



LEHIGH COUNTY AUTHORITY

July 14, 2014

WORKSHOP MEETING AGENDA

1. Call to Order
2. Review of Agenda
 - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
 - *June 18, 2014 Regular Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

FINANCE AND ADMINISTRATION

- *2013 Audit (Acceptance)*
- *Water and Sewer Rules and Regulations Revisions (Approval)*
- *Policy Revisions to Reflect Current Employee Structure (Approval)*

WATER

- *None*

WASTEWATER

- *Kline's Island Sewer System (KISS) Model Recalibration of Interceptors from Keck's Bridge to the Little Lehigh Interceptor (Approval)*
7. System Operations Overview
 8. Staff Comments
 9. Solicitor's Comments
 10. Other Comments
 11. Adjournment

AUGUST MEETINGS

Workshop Meeting
Board Meeting

THURSDAY

August 11 – 12:00 p.m.
August 21 – 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.

FINANCE & ADMINISTRATION

ACTION ITEMS

1. **2013 Audit** (Acceptance)

The auditor’s report and financial statements for year-end December 31, 2013 is complete. Staff recommends Board acceptance of the report.

2. **Water and Sewer Rules & Regulations Revisions** (Approval)

Two revisions are recommended by the Staff to deal with circumstances that have arisen recently (i) clarifying procedures for customers who feel they have unusual circumstances resulting in higher bills and (ii) establishing that it is the property owner’s responsibility to abandon service at the main for services no longer needed for a property (**gold**).

3. **Policy Revisions to Reflect Current Employee Structure** (Approval)

With the reorganization and creation of new positions as a result of the concession transaction, there is the need to have the Board take action revising a few policies to reflect the shifting of responsibilities to the proper new position. The attached table shows the changes and the staff recommends the Board approve the changes to the appropriate policy (**pink**).

DISCUSSION ITEMS

1. **TAG Report/Discussion**

Attendees at the first Northeast US TAG meeting will report on the session and their recommendation(s) regarding the technologies presented and future participation.

INFORMATION ITEMS

1. **CMMS Upgrade and Expansion Project**

RJN installed the Cityworks application on June 24. Pilot phase is scheduled for August – October. Verizon Wireless is willing to provide sample mobile devices, ex. iPad, Android tablet, for evaluation during the pilot phase.

2. **WEB Map Upgrade Project**

CDM has delivered the pilot updated web map for LCA testing and evaluation. We expect to have the updated map Live for all employees by the end of July.

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	PSDLAF Collateralized CD		400,000.00	6/24/2014	9/23/2014	0.09
Cons Wtr (2)	PSDLAF Collateralized CD		155,000.00	6/24/2014	9/23/2014	0.09
Cons LL2 (314)	PSDLAF Collateralized CD		245,000.00	6/24/2014	9/23/2014	0.09
WW Capac	PSDLAF Collateralized CD		600,000.00	6/24/2014	9/23/2014	0.09
2010 Wtr Cons A	PSDLAF Flex Pool		3,250,000.00	6/24/2014	9/23/2014	0.09
Wtr R&R	PSDLAF Collateralized CD		1,000,000.00	6/24/2014	9/23/2014	0.09

Fund Descriptions for Investments:

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

WATER

ACTION ITEMS

1. *None.*

DISCUSSION ITEMS

1. *None.*

INFORMATION ITEMS

1. **Arcadia West Pumping Station Modifications**

Layout drawings are being prepared for the station piping and bypass pumping. Pump delivery dates have not been confirmed; however, the booster pumps are expected in July and the high service pump by the end of July or early August. Electrical and SCADA tie-ins will be made as the work progresses.

2. **Pine Lakes of Lynn Township Pump Station Upgrade**

Currently this pump station is a hydro-pneumatic system that has proven to be problematic over time. This project will convert the hydro-pneumatic operated equipment to a variable frequency drive controlled double pumping system. Other miscellaneous improvements are included in the project scope. A RFP for engineering services will be sent in the middle of July 2014.

3. **Allentown Division- Schantz Spring Chlorination Issue**

Alternative options in lieu of a CL₂ Booster Station as originally scoped by the City are being fully evaluated based on cost and feasibility. Backup power supply, more reliable chemical feed pumps, and full-time data recording are all being considered in an effort to reduce the potential for unchlorinated slugs of water in the future. Barry Isett Inc. has provided a proposal to determine costs of the alternate plan vs the original booster station. City of Allentown has agreed to the concept and has been authorized to proceed with the evaluation. The contract with Barry Isett is finalized and Isett is preparing to begin their work. This Project is identified as Un-Completed Work and will be funded by the City.

4. **Allentown Division- WFP Chemical Building Roof Replacement**

The Project includes modifications to the roof of WFP chemical storage area (i.e. installation of hatches), removal and replacement of (2) 8,000 gallon chemical storage tanks; and replacement of the 20-year old rubber membrane roof system. Construction has been underway since 3/31/2014. Water pipes, sprinklers, storm drains, etc. were moved first. Steel and other construction materials started arriving on May 19, 2014. Dismantling of the existing roof began on May 19, 2014. Both replacement sodium hypochlorite tanks are set in-place. Replacement tank #1 was certified for use by PaDEP on 6/5/2014, and is currently on-line. Replacement tank #2 was certified for use as of 6/27/2014. All four new hatches are now in place. The new membrane roof is being installed but construction has been hampered by wet weather. The anticipated completion date for the project has been revised to July 15, 2014. This Project is identified as Un-Completed Work and will be funded by the City.

5. **Allentown Division- Water Main Replacement Program**

The Board authorized the design phase of this project in October 2013 and a Professional Service Authorization was awarded to Gannett Fleming, Inc. The project will replace the required one-mile of main and an additional 1,475 LF for the first year "cycle 1". The project was advertised for bid on May 6, 2014 and bids were received on June 5, 2014. On June 18, 2014 the Board authorized the cycle 1 construction phase of this project and a Professional Service Authorization was awarded to Gannett Fleming, Inc. for construction management and inspection. Additionally the Board authorized Doli Construction Corp. (Doli) as the General contractor for the project. The intent to award has been issued to Doli and LCA is currently awaiting the necessary performance and payment bonds and insurances. LCA anticipates delivery of these items by July 8, 2014 for our review and approval with issuance of the notice to proceed in the following days thereafter. Substantial Completion of Cycle-1 is expected in October 2014.

6. **Developments**

Water system construction is occurring in the following developments:

Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT

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

Lehigh Hills, Lot 4, 1 commercial building, 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

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 Settlement Subdivision (formerly Spring Creek Properties Subdivision I), 16 commercial and industrial lots, LMT

Trexler Business Center, Lot 1, 1 commercial building, LMT

Weilers Road Twins, 82 residential lots (sfa), UMT

West Park, Lot 8, 1 industrial building, UMT

Woodmere Estates, 60 residential units (sfd), UMT

Woodmont at Upper Macungie (formerly Rabenold Farms II), 288 apartment units and clubhouse, (Portion north of I-78), UMT

WASTEWATER

ACTION ITEMS

1. **Kline's Island Sewer System (KISS) Model Recalibration of Interceptors from Keck's Bridge to the Little Lehigh Interceptor** (Approval)

A memo, Capital Project Authorization Amendment and Professional Services Authorization for Arcadis (name change from Malcolm Pirnie) is being presented to the Board for consideration. The work is related to the recalibration of the combined City and Suburban Hydraulic Models (KISS Model). The goal is to create a robust system-wide tool to support planning at Kline's Island System and the LCA Western Lehigh Area. The recalibrated model will be utilized for the alternatives analysis for both the LCA Suburban Division AO Project and Wastewater Capacity Programs and the LCA City Divisions AO Project. The Arcadis Proposal is attached (**purple**).

DISCUSSION ITEMS

1. **None.**

INFORMATION ITEMS

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

Current Information:

- The LCA will be requesting an extension for the EPA Administration Order (AO) completion date before the end of the year. The AO issued in September 2009 stated "Respondents shall eliminate the discharges from the SSOs in the System no later than December 31, 2014." A meeting was held with the City and City Signatories to determine if there is an interest in making a joint request to EPA. Two of the Signatories attending the meeting will not be participating in the joint extension request. We are currently obtaining signatures from those Signatories and the City.

Back-ground Information:

The following is work planned for 2014:

- Submission of reports to EPA and DEP.
- 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.
- WLI Manhole Inspections. This work is near completion.
- Test and Seal project for branches of the WLI that were CCTVed in 2011 – 2012.
- Long term flow meters will continue on a limited basis. Two rain gauges and meters remain in the system.

- 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.
- Preliminary Program Objectives Evaluation Report will be submitted to DEP by the end of 2014. 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.
- The City and LCA hydraulic models have been combined by Arcadis. A meeting was held with City representatives and the City Engineer and LCA representatives and our Engineer to discuss the combined model and to determine if additional flow monitoring is required to calibrate the models. Ten meters have been installed near the park Pump Station to collect flow data for three to four months. The flow data will help the two models work together. A proposal for updating the calibration with the new flow data will be presented to the Board for consideration.

2. **Wastewater Treatment Capacity**

Current Information:

A meeting with Wastewater Capacity Team at the DRBC office is planned for July. The discussion will be centered on the revised permit limits and grand-fathered loads presented to LCA in March.

Back-ground Information:

The Memo of Understanding (MOU) regarding working together on a joint Act 537 Plan with the City was never executed with the City. The MOU was revised as a result of the Concession. The City revised the MOU and returned to LCA. We are in the process of continued negotiations.

A Stakeholder's Advisory Committee (SAC) Meeting will be scheduled for summer 2014.

DEP has indicated that a Jordan Creek study must be submitted to DEP prior to the issuance of final effluent standards. If we want to avoid the study, then water quality standards would be imposed for effluent limitations. There is no work currently being done on the Jordan Creek discharge option.

A meeting was held with the DRBC to discuss updating the prospective effluent limits for the various alternatives. The model was refined and the grandfathered loads for Phosphorus and Ammonia have been updated based on the actual Kline's Island data. The new effluent limits have been developed and provided by the DRBC. The Engineering team held a meeting to discuss the revised effluent limits provided by the DRBC. A follow-up letter is being provided to the DRBC requesting back-up documentation and sources of data.

A meeting was held at the Pretreatment Plant with the DEP to discuss the land application option. Four individuals from DEP toured the area to see the various sites that are being investigated for land application of the plant effluent. DEP is still excited about this option but did present the requirement for total dissolved solids (TDS) which will be one of the challenges. In the next several months, the WASTEWATER Capacity Team will provide an update to the Board.

3. **Northern Lehigh Wastewater System**

The project is composed of the following:

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

The North Whitehall Township (NWT) Board of Supervisors granted approval of the Conditional Use for the proposed WWTP. In late November 2012 the opposition, the Voice of the Jordan (Voice), appealed the NWT decision to Lehigh County Court of Common Pleas. On June 5, 2013 the Court ordered “that the decision of the NWT Board of Supervisors dated October 23, 2012 is hereby reaffirmed”. On July 29, 2013 the Voice filed an appeal of the previous Court ruling to Commonwealth Court. Arguments in Harrisburg took place on December 11, 2013, a decision rendered by the Court on January 9, 2014 affirmed the lower Courts decision and Township approval. The Voice has filed a Petition with the Pennsylvania Supreme Court to hear the case. We are evaluating the timing of any legal action to request that the Court require the Voice to post a bond. **No Current Activity**

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

Wal-Mart

Wal-Mart has put the proposed store on-hold indefinitely. Wal-Mart was a key financial contributor to the offsite 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 proposed wastewater treatment facilities at the Kids Peace site. Cost-sharing negotiations are on hold. **No Current Activity.**

KidsPeace 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. Since that revised amendment submittal, KidsPeace has filed for Chapter 11 Bankruptcy. We have retained an attorney who specializes in bankruptcy, Jack Seitz, to represent LCA in this matter. LCA has agreed not to contest the motion filed by the KidsPeace with the bankruptcy court that allows KidsPeace to retain the Acquisition Agreement after the bankruptcy proceedings. **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 met with NWT on November 21, 2013 to discuss the status of their efforts. NWT has requested that LCA work their engineer to obtain the information necessary to secure conceptual pricing for the WTP and to develop high level capital and operating cost estimates. **No Current Activity.**

4. Arcadia West WWTP Improvements

Construction is complete at the site. Facility operation has significantly improved with several weeks of performance within contractual and regulatory requirements. After discussion with Staff, we are moving forward with a “Commencement Date” of July 7, 2014. This initiates a 14-day cycle of composite sampling to determine the effectiveness, and starts the 5-year performance warranties, of the Single Batch Reactors and filter equipment. The Equipment Supplier will be meeting with our Operational Staff to review performance in July. The project is still within budget.

5. Park Pump Station Improvements

Fuel Tank Replacement

Staff has reviewed specifications and plans for replacement of the fuel tank at the Park Pump Station. We expect to place the work to bid in August.

6. **LCA WTP**

Digester Mixer Replacements:

The General contractor has completed the installation of mixers in the first two digesters. The new mixers in the 3rd and final digester have been installed. The electrical contractor is in the process of completing his work. We expect the project will be completed by the August 2014.

7. **Allentown Division - WWTP-New Bar Rack at Headworks**

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. The project has been bid by the City and a contract in the amount of \$737,000 has been awarded to Blooming Glen Contractors. Given the long lead time for the equipment, we expected the bulk of the work to start in mid-June 2014. The City released the check for procurement of the screens on June 5, 2014. Infilco required 85% of the equipment costs to be paid in advance of shipment. Installation has been delayed until some issues with Blooming Glen are resolved. This Project is identified as Administrative Order / Un-Completed Work and will be funded by the City.

8. **Allentown Division - WWTP-Replacement of Motor Control Centers**

This Project will replace five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The motor control centers are located in areas where they are exposed to corrosive wastewater gas and have deteriorated considerably. Because of the age of the existing MCCs, replacement parts are nearly impossible to find. This equipment is critical for the daily operation of the WWTP. The design of the electrical upgrade has been awarded to CDM and kickoff meeting for project was held 2-12-14. Design is currently underway. A contract amendment with CDM has been approved and it will allow for additional design services that were not part of the original specifications. Currently, the CDM projected construction schedule has the MCC fully installed and operational by July 2015.

9. **Allentown Division - WWTP-Other Work**

PPL Combined Heat & Power (CH&P) Facility:

The Combined Heat and Power (CH&P) facility at the Kline's Island WWTP which was constructed through Addendum No.3 to Energy Services Master Agreement between the City and PPL Energy Plus began limited basis firing of digester gas on April 21, 2014. PPL is in the process of shake down for all of the components that makeup the facility. The production of electricity will slowly be increased as all of the bugs are worked out of the facility.

10. **WWTP SCADA Upgrade**

Transdyne conducted the radio communication study for the SCADA system upgrade on April 28, 2014. Additional walk through of the PSPS was conducted on June 16, 2014. We received their SCADA Upgrades System Propagation Study report on June 30, 2014. Staff will review and incorporate into an updated capital project plan.

11. **Lynn Township – WWTP Improvements, Phases 1 & 2**

Gannett Fleming visited the plant on May 15th as part of their design effort. As a result of their visit, and on-going interaction on several design concepts, a revised scope of work is being developed and presented for LCA approval. Among the proposed changes will be to defer installation of UV light and continue to use chlorine to disinfect the waste discharge to the creek. A revised Water Quality Management (WQM) Part II permit package will be submitted to DEP for approval and the specifications finalized for bidding the work. Gannett has

obtained buy-in from DEP on the change in the design scope. Application will be made for PennVEST funding after permits have been acquired. It appears that replacing the RAS pumps and blowers will be performed in-house. We learned that township adoption of a 55+ active adult community overlay district is still in the approval process. The impact this district will have on the timing to upgrade the 80,000 GPD plant to 160,000 GPD (Phase 3) will need to be investigated with the affected property owners.

12. Allentown Division – Manhole Collars with Water Tight Frame and Covers (above-ground)

This project involves, where applicable, installing a 5-foot diameter, three to four foot deep concrete collar around 100 aged brick manholes identified by previous City staff. This technique will be used to secure a new water tight frame and cover onto the manhole. Where vehicular accesses to the manholes are problematic, alternative solutions will be investigated to secure new water tight frame and covers. This work will eliminate the potential for inflow and infiltration (I/I) entering these manholes, this eliminating the potential for sanitary sewer overflows (SSO's) from these manholes. The City has directed LCA to bring the project to a bid ready stage, but not to bid unless authorized to do so by the City. A RFP was issued and proposals were received on March 26, 2014 for engineering consulting services. A professional service agreement was approved administratively with Barry Isett & Associates (BIA) on June 25, 2014. The project is anticipated to be bid ready by the end of August 2014. The project is identified as Administrative Order and will be funded by the City.

13. Allentown Division – Sanitary Sewer Manhole Lining (below-ground)

This project will install a lining system in 47 aged brick manholes identified by previous City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes. The City has directed LCA to bring the project to a bid ready stage, but not to bid unless authorized to do so by the City. A RFP was issued for engineering consulting services and proposals were received. A professional service agreement was approved administratively with Barry Isett & Associates (BIA) on April 4, 2014. BIA inspected all 47 manholes via a video camera and these DVD's are currently under LCA review – bid specifications are to be complete by the end of July 2014. The project is anticipated to be bid ready by the end of August 2014. The project is identified as Administrative Order Work and will be funded by the City.

14. Allentown Division – Belt Filter Presses

The wastewater treatment plant has three belt filter presses that are used to dewater both wastewater sludge and water plant chemical sludge. This project will install a remanufactured belt press for existing BFP #1, and will rehabilitate in-place existing BFP #2 and #3. Units #1 and #2 will also get a new control cabinet. Board approval has already been received to purchase the remanufactured unit for BFP #1, OEM parts for BFP #2 and #3 and also for D'Huy Engineering to design the construction work for the entire project. Construction specifications are to be completed by mid-July 2014. The project is planned to be completed by the end of 2014 and will be funded by LCA.

15. Allentown Division – Sanitary Sewer Evaluation Study (SSES)

This project involves field investigatory work to identify sources of inflow and infiltration (I/I) in the City's sanitary sewer system located in the Primary and Secondary basins as identified in the WR&A report. The work will include closed circuit television (CCTV) inspection of approximately 102,000 linear feet of sanitary sewer mains ranging in size from 8 to 36 inches in diameter. The work will include the inspection of approximately 550 manholes and sewer piping point repairs, joint repairs, smoke testing, and heavy cleaning. The design phase of this project was authorized administratively. The project was advertised for bid on March 20, 2014 and bids were opened on April 28, 2014. Board approval for the construction phase of the project was given on at the May 27, 2014 Meeting. The construction contract was awarded to Video Pipe Services and the Notice to Proceed was issued on June 23, 2014. The project has an anticipated completion date of

September 2014 (90 calendar contract). This project is identified as Administrative Order / Un-Completed Work and will be funded by the City.

16. Wynnewood Terrace Pump Station and Force Main Replacement

Design work is complete and DEP has granted the permit. Staff has initiated an application to PENNVEST for construction funding and is anticipated to meet August due date. We have received and responded to comments on the NPDES Permit. A "Letter of No Prejudice" has been solicited, due to Sanitary Sewer Overflows in 2014, so that bidding can start in August.

17. Wynnewood Terrace Collector System Rehabilitation

In May, LCA applied for a grant from the PA Small Sewer Systems Grant Program. Submission was completed by the deadline. We expect notification of any awards at their July 8 meeting. We are seeking \$125,800 in grant for this \$148,000 test and seal project.

LEHIGH COUNTY AUTHORITY

RULES AND REGULATIONS

FOR

WATER SERVICE

Effective: 13 January 2014

SERVING YOUR WATER NEEDS

Lehigh County Authority welcomes the opportunity to serve you and accepts the responsibility of providing quality water at economical prices.

Our professional staff offers prompt, courteous service, 24 hours each day, 7 days per week, with a full-time customer service representative available Monday through Friday, 8:15 am to 4:45 pm to answer your questions. For customers within the City of Allentown, inquiries should be directed to our customer service representative by telephone at 610-437-7515 or by email at cityservice@lehighcountyauthority.org. After-hour emergencies may be reported by calling 610-477-7515. For all other customers, the customer service telephone number is 610-398-1444, and in case of emergency, 610- 398-2503.

To help us better serve you, please be aware of the water facilities on your property and ensure that they are maintained and accessible. These include such facilities as a water meter, backflow-prevention assembly, shutoff valve and curb box - all more thoroughly described in this document. Of course, hydrants can be equally important water service facilities and should be easily accessible at all times.

Your efforts to keep your facilities in good working order, and to avoid leaks through dripping faucets, leaking toilets and the like, can help to hold down the cost of your water service.

The Authority appreciates the opportunity to serve you and will strive to continually improve the quality of your water service.

Should you want more information about LCA and our operations, please call us at either 398-2503 or 398-1444. Meanwhile...

Use all the water you need - WASTE NONE!

**RULES AND REGULATIONS
FOR
WATER SERVICE**

1. DEFINITIONS

Except where context indicates otherwise, the following meanings shall apply when used in these Rules and Regulations regardless of whether the first letter of the word is upper case or lower case.

- a. Applicant: A person who applies for service.
- b. Authority: Lehigh County Authority.
- c. Authority's Service Line: The lateral pipe, including the tee or tap in the main, from the main to a point at or near the property line, and the curb stop and curb box.
- d. Backflow: Water or other substances in the customer's facility flowing back into the Authority system.
- e. Backflow-Prevention Assembly: The assembly installed on the customer's service line to prevent backflow.
- f. Capital Recovery Charges: The up-front charges, set forth in the Authority's Schedule of Rates and Charges, including Connection, Customer Facility and Tapping Fees, and Assessments.
- g. Connection Fee: The fee established in §3.m herein which is based on the cost of connecting to the Authority water line and extending the Authority's Service Line to the property line.
- h. Cross-Connection: Any actual or potential connection between the Authority's system and a system containing a source or potential source of contamination or pollution.
- i. Curb Box: A structure which permits access to the curb stop.
- j. Curb Stop: A shutoff valve placed on a service line generally at the property line.
- k. Customer: Any person who receives service from the Authority.
- l. Customer Facilities Fee: The fee established in §3.m herein reflecting the Authority's cost of providing and/or installing a Meter and backflow-prevention assembly and/or Customer's Service Line.

- m. Customer's Service Line: The pipe from the customer-side of the curb stop to the meter setting.
- n. Extension of Service: Providing facilities which connect the system to one or more premises not previously connected.
- o. Lien Administration Fee: The fee established in §3.p herein representing the Authority's administrative costs as a result of a customer failing to make timely payment, thus requiring a municipal lien to be filed.
- p. Main: An Authority-owned pipeline suitable for the connection of a service line.
- q. Main Extension: Extension of service requiring additional water main construction.
- r. Meter: A device for measuring the quantity of water used.
- s. Meter Inspection Fee: A fee, established in the Authority's Commercial/Industrial Water Meter and Fire Protection System Installation Policy and set forth in the Authority's Schedule of Water Rates and Charges, for each inspection of the meter setting and fire protection piping in commercial/industrial installations.
- t. Meter Setting: The location of the meter and components, including shutoff valves and any meter bypass.
- u. Meter Test Fee: A fee established in §3.k herein charged for performance of a special test to determine the accuracy of a meter.
- v. Non-sufficient Funds (NSF) Fee: A fee charged if a customer's check is returned by the bank for insufficient funds, closed account or other such reasons, established herein and set forth in the Authority's Schedule of Water Rates and Charges.
- w. Person: An individual, partnership, company, corporation, school, association, corporate political body, joint ownership, or any other entity capable of functioning in the context used herein.
- x. Plan Review Deposit: A fee to reimburse the Authority for engineering, legal, administrative and other justifiable expenses incurred in the review of preliminary or final plans submitted for new service.
- y. Plan Review Fee: A fee to reimburse the Authority for engineering, legal, administrative and other related expenses incurred in the review of Sketch Plans submitted for new service.

- z. Premises: The property, building or other site to which service is furnished, comprising, but not limited to the following:
- (1) a residential building under one roof occupied by one person or family; or
 - (2) a nonresidential building or combined residential/non-residential building under one roof occupied by more than one person; or
 - (3) each combination of buildings owned by one person, or leased and occupied by one person, and served by a single service line on a single lot; or
 - (4) each side of a double house, a townhouse, a condominium unit, a mobile home site or an apartment, having an individual service line; or
 - (5) a complex of buildings, including mobile homes, which are connected to a water system not owned by the Authority, but which water system is connected to and served by the Authority System through a single connection.
 - (6) such other situations as the Authority shall deem applicable.
- aa. Property Owner: The person in whose name the property is deeded.
- bb. Schedule of Rates and Charges: The adopted Authority rates and charges for service.
- cc. Service: (1) Furnishing or readiness to furnish water for any purpose, including the extinguishment of fires, and/or (2) any installation or improvement or change in the service line or the system facilities, at the customer's request or as required by the Authority, and/or (3) any Authority activities related thereto.
- dd. Service Initiation Fee: A fee, set forth in the Schedule of Water Rates and Charges, to defray the labor and administrative costs associated with the establishment of a new water account.
- ee. Service Line: The pipeline comprised of the Authority's service line and the customer's service line.
- ff. Service Restoration Charge: A charge established in §3.n herein for restoring service to a premises which has had service terminated or discontinued.
- gg. Site Visit Charge: A charge, established in §3.i herein and set forth in the Schedule of Water Rates and Charges, for Authority personnel to visit a customer's property with a termination notice.
- hh. Site Revisitation Charge: A charge established in §3.q. herein and set forth in the Schedule of Water Rates and Charges, to recover the Authority's costs for a return visit due to inadequate preparation or follow through by the party requesting the appointment.

- ii. Specifications for Water System Construction: The Authority's published specifications which outline methods of installation, materials, and testing and disinfection requirements.
- jj. System: The Authority's water supply, transmission and distribution facilities, in whole or in part.
- kk. Tapping Fee: A fee by a new customer, contributing its fair share of the Authority's cost of constructing the existing System which was available for the new customer's connection and use.
- ll. Tenant: A person who leases or rents premises.

2. APPLICATION FOR SERVICE

- a. General: Owners of premises abutting existing mains may obtain service by filing an application, obtaining a construction permit, submitting plumbing and site development plans for review, paying all applicable fees and charges and fulfilling all other requirements of the Authority. Owners of premises requiring a water main extension from the Authority System to serve the premises must also comply with the terms established in Section 7.
- b. Application and Contract: An applicant shall complete the appropriate Authority water service form. Upon approval by the Authority, this application shall constitute the contract between the Authority and the customer. In situations where an application has not been completed, the provision of service to a property by the Authority shall constitute the contractual relationship between the Authority and the customer. The contract shall be subject to the provisions of these Rules and Regulations.
- c. Separate Application for Each Premises: Any person who desires service at more than one premises must make separate application for each premises.
- d. Tenant as Applicant: A tenant may make application for service, provided the application is cosigned by the property owner. In cosigning, the property owner agrees to guarantee the payment of all bills rendered to that tenant; however, the property owner will be held liable for payment regardless of cosignature. Where private fire service is rendered to a multiple-tenant premises, such bills for fire service shall be billed to the property owner.
- e. Change in Occupancy Requires New Application: A new application must be made upon any change in ownership of a property, in tenancy where the tenant is the applicant, or in use. Similarly, a customer moving from one premises to another within the Authority's system must make a new application for service.

- f. Standby Service: Any applicant desiring service intended to supplement a source of supply other than the Authority's shall state so on the application form.
- g. Water for Temporary Use: An applicant who wishes to use water for temporary purposes shall indicate which of the following methods of obtaining water shall be employed:
 - (1) Installation of a temporary service line from an approved main and abandonment of that service line (remove the tap and plug the main) upon termination of service.
 - (2) Connection to an installed permanent service line.
 - (3) Hauling of water from an Authority-approved source.

If method (1) or (2) is used, metered service will be required. The Authority will supply and install a meter after the posting of a deposit equal to the replacement cost of the meter plus the estimated cost of meter installation and removal. The customer shall protect the meter from loss or damage. The deposit, less any Authority cost, will be refunded to the customer upon return of the meter in good condition and after payment of the final bill. Bills will be calculated in accordance with the Authority's Schedule of Rates and Charges. In the case of a lost or damaged meter, a bill for the applicable time period shall be based, solely at the Authority's discretion, on either (1) ten times the minimum charge for that size meter or (2) the Authority-estimated consumption.

If method (3) is used, a letter authorizing the customer to remove water from the designated location, together with an explanation and instructions, will be issued by the Authority. Fire hydrants may not be used to supply temporary service, unless they are specifically designated in writing for such use. Bills will be calculated on the basis of the quantity of water used, charged at the highest priced unit rate in the Authority's Schedule of Rates and Charges.

Water for temporary use will not be subject to Capital Recovery Charges.

- h. Construction Permit: Owners of premises abutting existing mains and connecting to the System without requiring a main extension to either serve the premises or comply with these Rules and Regulations, shall apply for and comply with a Construction Permit from the Authority. The connection of one single-family residential dwelling shall be exempt from the construction permit requirement.
- i. Plan Review for Service: Whenever new service is requested the applicant shall submit plans acceptable to the Authority showing how that service will be provided. The Authority may waive this requirement if it determines that the plans will be of minimal value. The applicant shall complete a plan review application and pay the applicable fees and charges before review of the plans.

With the plan review application, the applicant shall pay either a non-refundable Plan Review Fee when a sketch plan is submitted or a Plan Review Deposit when either a

preliminary or final plan is submitted. The amount of the Plan Review Fee or Plan Review Deposit, as set forth in the Authority's Schedule of Rates and Charges, shall be based upon whether the plan submitted is for a land development, small subdivision (less than twenty lots), or large subdivision (twenty lots or greater).

The Plan Review Deposit shall be used by the Authority for recovery of engineering, legal, administrative and other related expenses incurred in the review of the plans submitted. Payment for such review shall be based on the actual costs incurred. Each deposit account will be reviewed on a biweekly basis during periods of activity. An additional deposit will be required before the review will continue if the balance is deemed by the Authority to be insufficient to complete review. Any unspent funds will be refunded to the applicant without interest within forty-five days following review completion or plan withdrawal. When a municipality permits the applicant to omit the sketch plan phase of a plan review and the Authority determines during the preliminary or final plan review that it is not feasible for it to serve the premises, the Authority will refund the difference between the Plan Review Deposit and the Plan Review Fee to the applicant.

3. FEES AND CHARGES; PAYMENT AND COLLECTION

- a. General: This section establishes and discusses fees and charges applying to water service by the Authority. While there are additional Authority fees and charges included in other Authority policies, the terms for payment and collection established in this Section apply to all Authority rates, fees and charges, unless different terms are specified elsewhere for a particular fee or charge.
- b. Charges for Water Service: Charges for service shall be in accordance with the Authority Schedule of Rates and Charges. Each premises shall be billed separately.

If the Authority permits more than one service line to serve a property, and if a single premises is served, the metered usage through all service lines shall be totaled and a single volume billing calculation made.

- c. Service Initiation Fee: A non-refundable fee, set forth in the Schedule of Water Rates and Charges, due prior to initiation of a new water service account for a premises. This fee is established to defray the labor and administrative costs associated with the establishment of the new account.
- d. Billing Period: Unless otherwise agreed to at the time of connection to the Authority system, customers served by meters sized $\frac{5}{8}$ -inch through one-inch shall be billed quarterly. Unless otherwise agreed to at the time of connection to the Authority system, customers with meters larger than one-inch shall be billed monthly.
- e. Fractional Bills: Fractional bills shall be prorated to the nearest day, on the basis of thirty-day months and ninety-one day quarters.

- f. Estimated Bills: Bills shall be estimated by the Authority in cases where the meter is unable to be read, where the meter is out of service during a billing period, or where water has been used which does not pass through a meter.
- g. Due Dates: All bills shall be due and payable on the due date as indicated on the original bill. For purposes of determining timely payment, the Authority will use the payment receipt date.

If a bill is not paid by the due date, the bill together with a five (5) percent late payment charge, shall be owing and a past due notice will be issued.

- h. Returned Check: If a customer's check is returned by the bank for insufficient funds, closed account or other such reasons, the customer's account will be treated as though no payment was received as of that date and a NSF Fee will be added to that customer's account.
- i. Termination: If the bill remains unpaid 23 additional days after the due date another late payment charge of five (5) percent of the bill will be added. Also at this time a warning notice shall be issued by regular mail to the last address given the Authority for billing purposes. This notice will specify the day on or after which service will be discontinued if payment is not received and the availability of a dispute resolution procedure.

If the entire amount due is not paid within an additional 15 days after the date of the warning notice nor has the customer filed a dispute under the procedure detailed in §3.1 below, the Authority may then discontinue service. Instituting and following the dispute resolution and/or termination procedures shall not preclude the Authority from pursuing other legal options to collect the delinquency. Additional termination notices may be issued by phone or in person, but are not required, and the Authority's inability to contact a customer by phone or in person will not cause the termination to be canceled.

If a termination site visit is conducted prior to service termination, the customer will be assessed a Site Visit Charge even if service is not terminated. At the time of a termination site visit, the customer must pay the initial bill, late payment charges and the Site Visit Charge or service will be terminated. Personal checks will be accepted. Authority personnel cannot make change when performing a site visit; therefore, any overpayment will be credited to the customer's account.

Service will not be terminated on Fridays or the day before an LCA-observed holiday. After service has been terminated for non-payment, a Restoration Charge, along with all outstanding service charges, late payment charges, Site Visit Charges and penalties shall be paid before service will be reinstated.

In situations where the charges for water service to a premises are being paid by a landlord rather than the tenant, the termination procedure will follow the provisions of Pennsylvania's Utility Service Tenants Rights Act.

If the bill remains unpaid beyond 38 days after the due date, a monthly Penalty will be applied in the amount of 1½ percent of the outstanding principal amount.

- j. Failure to Receive Bill: Failure to receive a bill shall not exempt any customer from the obligation to pay the bill by its due date.
- k. Questions Regarding Billings: Any customer doubting the accuracy of the meter or meter reading shall bring or mail the bill, together with an explanatory note, preferably at least 10 days prior to its due date to the office of the Authority for investigation. The Authority, upon receipt, will then check the billing in question and either confirm the original billing or issue a corrected bill. Where special tests are requested, or in the case of the correction of a billing error, the due date will be adjusted by the time required to check and reissue the bill.

When a customer doubts the accuracy of a meter and requests a special test, the Authority shall perform such test upon payment of a Meter Test Fee set forth in the Authority's Schedule of Rates and Charges. If results of such test indicate that the meter registers more than four percent higher than the actual amount, the fee shall be refunded and an appropriate adjustment made in the customer's billing; otherwise, the fee will be retained by the Authority.

- l. Dispute Resolution: Except as covered in §3k above, if a customer disputes a bill, payment shall still be made in full by the due date; however, the customer may make this payment under protest by including a letter with the payment indicating such and detailing the reason for the disagreement or presenting the dispute in person to the customer service representative at the Authority's office.

Should the customer not be satisfied with the handling of this dispute by the customer service representative or that person's supervisors, then a request should be made for a hearing with Authority Board of Directors for review of the dispute. This hearing shall be held prior to termination, if applicable.

Thereafter, if the customer wishes to pursue the billing dispute, the customer must deliver to the customer service representative a written statement, under oath or affirmation, describing the details of the dispute and further declaring that the written statement is not being executed for the purpose of delay. After receiving this statement, the Authority will not terminate service until the claim has been judicially determined; however, the customer shall continue to pay all billings under protest thereafter, until judicial resolution, into an escrow account to be established by the Authority for this purpose. If after ninety days the customer has not instituted judicial proceedings to resolve the suit and continued to make payment of all billings, the Authority may begin the termination proceedings at the warning notice stage, as set out in §3.i above, with the customer having waived its ability to file a dispute on the same issues.

m. Customer Relief from Collections Procedures under Unusual Circumstances: Except as outlined in §§3.k and l above, customers may request relief from the Authority's bill collection's procedures, including imposition of late payment charges and termination of water service. The Authority will establish administrative procedures to respond to such requests in a uniform manner on any circumstances that may warrant such relief.

n. Capital Recovery Charges: The up-front charges at the rates set forth in the Schedule of Water Rates and Charges, including Connection, Customer Facilities and Tapping Fees.

- i) Connection Fee: A capital recovery fee charged for each new Service which shall be based on the cost of connecting to the System, inspecting the Customer Service Line, and installing and/or inspecting the Authority Service Line.
- ii) Customer Facilities Fee: A fee reflecting the Authority's cost of providing the meter and backflow-prevention assembly, as well as installing the meter, for new services. The fee can also include, at the customer's option and based on actual cost, installation of the backflow-prevention assembly and customer's service line by the Authority.
- iii) Tapping Fee: A fee by a new customer contributing its fair share of the Authority's cost of constructing the existing System which was available for the new customer's connection and use.

no. Service Restoration Charge: A charge, set forth in the Authority's Schedule of Rates and Charges, shall be made for restoring any service which has been discontinued because of a delinquent account, for violation of these Rules and Regulations, or where a customer has requested a temporary discontinuance of service. This charge shall have two components - one for situations where the customer requests service to be restored during business hours and a larger amount, to reflect overtime costs, if the request is for restoration after business hours and on weekends. Once service is terminated, the customer must pay the initial bill, penalties, the Site Visit Charge and the Service Restoration Charge before service will be restored. Payment must be made by cash, money order or certified check. Authority personnel cannot make change when performing a service restoration visit; therefore, any overpayment will be credited to the customer's account.

op. Security Deposits: The Authority may require a security deposit before commencement of service or resumption of service after termination. Such deposit will be 1.5 times the estimated water bill for one billing period. This deposit will not be applied to billing delinquencies and will be refunded after one year of prompt payment of bills for service.

pq. Lien Administration Fee: A fee, set forth in the Authority's Schedule of Rates and Charges, shall be charged whenever a municipal lien is filed as a result of that customer failing to make timely payment. This fee represents the Authority's administrative costs involved with this process and shall be charged in addition to any

lien filing, service and any other fees charged by the appropriate government offices to process the lien.

- ¶. Site Revisitation Charge: A charge set forth in the Schedule of Water Rates and Charges, for a return visit by the Authority to perform work or conduct an inspection when the originally scheduled appointment is unable to be completed due to inadequate preparation or follow through by the party requesting the appointment. The Charge will be assessed to the party requesting the appointment.

4. CONDITIONS OF WATER SERVICE

- a. All Service Metered: Except as noted or allowed herein, all service shall be provided utilizing meters with outside registers, with a separate meter for each premises.
- b. No Service Except to Customer Premises: No customer shall, by means of hoses or otherwise, provide service to premises other than those covered in his application.
- c. Authority Service Line: The Authority's service line shall run perpendicular to the distribution main and directly toward the building. The curb stop shall be located at or near the property line, approximately 2 feet behind the curb, if established, and at a minimum depth of 4 feet below final grade. The Authority is responsible for maintenance of its service line. The Authority may, solely at its option, provide a single service line for more than one premises, with branch and individual curb stops for each premises.
- d. Customer's Service Line: The customer shall construct his service line to Authority standards, from the curb stop to the meter setting. There shall be no tee or branch in the customer's service line. The customer is responsible for maintenance of his service line. Where utility ground wires are attached to the customer's service line, they shall be attached on the street side of the meter.
- e. Pressure Control: Where the customer considers prevailing pressures to be higher than desirable, he may at his own expense install a pressure control valve after the backflow-prevention assembly. The customer shall be responsible for the maintenance of any such valve.

Where the customer considers prevailing pressures to be lower than desirable, he may at his own expense install a pressure boosting system after the backflow-prevention assembly. The customer shall be responsible for the maintenance of any such system.

Under certain circumstances the Authority may require that a pressure control valve or pressure boosting system be installed upon connection to the Authority System by a developer or home owner. Thereafter, however, the customer shall be responsible for the maintenance of such facilities.

- f. Operation of Valves: No person, except Authority personnel, shall operate curb stops or any main line valves, except with the written permission of the Authority.
- g. Leakage or Waste: No person shall allow water waste by unrepaired leaks or by willful action. Use of all water passing through a meter shall be charged at the regular rate, and no allowance will be made for excessive consumption due to leakage or waste on the customer's premises.
- h. Cross-connections: No cross-connections will be permitted.
- i. Backflow Prevention: A backflow-prevention assembly shall be installed on all service lines.
- j. Special Uses: No device or use having an adverse effect on the water system or service shall be permitted.
- k. Vacation of Premises: Service shall be terminated as of the date stipulated in a written notice by the customer for the vacation of the premises.
- l. Water Conservation Fixtures: The Delaware River Basin Commission requires all municipalities to adopt minimum water-conservation plumbing codes. For service within a municipality which has not adopted such a code, the applicant for water service to a building constructed after 1 October 1992 shall provide certification, in a form acceptable to the Authority, of compliance with the then-current water conservation performance standards for plumbing fixtures and fittings of the Delaware River Basin Commission.
- m. Abandonment of Service: The property owner or developer shall be responsible for the abandonment and all associated costs, including street restoration, of any unused Authority's water service line when required by the Authority. Conditions that typically require the abandonment of an unused water service line are (1) whenever a new building is erected on the site where there is an existing water service line (typically where an old building existed) and it is desired to change the size and/or the location of the water service line; (2) construction on multiple lots or any change to existing platting that results in an unused water service line; and (3) any other conditions that are deemed applicable by the Authority.

The water service line shall be disconnected at the water main and the water service line connection at the main shall be plugged, capped or protected as directed by the Authority. The removal of the curb-box and/or valve box shall also be required. The Authority reserves the right to include other methodologies in the abandonment depending on the circumstances.

Before the abandonment of a water service line the property owner, developer or their contractor shall make application to the Authority and obtain an Authority construction permit; or when applicable enter into a Developer's Water System Agreement. The property owner shall also obtain any other permits that may be

required by the municipality in which the work is being performed, such as when a Pennsylvania Department of Transportation (PennDOT) Highway Occupancy Permit will be required for work within PennDOT right-of-way.

The property owner/developer shall warrant the work for an 18-month period from the date of acceptance by the Authority.

5. METERS

- a. Cost and Ownership: The cost of all meters shall be borne by the applicant. Meters two inches and smaller shall be provided by the Authority upon payment of the meter component. Meters larger than two inches shall be furnished by the applicant, subject to Authority specifications, approval, inspection and inspection cost (including the Meter Inspection Fee), all as established in the Authority's Commercial/Industrial Water Meter and Fire Protection System Installation Policy. Upon commencement of service, the meter shall automatically become the property of the Authority.
- b. Size and Type: Size and type of meters shall be determined by the Authority.
- c. Meter Setting: The applicant shall provide a suitable meter setting at his/her cost and shall maintain it.
- d. Installation of Meters: All meter installations shall be made in accordance with the Authority's meter installation policies. The Authority will install all meters two inches and smaller upon payment of the applicable parts of the Customer's Facilities Fee. If the meter installation cannot be completed due to deficiencies within the home, inaccessibility of the curbside, or a service line pressure test failure, a charge in the amount established in the Authority's Residential Water Meter Installation Policy shall be charged to the property owner, or contractor who scheduled the meter installation. Larger meters shall be installed by the applicant. The installation of the meter will constitute commencement of service for billing purposes.
- e. Location: Meters shall be located, as approved by the Authority, to provide for flow measurement at the earliest practicable point within the customer's premises.
- f. Sealing: Meters, inlet couplings and by-pass valves shall be sealed by the Authority, and no one, except Authority personnel, shall disturb or tamper with such seals.
- g. Protection and Accessibility: The customer shall provide access to and be responsible for protecting the meter and readout against damage from freezing, hot water or other cause. Any such damage to the meter shall be repaired at the customer's expense.
- h. Normal Maintenance and Testing: The Authority shall be responsible for normal maintenance of meters and for such routine testing as it deems proper.

6. BACKFLOW-PREVENTION ASSEMBLY

All installations, maintenance and operation shall be in accordance with the Authority's Backflow Prevention/Cross-Connection Control by Containment Policy.

- a. Cost and Ownership: All new and existing non-residential customers shall install a backflow-prevention assembly approved by the Authority. The cost of furnishing and installation of the assembly shall be the customer's responsibility. The customer shall retain ownership of the assembly. A means of providing for thermal expansion shall also be included.

All new residential customers shall install a backflow-prevention assembly, which will be supplied by the Authority after payment of the applicable parts of the Customer Facilities Fee. The device will be installed directly after the meter and in a configuration specified and approved by the Authority. The device will remain the property of the Authority. A thermal expansion tank shall be installed by the customer before a water meter is installed.

All existing residential customers shall have a backflow-prevention assembly installed and supplied by the Authority, on a schedule to be determined by the Authority and at no cost to the customer. The device will remain the property of the Authority. The Authority highly recommends the installation of a thermal expansion tank by the customer.

- b. Normal Maintenance and Testing: Non-residential customers will be responsible for periodic testing and maintenance of the devices as required by the Authority.

The Authority will be responsible for periodic testing and maintenance of the residential devices.

7. EXTENSION OF SERVICE

- a. Service Extensions on Existing Main: Where new service is requested for a premises abutting existing mains, but the existing mains do not extend in or along the entire length of any public roads crossing or adjoining the subject property, the owner shall make application, submit plumbing and site development plans for review, and enter into a developer's water system agreement with the Authority to extend the mains in accordance with the terms of the Authority's Main Extension Policy, as well as pay all applicable fees and charges and fulfill all other pertinent requirements of the Authority.
- b. Main Extension Constructed by Customer: Where new service requires a main extension, the customer shall make application, submit plumbing and site development plans for review, enter into a developer's water system agreement with the Authority, pay all applicable fees and charges, and fulfill all other pertinent requirements of the Authority. Extensions will be in accordance with the terms of the Authority's Main Extension Policy.

- c. Main Extension Constructed by Authority: Where new service is provided by a main extension constructed by the Authority, the customer may obtain service by filing an application, submitting plumbing and site development plans for review, paying applicable fees and charges and fulfilling all other pertinent requirements of the Authority. Assessment, if applicable, shall be established in accordance with the terms of the Authority's assessment policy.

8. FIRE PROTECTION

- a. Public Fire Hydrants: When a municipality desires the installation of a fire hydrant in the system, it shall make application to the Authority. The installation shall be made at no cost to the municipality. The municipality shall be responsible for payment for public fire protection service in accordance with the prevailing Authority Schedule of Rates and Charges.
- b. Change in Hydrant Location: When a municipality desires that the location of a fire hydrant be changed, it shall make application for such change. The change shall be made by the Authority at the expense of the municipality.
- c. Hydrant Usage: A fire hydrant may be used without the Authority's permission for the extinguishing of fires. Street and sewer flushing, fire department practice or other non-emergency shall be permitted at designated hydrants and shall be subject to the Authority's written approval and designation of hydrant(s) to be used.
- d. Private Fire Service: When a customer desires private fire protection service, plans showing the fire protection service connection to the system shall first be approved by the Authority. The customer shall be responsible for the installation and all costs required to provide such service to the premises. The customer shall be responsible for payment for private fire protection service in accordance with the Authority Schedule of Rates and Charges. If line size is the determining factor for payment, the size shall be based on the size of the backflow-prevention assembly or, if before the assembly, the line size at the first fire service connection.
- e. Private Fire Service Usage: A customer's private fire protection service line shall only be used for the extinguishing of fires or testing of the protection system.
- f. Private Fire Service Backflow Prevention and Monitoring: A backflow-prevention assembly with metered by-pass shall be required on all private fire service lines in accordance with the Authority's Backflow Prevention/Cross-Connection Control Policy. The customer shall own the backflow-prevention assembly and shall be responsible for periodic maintenance and testing. The meter on the by-pass shall be provided by the Authority upon payment of the applicable fee by the customer. The Authority shall retain ownership of the by-pass meter, and shall be responsible for maintenance and testing.

All metered or estimated usage for a purpose other than the actual extinguishing of fires will be charged in accordance with the Authority Schedule of Rates and Charges. In addition, the customer shall be responsible for locating and discontinuing any usage of water from the private fire service line other than for fire protection purposes.

9. VIOLATIONS AND PENALTIES

Unauthorized use and/or operation of the system is a prohibited activity, subject to the Authority penalties as set forth below. The application of these penalties shall in no way effect the enforceability of pertinent government statutes, ordinances or regulations for the same offenses.

- a. Fire Hydrant Use: For unauthorized use of fire hydrants, all wrenches, hoses and other equipment may be confiscated and a charge of \$50 per incident may be levied against the responsible party.
- b. Unauthorized Connections: For unauthorized connections, a charge of \$50 per day may be levied against the responsible party.
- c. Unauthorized Water Use: For unauthorized use of water for any purpose, including the violation of any drought restrictions adopted by the Authority, a charge of \$50 per day may be levied against the responsible party.
- d. Meter Tampering: Where any meter seal has been broken, a charge for all consequential costs may be levied. In addition, a bill based, solely at the Authority's discretion, on either (1) ten times the minimum charge for that size meter or (2) the estimated consumption for the billing period may also be issued.
- e. Unauthorized Operation of Authority's System: Where unauthorized operation of valves, curb stops, etc., has occurred, the responsible party may be charged \$200 per incident.
- f. Supplemental Charges and Actions: The Authority reserves the right to charge against the responsible party any and all expenses incurred in exposing, correcting and/or litigating any violations, as well as any damages suffered by the Authority or other parties as a result of the action.

The right to prosecute any person who shall have committed an unlawful act as a result of any violations is preserved.

10. MISCELLANEOUS

- a. Amendments: The Authority reserves the right to amend these Rules and Regulations.

- b. Access to Premises: Any authorized employee of the Authority, upon presentation of credentials, shall have access at all reasonable hours to any premises supplied with water, for the purpose of reading, changing or repairing meters, making inspections and securing such information relative to service as may be deemed necessary by the Authority.
- c. Curtailment or Termination of Service: The Authority may terminate service, as set forth in §3, for violation of these Rules and Regulations or for the nonpayment of charges owed to the Authority by a customer when due. In the event of an emergency, the Authority reserves the right to discontinue service with or without prior notification. In the event of a general water shortage, such as could be occasioned by a drought, the Authority reserves the right to require the curtailment of water usage by customers generally and to discontinue service to any customer failing to cooperate in such curtailment, such as that referred to in the Authority's Water Management Plan or Emergency Management Plan.
- d. Waiver: The Authority retains the right to waive provisions of these Rules and Regulations, solely at its discretion. The waiver of a provision in one circumstance does not obligate the Authority to waive the same provision under the same or similar circumstances at another time; and further the act of waiving a provision one time shall not be interpreted to compromise the Authority's position in applying that provision at any time before or after such waiver.
- e. City Division; Additional Provisions: The Authority began operation of the water system in the City of Allentown as of 8 August 2013 pursuant to the Allentown Water and Sewer Utility Concession and Lease Agreement dated 1 May 2013 (the "Concession Agreement"). This portion of the Authority's system is now referred to as the Authority's City Division versus its other systems being the Suburban Division. The Concession Agreement and accompanying documents, including appropriate City of Allentown Ordinances, may contain provisions applicable to City Division customers that differ from those in these Rules & Regulations. It is the intent to eventually amend the Rules & Regulations to reflect these additional requirements, but that process has not been completed yet. These Rules & Regulations shall apply to City Division customers to the fullest extent possible without conflicting with Concession Agreement requirements that have not yet been incorporated herein. The Authority reserves the right to apply and enforce such Concession Agreement requirements against its customers in the City Division even when not stated in these Rules & Regulations.

RULES & REGULATIONS FOR SEWERAGE SERVICE

LEHIGH COUNTY AUTHORITY

EFFECTIVE 13 JANUARY 2014

It is our pleasure to welcome you as a Lehigh County Authority wastewater customer. We look forward to providing prompt, reliable service.

Our professional staff is available twenty-four hours each day, seven days per week with normal business hours of 8:15 a.m. - 4:45 p.m., Monday through Friday. For customers within the City of Allentown, inquiries should be directed to our customer service representative by telephone at 610-437-7515 or by email at cityservice@lehighcountyauthority.org. After-hour emergencies may be reported by calling 610-477-7515. For all other customers, inquiries should be directed to our customer service representative by telephone at 610-398-1444 or by email at service@lehighcountyauthority.org. After-hour emergencies may be reported by calling 610-398-2503.

To help us better serve you, please be familiar with the location of sewer facilities on your property, and be sure that they are readily accessible.

We will strive to be responsive to your needs and look forward to serving you. Should you want more information about LCA, or your wastewater service, please feel free to call us. General information is also provided at the Authority's website - www.lehighcountyauthority.org.

RULES & REGULATIONS FOR SEWERAGE SERVICE

1. DEFINITIONS

- a. Applicant: A person who applies for Service.
- b. Authority: Lehigh County Authority ("LCA"), 1053 Spruce Street, P.O. Box 3348, Allentown, Pennsylvania 18106-0348.
- c. Authority Lateral: The pipe from the sewer main to a point at or near the street right-of-way line.
- d. BOD (5-day Biochemical Oxygen Demand): the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five (5) days at 20° centigrade, expressed as a concentration of mg/l measured analytically according to prescribed standard methods.
- e. Capital Recovery Charges: The up-front charges, set forth in the *Schedule of Wastewater Rates and Charges*, including Connection, Customer Facilities and Tapping Fees.
- f. Connection Fee: The fee established in §7.1 herein which is based on the cost of connecting to the Authority sewer main and extending the Authority Lateral to the property line.
- g. Customer: Any person who receives Service from the System.
- h. Customer Facilities Fee: The fee established in §7.1 herein reflecting the Authority's cost of providing a Customer Lateral and/or other customer facilities.
- i. Customer Lateral: The pipe connecting the Authority Lateral to the premises.
- j. Extension of Service: Providing facilities that connect to the System for one or more premises not previously connected.
- k. General Specifications for Sanitary Sewer Construction: The Authority's published standard specifications that outline materials, methods of installation, and testing requirements.

- l. Lien Administration Fee: The fee established in §7.r herein representing the Authority's administrative costs resulting from the filing of a municipal lien due to a customer's failure to make timely payment of service charges.
- m. Main: A pipeline in a street or right-of way, suitable for the connection of a lateral.
- n. Main Extension: Extension of Service requiring additional main construction.
- o. Meter: A device for measuring the quantity of water used or sewage discharged.
- p. Meter Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for the cost of a meter provided by the Authority for installation by the owner.
- q. Meter Inspection Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for each inspection of the meter setting and installations.
- r. Meter Installation Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for having a meter installed and sealed by the Authority.
- s. Meter Test Fee: A fee, established herein, charged for performance of a special test to determine the accuracy of a meter and set forth in the Authority's *Schedule of Wastewater Rates and Charges*.
- t. Non-sufficient Funds (NSF) Fee: A fee charged if a customer's check is returned by the bank for insufficient funds, closed account or other such reasons, established herein and set forth in the Authority's *Schedule of Wastewater Rates and Charges*.
- u. Person: An individual, family, household, partnership, company, corporation, association, corporate political body, joint ownership, or any other entity capable of functioning in the context used herein.
- v. Plan Review Deposit: A deposit to fund Authority administrative, engineering, legal and other justifiable expenses incurred in the review of preliminary or final plans submitted for new Service.
- w. Plan Review Fee: A fee to reimburse the Authority for administrative, engineering, legal and other related expenses incurred in the review of sketch plans submitted for new Service.
- x. Premises: A single billable premises shall be the property, building or other site to which Service is furnished, comprising, but not limited to the following:
 - (1) a building under one roof occupied by one person; or
 - (2) a nonresidential building under one roof occupied by more than one person; or
 - (3) each combination of nonresidential buildings owned, or leased and occupied, by one person and served by a single Authority Lateral; or
 - (4) each side of a double house, or each townhouse or condominium unit, each apartment, or each trailer site; or
 - (5) such other situations as the Authority shall deem applicable.

- y. Pretreatment Plant: The facility constructed by the County of Lehigh, but presently operated by the Authority, which is located at the corner of Industrial Boulevard and Route 100 in Upper Macungie Township.
- z. Property Owner or Owner: The person(s) in whose name the property is deeded.
- aa. Schedule of Wastewater Rates and Charges: Schedules of user charges, fees and capital recovery charges titled *Schedule of Wastewater Rates and Charges* and adopted by the Authority for various sections of the System.
- bb. Service: (1) Providing or readiness to provide for the collection of wastewater for any premises or any services in connection therewith; and/or (2) any installation or improvement or change in the Customer Lateral or the System facilities at the customer's request or as required by the Authority; and/or (3) any Authority activities related thereto.
- cc. Service Initiation Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, to defray the labor and administrative costs associated with the establishment of a new sewer account.
- dd. Service Restoration Charge: A charge established in §7.p herein for restoring Service to a premises which has had Service terminated or discontinued, as set forth in the *Schedule of Wastewater Rates and Charges*.
- ee. Site Visit Charge: A charge for Authority personnel to visit a customer's property established herein and set forth in the *Schedule of Wastewater Rates and Charges*.
- ff. Site Revisitation Charge: A charge established in §7.s. herein and set forth in the *Schedule of Water Rates and Charges*, to recover the Authority's costs for a return visit due to inadequate preparation or follow through by the party requesting the appointment.
- gg. Suspended Solids: the quantity of solid particles that float on the surface of, or are suspended in, sewage flows, measured analytically according to prescribed standard methods.
- hh. System: All facilities owned and/or operated by the Authority, along with acquired property interests, used for collecting, pumping, transporting, treating and/or disposing of sewage, except the Pretreatment Plant.
- ii. Tapping Fee: A fee by a new customer contributing its fair share of the Authority's cost of constructing the existing System which was available for the new customer's connection and use.
- jj. Tenant: A person who leases or rents a premises.
- kk. TKN (Total Kjeldahl Nitrogen): the quantity of both organic nitrogen and ammonia whereby the organically-bound, reduced nitrogen can be determined after a digestion which converts the nitrogen in those compounds to ammonia and is then measured analytically according to prescribed standard methods.

- ii. Western Lehigh Interceptor: A system of transmission mains that transports wastewater from a number of municipalities in western Lehigh County to the City of Allentown Kline's Island Treatment Plant for treatment, including facilities constructed to provide relief for overloaded Authority and City interceptors, such as the Little Lehigh Relief Interceptor.

2. APPLICATION FOR SERVICE

a. Application and Contract:

- (1) Premises abutting existing mains may obtain service by filing a wastewater treatment allocation application, obtaining a construction permit, submitting plumbing and site development plans for review, paying all applicable fees and charges and fulfilling all other requirements of the Authority. If the premises requires a main extension from the Authority System for service, the terms established in §6 also apply. The location of the premises determines the appropriate allocation application to file. For connections to a system, which ultimately flows to the Western Lehigh Interceptor, it is also necessary to obtain certification by the municipality where the property is located that municipal requirements have been met.

Approval of the wastewater treatment allocation application is contingent on sufficient allocation existing. Allocation purchased must be used for the Premises for which it was purchased and purchased allocation cannot be resold or transferred by the owner to another Person for a different Premises. Rules in regard to unused allocation for wastewater that will ultimately flow through the Western Lehigh Interceptor are set forth in agreements among the municipal entities that use the Western Lehigh Interceptor. Unused allocation for wastewater that will not ultimately flow through the Western Lehigh Interceptor shall return to the Authority for re-use if the Premises for which the allocation was purchased is abandoned or has not discharged wastewater for five (5) years; the subdivision or land development approvals for the Premises for which the allocation was purchased lapses; upon voluntary return by the owner of the allocation; or any circumstance where a Premises is completed and there is remaining allocation for which there is no practical use in regard to the Premises within a reasonable time in the future.

- (2) The provision of Service to a property by the Authority shall constitute the contractual relationship between the Authority and the customer based upon the terms set out in these *Rules & Regulations for Sewerage Service*, as well as any other applicable Authority policies.

- b. Separate Application for Each Premises: Any person who desires Service at more than one premises must make separate application for each premises. In the situation where the Authority allows multiple premises to be served by a single Customer Lateral, each premises connected to the single Customer Lateral would nevertheless be billed separately.

- c. Premises with Tenant: The property owner is responsible to submit an application for Service whenever a premises is occupied by a tenant or there is any change in tenancy. The owner may give written permission for the Authority to bill the tenant directly; however, the Authority will determine if such billing arrangement is acceptable, and if acceptable, the property owner shall retain ultimate responsibility for all bills for Service provided to the premises.
- d. Industrial and commercial customers: Federal law and regulation require that certain industrial and commercial dischargers to public sanitary sewer systems must establish pretreatment of their waste if certain pollutants are present in their wastewater discharge.

For industrial and commercial customers who discharge to systems connected to the Western Lehigh Interceptor system, wastewater is treated at the City of Allentown treatment plant at Kline's Island. In this case, it is the City's permit that contains such requirements and therefore the City has developed and implemented an industrial pretreatment program. The Authority has entered into an agreement with the City making the conditions and requirements of the City sewage and industrial wastes ordinance applicable to Authority industrial and commercial customers and authorizing the City to administer the program with such customers. Application for the necessary industrial discharge permits, however, shall be made to the Authority who will forward it to the City for processing.

In Authority systems where wastewater is not treated by the City, these federal laws and regulations are still applicable and the program will be administered by the Authority.

3. CONDITIONS OF SERVICE

- a. Service to Another Premises: Service may not be extended by a customer from the customer's premises to any other premises.
- b. Authority Lateral: The Authority Lateral shall run perpendicular to the adjacent property or right-of-way line extending from the sewer main directly toward the building. If an Authority Lateral does not exist, the customer may also construct it rather than have the Authority do so and be reimbursed by lowered Tapping and Connection Fees. The Authority is responsible for maintenance of its lateral. The Authority may, solely at its option, provide a single lateral for more than one premises, with branches for each premises.
- c. Customer Lateral: The customer shall construct the Customer Lateral to Authority standards, from the end of the Authority Lateral to the inside wall of the premises. The customer is responsible for maintenance of the Customer Lateral.
- d. System Facilities Prohibition: No person other than Authority personnel shall handle, operate or enter any of the System facilities, including manholes, cleanouts, pumps, etc. except with the written permission of the Authority.

4. GENERAL REGULATIONS

- a. After connection to the System, all sewage from a premises shall be discharged to the System, subject to such restrictions established herein; the provisions established to administer federal industrial pretreatment programs to applicable industrial and commercial users; and all other conditions imposed by municipal or regulatory entities.
- b. Upon connection to the System, any sewage disposal system then in existence shall be dealt with in accordance with municipal requirements and at property owner's expense.
- c. No person shall make connection of roof downspouts, floor drains, exterior foundation drains, area drains or other sources of drainage directly or indirectly to the System. Where existing surface water or roof drains are connected to the System, they shall be removed within thirty (30) days of receipt of a notice from the Authority to remove such connection. In the event such connection is not removed, the Authority shall cause such connection to be removed at the property owner's expense.
- d. No person or premises shall discharge or cause to be discharged into the System, any of the following:
 - (1) stormwater, surface water, groundwater, or drainage;
 - (2) gasoline, benzene, fuel oil, paint products or other flammable or explosive liquids;
 - (3) unground garbage or efflux from mechanical garbage grinders not meeting Authority standards; and
 - (4) ashes, cinders, sand and mud, straw, shavings, metals, glass, rags, feathers, tar, plastics, wood, bentonite, lye, building materials, rubber, hair, grease, manure, bones, leather, porcelain, china, ceramic wastes or other substances capable of obstructing the System.

The above list of unacceptable discharges shall apply to all residential, commercial and industrial discharges to the System and is supplemented by requirements listed in the current City of Allentown sewage and industrial wastes ordinance, when the sewage is ultimately treated at the City's treatment plant at Kline's Island, and Authority sewage rules and regulations.

- e. In addition, only domestic strength waste may be discharged to any System where the sewage is not ultimately treated at the City's treatment plant at Kline's Island; domestic strength discharge has an assumed average strength (based upon averaging the results of 24-hour composite samples taken on seven consecutive days) with the following parameters:

BOD - 250 ppm
TSS - 275 ppm
TKN - 35 ppm

- (1) It shall be the property owner's responsibility to lower any wastewater discharges that are in excess of these domestic strength limitations immediately upon knowledge of exceeding the limitations or notice from the Authority, whichever occurs first.
 - (2) If it is impossible or impractically difficult for the property owner to reduce the strength of its discharge, the property owner shall provide written notice to the Authority of such situation and request that the Authority take action to accept the property owner's strength. If the Authority determines it is possible and the Authority is willing to accept such waste, the property owner shall be solely responsible to compensate the Authority for the additional capital and operating expenses the Authority incurs to handle the property owner's exceptional strength waste discharge.
 - (3) Penalties for exceeding the domestic strength limitations are set forth in §8.b. If the property owner discharges wastewater in excess of the strength limitations set forth in this Agreement which result in actual direct damages to the Authority owned or operated wastewater system, the property owner shall be responsible for such damages in addition to such penalties to the extent that such direct damages are directly attributable to such excess discharges by the property owner.
- f. No provision in these *Rules & Regulations* shall be interpreted to deny the Authority, solely at its option, the ability to accept wastewater exceeding parameters established herein or by federal, state or local government regulations (including those of the City of Allentown) from facilities upstream of the Pretreatment Plant if after treatment at the Pretreatment Plant any such parameters are then met.
- g. Leakage directly or indirectly to the System by unrepaired leaks or by wilful action is unacceptable. Where such leakage exists and is within a property owner's control, it shall be repaired or remedied by the owner within thirty (30) days of receipt of a notice from the Authority to do so. However, where the Authority's system is endangered from unrepaired leaks or by wilful action, the owner shall immediately effect repairs upon receipt of a notice from the Authority to do so. In the event there is not such timely repair or remedy, the Authority shall cause such repair or remedial work to be performed at the property owner's expense.

5. CONNECTIONS/CUSTOMER LATERALS

- a. No person shall uncover, connect with, make any opening into or use, alter or disturb, any portion of the System without first making application for connection, paying all applicable fees and charges, and receiving approval from the Authority. For commercial and industrial users, an application for an *Industrial Waste Discharge Permit* must also be submitted and approved. Such applications shall be made on forms provided by the Authority.
- b. All connections to the System and installation of any Authority or Customer Lateral from any premises shall be accomplished in conformance with all applicable policies, rules, regulations, and specifications of the Authority, including the *General*

Specifications for Sanitary Sewer Construction. In the absence of provisions in the *General Specifications for Sanitary Sewer Construction*, or in amplification thereof, the materials and procedures set forth in appropriate specifications of the American Society of Testing Materials and the Water Pollution Control Federation *Manual of Practice* shall apply.

- c. Only persons properly approved by the Authority shall be permitted to make Authority or Customer Lateral installations.
- d. Except as otherwise approved by the Authority, each premises shall be connected separately and independently to a main by means of a Customer Lateral and Authority Lateral.
- e. All costs and expenses of construction of a Customer Lateral and Authority Lateral as well as all costs and expenses of connection of the same to the System, including testing and inspection, shall be borne by the property owner. The property owner shall indemnify the municipality and the Authority from all loss or damage that may be occasioned, directly or indirectly, as a result of construction or connection of an Authority or Customer Lateral to the System.
- f. Where a premises proposes to connect to the System, the existing sewer line may be cut on the structure side of any sewage disposal system or device and, with proper fittings, such existing sewer line may be connected to a Customer Lateral. All existing sewer lines must be inspected and pressure-tested to point of connection to the building, and if there are any pressure leaks, these lines must be uncovered and repaired.
- g. Every Customer Lateral shall be maintained in a sanitary and safe operating condition by the property owner at the owner's expense. If any person shall fail or refuse, upon receipt of a written notice of the Authority, to remedy any unsatisfactory condition with respect to a Customer Lateral within ten (10) days of receipt of such notice (unless notification by the Authority states a different time period based upon the severity of the situation), the Authority may:
 - refuse to permit such person to discharge into the System until such unsatisfactory condition is remedied to the satisfaction of the Authority, or
 - the Authority may make such maintenance or repairs as may be necessary and charge the owner for the costs.
- h. The property owner shall remove all trees, tree roots and other obstructions, including oils and grease, to the Customer Lateral, and where necessary the Authority Lateral or System. Where such maintenance or repairs are neglected by the property owner, ten (10) days after mailing written notice to the owner, the Authority may make, or cause to be made, such maintenance or repairs as may be necessary and charge the property owner for the cost thereof.
- i. Where an existing Customer Lateral and Authority Lateral connected to the System are to be abandoned by reason of demolition of buildings and structures or for any

other reason, the Customer Lateral shall be disconnected and the Authority Lateral permanently sealed at the property line or at the main, as directed by the Authority, at the expense of the property owner.

- j. All restaurants or bars with commercial kitchens and all food processing establishments shall have and maintain a grease trap acceptable to the Authority. Among discharge limits to the System is the oil and grease discharge limit of 50 mg/l (milligrams per liter). If any discharge limits are exceeded, the Property Owner shall be charged for additional testing costs in accordance with the *Schedule of Wastewater Rates and Charges* and for measures to rectify the situation as detailed in §5h above.

m. Abandonment of Service: The property owner or developer shall be responsible for the abandonment and all associated costs, including street restoration, of all unused sanitary sewer laterals or building sewers when required by the Authority (for purposes of this section, "Sanitary Sewer Lateral" or "Building Sewer" is defined as the portion of the sanitary sewer lateral that extends from the curb line or property line to the public sanitary sewer). Conditions that typically require the abandonment of an unused sanitary sewer lateral are (1) whenever a new building is erected on the site where there is an existing sanitary sewer lateral (typically where an old building existed) and it is desired to change the size and/or the location of the sanitary sewer lateral; (2) construction on multiple lots or any change to existing platting that results in an unused sanitary sewer lateral; and (3) any other conditions that are deemed applicable by the Authority.

The sanitary sewer lateral shall be disconnected at the public sewer main and the lateral line connection at the main shall be plugged, capped or protected as directed by the Authority. The Authority reserves the right to include other methodologies in the abandonment depending on the circumstances.

Before the abandonment of a sanitary sewer lateral the property owner, developer or their contractor shall make application to the Authority and obtain an Authority construction permit; or when applicable enter into a Developer's Sewer System Agreement. The property owner shall also obtain any other permits that may be required by the municipality in which the work is being performed, such as when a Pennsylvania Department of Transportation (PennDOT) Highway Occupancy Permit will be required for work within PennDOT right-of-way.

The property owner/developer shall warrant the work for an 18-month period from the date of acceptance by the Authority.

6. EXTENSION OF SERVICE

- a. General: For new construction, the Authority shall only provide Service where the municipality approves such Service, which may be by subdivision or land development approvals. Owners of premises abutting existing mains may obtain Service by filing an *Application for Wastewater Treatment Allocation*; obtaining a construction permit; submitting plumbing and site development plans for review; paying all applicable fees and charges and fulfilling all other requirements of the

Authority. In addition, owners of premises requiring a main extension from the System to serve the premises must also comply with the terms established in the Authority's *Sewer Main Extension Policy*, and owners of premises that will discharge industrial and/or commercial waste shall be subject to the requirements of the City of Allentown, where applicable, and Authority sewage rules and regulations.

- b. Construction Permit: Owners of premises abutting existing mains and connecting to the System without requiring a main extension to either serve the premises or comply with these *Rules & Regulations*, shall apply for and comply with a construction permit from the Authority. The connection of one single-family residential dwelling shall be exempt from the construction permit requirement.
- c. Plan Review for Service: Whenever new Service is requested, the applicant shall submit plans, acceptable to the Authority, showing how Service will be provided. The Authority may waive this requirement if it determines the plans will be of minimal value. The applicant shall complete a Plan Review Application and pay the applicable fees and charges before review of the plans.

With the plan review application, the applicant shall pay either a non-refundable Plan Review Fee when a sketch plan is submitted or a Plan Review Deposit when either a preliminary or final plan is submitted. The amount of the Plan Review Fee or Plan Review Deposit shall be based upon whether the plan submitted is for land development, small subdivision (less than twenty lots), or large subdivision (twenty lots or greater).

The Plan Review Deposit shall be used by the Authority for recovery of engineering, legal, administrative and other related expenses incurred in the review of submitted plans. Payment for such review shall be based on the actual costs incurred. Each deposit account will be reviewed regularly during periods of activity. An additional deposit will be required before the review will continue if the balance is deemed by the Authority to be insufficient to complete review. Any unspent funds will be refunded to the applicant without interest within forty-five (45) days following review completion or plan withdrawal. When a municipality permits the applicant to omit the sketch plan phase of a plan review and the Authority determines during the preliminary or final plan review it is not feasible for the Authority to serve the premises, the difference between the Plan Review Deposit and the Plan Review Fee will be refunded to the applicant by the Authority.

7. RATES AND CHARGES

- a. General: This section establishes and discusses fees and charges applying to Service by the Authority. While there are additional Authority fees and charges included in other Authority policies, the terms for payment and collection established in this Section apply to all Authority rates, fees and charges, unless different terms are specified elsewhere for a particular fee or charge.

- b. Charges for Service: Charges for Service shall be in accordance with the *Schedule of Wastewater Rates and Charges*. Each premises shall be subject to separate billing calculations.
- c. Time Period & Basis of Billing: Billing for Service is based either on water consumption, an estimated usage amount, metered sewage discharge, a flat rate per premises, or any combination thereof. Designation of the basis used for a particular division of the System, is detailed in the applicable *Schedule of Wastewater Rates and Charges*.

When wastewater billing is based on water consumption or metered sewage discharge:

Residential customers served by a community water system and all nonresidential customers shall be based on either metered water usage or sewage discharge, with a separate meter for each premises. Where a sewage meter is available, the customer's bill is based on the sewage meter reading. Where there is no sewage meter but there is a water meter, a residential user is billed based on the first calendar quarter water usage for properties connected using connection fees associated with the Western Lehigh Interceptor. For properties connected using connection fees associated with non-Western Lehigh Interceptor systems, residential users are billed based upon the actual metered water usage for each period. Commercial and industrial users in all systems are billed based upon the water usage for each period.

Where a meter is unable to be read; where a premises has not been occupied for the entire first quarter for first calendar quarter water usage determination as described above; where a meter is out of service during a billing period or where the sewage discharge or water usage is not metered, the Authority's discharge estimate will be used for billing. For residential users, discharge estimates are based on the customer's metered discharge or water usage history, if available; otherwise the discharge estimates are based on a calculation of average daily flow per residential premises of 180 gallons per day.

For commercial or industrial users, estimates are based upon historical usage or such other methods deemed reasonable by the Authority.

Where a customer-owned sewage meter is used for sewage billing, the customer shall have the meter tested and calibrated annually with a report sent to the Authority.

- d. Meters: The *Water Meter Installation for Wastewater Billing Purposes Policy* and the section of the *Rules and Regulations for Water Service* discussing meters are incorporated by reference and applicable to all usage of meters for Service billing purposes.
- e. Fractional Bills: Fractional bills shall be prorated to the nearest day.

- f. Due Dates: All bills shall be due and payable on the due date as indicated on the original bill. For purposes of determining timely payment, the Authority will use the payment receipt date.
- g. Delinquencies: If a bill is not paid by the due date, a five percent (5%) late payment charge will be added to the bill and a past due notice will be issued.

If the bill remains unpaid 23 additional days after the due date another late payment charge of five (5) percent of the bill will be added. If termination of sewage or water service for nonpayment of a sewage bill is the course of action selected by the Authority, a warning notice shall be issued by regular mail to the last address given the Authority for billing purposes and will specify the procedure which will be followed to discontinue service if payment is not received and the availability of a dispute resolution procedure.

If the entire amount due is not paid by the date of the warning notice, or if there are circumstances involving a delinquency requiring collection action at an earlier date, the Authority may pursue any collection procedure - including without limit, filing a municipal lien against the property, suing for payment, seeking termination of sewage or water service - or a combination thereof.

If the bill remains unpaid beyond 38 days after the due date, a monthly Penalty will be applied in the amount of 1½ percent of the outstanding principal amount.

Instituting and following the dispute resolution of §7.k and/or termination procedures shall not preclude the Authority from pursuing other legal options to collect the delinquency. Additional termination notices may be issued by phone or in person, but are not required, and the Authority's inability to contact a customer by phone or in person will not cause the termination to be canceled.

If a termination site visit is conducted prior to service termination, the customer will be assessed a Site Visit Charge even if service is not terminated. At the time of a termination site visit, the customer must pay the initial bill, late payment charges and the Site Visit Charge or service will be terminated. Personal checks will be accepted. Authority personnel cannot make change when performing a site visit; therefore, any overpayment will be credited to the customer's account.

Service will not be terminated on Fridays or the day before an LCA-observed holiday. After service has been terminated for non-payment, a Restoration Charge, along with all outstanding service charges, late payment charges, Site Visit Charges and penalties shall be paid before service will be reinstated.

In situations where the charges for Service to a premises are being paid by a landlord rather than the tenant, the termination procedure will follow the provisions of the *Pennsylvania Utility Service Tenants Rights Act*.

- h. Failure to Receive Bill: Since Service was provided to a premises, failure to receive a bill shall not exempt any customer from the obligation to pay the bill by its due date.

- i. Returned Check: If a customer's check is returned by the bank for insufficient funds, closed account or other such reasons, the customer's account will be treated as though no payment was received as of that date and a NSF Fee will be added to that customer's account.
- j. Questions Regarding Billings: Any customer doubting the accuracy of a bill shall bring or mail such bill, together with an explanatory note, at least ten (10) days prior to its due date to the office of the Authority for investigation. The Authority, upon receipt, will check the billing in question and either confirm the original billing or issue a corrected bill. In cases where special tests are required, or in the case of the correction of billing error, the due date will be adjusted by the time required to check and reissue the bill.

If a customer doubts the accuracy of a meter used for wastewater billing purposes and requests a special test, the Authority shall perform such test upon payment of the Meter Test Fee, which shall be non-refundable. If the Authority questions the accuracy of such a meter, it shall request the customer to provide written certification by a properly trained person as to performance of a meter test and the accuracy of the meter as proven by the meter test. The Authority will perform this test upon request by the customer, payment of the Meter Test Fee and written permission by the owner of the water meter if the meter is not owned by the customer.

- k. Dispute Resolution: Except as covered in §7.j above, if a customer disputes a bill, payment shall still be made in full by the due date; however, the customer may make this payment under protest by including a letter with the payment indicating such and detailing the reason for the disagreement or presenting the dispute in person to the customer service representative at the Authority's office.

Should the customer not be satisfied with the proposed handling of this dispute by the customer service representative or that person's supervisors, then a request should be made for a hearing with Authority Board of Directors for review of the dispute. This hearing shall be held prior to termination of service, if applicable.

Thereafter, if the customer wishes to pursue the billing dispute, the customer must deliver to the customer service representative a written statement, under oath or affirmation, describing the details of the dispute and further declaring that the written statement is not being executed for the purpose of delay. After receiving this statement, the Authority will not terminate service until the claim has been judicially determined; however, the customer shall continue to pay all billings under protest thereafter, until judicial resolution, into an escrow account to be established by the Authority for this purpose. If after ninety (90) days the customer has not instituted judicial proceedings to resolve the dispute and has not continued to make payment of all billings, the Authority may begin the termination proceedings at the warning notice stage, as set out in §7.g above, with the customer having waived its ability to file a dispute on the same issues.

1. Customer Relief from Collections Procedures under Unusual Circumstances:
Except as outlined in §§73.jk and kl above, customers may request relief from the Authority's bill collection's procedures, including imposition of late payment charges and termination of water service for nonpayment of sewer charges. The Authority will establish administrative procedures to respond to such requests in a uniform manner on any circumstances that may warrant such relief.

- m. Capital Recovery Charges: Such charges shall be paid before initiation of service to a new connection at the rates set forth in the *Schedule of Wastewater Rates and Charges*, including Connection, Customer Facilities and Tapping Fees.
 - (1) Connection Fee: A capital recovery fee charged for each new Service that shall be based on the cost of connecting to the System, inspecting the Customer Lateral, and installing and/or inspecting the Authority Lateral.
 - (2) Customer Facilities Fee: A fee reflecting the Authority's actual cost of installing a Customer Lateral and/or other customer facilities required for new Service.
 - (3) Tapping Fee: A fee reflecting the Authority's cost of constructing the existing System and a new customer's contribution toward those costs.

- nn. Meter Inspection Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for each inspection of either a water or sewer meter installation used in calculating sewer billing.

- on. Meter Installation Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for having a meter installed and sealed by the Authority when a water meter is used to determine wastewater charges.

- pe. Service Initiation Fee: A non-refundable fee, set forth in the *Schedule of Wastewater Rates and Charges*, due prior to initiation of a new sewer service account for a premises. This fee is established to defray the labor and administrative costs associated with the establishment of the new account. This fee will be waived for initiation of a new sewer service account if a Service Initiation Fee is being charged for establishment of a new water service account for the same premises.

- qp. Service Restoration Charge: A charge, set forth in the *Schedule of Wastewater Rates and Charges*, shall be made for restoring any Service which has been discontinued because of a delinquent account, for violation of these *Rules & Regulations*, or where a customer has requested a temporary discontinuance of Service. This charge shall have two rates - one for situations where the customer requests Service to be restored during business hours and a larger amount, to reflect overtime costs, if the request is for restoration after business hours and on weekends. Once service is terminated, the customer must pay outstanding bills, penalties, interest, the Site Visit Charge and the Service Restoration Charge before service will be restored. Payment must be made by cash, money order or certified check. Since Authority personnel cannot make change when performing a service restoration visit, any overpayment will be credited to the customer's account. If there is restoration of service to another entity's system, the terms of that entity's rules, regulations and policies shall take precedence over

the Authority's and the owner shall be responsible for both the other entity's fees and the Authority fees for restoration of service.

- rq.** Security Deposits: The Authority may require a security deposit in certain circumstances, an example being when the customer has a poor utility payment history. Such deposit will be one and one-half (1.5) times the estimated sewage bill for one billing period. If the customer follows these rules and regulations as stated, including prompt payment of all bills, the Authority will refund the security deposit upon request after one year.
- sr.** Lien Administration Fee: A fee, set forth in the *Schedule of Wastewater Rates and Charges*, for filing a municipal lien. This fee represents the Authority's administrative costs involved with this process, as well as the lien filing fee, and shall be charged in addition to any other fees charged by the appropriate government offices to process the lien.
- ts.** Site Revisitation Charge: A charge set forth in the *Schedule of Wastewater Rates and Charges*, for a return visit by the Authority to perform work or conduct an inspection when the originally scheduled appointment is unable to be completed due to inadequate preparation or follow through by the party requesting the appointment. The Charge will be assessed to the party requesting the appointment.

8. VIOLATIONS AND PENALTIES

- a. Unauthorized use and/or operation of the System is a prohibited activity, subject to the Authority penalties as set forth below. Among such prohibited activities are:
 - (1) Unauthorized Use - an unauthorized sewage discharge to the System for any purpose.
 - (2) Meter Tampering - where any meter seal under control of the Authority, or meter owned by a customer but used for billing purposes, has been broken.
 - (3) Unauthorized Connections - unapproved connections to the System, which include, but are not limited to sump pumps, floor drains, and roof downspouts.
 - (4) Unauthorized Operation of the System - occurrence of any unauthorized operation of or trespass on any Authority facilities, including manholes, cleanouts, pumps, etc.

Any prohibited activity in connection with the System shall be subject to a penalty of Fifty (\$50.00) Dollars per day or a single penalty of Five Hundred (\$500.00) Dollars, whichever is larger unless different penalties are set forth elsewhere in these *Rules & Regulations* or other Authority policies.

- b. Exceeding domestic strength limitations as set forth in §4.d. shall, in addition to any liabilities set forth in §4.d., result in the following penalties:
 - (1) If the property owner does not reduce the strength of the discharge within fifteen (15) days of notification, a penalty of 1.5 times the then current user rate shall be

- due for the volume of wastewater discharged from that property during that time period since the notification.
- (2) If the property owner does not reduce the strength of the discharge within thirty (30) days of notification, instead a penalty of 2.0 times the then current user rate shall be due for the volume of wastewater discharged from that property during that time period since the notification.
 - (3) If the property owner does not reduce the strength of the discharge within forty-five (45) days of notification, instead a penalty of 3.0 times the then current user rate shall be due for the volume of wastewater discharged from that property during that time period since the notification.
 - (4) Payment by the property owner of such penalties shall not convey any right to the property owner to continue discharges in excess of the strength limitations.
- c. In addition to penalties, a charge for all consequential Authority costs and sewer user fees that would have been billed without the prohibited activity may also be levied.
 - d. The application of any penalties shall in no way affect the enforceability of pertinent government statutes, fines and penalties, ordinances or regulations for the same offenses - including those established in the City of Allentown's industrial pretreatment program and sewage and industrial wastes ordinance, where applicable - nor the Authority's ability to take other remedial actions. The right to prosecute any person who shall have committed an unlawful act as a result of any violations is also preserved, including, if applicable, the provisions of §5607(d)(17) of the Municipality Authorities Act that provide for prosecution as a summary offense.
 - e. Notice of Violation: When these *Rules & Regulations* have been violated, the Authority shall give the customer notice of the violation, what the customer must do to remedy the violation and the required deadline for completion of the remedy. If the customer fails to remedy the violation within the schedule set out in the notification, among the actions the Authority may pursue is termination of sewer and/or water service, as applicable, without any further notice, or remedy the situation itself and charge the costs to the customer.
 - f. Supplemental Charges and Actions: The Authority reserves the right to charge against the responsible party any and all expenses incurred in exposing, correcting and/or litigating any violations, as well as any damages suffered by the Authority or other parties as a result of the action. The customer will be assessed a Site Visit Charge each time it becomes necessary for Authority personnel to visit a premises in regard to such a violation, which fee will apply even if the planned action is unable to be completed. Furthermore, in addition to any and all other penalties and damages, the enforcement provisions of the City of Allentown, where applicable, and Authority sewage rules and regulations shall pertain when appropriate.

9. MISCELLANEOUS

- a. Amendments: The Authority reserves the right to amend these *Rules & Regulations* at any time upon proper Board approval and without notice to customers.
- b. Access to Premises: Any authorized employee of the Authority, upon presentation of credentials, shall have access at all reasonable hours to any premises provided with Service by the Authority, for the purpose of reading meters, making inspections and securing such information relative to Service as may be deemed necessary by the Authority.

If such access is not required on an emergency basis, the Authority will contact the occupants of the Premises to arrange a mutually convenient time for accessing the Premises. Failure to allow access or to respond to such notice shall be considered a violation of these Rules & Regulations that are a condition of Service to the Premises and result in a penalty of \$100.00 per month until such access is allowed. Furthermore, the Authority reserves the right to proceed with the provisions of §5607(d)(17) of the Municipality Authorities Act that provide for prosecution as a summary offense.

- c. Emergencies: In the event of an emergency, the Authority reserves the right to restrict or modify Service with or without prior notification. Any customer failing to cooperate with such emergency measures shall be subject to penalties as set out in the Violations and Penalties section.
- d. Waiver: The Authority retains the right to waive provisions of these *Rules & Regulations*, solely at its discretion. The waiver of a provision in one circumstance does not obligate the Authority to waive the same provision under the same or similar circumstances at another time; and further the act of waiving a provision one time shall not be interpreted to compromise the Authority's position in applying that provision at any time before or after such waiver.
- e. City Division; Additional Provisions. The Authority began operation of the sewer system in the City of Allentown as of 8 August 2013 pursuant to the Allentown Water and Sewer Utility Concession and Lease Agreement dated 1 May 2013 (the "Concession Agreement"). This portion of the Authority's system is now referred to as the Authority's City Division versus its other systems being the Suburban Division. The Concession Agreement and accompanying documents, including appropriate City of Allentown Ordinances, may contain provisions applicable to City Division customers that differ from those in these Rules & Regulations. It is the intent to eventually amend the Rules & Regulations to reflect these additional requirements, but that process has not been completed yet. These Rules & Regulations shall apply to City Division customers to the fullest extent possible without conflicting with Concession Agreement requirements that have not yet been incorporated herein. The Authority reserves the right to apply and enforce such Concession Agreement requirements against its customers in the City Division even when not stated in these Rules & Regulations.

Policy Revisions to Reflect Current Employee Structure

With the reorganization and creation of new positions as a result of the concession transaction, there is the need to have the Board take action revising a few policies to reflect the shifting of responsibilities to the proper new position. The table below represents those changes and it is recommended that the Board approve changes to each of those policies as indicated.

Chief Executive Officer - CEO
 Chief Financial Officer - CFO
 Chief Administrative Officer - CAO

Risk Manager - RM
 Computer Systems Administrator - CSA
 IT Manager - ITM
 Human Resource Manager - HRM

<i>Policy</i>	<i>Section/Page</i>	<i>Responsibility</i>	<i>Present Position</i>	<i>Reassigned Position</i>
Internet Use Policy	Page 2	Secure user passwords for the computer system	CFO/CSA	CAO/ITM
Internet Use Policy	Page 3	Review and grant permission for external network connections	CFO/CSA	CAO/ITM
Internet Use Policy	Page 3	Approval of access to sites that impose any additional charges to the Authority	CSA	ITM
CDL Drug & Alcohol Policy	IV B	Testing notifications; Record-keeping	CFO	RM
Computer User Procedures		Various computer system maintenance responsibilities	CSA	ITM
Employee Manual	Page 1	Source for further employee information or questions	CFO	HRM
Employee Manual	Page 4	Recipient for designation by an employee of a third person's access to personal employment record	CFO	HRM
Employee Manual	Ch. 3, §13	Workplace searches for cause determined by department head and CEO or CFO	CFO	CAO
Employee Manual	Ch. 6, §2	Contact for any employee who believes that his/her salary has been	CFO	HRM

		improperly reduced or subject to improper deductions for institution of investigation		
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Employee Manual	Appendix A	Contact for questions with pension	CFO	HRM
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Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 *
(610)398-2503 * FAX (610)398-8413 * Email: ser

MEMORANDUM

Date: July 9, 2014

To: Board of Directors & Management Staff
From: Pat Mandes
Re: KISS Model recalibration

Approvals Requested

Approvals Requested	Brief Description	Amount
Capital Project Authorization Amendment (19) Professional Services Authorization (19)	Consulting Services Arcadis	\$66,000

Background

In 2008, the Department of Environmental Protection (DEP) required LCA and the Signatories to generate a Corrective Action Plan for the areas identified as having significant infiltration and inflow (I&I) conditions. In addition, EPA has issued a Compliance Order to the City of Allentown, LCA and all municipalities tributary to the City WWTP to eliminate all SSOs within a five year period (2014).

The LCA 2009-2017 Signatory I&I Investigation & Remediation Project Capital Plan was developed so that LCA could take the lead in working with the Signatories to address the overload and SSO issues. A Sewer Capacity Assurance & Rehabilitation Program (SCARP) Outline was drafted by Malcolm Pirnie that provides a formalized and planned method of evaluating the LCA and Signatory systems, prioritizing and conducting sewer rehabilitation by all the LCA Signatory Partners.

Project Scope

KISS Model Recalibration – With the permission of the City of Allentown, Arcadis combined the City hydraulic sewer model created by WR&A with the LCA hydraulic sewer model created by Arcadis. The combined planning level model is now referred to as the Klines Island Sewer System Model or “KISS” Model. The integrated model was tested and with the exception of the Park Pump Station (PPS) area where the two models intercept, the model will work well together. The area of the PPS requires further calibration. There are currently 10 flow meters in the area collecting flow data. It is expected that by the end of August we will have adequate data to complete the calibration.

The integrated model will be utilized by LCA for the Western Lehigh Sewerage Partnership (WLSP) SCARP Program, Wastewater Capacity Program, Alternatives evaluation, and future planning related issues. The City will also have the opportunity to utilize the KISS Model as needed. The intention for the alternatives evaluation for both the City and the WLSP to be run through the KISS Model. This will allow a holistic approach to the analysis so that the outcomes of the WLSP alternatives can be used as an input to the City alternatives and vice versa. Each entity needs to be able to determine how their own approach will affect the other’s operation.

The scope of work includes data review, model recalibration, and attendance at a workshop.

**CAPITAL PROJECT AUTHORIZATION
AMENDMENT NUMBER 19**

PROJECT No.: S-08-5 **BUDGET FUND:** WLI Sewer Capital

PROJECT TITLE: Signatory I & I Investigation/Remediation Program **PROJECT TYPE:**

TOTAL PROJECT THIS AUTHORIZATION **Prior:** \$3,750,831
Current: \$66,000

Construction
 Engineering Study
 Equipment Purchase
 Amendment

DESCRIPTION AND BENEFITS:

Full Project Overview:

Based on the EPA Compliance Order and the PADEP Chapter 94 requirements, LCA and the LCA Signatories are required to reduce infiltration and inflow from the system and eliminate SSOs from the LCA and Signatory sewer systems within a five year period (2014). The SCARP Program has been developed to investigate the sources of I & I and to remediate areas identified as having excessive I & I. The SCARP Program consists of engineering tasks necessary to define and quantify the problems, to evaluate methods of redress and to determine the corrective actions required to meet the regulatory requirements.

KISS Model Recalibration:

The Kline's Island Sewer System (KISS) Model was created in early 2014 by combining the LCA's and the City's planning level hydraulic models. This model will be used as a planning tool for the LCA Suburban I & I Program, the LCA Suburban Wastewater Capacity Program, and the LCA City Division I & I Program and will be available for other City Signatories 537 Planning Activities. More specifically, the model will be utilized for the Wet Weather Alternatives Evaluation for both LCA WLI System and the LCA City Division. The Alternatives Evaluation will look at varying combinations of wet weather storage, I & I removal, and pipe rehabilitation to determine which combination is the most cost effective and most effective in reducing SSOs within the system. The combined model looks at the entire City System and allows for the determination of how one system's remedies effects the other systems performance. For example, if one of the City Signatory increases the size of their interceptor and eliminates SSOs within their own system, the model will tell us if the increased flow from the enlarged interceptor will now create the SSOs within the City System instead of the Signatory System. This is a holistic approach.

To enhance the KISS Model into a robust system-wide tool, 10 flow meters have been installed in the area of the Park Pump Station where the two systems intersect. The model will be recalibrated utilizing the data collected.

Previously Approved		This Amendment	Total Approval
Flow Monitoring Temporary	\$ 1,280,950		\$ 1,280,950
Purchase of Flow Meters (9)	\$63,000		\$63,000
Long Term Metering	\$431,081		\$431,081
Engineering Consulting	\$1,665,800	\$66,000	\$1,731,800
Staff	\$300,000		\$300,000
Contingencies	\$10,000		\$10,000
Totals	\$ 3,750,831	\$ 66,000	\$ 3,816,831

REVIEW AND APPROVALS:

Pat Mandes 07/03/14

Project Manager Date General Manager Date

Capital Works Manager Date Chairman Date



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

AMENDMENT NUMBER 19

Professional:

Arcadis U.S., Inc.
Jim Shelton
640 Freedom Business Center
Suite 310
King of Prussia, PA 19106

Date: 7/03/14

Requested By: Pat Mandes

Approvals
Department Head: _____

General Manager: _____

Description of Services (Work Scope, Steps, Check Points, etc.):

This is an amendment to the current Arcadis authorization for the WLI Infiltration and Inflow Project: The work covered by this amendment includes the recalibration of the KISS model based on the flow metering results from temporary flow meters located near the Park Pump Station.

Scope of Work:

Flow and Rainfall Monitoring Data Review

Review of the spring/summer 2014 rain gauge and flow meter data utilizing a time series data management system to ensure appropriate data. Wet weather events will be defined and classified according to local intensity/duration/frequency curves.

Model recalibration:

Dry weather calibration; wet weather calibration; wet weather validation.

Workshop:

The final KISS model results will be presented in two separate three hour workshops.

The total "Not to Exceed" cost is \$66,000. The scope of work is described in more detail in the proposal dated May 12, 2014.

Cost Estimate (not to be exceeded without further authorization): This amendment is not to exceed \$66,000. With this amendment the total authorization for the I&I Program consulting will be \$1,595,000.

Time Table and Completion Deadline:

Project to be completed by the end of mid-October 2014 provided that adequate wet weather flow data can be obtained by the end of August.

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____

Capital Project S-08-05, Signatory I & I Investigation/Remediation Program



Ms. Pat Mandes
Wastewater Services Director
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106

ARCADIS U.S., Inc.
640 Freedom Business Center
Suite 310
King of Prussia
Pennsylvania 19406
Tel 610.768.5813
Fax 610.768.5817
www.arcadis-us.com

Subject:

Kline's Island Sewer System (KISS) Model Recalibration of interceptors from Kecks Bridge to Little Lehigh Interceptor

Dear Ms. Mandes:

The Lehigh County Authority (LCA) planning level model was recently combined with the City of Allentown (City) model developed by WRA to create one integrated Kline's Island Sewer System (KISS) model. ARCADIS is pleased to provide LCA with this scope and budget for the recalibration of portions of the KISS model that were determined to require additional calibration as the LCA and City models were integrated.

Date:

May 12, 2014

Contact:

Tony Dill

Phone:

484.688.0380

Email:

Anthony.Dill@arcadis-us.com

Our ref:

0247-532

OBJECTIVES

The primary goal of this work is to create a robust system-wide tool to support all Kline's Island Wastewater Treatment Plant (KIWWTP) signatories' Act 537 planning efforts, the Western Lehigh Sewer Partnership's (WLSP) Sewer Capacity Assurance and Rehabilitation Program (SCARP) alternatives evaluations, and the City's wet weather program capital program alternatives evaluations. This project is to improve the KISS model's performance where the two original models connect, namely from Kecks Bridge to Park Pump Station and from the confluence of the Allentown Emmaus Interceptor and Little Lehigh Interceptor to near the KIWWTP influent sewer. This work will be conducted utilizing new flow and rainfall data collected by LCA under a separate project.

SCOPE OF WORK

Task 1 – Flow and Rainfall Monitoring Data Review

The accuracy of the flow and rain data collected at ten meter locations during the spring and summer 2014 period will be reviewed to ensure the data are appropriate for calibration and verification. The review will address such issues as meter

imbalance, sensor failure, low flow/level situations, sediment buildup, velocity gain adjustments, siphon impacts, force main influences, pump station fill-drain influences, and loss of storm peaks. We will work with LCA and their flow monitoring sub-consultant (ADS) to resolve problems with flow meter or rain gauge data. A time series data management system (in-house or off-the-shelf) will be used to store and evaluate all flow and rainfall data. During the flow metering period, all data will be validated to identify questionable flow meter and rain gauge data. Wet weather events will be defined and classified according to local Intensity/ Duration/Frequency (IDF) curves. Up to four wet weather events will then be selected for use during the model calibration task.

Task 2 – Model Recalibration

Using the data from Task 1, the KISS model will be recalibrated in the areas defined. Calibration procedures and calibration goal performance will be the same as those used during the LCA planning-level model development. Calibration will be comprised of:

- Dry weather calibration: Calibration of the model to dry weather flows or inter-wet weather events, including diurnal patterns and seasonally varying groundwater infiltration.
- Wet weather calibration: Calibration of the model will be completed for up to four storm events at the ten flow meters throughout the collection system. These events will ideally cover a range of events from smaller storms to significant storm events. The calibration will be completed by adjusting additional parameters to simulate the rainfall-induced flow response of the system for each storm event. Hydrologic parameters will be adjusted as needed to generate volume and peak flow.
- Wet weather validation: Once the model is calibrated, a period *not used for the* calibration will be simulated to assess the validity and robustness of the model calibrations. The model validation period will be taken from available historic data. The use of a storm of record identified by LCA or Allentown staff will be considered if sufficient comparative data are available (e.g., flow data, customer complaint data, etc.). Model results will be compared to available data to assess the model calibrations. Where significant deviations exist, a decision will be made in consultation with LCA whether adjusting the model calibration is warranted.

DELIVERABLES AND WORKSHOP

No reports will be developed during this work. All work products will be presented in workshops in the form of PowerPoint presentations, tables, graphs, model runs, and thematic maps.

For the purposes of this scope and budget, we have assumed one 3 hour workshop at LCA to review the final KISS model results, and one 3 hour workshop with LCA and the City to review KISS model usage moving forward.

BUDGET ESTIMATE

We estimate that the cost of these services will be \$66,000. We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc., dated June 17, 1997, and the current Summary of Standard Charges for Lehigh County Authority. We will not exceed this budget without prior authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred.

Please contact me with your authorization to proceed if this scope and budget are acceptable to you. If you have any questions please do not hesitate to call me at 484-688-0380 or 610-761-3253 (mobile).

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in blue ink that reads "Tony Dill".

Tony Dill, PE, BCEE
Program Manager – Buried Infrastructure Team

C: Jim Shelton, ARCADIS
Tanya McCoy-Caretti, ARCADIS

WASTEWATER
Supplemental Agenda Item

ACTION ITEMS

2. Wastewater Capital Recovery Fees (Approval)

Approval of Resolution 7-2014-1 which updates Capital Recovery Fees for the Western Lehigh Interceptor (WLI), Little Lehigh Relief Interceptor (LLRI) and the Upper Milford Collector (UMC) systems is recommended. In aggregate the WLI and LLRS fees increase by 3.7% and the UMC fees changes vary from, a 35.9% decrease to a 3.1% increase. These fee changes are effective as of July 1, 2014. **(green)**

RESOLUTION No. 7-2014-1

(Duly adopted 14 July 2014)

***A RESOLUTION ESTABLISHING THE VARIOUS COMPONENTS
OF THE LEHIGH COUNTY AUTHORITY
CAPITAL RECOVERY FEES FOR VARIOUS WASTEWATER SYSTEMS.***

WHEREAS, Lehigh County Authority ("Authority") is a Pennsylvania municipal authority incorporated by the County of Lehigh in accordance with the Municipality Authorities Act to provide, among other services, wastewater services; and

WHEREAS, the Authority owns and/or operates wastewater systems throughout the Lehigh Valley of Pennsylvania; and

WHEREAS, the Authority charges certain rates and fees for use of and connection to its systems; and

WHEREAS, the Authority desires to establish its fees in accordance with §5607 of the Municipality Authorities Act, as amended by legislative action in December 2003, setting forth the appropriate fee components; and

WHEREAS, the Authority has calculated the allowable basis for such fees for certain of its wastewater systems in accordance with the attached calculations and its Summary of Tapping, Connection and Customer Facilities Fees (including Exhibits A through D), the current version of which, as well as any future changes thereto, is made a part hereof as if included herein; and

NOW THEREFORE, the Lehigh County Authority, pursuant to powers invested in it by the Pennsylvania Municipality Authorities Act, as amended, hereby resolves that:

1. The capital recovery fees for wastewater service in various of the Authority's wastewater systems as indicated and shown on Summary of Tapping, Connection and Customer Facilities Fees, with supporting calculations reflected on Exhibits A through D, attached hereto and made a part hereof, are adopted effective 1 July 2014.

2. The Authority's Wastewater Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 1 July 2014.

On motion of _____, seconded by _____, this Resolution was adopted the 14th day of July 2014.

LEHIGH COUNTY AUTHORITY
ANNUAL SUMMARY OF TAPPING, CONNECTION AND CUSTOMER FACILITIES FEES
WASTEWATER FUND
EFFECTIVE 7/1/14

Exhibit	Charge	Per Gallon			Per EDU			(1) Gallons per EDU	Costing Method
		Existing Charge	Maximum Charge	New Charge	Existing Charge	Maximum Charge	New Charge		
Interceptor System:									
A	Wastewater Capacity	\$ 5.35	\$ 5.51	\$ 5.51	\$ 1,193.05	\$ 1,228.73	1,229	223	Historical Trended Cost
B	Western Lehigh Interceptor	2.47	2.65	2.65	\$ 550.81	591.37	591	223	Historical Trended Cost
C	Little Lehigh Relief Interceptor	0.91	0.94	0.94	202.93	209.62	210	223	Historical Trended Cost
	Total Western Lehigh Service Area	8.73	9.10	9.10	1,946.79	2,029.72	2,030		
Upper Milford Collector System:									
D	Collection Part	10.35	8.52	8.52	2,432.25	2,002.20	2,002	235	Historical Trended Cost
D	Capacity Part	2.48	1.59	1.59	582.80	373.65	374	235	Historical Trended Cost
D	Capacity Part - Other	0.55	0.55	0.55	129.25	129.25	129	235	Historical plus Financing Costs
D	Capacity Part - Lower Macungie	2.24	2.31	2.31	535.36	552.09	552	239	Historical Trended Cost

(1) The gallons per EDU figure to calculate the per gallon rate has changed with the 2010 census data but the amount sold per EDU remains at 223 gpd with the exception of LMT.

EXHIBIT A
2014 CAPITAL RECOVERY FEES
WASTEWATER TREATMENT CAPACITY

	General Pool	(A) Salisbury Portion	Blended Total
Capacity Cost (6/2009 Purchase)	\$ 1,152,500	\$ 600,000	\$ 1,752,500
ENR Index Increase	1.136628585	1.028047237	
Trended Capacity Cost	\$ 1,309,964	\$ 616,828	\$ 1,926,793
Capacity in Gallons	250,000	100,000	350,000
Calculated Charge per Gallon	\$ 5.24	\$ 6.17	\$ 5.51
Current charge per Gallon			\$ 5.35
Calculation of Gallons per Household:			
2010 Census figure per Household - Lehigh County	2.54		2.54
# of Gallons per day per Capita	90		90
Gallons per EDU	223		223
Charge per EDU (223 gals)	\$ 1,168.52		\$ 1,228.73
Current Charge per EDU			1,193.05

(A) Allocation purchased on 4/18/13 at \$6.00 per gallon.

	General	Salisbury
ENR Index June 2009 (Last Purchase Date)	8,578	
ENR Index Salisbury (5/18/13)		9,484
ENR Index April 2014	9,750	9,750
ENR Index Increase	13.66%	2.80%

**EXHIBIT B
2014 CAPITAL RECOVERY FEES
WESTERN LEHIGH INTERCEPTOR
CAPACITY PART
TRENDING COST METHOD**

	(A) Original Interceptor	(B) Phase II, Stg 1	(C) Phase II, Stage 2	(D) Phase II, Stage 4	(E) Flow Equaliz. Basin	Total System
Project Costs	\$ 5,215,326	\$ 884,097	\$ 6,044,664	\$ 3,327,473	\$ 5,495,586	\$ 20,967,146
Contributions/Grants	(2,536,420)	-	-	-	-	(2,536,420)
	2,678,906	884,097	6,044,664	3,327,473	5,495,586	18,430,726
Trend Factor (H)	5.8001	2.0308	1.6661	1.2933	1.0891	
Trended Value	15,537,974	1,795,448	10,070,997	4,303,338	5,985,474	31,707,756
Outstanding Debt (F)	-	-	(451,761)	-	(4,570,294)	(5,022,055)
Cost Basis	15,537,974	1,795,448	9,619,236	4,303,338	1,415,180	26,685,701
System Capacity (Avg Daily Flow)	7,023,000			3,040,000		10,063,000
Maximum Charge per gallon						\$ 2.65
Rounded Charge per gallon						\$ 2.65
Calculation of Gallons per Household:						
Census figure per Household - Lehigh County						2.54
# of Gallons per day per Capita						90
Gallons per EDU						223
Maximum Charge per EDU						\$ 591.37

(A) Substantial completion 1/1/72.

(B) Substantial completion 5/1991.

(C) Spring Creek PS and Force Main - Substantial completion 1/1/98. No capacity added by this project due to downstream limitations.

(D) Substantial completion 9/1/05. System Capacity is 7 mgd / 2.3 peaking factor.

(E) Includes actual costs through 12/31/12. Substantial Completion was 12/1/10.

(F) As of 4/30/14

(G) ENR Index:

Substantial Completion	1,681	4,801	5,852	7,539	8,952
Apr 2014	9,750	9,750	9,750	9,750	9,750

(H) Substantial completion 10/24/08.

**EXHIBIT C
2014 CAPITAL RECOVERY FEES**

TRENDING COST METHOD

	Phase 2, Stage 1
Project Cost	\$ 4,750,332
Contributions	(583,221)
Less: Outstanding Debt	-
Total Cost Basis	\$ 4,167,111
Trending Factor (2)	2.2512
Trending Cost Basis	\$ 9,381,051
System Capacity (Avg. Daily Flow)	(1) 10,000,000
Maximum Charge per gallon	\$ 0.94
Rounded Charge per gallon	\$ 0.94
Calculation of Gallons per Household:	
Census figure per Household - Lehigh County	2.54
# of Gallons per day per Capita	90
Gallons per EDU	223
Maximum Charge per EDU	\$ 209.62
(1) PPS Peak flow of 24 MGD / 2.4 peaking factor.	
(2) ENR Index 12/31/86 (Substantial Completion)	4,331
ENR Index Apr 2014	9,750

Exhibit D
2014 UPPER MILFORD CONNECTION FEE SUMMARY

Fee	Cost per Gallon		Cost per 1000 Gallons		Costing Method
	Existing Charge	New Charge	Existing Charge	New Charge	
Collection Part	\$ 10.35	\$ 8.52	\$ 10,350.00	\$ 8,520.00	Historical Cost Treated
Capacity Part (F)	\$ 2.48	\$ 1.59	\$ 2,480.00	\$ 1,590.00	Historical Cost Treated
Non-UMiT Interceptor Use:					
Capacity Part	\$ 0.55	\$ 0.55	\$ 550.00	\$ 550.00	Historical Cost plus Financing
UMiT Interceptor Use (C):					
Total Cost per EDU (A)	\$ 5,291.79	\$ 4,534.40	\$ 22,110.00	\$ 19,760.00	
Total Cost per MFR (B)	\$ 4,622.79	\$ 3,532.36			
Other UMiT Areas:					
Total Cost per EDU (A)	\$ 129.25	\$ 129.25			
Total Cost per MFR (B)	\$ 77.55	\$ 77.55			
Lower Macungie (E):					
Total Cost per EDU	\$ 535.36	\$ 552.09			
WLI Fees (D)	\$ 8.73	\$ 9.10	\$ 8,730.00	\$ 9,100.00	

(A) Upper Milford EDU = 250 gallons in 2011 and 235 gallons in 2012.

(B) 2013 MFR for Upper Milford fees equates to 134 gallons per day or 60% of EDU.

(C) Includes Upper Milford & WLI fees.

(D) Wastewater Capacity and Interceptor fees for a 2012 EDU equates to 223 gallons because fees are sold across municipal lines.

(E) Represents the capacity charge to a Lower Macungie resident connecting to the Upper Milford Interceptor System.

(F) Only applies to connections where flow is transported by Upper Milford interceptors.

EXHIBIT D
2014 CAPITAL RECOVERY FEES
UPPER MILFORD TOWNSHIP
RT 29 AREA - COLLECTION & CAPACITY PARTS
TRENDING METHOD

Project Costs: (A)	
Rt. 29 Project Cost & Capitalized Interest	\$ 1,646,084
South 7th Street - Ph - 1	204,222
South 7th Street - Ph - 2	233,261
Ramer Heights Project & Capitalized Interest	148,811
Vera Cruz Project Costs thru 4/30/14	4,475,600
Project Costs Total: (A)	\$ 6,707,978
Less federal Grant Vera Cruz (E)	(1,309,500)
Less State Grant Vera Cruz (E)	(1,000,000)
Less Federal Grant - S. 7th St - Ph 1	(172,100)
Less Federal Grant - S. 7th St - Ph 2	(206,649)
Net Project Cost	4,019,729

ENR Index Change (B)	
Rt 29 Project	2.1113 3,475,383
Ramer Heights Project	1.9559 291,055
South 7th Street - Ph - 1	1.1426 36,703
South 7th Street - Ph - 2	1.0893 28,987
Vera Cruz	1.0359 2,243,888
Cost Basis	6,076,017
Outstanding Debt 4/30/14 (D)	(2,166,100)
Cost Basis for Capital Recovery Fee	\$ 3,909,917

% of Collector Cost	84.3%	\$ 3,294,211
% of Capacity Cost (C)	15.7%	\$ 615,706

System Capacity 386,669

Cost per Gallon - Collector Part \$ 8.52

Cost per Gallon (Rounded) - Collector Part \$ 8.52

Cost per Gallon - Capacity Part \$ 1.59

Cost per Gallon (Rounded) - Capacity Part \$ 1.59

EXHIBIT D
2014 CAPITAL RECOVERY FEES
UPPER MILFORD TOWNSHIP
RT 29 AREA - COLLECTION & CAPACITY PARTS
TRENDING METHOD

Calculation of Gallons per Household:

Census figure per Household - UMiT	2.61
# of Gallons per day per Capita	90
Gallons per EDU	234.9
Gallons per EDU Rounded	235

Cost per EDU - Collector Part **\$ 2,002.20**

Cost per EDU - Capacity Part **\$ 373.65**

Gallons per MFR (60% of EDU)	141
Gallons per MFR Rounded	141

Cost per MFR Unit - Collector Part **\$ 1,201.32**

Cost per MFR Unit - Capacity Part **\$ 224.19**

NOTES:

A) Excludes treatment capacity purchases & capitalized interest.

<u>(B) ENR Index</u>	<u>Subs. Comp</u>	<u>ENR</u>	<u>ENR 4/1/14</u>	<u>ENR Chg</u>
Rt 29 System	8/22/89	4,618	9,750	2.1113
Ramer Heights	12/15/92	4,985	9,750	1.9559
S. 7th St - Ph 1	1/26/09	8,533	9,750	1.1426
S. 7th St - Ph 2	10/15/10	8,951	9,750	1.0893
Vera Cruz	12/31/12	9412	9,750	1.0359

C) Includes 100% of sewers transporting sewage from a collector system to an interceptor.

D) If projects are built to serve exclusively new customers, outstanding debt does not need to be subtracted.

E) Costs incurred and grants as of 4/30/14.

EXHIBIT D
2014 CAPITAL RECOVERY FEE
UMIT CAPACITY OTHER
CARRYING COST METHOD

Unreimbursed Planning Costs (B)	\$ 183,425
Less: Contributions	-
Less: Outstanding Debt	-
Plus: Financing & Interest Expenses (A)	30,306
Total Cost Basis	\$ 213,731

System Capacity:	
Ultimate UMiT flow in gals.(C)	386,669
Planning Charge per Gallon	\$ 0.5527
Planning Charge per Gallon (Rounded)	\$ 0.55
Existing Charge per Gallon	\$ 0.55

Calculation of Gallons per Household:

Census figure per Household - Upper Milford	2.61
# of Gallons per day per Capita	90
Gallons per EDU	234.9
Gallons per EDU Rounded	235

Planning Charge per EDU	\$ 129.25
Existing Charge per EDU	\$ 129.25

(A) Includes interest expense (\$29,122) thru 11/12/99 on \$77,487 borrowed as part of December 1991 loan and the portion of prorated financing costs \$1,184.

(B) Planning costs thru 12/31/11. Excludes costs for LMT agreement (1993 = \$3,696 & 1994 = \$2,820).

(C) Reflects limiting agreement capacity (225,000 gals) plus allocation added as part of Vera Cruz project.

Exhibit D
2014 CAPITAL RECOVERY FEES
LOWER MACUNGIE CONNECTIONS TO UMIT INTERCEPTOR
TRENDING METHOD

Project Costs: (A)	
Rt. 29 Project Cost	\$ 1,646,084
ENR Index Increase (B)	2.1113
Cost Basis	\$ 3,475,383
Less O/S Debt (C)	-
Project Cost Basis	<u>\$ 3,475,383</u>
% of Project applicable to LMT Interceptor	24.79%
LMT Interceptor Cost Basis	\$ 861,547
Avg Day Capacity in GPD (D)	373,632
Charge per Gallon	\$ 2.31
Calculation of Gallons per Household:	
Census figure per Household - LMT	2.65
# of Gallons per day per Capita	90
Gallons per EDU	239
Maximum charge per EDU	\$ 552.09
Maximum charge per MFR (E)	\$ 331.25

NOTES:

(A) Includes Capitalized interest but excludes treatment capacity purchases.

<u>(B) ENR Index</u>	<u>Subs. Comp</u>	<u>ENR</u>	<u>ENR 4/1/14</u>	<u>ENR Chg</u>
Rt 29 System	8/22/89	4,618	9,750	2.1113

(C) Since the projects were built to serve exclusively new customers, outstanding debt does not need to be subtracted.

(D) Equates to 1.5 mgd / 4 peaking factor.

(E) Based on 2011 water usage in LMT, an MFR (Apts/Mobile Homes) uses 60% the amount of water of an EDU (SFA/SFD)