



LEHIGH COUNTY AUTHORITY

LCA Main Office:
1053 Spruce Road
Wescosville, PA 18106
610-398-2503

Agendas & Minutes Posted:
www.lehighcountyauthority.org

Published: September 16, 2019

BOARD MEETING AGENDA – September 23, 2019

1. Call to Order

- NOTICE OF MEETING RECORDINGS

Meetings of Lehigh County Authority's Board of Directors that are held at LCA's Main Office at 1053 Spruce Road, Wescosville, PA, may be recorded for viewing online at lehighcountauthority.org. Recordings of LCA meetings are for public convenience and internal use only and are not considered as minutes for the meeting being recorded, nor are they part of public record. Recordings may be retained or destroyed at LCA's discretion.

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

- *September 9, 2019 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2020 Budget Review (Discussion)*
- *LCA Pension Program – 2020 Minimum Municipal Obligation (MMO) – Information Only (yellow)*

WATER

- *Change Order Request – Suburban Division – Water Meter Reading Equipment Upgrade (Approval) (pink)*

WASTEWATER

- *Western Lehigh Service Area – Hydraulic Flow Model Recalibration (Approval) (blue)*

6. Monthly Project Updates / Information Items (1st Board meeting per month)

7. Monthly Financial Review (2nd Board meeting per month) – **August report attached**

8. Monthly System Operations Overview (2nd Board meeting per month) – **August report attached**

9. Staff Comments

10. Solicitor's Comments

11. Public Comments / Other Comments

12. Executive Sessions

13. Adjournment

UPCOMING BOARD MEETINGS

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

October 7, 2019

October 21, 2019

November 11, 2019

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES

September 9, 2019

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, September 9, 2019, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Jeff Morgan, Richard Bohner, Norma Cusick, Ted Lyons and Amir Famili. Authority Staff present were Liesel Gross, Brad Landon, Chuck Volk, Ed Klein, Pat Mandes, Chris Moughan, Susan Sampson, Todd Marion, and Lisa Miller.

Chairman Nagle announced that today's Board meeting is being videotaped and streaming live and recordings will be posted to the Authority's website.

Mr. Nagle also announced that the Board received their packet in the mail prior to the meeting.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the agenda and there are no action or discussion items. There will be an Executive Session at the end of the regular meeting to discuss matters of potential litigation.

APPROVAL OF MINUTES

August 26, 2019 Regular Meeting Minutes

Richard Bohner noted a minor grammatical error. On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the August 26, 2019 meeting as corrected (7-0).

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

None.

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross highlighted items for the meeting on September 23, 2019 noting that the resolution for the Suburban Division Water Tapping Fees should be ready for the meeting. A review of the 2020 Budget will also be on the agenda for discussion. Also for the next meeting on September 23rd, under action items for Water, a Change Order Request for the Suburban Division – Water Meter Reading Equipment Upgrade is requested for approval and under action items for Wastewater, the Hydraulic Flow Model Recalibration in the Western Lehigh Service Area is ready for approval. There were no questions regarding the report.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Chairman Nagle called a recess at 12:04 p.m. The meeting reconvened at 12:06 p.m.

EXECUTIVE SESSION

An Executive Session was held at 12:06 p.m. to discuss matters of potential litigation.

Scott Bieber arrived at 12:42 p.m.

The Executive Session ended at 1:51 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:51 p.m.

Richard H. Bohner
Secretary



LEHIGH COUNTY AUTHORITY 1053 SPRUCE ROAD - P.O. BOX 3348 - ALLENTOWN, PA 18106-0348
610-398-2503 - FAX 610-351-8363

MEMORANDUM

Date Presented: September 5, 2019
To: Lehigh County Authority Board of Directors
From: Edward Klein, Chief Financial Officer
Subject: 2020 Minimum Municipal Obligation (MMO) for the Lehigh County Authority Pension Plan (39-448-6N)

Act 205 of 1984, as amended, governs the funding requirements for all municipal pension plans. The law requires the Chief Administrative Officer of each pension plan to inform the governing board of the municipality of the plan's expected financial obligation for the coming year. This must be done by the last business day in September.

The calculation of the 2020 MMO required an estimate of the 2019 W-2 wages of the employees covered by the plan. I have indicated on the attached worksheet my best estimate of the same. Questions on the pension cost calculation may be addressed to either myself or the Pennsylvania Municipal Retirement System at (800) 622-7968.

The MMO is the municipality's 2020 bill for this pension plan and must be paid by December 31, 2020. The obligation must be met with general fund monies or with any General State Aid to Municipal Pensions to which we may be entitled to under Act 205.

Edward Klein
Chief Financial Officer
edwardklein@lehighcountyauthority.org
(610) 398-2503, extension 160

Attachment: 2020 MMO Worksheet

The Minimum Municipal Obligation Worksheet (MMO)

For The

Lehigh County Authority Pension Plan (39-448-6 N)

For Plan Year 2020

CHARGES

Estimated 2019 W-2 Payroll For Covered Plan Members:	(A)	\$10,114,304	
PMRS Determined Normal Cost Expressed as a Decimal:	(B)	.1201	
RESULT: (A) * (B) =			(C) \$1,214,728
Administrative Charge (PMRS Determined) # of Plan Members times \$20:			(D) 4,060
Amortization of Unfunded Liability (PMRS Determined)			(E) 371,205
TOTAL CHARGES: (C) + (D) + (E) =			(F) \$1,589,993

CREDITS

Repeat Estimated 2019 W-2 Payroll For Covered Plan Members:	(A)	\$10,114,304	
Employee Contribution Rate Expressed as a Decimal:	(G)	.01	
RESULT: (A) * (G) =			(H) \$101,143
Amortization of the Actuarial Surplus (PMRS Determined)			(I) 0
TOTAL CREDITS: (H) + (I) =			(J) \$101,143

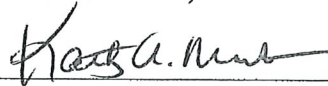
MINIMUM MUNICIPAL OBLIGATION

(Based on 01/01/2017 Actuarial Valuation)

(MMO) \$1,488,850

Equals TOTAL CHARGES Minus

TOTAL CREDITS (F) - (J) = (Please round numbers to dollars)

Prepared By: Kathy A. Martin (Name)  (Signature)
Human Resources Manager (Title) () 610 398-2503 (Telephone #)

Please complete the above worksheet with your best estimates and return a copy to the Pennsylvania Municipal Retirement System by October 4. The official copy must be shared with the plan's governing board by the last business day in September.

MEMORANDUM

Date: September 23, 2019

To: Lehigh County Authority Board of Directors
From: Amy Kunkel, Capital Works Project Engineer
Subject: Suburban Division – Water Meter Reading Equipment Upgrade –
Construction Phase Change Order 1

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase Amendment No. 1	\$1,317,800.00
2	Core and Main, LP – Construction Phase Change Order (*)	\$1,207,800.00

(*) Included in Capital Project Authorization

BACKGROUND:

The project consists of the replacement of approximately 10,000 existing water meter radio read units (MXUs) with new Smartpoint radio units. This is the first phase of a two-year project to replace 100% of the MXUs in the Suburban Division. The previous generation of MXU units were expected to have a 7-year battery life. Approximately 1,000 transceiver units no longer work and cannot be read, and more continue to fail as they reach the end of their useful life. The new type of transceiver units have a longer (20 year) battery life and are compatible with the new meter reading software purchased in 2017. Moving forward, implementation of a fixed base meter reading system is anticipated.

CHANGE ORDER SUMMARY:

This construction phase change order is for the replacement of approximately 7,500 additional water meter radio units (MXUs) with new Smartpoint units. This is a contract extension to complete the second phase of a two-phase project to replace 100% of the MXUs in the Suburban Division. The original plan was to complete the second phase in 2020. By including the second phase of the replacements in a change order to this year's contract, we save the costs and time associated with bidding another project in 2020 and the unit price for the work remains the same (prices would more than likely increase in 2020). The contractor for the current project has been professional and expedient and we are pleased with their work.

FUNDING:

The Project is funded by the LCA Suburban Division.

BUDGET AMENDMENT:

Not anticipated.

PROJECT STATUS:

Construction of the first phase of the project is approximately 70% complete.

PROJECT SCHEDULE:

It was originally anticipated that the project would be completed by December 2019. The contractor is ahead of schedule but the additional work will extend into the first quarter of 2020.

FUTURE AUTHORIZATIONS:

None anticipated.

CAPITAL PROJECT AUTHORIZATION AMENDMENT NO. 1

PROJECT NO.:	SD-W-19-3	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Suburban Division Water Meter Reading Equipment Upgrade – Construction Phase -	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$1,317,800.00		
TO DATE (W/ ABOVE)	\$3,281,092.91		

CONTRACT AMENDMENT NO. 1 – CONSTRUCTION PHASE CHANGE ORDER

DESCRIPTION AND BENEFITS:

This construction phase change order is for the replacement of approximately 7,500 additional water meter radio units (MXUs) with new Smartpoint units. This is a contract extension to complete the second phase of a two-phase project to replace 100% of the MXUs in the Suburban Division. The unit price for the work remains the same as in the first phase.

Please see attached Board Memo for further project details.

Authorization Status:

Previous Authorizations	
<i>Construction Phase</i>	<i>\$1,963,292.91</i>

REQUESTED THIS AUTHORIZATION	
Construction Phase	
<i>Construction Phase Contract Amendment No. 1</i>	
General Contractor: Core and Main, LP	\$1,207,800.00
Staff	\$45,000
Contingency	\$65,000
Total This Authorization	\$1,317,800.00

Future Authorization	None Anticipated
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<i>Total Estimated Project</i>	<i>\$3,281,092.91</i>
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REVIEW AND APPROVALS:

Project Manager	Date	Chief Executive Officer	Date
Chief Capital Works Officer	Date	Chairman	Date

**Lehigh County Authority**

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

MEMORANDUM

Date: September 16, 2019

To: LCA Board of Directors
Liesel Gross, CEO

From: Pat Mandes, Chief Compliance Officer

RE: WLI Signatory I&I Program / 2019 Model Recalibration

Approvals Requested	Amount
<u>Capital Project Authorization Amendment</u> 2019 Hydraulic Model Recalibration	\$365,000
<u>Professional Services Authorization*</u> Arcadis	\$365,000
<u>2019 Budget Amendment – Suburban Wastewater Capital Budget</u>	\$245,000

* Included in Capital Project Authorization

Background

In 2008, the Pa. Department of Environmental Protection (DEP) required LCA and the Western Lehigh sewer signatories to generate a corrective action plan for the areas identified as having significant infiltration and inflow (I&I) conditions. The municipalities formed the Western Lehigh Sewerage Partnership (WLSP) and developed the Sewer Capacity Assurance & Rehabilitation Program (SCARP) to provide a formalized and planned method of evaluating the LCA and signatory sewer systems, prioritizing and conducting sewer rehabilitation by all WLSP communities – LCA, Upper Macungie, Lower Macungie, Weisenberg, Lowhill and Upper Milford townships, and Macungie and Alburtis boroughs.

To support this work, flow metering was conducted in 2008 and a hydraulic model was developed in 2009. In 2014, this hydraulic model was recalibrated using data gathered for adjoining sewer systems in the City of Allentown and surrounding communities. In 2018, LCA and all the municipalities in the Kline's Island Sewer System submitted a Regional Flow Management Strategy to the U.S. Environmental Protection Agency and to DEP which included commitment to conduct flow monitoring and additional flow characterization work in the years ahead. Due to the plans and needs of the WLSP communities, LCA and the WLSP partners began this monitoring in 2019.

In January 2019, flow meters were installed in locations throughout the WLSP service area. This flow monitoring was necessary for the hydraulic model to be recalibrated. This model calibration is beginning ahead of schedule and was not included in LCA's 2019 Budget for the Suburban Wastewater capital program. LCA expects to complete about 2/3 of the work in 2019, with the remainder to be completed in early 2020.

Project Scope

2019 Model Recalibration Scope – Arcadis will recalibrate the sewer system hydraulic model that was built and calibrated using the 2009 flow and rainfall data. The flow metering and rainfall data collected since January of 2019 will be used to recalibrate the model. This is intended to provide a more accurate reflection of the current system's response to rainfall events and will include updates to the sewer system data including growth, sewer system upgrades, and other rehab work completed since 2009. The model will also be used to estimate average dry day flows and predict peak wet weather impacts.

Physical changes will be made to the model dictated by infrastructure constructed since the 2009 model was developed. Calibration will be comprised of dry weather calibration and wet weather calibration (using data from four storm events) as well as validation of the groundwater module calibration using data from 2017 through 2019. The model recalibration is an important tool for the WLSP community and will be used to evaluate future infrastructure projects such as the Trexlertown Wastewater Storage Facility and other future conveyance capacity improvements that will be required over the next several years. In 2021, when the City of Allentown and its other signatories conduct future flow monitoring as described in the Regional Flow Management Strategy, the WLSP flow model will be combined with that data to create a fully recalibrated model of the Kline's Island Sewer System.

**CAPITAL PROJECT AUTHORIZATION
AMENDMENT NUMBER 28**

PROJECT No.:	<u>S-08-5</u>	BUDGET FUND:	<u>WLI Sewer Capital</u>
PROJECT TITLE:	<u>Signatory I & I Investigation/Remediation Program</u>		PROJECT TYPE:
TOTAL PROJECT	Prior:	\$7,331,331	<input type="checkbox"/> Construction
THIS AUTHORIZATION	Current:	\$365,000	<input type="checkbox"/> Engineering Study
			<input type="checkbox"/> Equipment Purchase
			<input checked="" type="checkbox"/> 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. 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. In 2019, EPA passed oversight of the program to PADEP.

2019 SCARP Model Recalibration Scope:

The work completed by the Arcadis, the LCA I & I Program Consultant includes the following:

Task 1: Model Calibration

Both the dry and wet weather calibration will be completed.

Task 2: Model Validation

The wet weather and dry weather results will be compared with actual weather conditions and adjustments made.

Task 3: Model Calibration Report

Task 4: Model Results Report and Workshops

Observed changes in flows between 2009 and 2019 will be documented.

Previously Approved		This Amendment	Total Approval
Flow Monitoring ADS (thru 2014)	\$1,775,031		\$ 1,775,031
Flow Monitoring TFE	\$683,000		\$683,000
Engineering Consulting	\$2,933,300	\$365,000	\$3,298,300
Rehabilitation	\$1,590,000		\$1,590,000
Staff	\$660,000		\$660,000
Contingencies	\$20,000		\$20,000
Totals	\$7,331,331		\$7,696,331

REVIEW AND APPROVALS:

<u>Pat Mandes</u>	<u>8/21/2019</u>		
Chief Compliance Officer	Date	Chief Executive Officer	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 32

Professional:

Arcadis
Jim Shelton
1128 Walnut St.
Philadelphia, PA 19107

Date: 9/16/19

Requested By: Pat Mandes

Approvals

Department Head:

Chief Executive

Officer:

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 **2019 SCARP Model Recalibration Scope**. The objective is to recalibrate the model to evaluate competing effects of growth and rehabilitation work realized since the original model was built and calibrated in 2009. The recalibration will provide a more accurate reflection of the interceptor's response to rainfalls. This will allow us to predict peak wet weather impacts under both the pre-2018 and the 2018/2019 groundwater conditions.

- **TASK 1 – CALIBRATE THE MODEL**

Both the dry and wet weather calibration will be completed. The wet weather will be comprised of four storm events. The model predicted overflows will be compared to real overflow events.

- **TASK 2 – WET WEATHER AND DRY WEATHER VALIDATION**

The wet and dry weather model results will be compared with actual weather conditions and adjustments made.

- **TASK 3 – MODEL CALIBRATION REPORT**

A report will be prepared that documents the decisions regarding the model calibration.

- **TASK 4 – MODEL RESULTS REPORT AND WORKSHOP**

A report will be prepared that documents the observed changes in flows between 2009 and 2019. Several workshops will occur to review the 2019 recalibrated KISS model results.

The scope of work is described in more detail in the attached proposal dated August 16, 2019.

Cost Estimate (not to be exceeded without further authorization): This amendment is not to exceed \$365,000 for Model Recalibration.

Time Table and Completion Deadline:

It is expected that this will take place in the last quarter of 2019 and 1st quarter of 2020.

(For Authority Use Only)

Authorization Completion:

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

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

Arcadis U.S., Inc.
1128 Walnut St., 4th Floor
Philadelphia
Pennsylvania 19107
Tel 215.931.4372
www.arcadis-us.com

Ms. Pat Mandes
Chief Compliance Officer
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106

Subject:

Kline's Island Sewer System (KISS) 2019 Model Recalibration Scope and Budget

Dear Ms. Mandes:

The Lehigh County Authority (LCA) planning level model was previously combined with the City of Allentown (City) model 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 the WLSP portion of the KISS model using the rainfall and flow data collected during the 2019 monitoring period.

OBJECTIVES

The primary goal of this work is to recalibrate the model to evaluate competing effects of growth and of rehabilitation work realized since the original WLSP model was first built and calibrated using 2009 flow and rain data. The re-calibrated model is primarily intended to provide a more accurate reflection of the current system's response to rainfall events. Given the extremely high volume but low intensity rainfall experienced both nationally and locally since early 2018, the model will also be used to estimate average dry day flows when/if a return to normal rainfall patterns (i.e., pre-2018) as well as allow us to predict peak wet weather impacts under both pre-2018 and 2018/2019 groundwater conditions.

Future phases of modeling effort may include revisiting future flow projections and estimating future changes in infiltration and inflow (I/I) due to planned rehabilitation projects. The model will be used as the basis to refine and confirm the wet weather capital program and alternatives evaluations. It will also be used to support evaluations of flow impacts at the Pretreatment Plant, at Kline's Island Wastewater Treatment Plant, and in the interceptors of LCA. Because only 25% of the KISS is covered by this calibration, flow impacts at KIWWTP and in the interceptors of the

This proposal and its contents shall not be duplicated, used or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of — or in connection with — the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.

Date:
8/16/2019

Contact:
Anthony J. Dill

Phone:
215.931.4372

Email:
Anthony.Dill@arcadis.com

Our ref:
66000247.0000

City of Allentown will only be broadly approximated. These works will be conducted utilizing new 2019 flow and rainfall data collected and validated under separate projects.

PROPOSED SCOPE OF SERVICES

Arcadis will make any physical changes to the KISS model dictated by new infrastructure constructed or modified since the 2009 model was developed. This will include current control logic for the FEB, SCPS (including its new comminutor and control structures), PPS pump curves (including new control logic), new pump stations in Upper Macungie Township, and any sewer extensions installed.

Using the flow and rainfall data collected and validated under separate, previously authorized projects, reliable and useful Signatory Sewage Billing data, and LCA SCADA data for KIWWTP, SCPS, FEB, PPS, and Meter Station 5, Arcadis will recalibrate the KISS model. Calibration procedures and calibration goal performance will be the similar to those used during the LCA planning-level model development, with the exception that the model will also be verified against 2017 flow to ensure the groundwater module of the model adequately reflects the extreme changes in base infiltration experienced in the last 18 months. 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 utilizing the 50 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, including observed surcharge conditions. Hydrologic parameters will be adjusted as needed to generate volume and peak flow, and hydraulic parameters for peak depth. Model predicted overflows will be compared to available documentation regarding the date, location and root cause of overflow events.
- 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

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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.

- Dry weather validation: Once the model is calibrated, the 2017 rainfall period will be simulated to assess the validity and robustness of the model groundwater module calibrations. Model results will be compared to available 2017 flow data (i.e. Pretreatment Plant, KIWWTP, Spring Creek PS, Park PS, and Meter Station 5) to assess the model ability to manage the wide range of groundwater conditions, and adjustments to groundwater calibrations will be made as appropriate.
- Model Calibration Report: As the model calibration is finalized, we will prepare a report that documents decisions made and sources of information used to calibrate the model. This report will provide useful information to future users of the model; it is anticipated that from time to time the model may require updates/recalibration for physical changes to the pipe network, rehabilitation work to eliminate I&I sources, and changes in customer flows.
- Model Results Report: Upon completion of the model validation work, we will prepare a report that documents the observed changes in hydraulic flows between 2009 and 2019. The hydraulic model's measured difference of groundwater impacts on system performance will be evaluated. The report will include a description of the model validation periods used, hydraulic profiles in select areas, maps showing predicted overflow locations/volumes, and a summary table documenting changes in manhole depth/overflow volume for selected manholes. A 10-year design storm will be used for the purposes of comparison for wet weather flow conditions (at Pretreatment Plant, KIWWTP, Spring Creek PS, Park PS, and Meter Station 5) under 2009, 2017 and 2019 groundwater conditions. Dry weather flow conditions will also be compared at these locations under 2009, 2017 and 2019 groundwater conditions.
- Workshops: We have assumed three 2-hour workshops at LCA to review and discuss the 2019 recalibrated KISS model results with LCA and the WLSP.

BUDGET

We estimate that the cost of these services will be \$365,000. 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

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Ms. Pat Mandes
August 16, 2019

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 215-931-4372 or 610-761-3253 (mobile).

Sincerely,

ARCADIS U.S., Inc.



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

Cc: Jim Shelton, Arcadis

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(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

BUDGET AMENDMENT REQUEST

Date: 09/09/2019

Type:	Transfer	
	Addition	X
	Deletion	

Requested By: Edward C. Klein

Approved By: _____

Budget	\$0
Amount	\$245,000

	<u>Budget</u>	<u>Spending YTD Aug</u>	<u>Forecast Sep-Dec</u>	<u>Total Forecast</u>	<u>Variance</u>
SUBURBAN WASTEWATER					
2019 Flow Model Recalibration	-	-	-	245,000	(245,000)

Budget Amendment is requested for the costs of recalibration of the Flow Model for the Suburban Wastewater System. The flow model will be recalibrated by Arcadis with \$245,000 estimated to be spent in 2019.

**LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS
AUGUST 2019**

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUMMARY
AUGUST 2019

MONTH						YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Year	FC Var	PY Var		Actual	Forecast	Prior Year	FC Var	PY Var	Forecast	Budget	Prior Year	Bud Var	PY Var
					AUGUST 2019										
					Income Statement										
44,869	28,852	(4,291)	16,017	49,160	Suburban Water	594,731	566,519	247,948	28,212	346,783	281,095	236,452	1,813,064	44,643	(1,531,969)
803,555	746,595	(264,649)	56,960	1,068,204	Suburban Wastewater	551,580	501,175	(671,288)	50,405	1,222,868	(233,260)	(969,731)	(743,133)	736,471	509,873
253,262	232,019	(964,921)	21,243	1,218,183	City Division	(1,061,226)	(1,087,208)	(3,379,699)	25,982	2,318,473	(3,937,684)	(4,036,377)	(6,134,152)	98,693	2,196,468
1,101,686	1,007,466	(1,233,862)	94,220	2,335,548	Total LCA	85,085	(19,514)	(3,803,040)	104,599	3,888,125	(3,889,849)	(4,769,656)	(5,064,221)	879,807	1,174,372
					Cash Flow Statement										
(474,557)	(732,026)	872,582	257,469	(1,347,139)	Suburban Water	2,030,139	1,348,468	3,698,902	681,671	(1,668,763)	(321,930)	(2,378,358)	(287,896)	2,056,428	(34,034)
1,172,349	(762,722)	(587,897)	1,935,071	1,760,246	Suburban Wastewater	(2,877,858)	(5,533,627)	1,649,186	2,655,769	(4,527,044)	(1,486,212)	(3,026,596)	2,533,964	1,540,384	(4,020,176)
2,184,217	2,410,019	1,496,716	(225,802)	687,501	City Division	4,544,533	4,700,700	2,647,949	(156,167)	1,896,584	2,135,568	2,127,423	8,179,138	8,145	(6,043,570)
2,882,009	915,271	1,781,401	1,966,738	1,100,608	Total LCA	3,696,814	515,541	7,996,037	3,181,273	(4,299,223)	327,426	(3,277,531)	10,425,206	3,604,957	(10,097,780)
					Debt Service Coverage Ratio										
1.51	1.42	1.36	0.09	0.15	Suburban Water	1.61	1.59	1.48	0.02	0.13	1.41	1.40	1.39	0.01	0.02
21.50	20.11	2.74	1.38	18.76	Suburban Wastewater	8.43	8.27	6.07	0.16	2.37	6.60	5.52	5.75	1.08	0.85
1.82	1.79	1.02	0.03	0.79	City Division	1.45	1.45	1.41	-	0.04	1.40	1.37	1.65	0.03	(0.25)

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MONTH					YEAR-TO-DATE				FULL YEAR FORECAST			
Suburban Water	Suburban Wastewater	City Division	LCA TOTAL		Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL
				AUGUST 2019 INCOME STATEMENT								
				Operating Revenues								
804,030	1,236,772	3,488,400	5,529,202	Charges For Services	6,383,868	9,561,206	24,875,923	40,820,997	9,785,911	14,425,933	37,090,226	61,302,070
10,134	-	-	10,134	Rent	83,535	-	-	83,535	111,213	-	-	111,213
10,571	-	60,379	70,950	Other Income	63,213	-	335,213	398,426	100,621	-	531,111	631,732
824,735	1,236,772	3,548,779	5,610,286	Total Operating Revenues	6,530,616	9,561,206	25,211,136	41,302,958	9,997,745	14,425,933	37,621,337	62,045,015
				Operating Expenses								
125,853	70,002	637,811	833,666	Salaries and Wages	719,460	380,698	3,817,902	4,918,060	1,022,669	556,785	5,606,749	7,186,203
88,206	47,310	491,677	627,193	General and Administrative	922,043	435,373	4,689,156	6,046,572	1,418,704	627,662	6,761,873	8,808,239
38,036	32,158	158,435	228,629	Utilities	307,373	292,278	1,488,452	2,088,103	601,683	422,393	2,118,481	3,142,557
26,236	24,755	121,396	172,387	Materials and Supplies	221,586	214,005	801,493	1,237,084	492,663	350,914	1,574,483	2,418,060
199,374	499,106	62,729	761,209	Miscellaneous Services	1,581,478	4,149,409	1,002,500	6,733,387	2,866,526	6,405,866	2,031,779	11,304,171
-	342,905	-	342,905	Treatment & Transportation	-	2,318,797	4,628	2,323,425	-	3,545,445	12,000	3,557,445
229,166	383,527	490,000	1,102,693	Depreciation and Amortization	1,833,328	3,068,216	3,920,000	8,821,544	2,749,994	4,602,324	5,880,000	13,232,318
706,871	1,399,763	1,962,048	4,068,682	Total Operating Expenses	5,585,268	10,858,776	15,724,131	32,168,175	9,152,239	16,511,389	23,985,365	49,648,993
117,864	(162,991)	1,586,731	1,541,604	Operating Income	945,348	(1,297,570)	9,487,005	9,134,783	845,506	(2,085,456)	13,635,972	12,396,022
				Non-Operating Revenues (Expenses)								
9,680	936,130	122,014	1,067,824	Tapping and Capital Recovery fees	361,055	1,726,182	562,808	2,650,045	471,990	1,744,841	415,294	2,632,125
8,096	-	6,759	14,855	Meter Sales	64,165	-	14,918	79,083	107,907	-	13,159	121,066
23,051	13,727	2,150	38,928	Inspection and Plan Reviews	98,168	13,727	22,333	134,228	160,772	-	179,846	340,618
-	-	-	-	Project Reimbursements	-	21,302	19,231	40,533	-	20,282	20,000	40,282
13,368	25,657	87,500	126,525	Interest Income	117,199	194,878	758,364	1,070,441	158,937	266,086	1,164,612	1,589,635
2,914	10,771	3,750	17,435	Other Income	37,695	57,053	33,295	128,043	35,445	46,940	34,742	117,127
(130,104)	(18,177)	(1,439,984)	(1,588,265)	Interest Expense	(1,025,508)	(142,180)	(11,628,220)	(12,795,908)	(1,496,071)	(208,913)	(18,943,851)	(20,648,835)
-	(1,562)	(115,658)	(117,220)	Other Expense	(3,391)	(21,812)	(330,960)	(356,163)	(3,391)	(17,040)	(457,458)	(477,889)
(72,995)	966,546	(1,333,469)	(439,918)	Total Non-Operating Revenues (Expenses)	(350,617)	1,849,150	(10,548,231)	(9,049,698)	(564,411)	1,852,196	(17,573,656)	(16,285,871)
44,869	803,555	253,262	1,101,686	Net Income Before Capital Contributions	594,731	551,580	(1,061,226)	85,085	281,095	(233,260)	(3,937,684)	(3,889,849)
-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-
44,869	803,555	253,262	1,101,686	NET INCOME	594,731	551,580	(1,061,226)	85,085	281,095	(233,260)	(3,937,684)	(3,889,849)

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MONTH				YEAR-TO-DATE				FULL YEAR FORECAST				
Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	AUGUST 2019 CASH FLOW STATEMENT	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL
824,735	1,236,772	3,548,779	5,610,286	Cash Flows From Operating Activities	6,530,616	9,561,206	25,211,136	41,302,958	9,997,745	14,425,933	37,621,337	62,045,015
(477,705)	(1,016,236)	(1,472,048)	(2,965,989)	Operating Revenues	(3,751,940)	(7,790,560)	(11,804,131)	(23,346,631)	(6,402,245)	(11,909,065)	(18,105,365)	(36,416,675)
153,962	581,077	287,675	1,022,714	Operating Expenses (ex D&A)	(645,795)	(328,611)	(260,837)	(1,235,243)	10,946	(391,136)	-	(380,190)
500,992	801,613	2,364,406	3,667,011	Non-Cash Working Capital Changes	2,132,881	1,442,035	13,146,168	16,721,084	3,606,446	2,125,732	19,515,972	25,248,150
				Net Cash Provided by (Used in) Operating Activ								
				Cash Flows From Financing Activities								
-	-	-	-	Lease Payments to City	-	-	-	-	-	-	-	-
-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-
-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	-	-	-
(4,726)	(15,184)	-	(19,910)	Interest Payments	(752,987)	(119,037)	(6,775,522)	(7,647,546)	(1,496,071)	(208,913)	(14,961,810)	(16,666,794)
(30,292)	(40,951)	-	(71,243)	Principal Payments	(240,836)	(327,258)	-	(568,094)	(1,724,544)	(484,500)	-	(2,209,044)
(35,018)	(56,135)	-	(91,153)	Net Cash Provided by (Used in) Financing Activ	(993,823)	(446,295)	(6,775,522)	(8,215,640)	(3,220,615)	(693,413)	(14,961,810)	(18,875,838)
				Cash Flows from Capital and Related Activities								
43,741	960,628	134,673	1,139,042	Non-Operating Revenues	561,083	1,796,962	633,354	2,991,399	776,114	1,791,781	643,041	3,210,936
-	-	-	-	Project Reimbursement	-	21,302	19,231	40,533	-	20,282	20,000	40,282
-	-	-	-	Non-Operating Expenses	-	-	(258,931)	(258,931)	-	(92)	(521,362)	(521,454)
(997,640)	(548,845)	(402,362)	(1,948,847)	Capital Expenditures	(2,689,932)	(3,842,144)	(2,978,131)	(9,510,207)	(8,249,662)	(11,452,292)	(3,724,885)	(23,426,839)
(953,899)	411,783	(267,689)	(809,805)	Net Cash Provided By (Used In) Capital and Re	(2,128,849)	(2,023,880)	(2,584,477)	(6,737,206)	(7,473,548)	(9,640,321)	(3,583,206)	(20,697,075)
				Cash Flows From Investing Activities								
-	494,000	-	494,000	Investments Converting To Cash	4,507,017	3,870,626	-	8,377,643	7,049,635	12,365,626	-	19,415,261
-	(504,569)	-	(504,569)	Purchased Invesments	(1,604,286)	(5,915,222)	-	(7,519,508)	(442,785)	(5,909,922)	-	(6,352,707)
13,368	25,657	87,500	126,525	Interest Income	117,199	194,878	758,364	1,070,441	158,937	266,086	1,164,612	1,589,635
13,368	15,088	87,500	115,956	Net Cash Provided By (Used In) Investing Activ	3,019,930	(1,849,718)	758,364	1,928,576	6,765,787	6,721,790	1,164,612	14,652,189
(474,557)	1,172,349	2,184,217	2,882,009	FUND NET CASH FLOWS	2,030,139	(2,877,858)	4,544,533	3,696,814	(321,930)	(1,486,212)	2,135,568	327,426
				DEBT SERVICE RATIO								
404,139	1,206,821	2,263,208	3,874,168	Total Cash Available For Debt Service	3,456,958	3,762,486	14,489,650	21,709,094	4,530,551	4,574,735	20,923,445	30,028,731
268,385	56,135	1,246,381	1,570,901	Debt Service	2,147,080	446,295	9,971,048	12,564,423	3,220,620	693,413	14,956,576	18,870,609
1.51	21.50	1.82	2.47	DSCR	1.61	8.43	1.45	1.73	1.41	6.60	1.40	1.59

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MONTH					YEAR-TO-DATE					FULL YEAR FORECAST										
Actual	Forecast	Prior Yr	FC Var	PY Var	AUGUST 2019 INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	FC Var	PY Var	
					Operating Revenues															
5,529,202	5,494,272	4,481,926	34,930	1,047,276	Charges For Services					40,820,997	40,775,622	37,469,565	45,375	3,351,432	61,302,070	60,471,236	59,614,467	830,834	1,687,603	
10,134	8,000	7,481	2,134	2,653	Rent					83,535	79,213	60,707	4,322	22,828	111,213	87,860	98,405	23,353	12,808	
70,950	82,309	163,208	(11,359)	(92,258)	Other Income					398,426	410,498	579,107	(12,072)	(180,681)	631,732	696,864	466,744	(65,132)	164,988	
5,610,286	5,584,581	4,652,615	25,705	957,671	Total Operating Revenues					41,302,958	41,265,333	38,109,379	37,625	3,193,579	62,045,015	61,255,960	60,179,616	789,055	1,865,399	
					Operating Expenses															
833,666	755,910	822,226	(77,756)	(11,440)	Salaries and Wages					4,918,060	4,844,560	4,808,248	(73,500)	(109,812)	7,186,203	7,094,831	6,917,656	(91,372)	(268,547)	
627,193	636,660	792,985	9,467	165,792	General and Administrative					6,046,572	6,023,605	5,591,882	(22,967)	(454,690)	8,808,239	8,281,923	8,565,904	(526,316)	(242,335)	
228,629	251,000	363,294	22,371	134,665	Utilities					2,088,103	2,079,557	1,948,566	(8,546)	(139,537)	3,142,557	3,026,040	2,697,837	(116,517)	(444,720)	
172,387	196,621	219,088	24,234	46,701	Materials and Supplies					1,237,084	1,243,363	1,049,697	6,279	(187,387)	2,418,060	2,561,120	1,787,455	143,060	(630,605)	
761,209	893,902	1,010,449	132,693	249,240	Miscellaneous Services					6,733,387	6,937,460	6,714,988	204,073	(18,399)	11,304,171	11,352,878	10,680,843	48,707	(623,328)	
342,905	300,000	90,855	(42,905)	(252,050)	Treatment & Transportation					2,323,425	2,285,445	1,627,072	(37,980)	(696,353)	3,557,445	2,661,555	3,553,830	(895,890)	(3,615)	
1,102,693	1,102,694	1,110,364	1	7,671	Depreciation and Amortization					8,821,544	8,821,546	8,882,912	2	61,368	13,232,318	13,170,765	13,122,963	(61,555)	(109,355)	
4,068,682	4,136,787	4,409,263	68,105	340,581	Total Operating Expenses					32,168,175	32,235,536	30,623,365	67,361	(1,544,810)	49,648,993	48,149,112	47,326,489	(1,499,881)	(2,322,504)	
1,541,604	1,447,794	243,352	93,810	1,298,252	Operating Income					9,134,783	9,029,797	7,486,014	104,986	1,648,769	12,396,022	13,106,848	12,853,128	(710,826)	(457,106)	
					Non-Operating Revenues (Expenses)															
1,067,824	1,079,000	144,471	(11,176)	923,353	Tapping and Capital Recovery fees					2,650,045	2,668,410	985,567	(18,365)	1,664,478	2,632,125	1,591,000	1,308,953	1,041,125	1,323,172	
14,855	6,000	13,278	8,855	1,577	Meter Sales					79,083	69,989	63,375	9,094	15,708	121,066	120,000	93,656	1,066	27,410	
38,928	18,250	31,200	20,678	7,728	Inspection and Plan Reviews					134,228	113,965	163,144	20,263	(28,916)	340,618	376,000	761,209	(35,382)	(420,591)	
-	-	-	-	-	Project Reimbursements					40,533	40,282	(0)	251	40,533	40,282	1,645,000	372,527	(1,604,718)	(332,245)	
126,525	132,000	111,942	(5,475)	14,583	Interest Income					1,070,441	1,061,635	788,768	8,806	281,673	1,589,635	619,000	1,520,789	970,635	68,846	
17,435	3,833	7,050	13,602	10,380	Other Income					128,043	101,494	49,732	26,549	78,311	117,127	47,000	682,374	70,127	(565,247)	
(1,588,265)	(1,579,411)	(1,544,036)	(8,854)	(44,229)	Interest Expense					(12,795,908)	(12,777,197)	(12,294,635)	(18,711)	(501,273)	(20,648,835)	(20,629,504)	(20,584,072)	(19,331)	(64,763)	
(117,220)	(100,000)	(241,124)	(17,220)	123,904	Other Expense					(356,163)	(327,889)	(1,045,004)	(28,274)	688,841	(477,889)	(1,645,000)	(3,901,477)	1,167,111	3,423,588	
(439,918)	(440,328)	(1,477,214)	410	1,037,296	Total Non-Operating Revenues (Expenses)					(9,049,698)	(9,049,311)	(11,289,053)	(387)	2,239,355	(16,285,871)	(17,876,504)	(19,746,041)	1,590,633	3,460,170	
1,101,686	1,007,466	(1,233,862)	94,220	2,335,548	Net Income Before Capital Contributions					85,085	(19,514)	(3,803,040)	104,599	3,888,125	(3,889,849)	(4,769,656)	(6,892,913)	879,807	3,003,064	
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	1,828,692	-	-	(1,828,692)
1,101,686	1,007,466	(1,233,862)	94,220	2,335,548	NET INCOME					85,085	(19,514)	(3,803,040)	104,599	3,888,125	(3,889,849)	(4,769,656)	(5,064,221)	879,807	1,174,372	

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MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR FORECAST				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	FC Var	PY Var
					Cash Flows From Operating Activities														
5,610,286	5,584,581	4,652,615	25,705	957,671	Operating Revenues					41,302,958	41,265,333	38,109,379	37,625	3,193,579	62,045,015	61,255,960	60,179,616	789,055	1,865,399
(2,965,989)	(3,034,093)	(3,298,899)	68,104	332,910	Operating Expenses (ex D&A)					(23,346,631)	(23,413,990)	(21,740,453)	67,359	(1,606,178)	(36,416,675)	(34,978,347)	(34,203,526)	(1,438,328)	(2,213,149)
1,022,714	1,010,000	1,522,492	12,714	(499,778)	Non-Cash Working Capital Changes					(1,235,243)	(1,209,357)	(2,080,139)	(25,886)	844,896	(380,190)	-	520,935	(380,190)	(901,125)
3,667,011	3,560,488	2,876,208	106,523	790,803	Net Cash Provided by (Used in) Operating Activities					16,721,084	16,641,986	14,288,787	79,098	2,432,297	25,248,150	26,277,613	26,497,026	(1,029,463)	(1,248,876)
					Cash Flows From Financing Activities														
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing					-	-	-	-	-	-	-	18,735,000	-	(18,735,000)
(19,910)	(17,196)	(19,573)	(2,714)	(338)	Interest Payments					(7,647,546)	(7,645,733)	(7,404,639)	(1,813)	(242,907)	(16,666,794)	(16,629,504)	(15,026,432)	(37,290)	(1,640,362)
(71,243)	(68,604)	(70,162)	(2,639)	(1,081)	Principal Payments					(568,094)	(564,944)	(557,800)	(3,150)	(10,294)	(2,209,044)	(2,203,250)	(20,913,047)	(5,794)	18,704,003
(91,153)	(85,800)	(89,734)	(5,353)	(1,419)	Net Cash Provided by (Used in) Financing Activities					(8,215,640)	(8,210,677)	(7,962,439)	(4,963)	(253,201)	(18,875,838)	(18,832,754)	(17,204,479)	(43,084)	(1,671,359)
					Cash Flows from Capital and Related Activities														
1,139,042	1,107,083	196,004	31,959	943,038	Non-Operating Revenues					2,991,399	2,953,858	1,261,818	37,541	1,729,581	3,210,936	2,134,000	2,846,192	1,076,936	364,744
-	-	-	-	-	Project Reimbursement					40,533	40,282	(0)	251	40,533	40,282	1,645,000	372,527	(1,604,718)	(332,245)
-	-	9,065	-	(9,065)	Non-Operating Expenses					(258,931)	(259,023)	(253,369)	92	(5,562)	(521,454)	(516,200)	(883,046)	(5,254)	361,592
(1,948,847)	(3,798,500)	(1,322,083)	1,849,653	(626,764)	Capital Expenditures					(9,510,207)	(12,586,454)	(6,198,588)	3,076,247	(3,311,619)	(23,426,839)	(24,675,040)	(15,890,144)	1,248,201	(7,536,695)
(809,805)	(2,691,417)	(1,117,014)	1,881,612	307,209	Net Cash Provided By (Used In) Capital and Related Activities					(6,737,206)	(9,851,337)	(5,190,139)	3,114,131	(1,547,067)	(20,697,075)	(21,412,240)	(13,554,471)	715,165	(7,142,604)
					Cash Flows From Investing Activities														
494,000	500,000	(0)	(6,000)	494,000	Investments Converting To Cash					8,377,643	8,381,641	6,071,061	(3,998)	2,306,582	19,415,261	10,070,850	20,946,833	9,344,411	(1,531,572)
(504,569)	(500,000)	-	(4,569)	(504,569)	Purchased Investments					(7,519,508)	(7,507,707)	-	(11,801)	(7,519,508)	(6,352,707)	-	(7,780,492)	(6,352,707)	1,427,785
126,525	132,000	111,942	(5,475)	14,583	Interest Income					1,070,441	1,061,635	788,768	8,806	281,673	1,589,635	619,000	1,520,789	970,635	68,846
115,956	132,000	111,941	(16,044)	4,015	Net Cash Provided By (Used In) Investing Activities					1,928,576	1,935,569	6,859,829	(6,993)	(4,931,253)	14,652,189	10,689,850	14,687,130	3,962,339	(34,941)
2,882,009	915,271	1,781,401	1,966,738	1,100,608	FUND NET CASH FLOWS					3,696,814	515,541	7,996,037	3,181,273	(4,299,223)	327,426	(3,277,531)	10,425,206	3,604,957	(10,097,780)
					DEBT SERVICE RATIO														
3,874,168	3,757,273	1,626,430	116,895	2,247,738	Total Cash Available For Debt Service					21,709,094	21,570,283	18,116,493	138,811	3,592,601	30,028,731	28,651,699	29,885,633	1,377,032	143,098
1,570,901	1,571,806	1,408,807	(905)	162,094	Debt Service					12,564,423	12,566,230	11,269,718	(1,807)	1,294,705	18,870,609	18,832,754	16,930,918	37,855	1,939,691
2.47	2.39	1.15	0.08	1.31	DSCR					1.73	1.72	1.61	0.01	0.12	1.59	1.52	1.77	0.07	(0.17)

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WATER
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MONTH					AUGUST 2019	YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT	Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Operating Revenues										
804,030	854,409	786,368	(50,379)	17,662	Charges For Services	6,383,868	6,422,426	6,067,571	(38,558)	316,297	9,785,911	9,772,570	9,140,848	13,341	645,063
10,134	8,000	7,481	2,134	2,653	Rent	83,535	79,213	60,707	4,322	22,828	111,213	87,860	98,405	23,353	12,808
10,571	10,000	23,538	571	(12,967)	Other Income	63,213	52,621	100,382	10,592	(37,169)	100,621	129,158	109,632	(28,537)	(9,011)
824,735	872,409	817,387	(47,674)	7,348	Total Operating Revenues	6,530,616	6,554,260	6,228,661	(23,644)	301,955	9,997,745	9,989,588	9,348,885	8,157	648,860
					Operating Expenses										
125,853	79,490	115,653	(46,363)	(10,200)	Salaries and Wages	719,460	671,705	745,003	(47,755)	25,543	1,022,669	1,020,940	1,037,882	(1,729)	15,213
88,206	120,700	117,699	32,494	29,493	General and Administrative	922,043	935,904	859,947	13,861	(62,096)	1,418,704	1,399,959	1,261,241	(18,745)	(157,463)
38,036	51,000	66,432	12,964	28,393	Utilities	307,373	338,683	335,307	31,310	27,934	601,683	592,750	437,253	(8,933)	(164,430)
26,236	42,048	24,426	15,812	(1,810)	Materials and Supplies	221,586	212,467	148,398	(9,119)	(73,188)	492,663	504,580	294,937	11,917	(197,726)
199,374	237,437	212,320	38,063	12,946	Miscellaneous Services	1,581,478	1,637,772	1,480,213	56,294	(101,265)	2,866,526	2,905,325	2,703,594	38,799	(162,932)
-	-	-	-	-	Treatment & Transportation	-	-	-	-	-	-	-	-	-	-
229,166	229,167	245,832	1	16,666	Depreciation and Amortization	1,833,328	1,833,330	1,966,656	2	133,328	2,749,994	2,750,000	2,768,133	6	18,139
706,871	759,842	782,362	52,971	75,491	Total Operating Expenses	5,585,268	5,629,861	5,535,523	44,593	(49,745)	9,152,239	9,173,554	8,503,041	21,315	(649,198)
117,864	112,567	35,026	5,297	82,838	Operating Income	945,348	924,399	693,138	20,949	252,210	845,506	816,034	845,845	29,472	(339)
					Non-Operating Revenues (Expenses)										
9,680	19,500	32,480	(9,820)	(22,800)	Tapping and Capital Recovery fees	361,055	378,275	160,185	(17,220)	200,870	471,990	467,000	221,405	4,990	250,585
8,096	5,000	11,795	3,096	(3,699)	Meter Sales	64,165	60,830	56,488	3,335	7,677	107,907	108,000	85,259	(93)	22,648
23,051	1,000	16,700	22,051	6,351	Inspection and Plan Reviews	98,168	72,532	110,898	25,636	(12,730)	160,772	144,000	183,148	16,772	(22,376)
-	-	-	-	-	Project Reimbursements	-	-	(0)	-	0	-	-	(0)	-	0
13,368	12,000	17,836	1,368	(4,468)	Interest Income	117,199	110,937	153,090	6,262	(35,891)	158,937	144,000	255,438	14,937	(96,501)
2,914	1,000	2,575	1,914	339	Other Income	37,695	31,148	18,165	6,547	19,530	35,445	24,000	86,971	11,445	(51,526)
(130,104)	(122,215)	(124,903)	(7,889)	(5,201)	Interest Expense	(1,025,508)	(1,008,211)	(941,712)	(17,297)	(83,796)	(1,496,071)	(1,466,582)	(1,576,659)	(29,489)	80,588
-	-	4,200	-	(4,200)	Other Expense	(3,391)	(3,391)	(2,304)	-	(1,087)	(3,391)	-	(82,141)	(3,391)	78,750
(72,995)	(83,715)	(39,317)	10,720	(33,678)	Total Non-Operating Revenues (Expenses)	(350,617)	(357,880)	(445,190)	7,263	94,573	(564,411)	(579,582)	(826,579)	15,171	262,168
44,869	28,852	(4,291)	16,017	49,160	Net Income Before Capital Contributions	594,731	566,519	247,948	28,212	346,783	281,095	236,452	19,266	44,643	261,829
-	-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	1,793,798	-	(1,793,798)
44,869	28,852	(4,291)	16,017	49,160	NET INCOME	594,731	566,519	247,948	28,212	346,783	281,095	236,452	1,813,064	44,643	(1,531,969)

LEHIGH COUNTY AUTHORITY
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MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Cash Flows From Operating Activities														
824,735	872,409	817,387	(47,674)	7,348	Operating Revenues	6,530,616	6,554,260	6,228,661	(23,644)	301,955	9,997,745	9,989,588	9,348,885	8,157	648,860				
(477,705)	(530,675)	(536,530)	52,970	58,825	Operating Expenses (ex D&A)	(3,751,940)	(3,796,531)	(3,568,867)	44,591	(183,073)	(6,402,245)	(6,423,554)	(5,734,908)	21,309	(667,337)				
153,962	155,000	830,406	(1,038)	(676,444)	Non-Cash Working Capital Changes	(645,795)	(614,054)	(798,899)	(31,741)	153,104	10,946	-	(5,441,123)	10,946	5,452,069				
500,992	496,734	1,111,264	4,258	(610,272)	Net Cash Provided by (Used in) Operating Activities	2,132,881	2,143,675	1,860,895	(10,794)	271,986	3,606,446	3,566,034	(1,827,145)	40,412	5,433,591				
					Cash Flows From Financing Activities														
-	-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(4,726)	-	(5,366)	(4,726)	640	Interest Payments	(752,987)	(747,231)	(765,859)	(5,756)	12,872	(1,496,071)	(1,466,582)	(1,508,149)	(29,489)	12,078				
(30,292)	(28,760)	(29,652)	(1,532)	(640)	Principal Payments	(240,836)	(239,822)	(235,722)	(1,014)	(5,114)	(1,724,544)	(1,725,120)	(1,693,208)	576	(31,336)				
(35,018)	(28,760)	(35,017)	(6,258)	(1)	Net Cash Provided by (Used in) Financing Activities	(993,823)	(987,053)	(1,001,580)	(6,770)	7,757	(3,220,615)	(3,191,702)	(3,201,357)	(28,913)	(19,258)				
					Cash Flows from Capital and Related Activities														
43,741	26,500	63,550	17,241	(19,809)	Non-Operating Revenues	561,083	542,785	345,736	18,298	215,347	776,114	743,000	576,783	33,114	199,331				
-	-	-	-	-	Project Reimbursement	-	-	(0)	-	0	-	-	(0)	-	0				
-	-	4,579	-	(4,579)	Non-Operating Expenses	-	-	460	-	(460)	-	-	(82,142)	-	82,142				
(997,640)	(1,238,500)	(289,629)	240,860	(708,011)	Capital Expenditures	(2,689,932)	(3,368,302)	(2,258,223)	678,370	(431,709)	(8,249,662)	(10,210,540)	(5,348,970)	1,960,878	(2,900,692)				
(953,899)	(1,212,000)	(221,500)	258,101	(732,399)	Net Cash Provided By (Used In) Capital and Related Activities	(2,128,849)	(2,825,517)	(1,912,028)	696,668	(216,821)	(7,473,548)	(9,467,540)	(4,854,329)	1,993,992	(2,619,219)				
					Cash Flows From Investing Activities														
-	-	(0)	-	0	Investments Converting To Cash	4,507,017	4,504,211	4,598,526	2,806	(91,509)	7,049,635	6,570,850	11,501,487	478,785	(4,451,852)				
-	-	-	-	-	Purchased Invesments	(1,604,286)	(1,597,785)	-	(6,501)	(1,604,286)	(442,785)	-	(2,161,990)	(442,785)	1,719,205				
13,368	12,000	17,836	1,368	(4,468)	Interest Income	117,199	110,937	153,090	6,262	(35,891)	158,937	144,000	255,438	14,937	(96,501)				
13,368	12,000	17,836	1,368	(4,468)	Net Cash Provided By (Used In) Investing Activities	3,019,930	3,017,363	4,751,616	2,567	(1,731,686)	6,765,787	6,714,850	9,594,935	50,937	(2,829,148)				
(474,557)	(732,026)	872,582	257,469	(1,347,139)	FUND NET CASH FLOWS	2,030,139	1,348,468	3,698,902	681,671	(1,668,763)	(321,930)	(2,378,358)	(287,896)	2,056,428	(34,034)				
					DEBT SERVICE RATIO														
404,139	380,234	362,244	23,905	41,895	Total Cash Available For Debt Service	3,456,958	3,411,451	3,158,620	45,507	298,338	4,530,551	4,453,034	4,446,199	77,517	84,352				
268,385	268,385	266,780	-	1,605	Debt Service	2,147,080	2,147,080	2,134,240	-	12,840	3,220,620	3,191,702	3,201,357	28,918	19,263				
1.51	1.42	1.36	0.09	0.15	DSCR	1.61	1.59	1.48	0.02	0.13	1.41	1.40	1.39	0.01	0.02				

LEHIGH COUNTY AUTHORITY
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FORECAST VARIANCES - MONTH

INCOME STATEMENT	Actual	Forecast	Variance	Comments
Operating Revenues				
Charges For Services	804,030	854,409	(50,379)	Lower industrial revenues and lower fire service charges
Rent	10,134	8,000	2,134	
Other Income	10,571	10,000	571	
Total Operating Revenues	824,735	872,409	(47,674)	Lower user charges offset a little by rent and other revenues
Operating Expenses				
Salaries and Wages	125,853	79,490	(46,363)	
General and Administrative	88,206	120,700	32,494	
Utilities	38,036	51,000	12,964	
Materials and Supplies	26,236	42,048	15,812	
Miscellaneous Services	199,374	237,437	38,063	
Treatment & Transportation	-	-	-	
Depreciation and Amortization	229,166	229,167	1	
Total Operating Expenses	706,871	759,842	52,971	Higher labor costs more than offset by lower G&A, lower utilities, lower materials & supplies, and lower services
Operating Income	117,864	112,567	5,297	Lower operating expenses offset by lower revenues
Non-Operating Revenues (Expenses)				
Tapping and Capital Recovery fees	9,680	19,500	(9,820)	
Meter Sales	8,096	5,000	3,096	
Inspection and Plan Reviews	23,051	1,000	22,051	
Project Reimbursements	-	-	-	
Interest Income	13,368	12,000	1,368	
Other Income	2,914	1,000	1,914	
Interest Expense	(130,104)	(122,215)	(7,889)	
Other Expense	-	-	-	
Total Non-Operating Revenues (Expenses)	(72,995)	(83,715)	10,720	
Net Income Before Capital Contributions	44,869	28,852	16,017	Slightly higher operating income aided by higher non-operating revenues from higher inspection & planning review with some unfavorable offset from higher interest expense
Capital Contributions	-	-	-	No contributions
NET INCOME	44,869	28,852	16,017	

FORECAST VARIANCES - MONTH

CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	824,735	872,409	(47,674)	
Operating Expenses (ex D&A)	(477,705)	(530,675)	52,970	
Non-Cash Working Capital Changes	153,962	155,000	(1,038)	
Net Cash Provided by (Used in) Operating Activities	500,992	496,734	4,258	
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(4,726)	-	(4,726)	
Principal Payments	(30,292)	(28,760)	(1,532)	
Net Cash Provided by (Used in) Financing Activities	(35,018)	(28,760)	(6,258)	
Cash Flows from Capital and Related Activities				
Non-Operating Revenues	43,741	26,500	17,241	
Project Reimbursement	-	-	-	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(997,640)	(1,238,500)	240,860	Favorable Timing effect on capex
Net Cash Provided By (Used In) Capital and Related Activities	(953,899)	(1,212,000)	258,101	
Cash Flows From Investing Activities				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	13,368	12,000	1,368	
Net Cash Provided By (Used In) Investing Activities	13,368	12,000	1,368	
FUND NET CASH FLOWS	(474,557)	(732,026)	257,469	

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MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Operating Revenues														
1,236,772	1,186,898	942,882	49,874	293,890	Charges For Services					9,561,206	9,519,836	8,814,791	41,370	746,415	14,425,933	13,676,460	14,023,121	749,473	402,812
-	-	-	-	-	Rent					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Other Income					-	-	-	-	-	-	-	-	-	-
1,236,772	1,186,898	942,882	49,874	293,890	Total Operating Revenues					9,561,206	9,519,836	8,814,791	41,370	746,415	14,425,933	13,676,460	14,023,121	749,473	402,812
					Operating Expenses														
70,002	44,000	70,105	(26,002)	103	Salaries and Wages					380,698	355,785	308,036	(24,913)	(72,662)	556,785	420,095	462,145	(136,690)	(94,640)
47,310	50,000	66,452	2,690	19,142	General and Administrative					435,373	424,662	310,226	(10,711)	(125,147)	627,662	474,363	511,800	(153,299)	(115,862)
32,158	35,000	34,142	2,842	1,984	Utilities					292,278	282,393	194,799	(9,885)	(97,479)	422,393	338,035	290,201	(84,358)	(132,192)
24,755	32,346	23,411	7,591	(1,344)	Materials and Supplies					214,005	213,532	133,957	(473)	(80,048)	350,914	459,324	295,370	108,410	(55,544)
499,106	549,234	604,167	50,128	105,061	Miscellaneous Services					4,149,409	4,220,602	4,289,061	71,193	139,652	6,405,866	6,458,708	6,175,835	52,842	(230,031)
342,905	300,000	90,855	(42,905)	(252,050)	Treatment & Transportation					2,318,797	2,285,445	1,622,447	(33,352)	(696,350)	3,545,445	2,649,555	3,544,003	(895,890)	(1,442)
383,527	383,527	397,865	-	14,338	Depreciation and Amortization					3,068,216	3,068,216	3,182,920	-	114,704	4,602,324	4,540,765	4,490,397	(61,559)	(111,927)
1,399,763	1,394,107	1,286,998	(5,656)	(112,765)	Total Operating Expenses					10,858,776	10,850,635	10,041,446	(8,141)	(817,330)	16,511,389	15,340,845	15,769,751	(1,170,544)	(741,638)
(162,991)	(207,209)	(344,116)	44,218	181,125	Operating Income					(1,297,570)	(1,330,799)	(1,226,655)	33,229	(70,915)	(2,085,456)	(1,664,385)	(1,746,630)	(421,071)	(338,826)
					Non-Operating Revenues (Expenses)														
936,130	950,000	66,496	(13,870)	869,634	Tapping and Capital Recovery fees					1,726,182	1,739,841	525,562	(13,659)	1,200,620	1,744,841	800,000	523,626	944,841	1,221,215
-	-	-	-	-	Meter Sales					-	-	-	-	-	-	-	-	-	-
13,727	-	11,800	13,727	1,927	Inspection and Plan Reviews					13,727	-	27,652	13,727	(13,925)	-	25,000	38,363	(25,000)	(38,363)
-	-	-	-	-	Project Reimbursements					21,302	20,282	-	1,020	21,302	20,282	-	-	20,282	20,282
25,657	20,000	17,828	5,657	7,829	Interest Income					194,878	186,086	139,988	8,792	54,890	266,086	75,000	217,721	191,086	48,365
10,771	1,000	115	9,771	10,656	Other Income					57,053	42,940	1,125	14,113	55,928	46,940	1,000	394,585	45,940	(347,645)
(18,177)	(17,196)	(16,399)	(981)	(1,778)	Interest Expense					(142,180)	(140,135)	(131,051)	(2,045)	(11,129)	(208,913)	(206,346)	(197,000)	(2,567)	(11,913)
(1,562)	-	(373)	(1,562)	(1,189)	Other Expense					(21,812)	(17,040)	(7,908)	(4,772)	(13,904)	(17,040)	-	(8,692)	(17,040)	(8,348)
966,546	953,804	79,467	12,742	887,079	Total Non-Operating Revenues (Expenses)					1,849,150	1,831,974	555,367	17,176	1,293,783	1,852,196	694,654	968,603	1,157,542	883,593
803,555	746,595	(264,649)	56,960	1,068,204	Net Income Before Capital Contributions					551,580	501,175	(671,288)	50,405	1,222,868	(233,260)	(969,731)	(778,027)	736,471	544,767
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	34,894	-	(34,894)
803,555	746,595	(264,649)	56,960	1,068,204	NET INCOME					551,580	501,175	(671,288)	50,405	1,222,868	(233,260)	(969,731)	(743,133)	736,471	509,873

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MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Cash Flows From Operating Activities														
1,236,772	1,186,898	942,882	49,874	293,890	Operating Revenues					9,561,206	9,519,836	8,814,791	41,370	746,415	14,425,933	13,676,460	14,023,121	749,473	402,812
(1,016,236)	(1,010,580)	(889,133)	(5,656)	(127,103)	Operating Expenses (ex D&A)					(7,790,560)	(7,782,419)	(6,858,526)	(8,141)	(932,034)	(11,909,065)	(10,800,080)	(11,279,354)	(1,108,985)	(629,711)
581,077	580,000	(267,675)	1,077	848,752	Non-Cash Working Capital Changes					(328,611)	(321,136)	(806,351)	(7,475)	477,740	(391,136)	-	2,166,774	(391,136)	(2,557,910)
801,613	756,318	(213,926)	45,295	1,015,539	Net Cash Provided by (Used in) Operating Activities					1,442,035	1,416,281	1,149,914	25,754	292,121	2,125,732	2,876,380	4,910,541	(750,648)	(2,784,809)
					Cash Flows From Financing Activities														
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing					-	-	-	-	-	-	-	-	-	-
(15,184)	(17,196)	(14,207)	2,012	(977)	Interest Payments					(119,037)	(122,980)	(114,919)	3,943	(4,118)	(208,913)	(206,346)	(197,000)	(2,567)	(11,913)
(40,951)	(39,844)	(40,510)	(1,107)	(441)	Principal Payments					(327,258)	(325,122)	(322,079)	(2,136)	(5,179)	(484,500)	(478,130)	(484,839)	(6,370)	339
(56,135)	(57,040)	(54,717)	905	(1,418)	Net Cash Provided by (Used in) Financing Activities					(446,295)	(448,102)	(436,998)	1,807	(9,297)	(693,413)	(684,476)	(681,839)	(8,937)	(11,574)
					Cash Flows from Capital and Related Activities														
960,628	951,000	78,411	9,628	882,217	Non-Operating Revenues					1,796,962	1,782,781	554,338	14,181	1,242,624	1,791,781	826,000	956,574	965,781	835,207
-	-	-	-	-	Project Reimbursement					21,302	20,282	-	1,020	21,302	20,282	-	-	20,282	20,282
-	-	4,486	-	(4,486)	Non-Operating Expenses					-	(92)	1,951	92	(1,951)	(92)	-	(8,692)	(92)	8,600
(548,845)	(2,433,000)	(419,979)	1,884,155	(128,866)	Capital Expenditures					(3,842,144)	(6,458,371)	(1,232,543)	2,616,227	(2,609,601)	(11,452,292)	(9,619,500)	(2,687,185)	(1,832,792)	(8,765,107)
411,783	(1,482,000)	(337,082)	1,893,783	748,865	Net Cash Provided By (Used In) Capital and Related Activities					(2,023,880)	(4,655,400)	(676,254)	2,631,520	(1,347,626)	(9,640,321)	(8,793,500)	(1,739,303)	(846,821)	(7,901,018)
					Cash Flows From Investing Activities														
494,000	500,000	-	(6,000)	494,000	Investments Converting To Cash					3,870,626	3,877,430	1,472,535	(6,804)	2,398,091	12,365,626	3,500,000	5,445,346	8,865,626	6,920,280
(504,569)	(500,000)	-	(4,569)	(504,569)	Purchased Investments					(5,915,222)	(5,909,922)	-	(5,300)	(5,915,222)	(5,909,922)	-	(5,618,502)	(5,909,922)	(291,420)
25,657	20,000	17,828	5,657	7,829	Interest Income					194,878	186,086	139,988	8,792	54,890	266,086	75,000	217,721	191,086	48,365
15,088	20,000	17,828	(4,912)	(2,740)	Net Cash Provided By (Used In) Investing Activities					(1,849,718)	(1,846,406)	1,612,523	(3,312)	(3,462,241)	6,721,790	3,575,000	44,565	3,146,790	6,677,225
<u>1,172,349</u>	<u>(762,722)</u>	<u>(587,897)</u>	<u>1,935,071</u>	<u>1,760,246</u>	FUND NET CASH FLOWS					<u>(2,877,858)</u>	<u>(5,533,627)</u>	<u>1,649,186</u>	<u>2,655,769</u>	<u>(4,527,044)</u>	<u>(1,486,212)</u>	<u>(3,026,596)</u>	<u>2,533,964</u>	<u>1,540,384</u>	<u>(4,020,176)</u>
					DEBT SERVICE RATIO														
1,206,821	1,147,318	149,988	59,503	1,056,833	Total Cash Available For Debt Service					3,762,486	3,706,284	2,650,591	56,202	1,111,895	4,574,735	3,777,380	3,918,062	797,355	656,673
56,135	57,040	54,717	(905)	1,418	Debt Service					446,295	448,102	436,998	(1,807)	9,297	693,413	684,476	681,839	8,937	11,574
<u>21.50</u>	<u>20.11</u>	<u>2.74</u>	<u>1.38</u>	<u>18.76</u>	DSCR					<u>8.43</u>	<u>8.27</u>	<u>6.07</u>	<u>0.16</u>	<u>2.37</u>	<u>6.60</u>	<u>5.52</u>	<u>5.75</u>	<u>1.08</u>	<u>0.85</u>

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER
AUGUST 2019

FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
Operating Revenues				
Charges For Services	1,236,772	1,186,898	49,874	Higher industrial revenues
Rent	-	-	-	
Other Income	-	-	-	
Total Operating Revenues	1,236,772	1,186,898	49,874	Higher user charges from higher industrial revenues
Operating Expenses				
Salaries and Wages	70,002	44,000	(26,002)	
General and Administrative	47,310	50,000	2,690	
Utilities	32,158	35,000	2,842	
Materials and Supplies	24,755	32,346	7,591	
Miscellaneous Services	499,106	549,234	50,128	
Treatment & Transportation	342,905	300,000	(42,905)	
Depreciation and Amortization	383,527	383,527	-	
Total Operating Expenses	1,399,763	1,394,107	(5,656)	Higher labor costs and treatment & transportation costs offset partly by lower service costs
Operating Income	(162,991)	(207,209)	44,218	Higher operating revenues
Non-Operating Revenues (Expenses)				
Tapping and Capital Recovery fees	936,130	950,000	(13,870)	
Meter Sales	-	-	-	
Inspection and Plan Reviews	13,727	-	13,727	
Project Reimbursements	-	-	-	
Interest Income	25,657	20,000	5,657	
Other Income	10,771	1,000	9,771	
Interest Expense	(18,177)	(17,196)	(981)	
Other Expense	(1,562)	-	(1,562)	
Total Non-Operating Revenues (Expenses)	966,546	953,804	12,742	Higher interest income and higher other miscellaneous
Net Income Before Capital Contributions	803,555	746,595	56,960	Higher operating income and higher non-operating revenues
Capital Contributions	-	-	-	No contributions
NET INCOME	803,555	746,595	56,960	

FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	1,236,772	1,186,898	49,874	
Operating Expenses (ex D&A)	(1,016,236)	(1,010,580)	(5,656)	
Non-Cash Working Capital Changes	581,077	580,000	1,077	
Net Cash Provided by (Used in) Operating Activities	801,613	756,318	45,295	Higher operating net
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(15,184)	(17,196)	2,012	
Principal Payments	(40,951)	(39,844)	(1,107)	
Net Cash Provided by (Used in) Financing Activities	(56,135)	(57,040)	905	
Cash Flows from Capital and Related Activities				
Non-Operating Revenues	960,628	951,000	9,628	Higher interest income and other miscellaneous
Project Reimbursement	-	-	-	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(548,845)	(2,433,000)	1,884,155	Favorable capex timing
Net Cash Provided By (Used In) Capital and Related Activities	411,783	(1,482,000)	1,893,783	
Cash Flows From Investing Activities				
Investments Converting To Cash	494,000	500,000	(6,000)	
Purchased Investments	(504,569)	(500,000)	(4,569)	
Interest Income	25,657	20,000	5,657	
Net Cash Provided By (Used In) Investing Activities	15,088	20,000	(4,912)	
FUND NET CASH FLOWS	1,172,349	(762,722)	1,935,071	

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
AUGUST 2019

MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Operating Revenues														
3,488,400	3,452,965	2,752,676	35,435	735,724	Charges For Services					24,875,923	24,833,360	22,587,203	42,563	2,288,720	37,090,226	37,022,206	36,450,498	68,020	639,728
-	-	-	-	-	Rent					-	-	-	-	-	-	-	-	-	-
60,379	72,309	139,670	(11,930)	(79,291)	Other Income					335,213	357,877	478,725	(22,664)	(143,512)	531,111	567,706	357,112	(36,595)	173,999
3,548,779	3,525,274	2,892,345	23,505	656,434	Total Operating Revenues					25,211,136	25,191,237	23,065,927	19,899	2,145,209	37,621,337	37,589,912	36,807,610	31,425	813,727
					Operating Expenses														
637,811	632,420	636,468	(5,391)	(1,343)	Salaries and Wages					3,817,902	3,817,070	3,755,208	(832)	(62,694)	5,606,749	5,653,796	5,417,629	47,047	(189,120)
491,677	465,960	608,835	(25,717)	117,158	General and Administrative					4,689,156	4,663,039	4,421,709	(26,117)	(267,447)	6,761,873	6,407,601	6,792,863	(354,272)	30,990
158,435	165,000	262,721	6,565	104,286	Utilities					1,488,452	1,458,481	1,418,461	(29,971)	(69,991)	2,118,481	2,095,255	1,970,383	(23,226)	(148,098)
121,396	122,227	171,250	831	49,854	Materials and Supplies					801,493	817,364	767,342	15,871	(34,151)	1,574,483	1,597,216	1,197,148	22,733	(377,335)
62,729	107,231	193,962	44,502	131,233	Miscellaneous Services					1,002,500	1,079,086	945,715	76,586	(56,785)	2,031,779	1,988,845	1,801,414	(42,934)	(230,365)
-	-	-	-	-	Treatment & Transportation					4,628	-	4,624	(4,628)	(4)	12,000	12,000	9,827	-	(2,173)
490,000	490,000	466,667	-	(23,333)	Depreciation and Amortization					3,920,000	3,920,000	3,733,336	-	(186,664)	5,880,000	5,880,000	5,864,433	-	(15,567)
1,962,048	1,982,838	2,339,903	20,790	377,855	Total Operating Expenses					15,724,131	15,755,040	15,046,396	30,909	(677,735)	23,985,365	23,634,713	23,053,697	(350,652)	(931,668)
1,586,731	1,542,436	552,443	44,295	1,034,288	Operating Income					9,487,005	9,436,197	8,019,531	50,808	1,467,474	13,635,972	13,955,199	13,753,913	(319,227)	(117,941)
					Non-Operating Revenues (Expenses)														
-	-	-	-	-	Tapping and Capital Recovery fees					562,808	550,294	299,820	12,514	262,988	415,294	324,000	563,922	91,294	(148,628)
122,014	109,500	45,495	12,514	76,519	Meter Sales					14,918	9,159	6,887	5,759	8,031	13,159	12,000	8,397	1,159	4,762
6,759	1,000	1,483	5,759	5,276	Inspection and Plan Reviews					22,333	41,433	24,595	(19,100)	(2,262)	179,846	207,000	539,698	(27,154)	(359,852)
2,150	17,250	2,700	(15,100)	(550)	Project Reimbursements					19,231	20,000	-	(769)	19,231	20,000	1,645,000	372,527	(1,625,000)	(352,527)
-	-	-	-	-	Interest Income					758,364	764,612	495,690	(6,248)	262,674	1,164,612	400,000	1,047,630	764,612	116,982
87,500	100,000	76,278	(12,500)	11,222	Other Income					33,295	27,406	30,442	5,889	2,853	34,742	22,000	200,818	12,742	(166,076)
3,750	1,833	4,365	1,917	(615)	Interest Expense					(11,628,220)	(11,628,851)	(11,221,872)	631	(406,348)	(18,943,851)	(18,956,576)	(18,810,413)	12,725	(133,438)
(1,439,984)	(1,440,000)	(1,402,734)	16	(37,250)	Other Expense					(330,960)	(307,458)	(1,034,792)	(23,502)	703,832	(457,458)	(1,645,000)	(3,810,644)	1,187,542	3,353,186
(115,658)	(100,000)	(244,950)	(15,658)	129,292	Total Non-Operating Revenues (Expenses)					(10,548,231)	(10,523,405)	(11,399,230)	(24,826)	850,999	(17,573,656)	(17,991,576)	(19,888,065)	417,920	2,314,409
(1,333,469)	(1,310,417)	(1,517,364)	(23,052)	183,895															
253,262	232,019	(964,921)	21,243	1,218,183	Net Income Before Capital Contributions					(1,061,226)	(1,087,208)	(3,379,699)	25,982	2,318,473	(3,937,684)	(4,036,377)	(6,134,152)	98,693	2,196,468
					Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-															
253,262	232,019	(964,921)	21,243	1,218,183	NET INCOME					(1,061,226)	(1,087,208)	(3,379,699)	25,982	2,318,473	(3,937,684)	(4,036,377)	(6,134,152)	98,693	2,196,468

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
AUGUST 2019

MONTH					AUGUST 2019					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					Cash Flows From Operating Activities														
3,548,779	3,525,274	2,892,345	23,505	656,434	Operating Revenues	25,211,136	25,191,237	23,065,927	19,899	2,145,209	37,621,337	37,589,912	36,807,610	31,425	813,727				
(1,472,048)	(1,492,838)	(1,873,236)	20,790	401,188	Operating Expenses (ex D&A)	(11,804,131)	(11,835,040)	(11,313,060)	30,909	(491,071)	(18,105,365)	(17,754,713)	(17,189,264)	(350,652)	(916,101)				
287,675	275,000	959,761	12,675	(672,086)	Non-Cash Working Capital Changes	(260,837)	(274,167)	(474,889)	13,330	214,052	-	-	3,795,284	-	(3,795,284)				
2,364,406	2,307,436	1,978,871	56,970	385,535	Net Cash Provided by (Used in) Operating Activities	13,146,168	13,082,030	11,277,978	64,138	1,868,190	19,515,972	19,835,199	23,413,630	(319,227)	(3,897,658)				
					Cash Flows From Financing Activities														
-	-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	-	-	18,735,000	-	(18,735,000)				
-	-	-	-	-	Interest Payments	(6,775,522)	(6,775,522)	(6,523,861)	-	(251,661)	(14,961,810)	(14,956,576)	(13,321,283)	(5,234)	(1,640,527)				
-	-	-	-	-	Principal Payments	-	-	-	-	-	-	-	(18,735,000)	-	18,735,000				
-	-	-	-	-	Net Cash Provided by (Used in) Financing Activities	(6,775,522)	(6,775,522)	(6,523,861)	-	(251,661)	(14,961,810)	(14,956,576)	(13,321,283)	(5,234)	(1,640,527)				
					Cash Flows from Capital and Related Activities														
134,673	129,583	54,043	5,090	80,630	Non-Operating Revenues	633,354	628,292	361,744	5,062	271,610	643,041	565,000	1,312,835	78,041	(669,794)				
-	-	-	-	-	Project Reimbursement	19,231	20,000	-	(769)	19,231	20,000	1,645,000	372,527	(1,625,000)	(352,527)				
-	-	-	-	-	Non-Operating Expenses	(258,931)	(258,931)	(255,780)	-	(3,151)	(521,362)	(516,200)	(792,212)	(5,162)	270,850				
(402,362)	(127,000)	(612,475)	(275,362)	210,113	Capital Expenditures	(2,978,131)	(2,759,781)	(2,707,822)	(218,350)	(270,309)	(3,724,885)	(4,845,000)	(7,853,989)	1,120,115	4,129,104				
(267,689)	2,583	(558,432)	(270,272)	290,743	Net Cash Provided By (Used In) Capital and Related Activities	(2,584,477)	(2,370,420)	(2,601,858)	(214,057)	17,381	(3,583,206)	(3,151,200)	(6,960,839)	(432,006)	3,377,633				
					Cash Flows From Investing Activities														
-	-	-	-	-	Investments Converting To Cash	-	-	-	-	-	-	-	4,000,000	-	(4,000,000)				
-	-	-	-	-	Purchased Investments	-	-	-	-	-	-	-	-	-	-				
87,500	100,000	76,278	(12,500)	11,222	Interest Income	758,364	764,612	495,690	(6,248)	262,674	1,164,612	400,000	1,047,630	764,612	116,982				
87,500	100,000	76,278	(12,500)	11,222	Net Cash Provided By (Used In) Investing Activities	758,364	764,612	495,690	(6,248)	262,674	1,164,612	400,000	5,047,630	764,612	(3,883,018)				
<u>2,184,217</u>	<u>2,410,019</u>	<u>1,496,716</u>	<u>(225,802)</u>	<u>687,501</u>	FUND NET CASH FLOWS	<u>4,544,533</u>	<u>4,700,700</u>	<u>2,647,949</u>	<u>(156,167)</u>	<u>1,896,584</u>	<u>2,135,568</u>	<u>2,127,423</u>	<u>8,179,138</u>	<u>8,145</u>	<u>(6,043,570)</u>				
					DEBT SERVICE RATIO														
2,263,208	2,229,721	1,114,199	33,487	1,149,009	Total Cash Available For Debt Service	14,489,650	14,452,548	12,307,282	37,102	2,182,368	20,923,445	20,421,285	21,521,372	502,160	(597,927)				
1,246,381	1,246,381	1,087,310	-	159,071	Debt Service	9,971,048	9,971,048	8,698,480	-	1,272,568	14,956,576	14,956,576	13,047,722	-	1,908,854				
<u>1.82</u>	<u>1.79</u>	<u>1.02</u>	<u>0.03</u>	<u>0.79</u>	DSCR	<u>1.45</u>	<u>1.45</u>	<u>1.41</u>	<u>0.00</u>	<u>0.04</u>	<u>1.40</u>	<u>1.37</u>	<u>1.65</u>	<u>0.03</u>	<u>(0.25)</u>				

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
AUGUST 2019

FORECAST VARIANCES - MONTH

INCOME STATEMENT	Actual	Forecast	Variance	Comments
Operating Revenues				
Charges For Services	3,488,400	3,452,965	35,435	Higher Water and higher Wastewater revenues
Rent	-	-	-	
Other Income	60,379	72,309	(11,930)	
Total Operating Revenues	3,548,779	3,525,274	23,505	Higher user charges
Operating Expenses				
Salaries and Wages	637,811	632,420	(5,391)	
General and Administrative	491,677	465,960	(25,717)	Higher allocated benefits
Utilities	158,435	165,000	6,565	
Materials and Supplies	121,396	122,227	831	
Miscellaneous Services	62,729	107,231	44,502	Lower miscellaneous services
Treatment & Transportation	-	-	-	
Depreciation and Amortization	490,000	490,000	-	
Total Operating Expenses	1,962,048	1,982,838	20,790	Lower services partly offset by higher G&A
Operating Income	1,586,731	1,542,436	44,295	Higher operating revenues along with lower operating expenses
Non-Operating Revenues (Expenses)				
Tapping and Capital Recovery fees	122,014	109,500	12,514	
Meter Sales	6,759	1,000	5,759	
Inspection and Plan Reviews	2,150	17,250	(15,100)	
Project Reimbursements	-	-	-	
Interest Income	87,500	100,000	(12,500)	
Other Income	3,750	1,833	1,917	
Interest Expense	(1,439,984)	(1,440,000)	16	
Other Expense	(115,658)	(100,000)	(15,658)	
Total Non-Operating Revenues (Expenses)	(1,333,469)	(1,310,417)	(23,052)	Lower interest income
Net Income Before Capital Contributions	253,262	232,019	21,243	Higher operating income offset partly by lower interest income
Capital Contributions	-	-	-	No contributed capital
NET INCOME	253,262	232,019	21,243	

FORECAST VARIANCES - MONTH

CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	3,548,779	3,525,274	23,505	
Operating Expenses (ex D&A)	(1,472,048)	(1,492,838)	20,790	
Non-Cash Working Capital Changes	287,675	275,000	12,675	
Net Cash Provided by (Used in) Operating Activities	2,364,406	2,307,436	56,970	Higher net operating revenues along with favorable working capital movements
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	-	-	-	
Principal Payments	-	-	-	
Net Cash Provided by (Used in) Financing Activities	-	-	-	
Cash Flows from Capital and Related Activities				
Non-Operating Revenues	134,673	129,583	5,090	
Project Reimbursement	-	-	-	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(402,362)	(127,000)	(275,362)	Unfavorable timing on capex
Net Cash Provided By (Used In) Capital and Related Activities	(267,689)	2,583	(270,272)	
Cash Flows From Investing Activities				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	87,500	100,000	(12,500)	
Net Cash Provided By (Used In) Investing Activities	87,500	100,000	(12,500)	
FUND NET CASH FLOWS	2,184,217	2,410,019	(225,802)	

CASH & INVESTMENT SUMMARY
AUGUST 2019
YTD CHANGES IN CASH BALANCES

	Suburban Water	Suburban Wastewater	City Division
CURRENT MONTH			
CASH			
Operating	10,660,666.15	2,308,352.74	17,226,516.92
Capital	5,406,855.59	7,867,876.94	1,949,592.69
Restricted	1,583,636.88	337,805.02	37,590,608.68
Escrow	4,600,216.25	-	6,361.59
Total Cash	22,251,374.87	10,514,034.70	56,773,079.88
INVESTMENTS			
Operating	2,137,446.20	-	-
Capital	1,744,267.24	8,500,300.44	-
Restricted	25,526.72	-	3,940,640.00
Total Investments	3,907,240.16	8,500,300.44	3,940,640.00
TOTAL CASH & INVESTMENTS	26,158,615.03	19,014,335.14	60,713,719.88
BEGINNING OF YEAR			
CASH			
Operating	8,283,969.69	5,314,951.71	18,017,729.33
Capital	5,772,084.72	7,739,379.19	42,935.90
Restricted	1,564,965.39	337,562.23	34,161,520.50
Escrow	4,990,657.44	-	6,361.22
Total Cash	20,611,677.24	13,391,893.13	52,228,546.95
INVESTMENTS			
Operating	3,356,991.39	-	-
Capital	3,426,629.74	6,455,704.16	-
Restricted	25,521.88	-	3,940,640.00
Total Investments	6,809,143.01	6,455,704.16	3,940,640.00
TOTAL CASH & INVESTMENTS	27,420,820.25	19,847,597.29	56,169,186.95
YTD CHANGE IN BALANCES			
CASH			
Operating	2,376,696.46	(3,006,598.97)	(791,212.41)
Capital	(365,229.13)	128,497.75	1,906,656.79
Restricted	18,671.49	242.79	3,429,088.18
Escrow	(390,441.19)	-	0.37
Total Cash	1,639,697.63	(2,877,858.43)	4,544,532.93
INVESTMENTS			
Operating	(1,219,545.19)	-	-
Capital	(1,682,362.50)	2,044,596.28	-
Restricted	4.84	-	-
Total Investments	(2,901,902.85)	2,044,596.28	-
TOTAL CASH & INVESTMENTS	(1,262,205.22)	(833,262.15)	4,544,532.93
CASH WITHOUT ESCROW	2,030,138.82	(2,877,858.43)	4,544,532.56

Lehigh County Authority
System Operations Review - August 2019
Presented: September 23, 2019

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Critical Activities	System	Description	Aug-19	2019 Totals	2018 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	21.90	21.68	21.48	39.0
		Schantz Spring	7.88	7.98	6.90	9.0
		Crystal Spring	3.82	3.88	3.88	4.0
		Little Lehigh Creek	10.20	9.82	10.69	30.0
		Lehigh River	0.00	0.00	0.02	28.0
	Central Lehigh	Total	10.53	10.03	9.46	19.04 MGD Avg
		Feed from Allentown	7.02	7.06	6.74	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	3.51	2.97	2.71	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.16	0.17	0.18	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	34.90	40.45	36.08	40.0
		Pretreatment Plant	6.07	6.45	5.46	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.16	0.19	0.20	0.36
			Aug-19	2019 Totals	2018 Totals	2017 Totals
Precipitation Totals (inches)			4.79	46.29	66.96	50.18
Compliance Reports Submitted to Allentown			17	200	285	291
Notices of Violation (NOVs)	(Allentown + Suburban)		0	1	1	3
Sanitary Sewer Overflows (SSOs)/Bypasses	(Allentown + Suburban)		1	30	78	22
Main Breaks Repaired	Allentown		0	17	33	19
	Suburban		1	4	23	12
Customer Service Phone Inquiries	(Allentown + Suburban)		2,096	16,239	26,440	27,313
Water Shutoffs for Non-Payment	(Allentown + Suburban)		167	1,200	1,838	1,577
Injury Accidents	(Allentown + Suburban)		1	8	14	8
Emergency Declarations	Allentown		0	(2)@ \$152,053	(5) @ \$76,469	(2) @ \$51,235
	Suburban		0	(1) @ \$19,335	(1) @ \$21,197	(1) @ \$72,554

<u>Significant Repairs/Upgrades</u> : Nothing to report.
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<p>Description of NOV's and/or SSO's: There were zero (0) bypasses that occurred in August 2019, and this figure includes Heidelberg Heights. There was one (1) SSO that occurred during August and happened in the City on 8/19/19 on North Maxwell Street. There were zero (0) NOV's issued during August 2019.</p>
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Other Highlights: USGS and the Next Generation Water Observation Program has gotten approval for new stream monitoring gages at the following locations: Little Lehigh Creek near Trexlertown, Cedar Creek at the confluence with the Little Lehigh, Iron Run, Schantz Spring (which is the headwater of Cedar Creek), Swabia Creek at the confluence with the Little Lehigh Creek, and Schaeffer Run. Stations will be monitored for flow, temperature and specific conductivity.

Western Lehigh Interceptor Emergency Project - Status as of 9/13/2019

Phase 1 MH Start Point U84-7 MH End Point U6

CCTV Work and Cleaning/Grouting: 100% Complete

Phase 2 MH Start Point U6 MH End Point L274

Remediation work began in Phase 2 on 7/1/2019.

Five (5) segments need to be CCTV'd yet.

20" relief line was successfully cleaned and CCTV'd.

CCTV Work and Cleaning/Grouting: ~95% Complete

Phase 3 MH Start Point L274 MH End Point L255 (SCPS)

Bypass system start-up occurred on 8/20.

Cleaning/CCTV work and grouting repairs should be finished by 9/13.

(19) manholes will be rehabilitated during the bypass.

CCTV Work and Cleaning/Grouting: ~95% Complete

Phase 4 MH Start Point L255 (SCPS) MH End Point L90 (Alburtis Line)

Four (4) segments remain to be CCTV'd.

Several segments are showing heavy debris which needs to be removed ASAP.

Phase 5 MH Start Point L90 MH End Point L1 (Meter Station 5)

Several segments remain to be CCTV'd.

Phase 6 MH Start Point L1 MH End Point B1 (PPS)

Several segments remain to be CCTV'd.

Throughout the entire project area consisting of Phases 1-6, a very short list of segments remain that have not been CCTV'd. The remaining segments all have site specific issues to overcome, i.e. access problems, area is flooded, etc. As far as cleaning and grouting work is concerned, the vast majority of Phases 2 and 3 have been completed. No cleaning and grouting has been done at all for Phases 4-6.

Phase 3 was scheduled for completion on 9/13 and afterwards, the bypass system can be dismantled and removed. This is a current priority as we are in the middle of hurricane season and we'd like to get all of the equipment out of the floodplain prior to any storms hitting NE PA. After Phase 3 is completed, Phase 2 will need to be finished but is currently almost completed anyway. Unless something unforeseen happens, Phases 1-3 will all be 100% complete by late September or early October. Cost estimates are currently being assembled for work in Phase 4, with several areas having been found with heavy debris. The remaining 2019 timetable for the project has not been finalized yet.

To-date, approximately 150,000 GPD of infiltration has been removed because of the joint and manhole repairs in Phases 1-3. There were several severe blockages that were found and removed. Several defects were found where previous remediation attempts had failed. There is significant debris in the line below SCPS and this should all be removed this year yet. Repairs to the gates, comminutor and Pump #3 of SCPS will be completed ASAP once the bypassing equipment has been removed from the station.