-Capital

Date: 8/2/13

1. **Proposal Title:** AMR Metering Project

2. **Location:** Allentown

3. **Description:**

The Project includes the replacement of ~27,000 aged meters ranging in size from 5/5" to 1-1/2" ; ~110 meters 3" or greater in size and ~100 meters at City properties of varying sizes . All meters will have radio read capability.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

Replacement of aged meters that may not be registering all water usage is expected to reduce the amount of non-revenue water. Secondly, the radio read capability will reduce the number of man-hours required to read the meters.

5. **Status of Proposal:**

☐ Preliminary Estimate  
☐ Plans and Specs Completed  
☒ Other (Specify)  
City contract work underway

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$ -
Maintenance Svcs	\$ -
Other	\$ -
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$ 290,000
Land Acquisition	\$ -
Construction/Equip.	\$ 8,000,000
Professional Services	\$ 415,000
Other	\$ 10,000
Contingencies	\$ 130,000
Total Project Cost	\$ 8,845,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ -
Sub-Total	\$ -

Total Operating Costs	\$ -
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Requested in this Capital Program	\$ 2,355,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$ -
Assessment, Contribution-in-Aid-of-Construction	\$ 8,845,000
Grants & Other	\$ -

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
		Need			
Prior Years	\$ 6,490,000	\$	\$	\$ 6,490,000	\$
1st Year	\$ 500,000	\$	\$	\$ 500,000	\$
2nd Year	\$ 1,855,000	\$	\$	\$ 1,855,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Uncompleted Work (UW) Project that will be funded by the City of Allentown



**WASTEWATER**



LEHIGH COUNTY AUTHORITY  
ALLEN TOWN DIVISION  
August 8, 2013 - 2016 CAPITAL PROGRAM  
WASTEWATER

Project #	Name or Title of Proposal	(1) Type	Approvals	Project Cost		This Capital Program					Dept. Priority	Funding
				Total Cost	(3) By City Prior to August 8, 2013	2013 <small>(From August 8, 2013)</small>	2014	2015	2016	Total		
	LCA FUNDED PROJECTS											
CA-S-1	Collection System - Development and Service Connections		A	115,000	-	\$ 10,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 115,000	High	LCA
CA-S-2	Other Equipment		A	85,000	-	10,000	25,000	25,000	25,000	\$ 85,000	High	LCA
CA-S-3	WWTP General Improvements		A	525,000	-	75,000	150,000	150,000	150,000	\$ 525,000	High	LCA
CA-S-4	Sanitary Sewer Main Replacements and/or Rehabilitation		P	985,000	-	180,000	265,000	270,000	270,000	\$ 985,000	High	LCA
CA-S-5	WWTP- Replacement of Motor Control Centers		P	2,482,000	-	76,000	1,664,000	742,000	-	\$ 2,482,000	High	LCA
CA-S-6	WWTP- Belt Filter Press Rebuilds & Replacement		P	1,775,000	-	95,000	1,680,000	-	-	\$ 1,775,000	High	LCA
CA-S-7	WWTP- Digester Cover Replacements		P	2,205,000	-	-	85,000	1,110,000	1,010,000	\$ 2,205,000	Medium	LCA
	Sub-Total LCA Funded Projects			8,172,000		446,000	3,904,000	2,332,000	1,490,000	8,172,000		
	CITY FUNDED PROJECTS											
CA-S-8	WWTP-New Bar Rack at Headworks	AO		955,000	24,000	290,000	641,000	-	-	\$ 931,000	Mandated	City
CA-S-9	Sanitary Sewer Evaluation Study (SSES)	AO		1,025,000	-	60,000	965,000	-	-	\$ 1,025,000	Mandated	City
CA-S-10	Additional Flow Metering & Hydraulic Model Update	AO		275,000	-	45,000	230,000	-	-	\$ 275,000	Mandated	City
CA-S-11	WWTP-SCADA Upgrades	UW		850,000	-	10,000	840,000	-	-	\$ 850,000	Medium	City
CA-S-12	WWTP-Security Upgrades	UW		225,000	-	-	-	225,000	-	\$ 225,000	Medium	City
	Sub-Total City Funded Projects			3,330,000	24,000	405,000	2,676,000	225,000	-	3,306,000	-	-
				-						-		
	Grand Total			\$ 11,502,000	\$ 24,000	\$ 851,000	\$ 6,580,000	\$ 2,557,000	\$ 1,490,000	\$ 11,478,000		

(1) **UW**= "Uncompleted Work" City Projects that were supposed to be complete by the time of settlement or executed by City personnel after settlement.  
The City will fund these projects but has requested that LCA execute them.

**AO**= "Administrative Order" Projects as per the Agreement are to be Funded by the City and executed by LCA.

(2) **A**= Annual Item, **S**= Study/Planning, **D**= Design, **C**= Construction / Implementation, **P** = Pending Approval, **E** = Entire Project Approved

(3) Estimated City expenditures (consultant, contract and equipment) for City Funded Projects prior to settlement.





**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-1  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/27/13

1. **Proposal Title:** Collection System - Development and Service Connections      2. **Location:** Allentown

3. **Description:**  
 Plan review and construction inspection of extensions and connections to the sanitary sewer system. Also included are general planning expenses.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
 To assure that development sewer mains and the connection of laterals to the City sanitary sewer system are designed and constructed according to the applicable specifications. Also allows for planning expenses.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
 \_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**  
 Add. Personnel Man-Hrs. \$ -  
 Personnel Services \$ -  
 Supplies & Equipment \$ -  
 Maintenance Svcs \$ -  
 Other \$ -  
 Sub-Total \$ -

8. **Estimated Costs:**  
 LCA Staff \$ 115,000  
 Land Acquisition \$ -  
 Construction/Equip. \$ -  
 Professional Services \$ -  
 Other \$ -  
 Contingencies \$ -  
 Total Project Cost \$ 115,000  
  
 Requested in this  
 Capital Program \$ 115,000

Indirect Operating Costs:  
 Overhead Costs \$ -  
 Debt Service (5%-30yr.) \$ 4,110  
 Sub-Total 4,110  
  
 Total Operating Costs \$ 4,110

10. **Revenue Impact:**  
 Gain/Loss in Annual Revenue \$ -  
 Assessment, Contribution-  
 in-Aid-of-Construction \$ 51,750  
 Grants & Other \$ -

11. **Source of Funds:**

		Source			
		Oper.		Assess.,	
		Revenues	Borrowing	Contr.-in-Aid	Reserves
		Need			
Prior Years	\$	\$	\$	\$	\$
1st Year	\$	10,000	\$	5,500	\$
2nd Year	\$	35,000	\$	19,250	\$
3rd Year	\$	35,000	\$	19,250	\$
4th Year	\$	35,000	\$	19,250	\$
5th Year	\$		\$		\$
6th thru 10th Years	\$		\$		\$

12. **Departmental Priority Rating:**  
 High ☒ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-2  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Wastewater Capital

Date: 7/27/13

1. **Proposal Title:** Other Equipment

2. **Location:** Allentown

3. **Description:**

Generally utilized for purchase of individual equipment greater than \$5,000

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

Replacement equipment is required from time to time to maintain service integrity. Items include valves, sampling equipment, electric and electronic equipment, Infiltration & Inflow (I/I) equipment and other equipment as needed.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	
Land Acquisition	\$	
Construction/Equip.	\$	85,000
Professional Services	\$	
Other	\$	
Contingencies	\$	
Total Project Cost	\$	85,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 5,530
Sub-Total	\$ 5,530

Total Operating Costs	\$ 5,530
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Requested in this Capital Program	\$ 85,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	
Assessment, Contribution-in-Aid-of-Construction	\$	-
Grants & Other	\$	

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 10,000	\$	\$ 10,000	\$	\$
2nd Year	\$ 25,000	\$	\$ 25,000	\$	\$
3rd Year	\$ 25,000	\$	\$ 25,000	\$	\$
4th Year	\$ 25,000	\$	\$ 25,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-3  
 Preparer: JP/RK

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/27/13

1. **Proposal Title:** Waste Water Treatment Plant (WWTP) General Improvements      2. **Location:** Allentown

3. **Description:**

Funding to cover the on-going replacement of equipment that is nearing the end of its useful life and to address unforeseen equipment failures. Equipment will be constantly evaluated and repaired or replaced as needed.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The WWTP was built in the 1920's with major upgrades in 1968, 1978 and 1998. Replacement of failed critical WWTP equipment is required immediately to assure proper operation and compliance with regulatory permits.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	5,000
Land Acquisition	\$	-
Construction/Equip.	\$	520,000
Professional Services	\$	-
Other	\$	-
Contingencies	\$	-
Total Project Cost	\$	525,000
Requested in this Capital Program	\$	525,000

Indirect Operating Costs:	\$	-
Overhead Costs	\$	-
Debt Service (5%-30yr.)	\$	34,150
Sub-Total	\$	34,150
Total Operating Costs	\$	34,150

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	-
Assessment, Contribution-in-Aid-of-Construction	\$	-
Grants & Other	\$	-

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	Need				
1st Year	\$ 75,000	\$	\$ 75,000	\$	\$
2nd Year	\$ 150,000	\$	\$ 150,000	\$	\$
3rd Year	\$ 150,000	\$	\$ 150,000	\$	\$
4th Year	\$ 150,000	\$	\$ 150,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X      Medium \_\_\_\_\_      Low \_\_\_\_\_      Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-4  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 8/2/13

1. **Proposal Title:** Sanitary Sewer Main Replacements and/or Rehabilitation      2. **Location:** Allentown

3. **Description:**

Replacement and/or rehabilitation of sanitary sewer mains that have been found to be defective. The replacement and/or rehabilitation of "Building Sewers" or Laterals as defined in City Ordinance "Title Five- Sewers" that are connected to said sewer mains is not included because these laterals are owned and maintained by the owners of the improved properties.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The Operating Standards require replacement and/or repair of any sanitary mains found to be defective when said mains are located in a street that has been included the City's annual Streets Program.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	\$	-
Personnel Services	\$	-
Supplies & Equipment	\$	-
Maintenance Svcs	\$	-
Other	\$	-
Sub-Total	\$	-

8. **Estimated Costs:**

LCA Staff	\$	130,000
Land Acquisition	\$	-
Construction/Equip.	\$	650,000
Professional Services	\$	95,000
Other	\$	10,000
Contingencies	\$	100,000
Total Project Cost	\$	985,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 64,080
Sub-Total	64,080

Total Operating Costs	\$ 64,080
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Requested in this Capital Program	\$ 985,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$	-
Assessment, Contribution-		
in-Aid-of-Construction	\$	-
Grants & Other	\$	-

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 180,000	\$	\$ 180,000	\$	\$
2nd Year	\$ 265,000	\$	\$ 265,000	\$	\$
3rd Year	\$ 270,000	\$	\$ 270,000	\$	\$
4th Year	\$ 270,000	\$	\$ 270,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X      Medium \_\_\_\_\_      Low \_\_\_\_\_      Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-5  
 Preparer: FJL

**DEPARTMENT:** CAPITAL WORKS  
**Sub-Organizational Unit:** Wastewater Capital

**Date:** 7/23/13

**1. Proposal Title:** Wastewater Treatment Plant (WWTP) Replacement of Motor Control Centers      **2. Location:** Allentown

**3. Description:**  
 This Project will replace five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP.

**4. Justification (need, function, selection of time, specific relationship to any long-term work program):**  
 The motor control centers are located in areas where they are exposed to corrosive wastewater gas and have deteriorated considerably. Because of their ages replacement parts are nearly impossible to find. This equipment is critical for the daily operation of the WWTP.

**5. Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

**6. Cost of Land Rights:**  
 \_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

**7. Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

**9. Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

**8. Estimated Costs:**

LCA Staff	\$ 176,000
Land Acquisition	\$
Construction/Equip.	\$ 1,760,000
Professional Services	\$ 264,000
Other	\$ 18,000
Contingencies	\$ 264,000
Total Project Cost	\$ 2,482,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 161,460
Sub-Total	\$ 161,460

Total Operating Costs	\$ 161,460
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**10. Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

Requested in this  
 Capital Program \$ 2,482,000

**11. Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 76,000	\$	\$ 76,000	\$	\$
2nd Year	\$ 1,664,000	\$	\$ 1,664,000	\$	\$
3rd Year	\$ 742,000	\$	\$ 742,000	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

**12. Departmental Priority Rating:**

High X      Medium \_\_\_\_\_      Low \_\_\_\_\_      Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-6  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/23/13

1. **Proposal Title:** WWTP- Belt Press Rebuilds & Replacement

2. **Location:** Allentown

3. **Description:**

The Project will replace one Belt Filter Press (BFP) and rebuild in place two BFPs

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The current BFPs, 1984 vintage have not been reconditioned properly over time and now, although operating are in a various states of disrepair. The BFPs are used to dewater sludge to meet PaDEP requirements **for land application**.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./((Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$	190,000
Land Acquisition	\$	
Construction/Equip.	\$	1,255,000
Professional Services	\$	90,000
Other	\$	50,000
Contingencies	\$	190,000
Total Project Cost	\$	<u>1,775,000</u>

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ <u>115,470</u>
Sub-Total	<u>115,470</u>
Total Operating Costs	\$ <u><u>115,470</u></u>

Requested in this	
Capital Program	\$ <u><u>1,775,000</u></u>

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 95,000	\$	\$ 95,000	\$	\$
2nd Year	\$ 1,680,000	\$	\$ 1,680,000	\$	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High X Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-7  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/27/13

1. **Proposal Title:** WWTP- Digester Cover Replacements

2. **Location:** Allentown

3. **Description:**

Phase 1 of this Project will replace the primary digester cover. Phase-2 will replace the secondary digester cover.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

The WWTP has two primary digesters and one secondary digester. In 2009 the 1968 vintage cover on one of the primary digesters failed and caused major operational issues. The failed digester cover replacement work was completed in 2010. The remaining two digester covers are nearing the end of their useful life and must be replaced before failure.

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./ (Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$ 120,000
Land Acquisition	\$
Construction/Equip.	\$ 1,660,000
Professional Services	\$ 165,000
Other	\$ 10,000
Contingencies	\$ 250,000
Total Project Cost	\$ 2,205,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ 143,440
Sub-Total	\$ 143,440

Total Operating Costs	\$ 143,440
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ -
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper. Revenues	Borrowing	Assess., Contr.-in-Aid	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$	\$	\$	\$	\$
2nd Year	\$ 85,000	\$	\$ 85,000	\$	\$
3rd Year	\$ 1,110,000	\$	\$ 1,110,000	\$	\$
4th Year	\$ 1,010,000	\$	\$ 1,010,000	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_



Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-8  
Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Wastewater Capital

Date: 7/24/13

1. **Proposal Title:** WWTP- New Bar Rack at Headworks

2. **Location:** Allentown

3. **Description:**

The project includes the replacement of the existing screen equipment with new coarse bar screens to minimize potential for jamming or mechanical malfunctions experienced by the existing screening equipment, resulting in discharges from Outfall 003 during high flow events.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

This project is one of the improvements necessary to assure compliance with the EPA Administrative Order; and is identified in the CDM report dated January 2011 entitled "EPA Directed Feasibility Study to Analyze Alternatives For Wet Weather Flow Management at Klines Island WWTP".

5. **Status of Proposal:**

☐ Preliminary Estimate  
☐ Plans and Specs Completed  
☒ Other (Specify)  
Project Bids Received

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

Indirect Operating Costs:

Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$
Sub-Total	-

Total Operating Costs

\$ -

8. **Estimated Costs:**

LCA Staff	\$ 40,000
Land Acquisition	\$
Construction/Equip.	\$ 792,000
Professional Services	\$ 38,000
Other	\$ 5,000
Contingencies	\$ 80,000
Total Project Cost	\$ 955,000

Requested in this Capital Program	\$ 931,000
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10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-in-Aid-of-Construction	\$ 955,000
Grants & Other	\$

11. **Source of Funds:**

		Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$ 24,000	\$	\$	\$ 24,000	\$
1st Year	\$ 290,000	\$	\$	\$ 290,000	\$
2nd Year	\$ 641,000	\$	\$	\$ 641,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_ X \_\_\_\_\_

(1) This an Administrative Order (AO) Project that will be funded by the City of Allentown

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-9  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/24/13

1. **Proposal Title:** Sanitary Sewer Evaluation Study (SSES)

2. **Location:** Allentown

3. **Description:**

Field investigatory work to identify sources of Infiltration & Inflow in the City sanitary sewer system located in the in the Primary and Secondary basins as identified in the WRA report . The work will include CCTV of ~102,210 linear-feet of sanitary sewer mains , manhole inspections, smoke testing, joint testing & sealing, point repairs and heavy cleaning.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**

This project is one of the investigatory tasks necessary for the design of future I/I mitigation projects to assure compliance with the EPA Administrative Order; and is identified in the WRA /OMNI Report dated January 2013 entitled "System Assessment and Phase 1 Corrective Action Plan Report".

5. **Status of Proposal:**

☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify)  
 \_\_\_\_\_

6. **Cost of Land Rights:**

\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_

7. **Status of Land Rights:**

☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./ (Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$
Maintenance Svcs	\$
Other	\$
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$ 70,000
Land Acquisition	\$
Construction/Equip.	\$ 700,000
Professional Services	\$ 140,000
Other	\$ 10,000
Contingencies	\$ 105,000
Total Project Cost	\$ 1,025,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$
Sub-Total	\$ -
Total Operating Costs	\$ -

Requested in this  
 Capital Program \$ 1,025,000

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-	
in-Aid-of-Construction	\$ 1,025,000
Grants & Other	\$

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 60,000	\$	\$	\$ 60,000	\$
2nd Year	\$ 965,000	\$	\$	\$ 965,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated X

(1) This an Administrative Order (AO) Project that will be funded by the City of Allentown

**Lehigh County Authority**  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-10  
 Preparer: FJL

DEPARTMENT: CAPITAL WORKS  
 Sub-Organizational Unit: Wastewater Capital

Date: 7/24/13

1. **Proposal Title:** Additional Flow Metering and Hydraulic Model Update      2. **Location:** Allentown

3. **Description:**  
 This project includes additional flow metering. If the flow metering data meets the criteria of containing at least one "system stressing storm", the City system hydraulic model will be updated.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
 The current City system hydraulic model was calibrated utilizing less than desirable 2008 flow metering data. The hydraulic model will be utilized to evaluate various options for infrastructure improvements to assure compliance with the EPA Administrative Order, as such it is important that the model have a high level of accuracy. The WRA /OMNI Report dated January 2013 entitled "System Assessment and Phase 1 Corrective Action Plan Report" identifies these hydraulic modeling efforts.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
 \_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
 \_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
 Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./(Decr.)**  
 Add. Personnel Man-Hrs.  
 Personnel Services \$ -  
 Supplies & Equipment \$ -  
 Maintenance Svcs \$ -  
 Other \$ -  
 Sub-Total \$ -

8. **Estimated Costs:**  
 LCA Staff \$ 10,000  
 Land Acquisition \$ -  
 Construction/Equip. \$ 155,000  
 Professional Services \$ 95,000  
 Other \$ -  
 Contingencies \$ 15,000  
 Total Project Cost \$ 275,000

Indirect Operating Costs:  
 Overhead Costs \$ -  
 Debt Service (5%-30yr.) \$ -  
 Sub-Total \$ -  
 Total Operating Costs \$ -

Requested in this  
 Capital Program \$ 275,000

10. **Revenue Impact:**  
 Gain/Loss in Annual Revenue \$ -  
 Assessment, Contribution-  
 in-Aid-of-Construction \$ 275,000  
 Grants & Other \$ -

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 45,000	\$	\$	\$ 45,000	\$
2nd Year	\$ 230,000	\$	\$	\$ 230,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**  
 High \_\_\_\_\_ Medium \_\_\_\_\_ Low \_\_\_\_\_ Legally Mandated X

(1) This an Administrative Order (AO) Project that will be funded by the City of Allentown

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-11  
Preparer: JP

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Wastewater Capital

Date: 8/2/13

1. **Proposal Title:** WWTP SCADA Upgrades      2. **Location:** Allentown

3. **Description:**  
Installation of a plant wide SCADA system that would enable operators to monitor and remotely control equipment at the WWTP.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
Much of the plants existing SCADA equipment has surpassed its expected life span. Upgrades to state-of-the-art equipment will improve plant efficiency.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ -

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./Decr.)**

Add. Personnel Man-Hrs.	
Personnel Services	\$ -
Supplies & Equipment	\$ -
Maintenance Svcs	\$ -
Other	\$ -
Sub-Total	\$ -

8. **Estimated Costs:**

LCA Staff	\$	145,000
Land Acquisition	\$	
Construction/Equip.	\$	565,000
Professional Services	\$	
Other	\$	10,000
Contingencies	\$	130,000
Total Project Cost	\$	850,000
Requested in this Capital Program	\$	850,000

Indirect Operating Costs:	
Overhead Costs	\$ -
Debt Service (5%-30yr.)	\$ -
Sub-Total	\$ -
Total Operating Costs	\$ -

10. **Revenue Impact:**

Gain/Loss in Annual Revenue	\$
Assessment, Contribution-in-Aid-of-Construction	\$ 850,000
Grants & Other	\$

11. **Source of Funds:**

		Source			
	Need	Oper.	Borrowing	Assess.,	Reserves
		Revenues		Contr.-in-Aid (1)	
Prior Years	\$	\$	\$	\$	\$
1st Year	\$ 10,000	\$	\$	\$ 10,000	\$
2nd Year	\$ 840,000	\$	\$	\$ 840,000	\$
3rd Year	\$	\$	\$	\$	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**

High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Unhcompleted Work (UW) Project that will be funded by the City of Allentown

Lehigh County Authority  
**CAPITAL PROGRAMMING PROJECT DETAIL**

Project: CA-S-12  
Preparer: JP

DEPARTMENT: CAPITAL WORKS  
Sub-Organizational Unit: Wastewater Capital

Date: 8/2/13

1. **Proposal Title:** WWTP Security Upgrades      2. **Location:** Allentown

3. **Description:**  
Installation of upgrades and related equipment to the existing security system at the WWTP.

4. **Justification (need, function, selection of time, specific relationship to any long-term work program):**  
Enhanced security would further reduce the risk of breaches that may have the potential to impair to the operation of the facility.

5. **Status of Proposal:**  
☒ Preliminary Estimate  
☐ Plans and Specs Completed  
☐ Other (Specify) \_\_\_\_\_

6. **Cost of Land Rights:**  
\_\_\_\_\_ ac. @ \_\_\_\_\_ /acre  
\_\_\_\_\_ l.f. @ \_\_\_\_\_ /lin ft.  
Total: \$ \_\_\_\_\_ -

7. **Status of Land Rights:**  
☐ Not Yet Acquired  
☐ Partly Acquired  
☐ LCA Owned  
☒ No Land Involved

9. **Annual Oper. Cost Impact: Incr./Decr.)**  
Add. Personnel Man-Hrs.  
Personnel Services \$ -  
Supplies & Equipment \$ -  
Maintenance Svcs \$ -  
Other \$ -  
Sub-Total \$ -

8. **Estimated Costs:**  
LCA Staff \$ 25,000  
Land Acquisition \$ -  
Construction/Equip. \$ 150,000  
Professional Services \$ -  
Other \$ 5,000  
Contingencies \$ 45,000  
Total Project Cost \$ 225,000

Indirect Operating Costs:  
Overhead Costs \$ -  
Debt Service (5%-30yr.) \$ -  
Sub-Total \$ -  
Total Operating Costs \$ -

Requested in this  
Capital Program \$ \_\_\_\_\_

10. **Revenue Impact:**  
Gain/Loss in Annual Revenue \$ -  
Assessment, Contribution-  
in-Aid-of-Construction \$ 225,000  
Grants & Other \$ -

11. **Source of Funds:**

	Need	Source			
		Oper. Revenues	Borrowing	Assess., Contr.-in-Aid (1)	Reserves
Prior Years	\$	\$	\$	\$	\$
1st Year	\$	\$	\$	\$	\$
2nd Year	\$	\$	\$	\$	\$
3rd Year	\$ 225,000	\$	\$	\$ 225,000	\$
4th Year	\$	\$	\$	\$	\$
5th Year	\$	\$	\$	\$	\$
6th thru 10th Years	\$	\$	\$	\$	\$

12. **Departmental Priority Rating:**  
High \_\_\_\_\_ Medium X Low \_\_\_\_\_ Legally Mandated \_\_\_\_\_

(1) This an Uncompleted Work (UW) Project that will be funded by the City of Allentown