



LEHIGH COUNTY AUTHORITY

May 26, 2015

BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
 - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
 - *April 27, 2015 Regular Meeting Minutes*
5. Public Comments
6. Election of Chairman
7. Action / Discussion Items

FINANCE AND ADMINISTRATION

- *2014 Financial Statement*

WATER

- *Suburban Division – Pumping Station Projects - Approval*
- *Allentown Division – Water Filtration Plant Inspection/Rebuild of Filter #6 - Approval*

WASTEWATER

8. System Operations Overview
9. Staff Comments
10. Solicitor's Comments
 - *PLSA Report (Preceded by Executive Session)*
11. Other Comments
12. Adjournment

MAY MEETINGS

Workshop Meeting
Board Meeting

June 15 – 12:00 p.m.
June 29 – 12:00 p.m.

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES
April 27, 2015

The Regular Meeting of the Lehigh County Authority was called to order at 12:21 p.m., on Monday, April 27, 2015, Vice Chairman Tom Muller presiding. Other Members present at the commencement of the meeting were: Richard Bohner, Brian Nagle, Ted Lyons, Norma Cusick, Scott Bieber, Emrich Stellar and Deana Zosky. Authority Staff present were Aurel Arndt, Liesel Adam, Ed Bielarski, Pat Mandes, Frank Leist, Robert Kerchusky, John Parsons, Chuck Volk and Lisa Miller.

The Board welcomed their newest member, Deana Zosky.

REVIEW OF AGENDA

EXECUTIVE SESSION

Aurel Arndt stated there would be an Executive Session at the end of the regular meeting to discuss personnel matters.

APPROVAL OF MINUTES

March 23, 2015 Regular Meeting Minutes

Brian Nagle noted that a correction needs to be made to the March 23, 2015 minutes to correct a vote in the Minutes of January 26, 2015 to 6-0, not 7-0.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board unanimously approved the Minutes of the March 23, 2015 Regular Meeting as corrected (7-0). Deana Zosky abstained.

April 13, 2015 Regular Meeting Minutes

Richard Bohner noted that the word "on" after refunding needs to be eliminated in the paragraph under the Proposal for Water Revenue Bond.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board unanimously approved the Minutes of the February 23, 2015 Workshop Meeting as corrected (7-0). Deana Zosky abstained.

PUBLIC COMMENTS

None.

Aurel Arndt introduced Chuck Volk to the Board. Mr. Volk has recently joined LCA as the Asset Management Engineer and will formally be working with Operations.

Election of Chairman

On a motion by Norma Cusick, seconded by Richard Bohner, the Board unanimously nominated Brian Nagle for Chairman of the Board since Asa Hughes, the Chairman elected in February was not reappointed to the Board when his term expired (7-0). There being no further nominations, Norma Cusick made a motion to close the nominations, Richard Bohner seconded the motion (7-0). Deana Zosky abstained.

Tom Muller announced that Brian Nagle is the Chairman of the Board of Directors by acclamation.

ACTION AND DISCUSSION ITEMS

Norma Cusick questioned the net rate of the Certificates of Deposit. Ed Bielarski explained that the PSDLAF CDs are purchased while waiting for the next CD or Treasury bond to become available and keeps the money liquid.

Allentown Division – Water System Hydraulic Model Approval

Frank Leist gave an overview of the project that will develop a fully calibrated, all-pipe, hydraulic model of the Allentown Division (AD) water system that will be integrated with LCA's GIS and MUNIS systems. He recommends approval of the Professional Services Authorization in the amount of \$234,800 to retain Gannett Fleming for this project and the Capital Project Authorization in the amount of \$381,300. Mr. Leist was asked to describe the model. He explained that hydraulic modeling is a model of the water distribution system and all the facilities that contribute to capacity. The project is estimated to take 14 months to complete. Brian Nagle asked that the terminology in the paperwork for these projects be stated as "the Project will be funded by LCA Allentown Division".

On a motion by Scott Bieber, seconded by Ted Lyons, the Board unanimously approved the Capital Project Authorization in the amount of \$381,300 including the Professional Services Authorization to Gannett Fleming in the amount of \$234,800 (7-0). Deana Zosky abstained.

At this time, the Board and Staff introduced themselves to Deana Zosky.

Scott Bieber asked Chuck Volk to give the Board a description of his background. Mr. Volk gave a brief history of his previous employment.

Allentown Division – Water Main Replacement Program – Cycle 2 Approval

Frank Leist gave an overview of the project. The Operating Standards of the Lease Agreement require that Lehigh County Authority annually replace two-miles of aged spun and/or pit cast-iron water mains, except in the first year where only one mile was required. A location table is included to show the nine locations of water main replacement. The project contract was bid in two parts. Part A is primarily the replacement of water mains and Part B deals with valve replacements in two intersection reconstructions on Hamilton Boulevard before the City of Allentown repaves those intersections. The bids were written as though LCA were purchasing certain materials, including pipe, but included an alternate bid with the contractor providing the materials for comparison to determine which is most cost effective for LCA. The Staff recommended the project be awarded to the lowest bidder with the alternate bid substituting for the appropriate line items of both Part A and Part B. As a result, the contractor will be responsible for purchase of all of the materials, including the pipe, excepting the 30" diameter materials.

On a motion by Tom Muller, seconded by Richard Bohner, the Board followed Staff recommendation and unanimously approved the Capital Project Authorization Amendment No. 2 in the amount of \$2,478,823 including the Professional Services Authorization No. 2 in the amount of \$57,221 for Construction Engineering and Management Services to Gannett Fleming Inc., Professional Services Authorization in the amount of \$82,200 for Construction Inspection Services to Keystone Consulting Engineers, awarding the contract to JOAO Bradley Construction Co., Inc. for general construction with the alternative of contractor providing pipe in the amount of \$2,038,632 including the Procured Material to L.B. Water in the amount of \$45,770 (7-0). Deana Zosky abstained.

Western Lehigh Sewerage Partnership (WLSP) Alternatives Evaluation Approval

Pat Mandes gave an overview of the project. She is requesting approval of the Capital Project Authorization Amendment No. 21 in the amount of \$249,000 to Arcadis for the final alternatives analysis and the Professional Services Agreement. The project is expected to be complete by the end of the year.

On a motion by Emrich Stellar, seconded by Norma Cusick, the Board unanimously approved the Capital Project Authorization Amendment No. 21 in the amount of \$249,000 and the Professional Services Agreement to Arcadis (7-0). Deana Zosky abstained.

Lowhill Township Sewer System Acquisition Approval

Brian Nagle abstained from the discussion. A Conflict of Interest Disclosure Form was signed and is included with these minutes.

Aurel Arndt gave a brief history of the Lowhill Township Wastewater System and provided an acquisition overview. An Acquisition Agreement (also known as the Wastewater Service Agreement) was provided and reviewed. System revenues and expenses were discussed.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board unanimously approved the Lowhill Wastewater Service Agreement (6-0). Brian Nagle and Deana Zosky abstained.

SYSTEM OPERATIONS OVERVIEW

Pat Mandes announced that a meeting with the stakeholders and municipal sewer signatories will be held on Wednesday, April 29 from 9-11 a.m. in the LCA Main Conference Room regarding Act 537 Sewer Facilities Planning. An update on the Act 537 options analysis for wastewater capacity expansion will be provided at the meeting and Board members were welcomed to attend.

Robert Kerchusky reported that the Arcadia Wastewater Treatment Plant is in full environmental compliance after facing some difficulties over the winter months. He provided a brief overview of the plant design and treatment challenges based on serving a very small service area of 13 commercial properties. There was discussion regarding plant design and function. Frank Leist stated that the independent engineers report is due by mid-May at which time it will be shared with the Board.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

Not present.

OTHER COMMENTS

Scott Bieber requested a copy of the letter sent to EPA requesting an extension of the Administrative Order. A copy will be provided to all Board members via email.

EXECUTIVE SESSION

The Chairman called an Executive Session at 1:18 p.m. to discuss personnel matters, at which time all Staff members except Mr. Arndt exited the meeting.

The session ended at 1:45 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:45 p.m.

Richard H. Bohner
Secretary

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

1. CMMS Upgrade and Expansion Project

'Go Live' was completed on schedule during the week of March 9, 2015 with follow up training conducted April 14-16. Work will now focus on entering Suburban facility assets into GIS. Activities will be coordinated with other capital projects.

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Basin Street	Community & Southern Bank	Atlanta, GA	98,000.00	4/15/15	10/14/16	0.6
LLRI CR	First Niagara Bank	Buffalo, NY	250,000.00	4/17/15	4/17/17	0.8
LLRI CR	Haddon Savings Bank	Haddon Heights, NJ	250,000.00	4/17/15	5/17/17	0.7

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. **Suburban Division – Pumping Station Projects**

This project will involve upgrades at two existing small system booster stations and the installation of one new major booster station in the Central Lehigh Division (CLD). The Pine Lakes Project will feature the conversion of the existing hydro-pneumatic station to a variable frequency drive controlled double pumping system (along with other miscellaneous improvements). The Crestwood Project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the existing North Whitehall Division System. The Central Lehigh Division Auxiliary Pump Station Project will feature the installation of a new booster station and main extension to pump water from the Lower to the Upper System. Board approval is requested for the design phase for all three of these projects (**grey**)

2. **Allentown Division- Water Filtration Plant Inspection/Rebuild of Filter #6**

The Allentown Water Plant currently uses (8) dual media filters that were built in 1953. Some operational concerns with the filters need to be investigated and particularly with filter #6. All media and support gravel will be removed to allow for a complete inspection of the tiles and underdrains which hasn't been done since 1992. The anthracite, sand, and gravel layers will all be replaced with new material. An engineering report will be generated that evaluates the overall condition of the filter. The report will become critical with the upcoming Water Master Plan. Board approval is requested for the Professional Services (**blue**)

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Suburban Division -Arcadia West Pumping Station Modifications**

The Substantial Completion punch list was given to the general and electrical contractors to complete. The electrical punch list was addressed. The few remaining SCADA system punch list items are dependent on the general contractor, who has yet to address the majority of his punch list. **No current activity.**

2. **Suburban Division - Water Main Replacement Program Cycle 1**

The project consists of the replacement of 1-mile of aged and/or failing Cast Iron water main. Design is currently under way.

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

The project is to design and construct a facility or improvements that assure continuous chlorination of the Schantz Spring water supply. Barry Isett Inc. has completed an engineering study of chlorination options. A conceptual design was submitted to the City and it was approved. PADEP permit applications been prepared and all materials have been ordered so installations may begin. This Project is identified as Un-Completed Work and will be funded by the City.

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

The project is the replacement of approximately 55 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. Design is currently under way. This project is identified as Un-Completed Work and will be funded by the City.

5. **Allentown Division – Transmission Main – Leak Detection Survey**

The Project includes the use of a non-invasive leak detection methodology to find any leaks that may exist in approximately 33,000 linear-feet of large transmission mains the ranging from 16 thru 36 inches in diameter, both steel and cast iron materials; with a majority of these mains over 65 years old. Effective non-invasive leak detection on mains of these sizes is a specialized service which requires sophisticated equipment a high level of expertise. To facilitate the transmission main leak detection survey for this year and to be utilized for future surveys this project includes the installation by hydro-excavation (*to minimize road damage and restoration costs*) of 21 permanent roadway monitoring points. The Lease Operating Standards requires 110 miles of water mains be surveyed annually; excepting for the large transmission mains this work is executed by the Allentown Division Distribution & Collection Department. The leak detection survey footage from this project will count towards the 110 mile annual requirement. We anticipate requesting a Professional Services approval for this project at the June workshop meeting. The project will be funded by the LCA Allentown Division.

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

Two projects have begun and are in various stages of proposals and/or finalization of work scope. The projects include: Painting of water plant piping to comply with PaDEP inspection report and a Stormwater pump/control upgrades at Water Distribution. The painting project will be an operational expense, while the Stormwater pump will be a capital project. These projects will be funded by the LCA Allentown Division.

7. **Developments**

Water system construction is occurring in the following developments:

- Highgate, Phase 4 (Dunbar Tract), 63 residential lots (sfa), UMT
- Laurel Field, Phase 4B, 30 residential lots (sfa), UMT
- Parkland Fields, Phase 3, 37 residential lots (sfd), UMT
- Spring Creek Settlement Properties, 4 commercial lots, LMT
- Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT (currently on hold)

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
- Fields at Indian Creek, 218 residential lots (sfd) & community center, LMT/UMiIT/Emmaus, water and sewer
- Grandview, 6 commercial units and 204 apartment units, LMT
- Grant Street Townes, 18 residential lots (sfa), WashT
- Hickory Park Estates, 3 residential lots (sfd), UMT
- Hillview Farms, 31 residential lots (sfd), LMT/SWT
- Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer
- Lehigh Hills, 247 residential lots (sfa/sfd), UMT
- Liberty at Mill Creek, 2 industrial lots, UMT
- Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer

North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water and
sewer
Shepherd's Corner, 1 commercial lot, LMT
Trexler Business Center, Lot 1, 1 commercial building, LMT
Weilers Road Twins, 82 residential lots (sfa), UMT
Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

1. Wastewater Treatment Capacity

A Public Outreach event was held on April 29th to bring the stakeholders up to date on the evaluation of alternatives. The attendance was very good and included the LCA and the City Signatories.

2. Suburban Division -Wynnewood Terrace Pump Station and Force Main Replacement

Work started on April 13, 2015, and is expected to be complete by the end of August. The force main contractor has completed most all of Wellington Circle and should have Wynnewood Drive complete by the Board meeting.

3. Suburban Division - Park Pump Station Fuel Tank Replacement

The installation of a new 8,000 gallon fuel tank began November 10, 2014. Most of the work is complete, except for final restoration. Completion is expected by the end of May 2015.

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

The project will upgrade the WWTP head works. Gannett Fleming is finalizing the bid package. **No current activity.**

5. Suburban Division -Condition Assessments for Package Wastewater Treatment Plants

Capital Works staff has received proposals to conduct condition assessments of the aged Wynnewood Terrace and Sand Spring Wastewater Treatment Plants. The proposals were satisfactory and staff has selected a professional firm to move forward. Work should start in early June, with completion by the end of July.

6. Suburban Division –WLI / LLRI Meter Station No. 5 Rehabilitation:

Meter Station No. 5, located near Keck’s Bridge in Lower Macungie Township, meters flow from the Western Lehigh Interceptor (WLI). The Allentown-Emmaus Interceptor joins the WLI just downstream of the metering location, and the combined flow is conveyed to the Allentown Division for treatment. The existing flow meters are outdated, inaccurate, and in need of replacement. The proposed Meter Station No. 5 Rehabilitation Project includes the following improvements: internal cleaning and CCTV inspection of all gravity sewer lines in the vicinity of the station, internal cured-in-place lining of the two inverted siphon lines, interior repair of meter pit structures to eliminate seepage/infiltration, replacement of flow meters, installation valves to isolate the flowmeters for future maintenance, and installation of a valved cleanout at each inverted siphon to facilitate future maintenance/line cleaning. It is expected that approval of the Construction Phase of the Project will be requested at the June Board meeting.

7. **Allentown Division – Sanitary Sewer Manhole Lining, Cycle 2**

This annual project will install a lining system (to eliminate infiltration) in approximately 85 aged brick manholes identified by LCA staff. The design phase has been administratively approved. A request for Board approval of the construction phase is anticipated in July. The project is identified as Administrative Order Work and will be funded by the City.

8. **Allentown Division – Manhole Collars with Water Tight Frame and Covers, Cycle 2**

This three year project will permanently secure the frame and cover of approximately 87 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. The design phase has been administratively approved. A request for Board approval of the construction phase is anticipated in July. The project is identified as Administrative Order will be funded by the City.

9. **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 project has been approved by the City as a Major Capital Improvement (MCI). The Construction Phase of the project has been approved by the Board. Notice to Proceed has been sent to both contractors and a pre-construction meeting was held on 2/13/15. Various submittals are currently in the approval process. This Project is identified in the Lease as Schedule 7 (required) project and will be funded the LCA Allentown Division.

10. **Allentown Division – Roof Rehabilitation and Replacements**

The Project consists of replacing 26 facility roofs that were identified as in need of immediate replacement in the Roof Evaluation report performed by D'Huy Engineering. The design of these replacements are proceeding. The project was presented to the City for review/approval as a Major Capital Improvement (MCI), but the city rejected it as such. Bid specifications are being finalized for all 26 roofs. A PLA study is underway to determine applicability to this project and the study is expected to be completed by mid-May. The project will be funded by the LCA Allentown Division.

11. **Allentown Division- SCADA System Installation –Wastewater Treatment Plant:**

All documents have been signed and the Kickoff Meeting was on Tuesday, March 17. This project is identified Un-Completed Work and will be funded by the City. Hardware submittals have been received and approved. Radio study was completed on April 30, 2015.

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

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). The Design Phase has been approved and a kick-off meeting was held in February 2015. A Major Capital Improvement (MCI) Conceptual Design has been submitted to the City for review and approval. A request for Board approval of the construction phase is anticipated in October 2015. This Project is identified in the Lease as Schedule 7 (required) project and will be funded the LCA Allentown Division.

13. **Allentown Division- Miscellaneous Projects at the Wastewater Treatment Plant:**

Several projects have begun and are in various stages of proposals and/or finalization of work scope. The projects include: Emergency power at the chlorination building, Odor Control Tower Replacements, and Locker Room upgrades. All of the projects will be capital projects. These projects will be funded by the LCA Allentown Division.

MEMORANDUM

Date: May 26, 2015

To: Authority Board
From: Phil DePoe, Ed Hoyle, Frank Leist
Subject: Suburban Division
Three Pumping Station Projects
CLD Auxiliary, Pine Lakes & Crestwood Pump Stations - Design Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – CLD Pumping Station - Design Phase	\$193,101
2	Capital Project Authorization – Pine Lakes Pumping Station - Design Phase	\$122,574
3	Capital Project Authorization – Crestwood Pumping Station - Design Phase	\$105,028
4	Professional Services Authorization – JMT Inc. (1), (2)	\$148,883

- (1) *The applicable share of the total amount shown included in the Capital Project Authorizations for each project.*
- (2) *Does not include Construction phase related engineering services.*

PROJECTS OVERVIEWS (Reference attached water systems map for locations):

1. Central Lehigh Division (CLD) New Pumping Station (Lower System to Upper System)
The CLD is the largest system in the Suburban Division and provides service to 17,027 customers. The system is located principally in Upper and Lower Macungie townships and small portions of Lowhill, Weisenberg, South Whitehall, Salisbury and Upper Milford townships. The system is divided into two primary service elevations: the Upper System generally north of Tilghman Street and the Lower System generally south of Tilghman Street. The water supply source is 18 wells and a permanent interconnection with the Allentown Division.

The project will provide the capability to pump water from the Lower to Upper System; thereby enhancing system reliability and fire flows in the Upper System and, if necessary, providing the flexibility to utilize water purchased from the Allentown Division in the Upper System.

The project will include the installation of a new 1.4 MGD water booster pumping station to pump water from the Lower to the Upper System and ~1,600 linear-feet of 12-inch diameter interconnecting main. Acquisition of easements and/or other property rights will be required.

2. *Pine Lakes Division (PLD)- Pumping Station Upgrades*

The PLD is located in Lynn Township and was acquired from a developer on September 25, 1991. The system provides service to 60 customers in the Pine Lakes of Lynn Subdivision. The water supply source is two wells.

This project will include the conversion of the aged existing hydro-pneumatic station serving the development to a variable frequency drive controlled double-pumping system. The project will also include the addition of a new 10,000 gallon steel non-pressure class underground water storage tank and other miscellaneous improvements.

3. *North Whitehall Division (NWD) Crestwood Pumping Station Upgrades*

The NWD is located primarily in the Schnecksville-Neffs area of North Whitehall Township and serves 908 customers. In general, the NWD is composed of numerous water systems that were acquired over the years from developers and interconnected by various LCA projects. The system is divided into two service elevations: the Primary Service Elevation which serves the majority of customers and the Crestwood Service Elevation which provides service to 96 customers in the Crestwood Subdivision (which is the highest elevation in the NWD). The water supply source for the Primary Service Elevation are 5 active wells and a permanent interconnection with the Northampton Borough Municipal Authority (NBMA). The water supply source for the Crestwood Service Elevation is two wells.

The existing two wells in Crestwood have low yields and at times are inadequate during extremely high demand periods (typically attributed to summer lawn watering). In addition, the source water has manganese, which causes operational problems and customer complaints.

The project consists of the abandonment of the two existing wells and the construction of approximately 600 linear feet of 6-inch diameter water main connecting the Primary NWD system to the Crestwood Pumping Station; thereby providing a higher quality water source and assuring adequate capacity to meet extremely high demand periods. Applicable piping and controls and other modifications to the pumping station are also included.

All projects will include the installation of SCADA (supervisory control and data acquisition) systems that will allow full remote control and monitoring of the facilities.

FINANCIAL:

The project will be funded by LCA Suburban Division.

PROJECT STATUS:

Pending Board approval of the Design Phase.

THIS APPROVAL - DESIGN PHASE

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide design phase services. Approval for construction-related engineering and inspection services, covered separately in the proposal, will be requested with the Construction Phase authorization. The following table summarizes the design phase professional services to be performed:

Professional Services ⁽¹⁾
1. Attend kickoff meeting
2. Perform surveying
3. Apply for and obtain all state & local permits
4. Prepare construction bid documents (plans & specifications)
5. Provide bidding services (if authorized by LCA)

(1) For Design Phase Only.

CONSULTANT SELECTION PROCESS:

On April 3, 2015, a detailed Request for Proposals (RFP) was issued to the following six engineering firms: ARRO Consulting, Buchart Horn (BH), Gannett Fleming (GF), Johnson, Mirmiran & Thompson (JMT), Maser Consulting, and T&M Associates. A mandatory pre-proposal meeting and open house were held on April 15, 2015. The firms were requested to submit costs for each project separately, as well as if all projects were awarded to one consultant incorporating any discount applicable. We believed there should be staff and consultant savings if all three of the projects were awarded to the same firm since there are similar design features duplicated among the stations which can result in economies in preparing the plans and specifications. The following table provides a summary of the results:

Consultant Total Project Cost Summary		
Consultant	Three Project Total	
	Before Discount	After Discount
JMT	\$275,035.00	\$225,529.00
GF	\$274,230.00	\$265,230.00
T&M	\$303,515.00	\$273,163.00
BH	\$290,814.00	\$285,814.00
Maser	\$333,052.00	\$333,052.00
ARRO	\$407,153.00	\$407,153.00

Based upon our review of all aspects of both the Technical and Cost Proposals submitted by the six firms, we recommend award of the Design Phase services for all three projects to JMT. Their proposal is on scope and represents what we believe is the best overall value for the Authority. JMT will perform the services outlined in their proposal dated May 6, 2015.

JMT - COMPANY INFORMATION & REFERENCE CHECK:

Founded in 1971, JMT is a 100% employee-owned firm that provides a full range of multi-disciplined engineering, architectural, and related services to public agencies and private clients throughout the United States. They employ a staff of more than 1,000 professionals, including engineers, architects, planners, environmental scientists, surveyors, construction and program managers, inspectors, designers, and GIS and information technology specialists. JMT ranks #75 among *Engineering News-Record's* Top 500 Design Firms, based on 2014 revenues. Their local office is located in Upper Macungie Township.

Three references provided by JMT were checked. All three references indicated that JMT delivers professional quality work in a timely fashion.

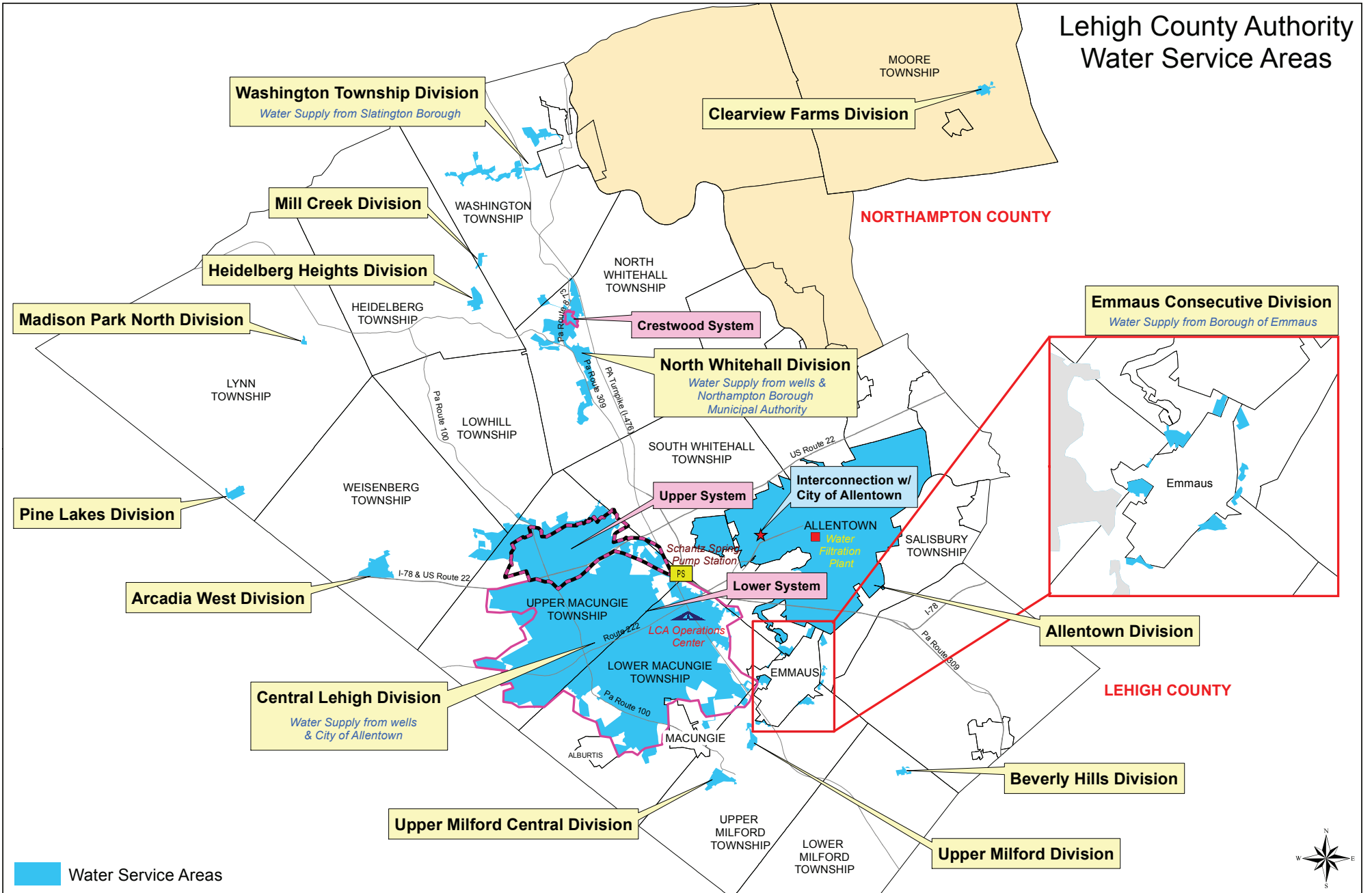
PROJECT SCHEDULE:

Assuming no regulatory permit delays, the Crestwood and Pine Lakes pump station projects are anticipated to be bid ready by the end of November 2015. The CLD Auxiliary pump station project is anticipated to be bid ready by the end of February 2016.

FUTURE AUTHORIZATIONS:

- SCADA – Professional Services for all three projects
- Construction Phase –for each project

Lehigh County Authority Water Service Areas



CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-15-2	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Suburban Division Pumping Station Project: CLD Auxiliary – Design Phase	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$193,101		

DESCRIPTION AND BENEFITS:

The Central Lehigh Division Auxiliary Pump Station Project will feature the installation of a new booster station and main extension to pump water from the Lower to the Upper System.

JMT will be used for the engineering consulting services. The Central Lehigh Division Auxiliary Pump Station Project is anticipated to be bid ready by the end of February 2016.

Please reference the cover Memo for additional information.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Planning Phase</i>	\$6,340
REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$64,100
Property Acquisition	\$35,000
Engineering Consultants	\$53,801
Miscellaneous	\$15,000
Contingencies	\$25,200
Total This Authorization	\$193,101
<i>Future Authorization</i>	
SCADA & Construction Phase	\$1,020,000
Total Estimated Project	\$1,213,101

REVIEW AND APPROVALS:

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

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-15-4	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Suburban Division Pumping Station Project: Pine Lakes – Design Phase	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$122,574		

DESCRIPTION AND BENEFITS:

The Pine Lakes Project will feature the conversion of the existing hydro-pneumatic station to a variable frequency drive controlled double pumping system (along with other miscellaneous improvements).

JMT will be used for the engineering consulting services. The Pine Lakes Project is anticipated to be bid ready by the end of November 2015.

Please reference the cover Memo for additional information.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Planning Phase</i>	\$8,610
REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$45,720
Engineering Consultants	\$50,854
Miscellaneous	\$10,000
Contingencies	\$16,000
Total This Authorization	\$122,574
Future Authorization	
SCADA & Construction Phase	\$327,000
Total Estimated Project	\$449,574

REVIEW AND APPROVALS:

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

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-15-3	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Suburban Division Pumping Station Project: Crestwood Pump Station – Design Phase	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$105,028		

DESCRIPTION AND BENEFITS:

The Crestwood Project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the existing North Whitehall Division System.

JMT will be used for the engineering consulting services. The Crestwood Project is anticipated to be bid ready by the end of November 2015.

Please reference the cover Memo for additional information.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Planning Phase</i>	\$7,040
REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$37,100
Engineering Consultants	\$44,228
Miscellaneous	\$10,000
Contingencies	\$13,700
Total This Authorization	\$105,028
Future Authorization	
SCADA & Construction Phase	\$245,000
Total Estimated Project	\$350,028

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: JMT
7535 Windsor Drive
Suite 204B
Allentown, PA 18195

Date: May 26, 2015
Requested By: Phil DePoe, Ed Hoyle

Approvals
Department Head: _____
Chief Executive Officer: _____

Suburban Division – Three Pumping Station Projects – Design Phase

JMT will perform the design related services for the Central Lehigh Division Auxiliary Pumping Station, the Pine Lakes Pumping Station, and the Crestwood Pumping Station - all in accordance with the RFP and as outlined in their proposal dated May 6, 2015.

Professional Services ⁽¹⁾
1. Attend kickoff meeting
2. Perform surveying & assist with right-of-way acquisition
3. Apply for state & local permits
4. Prepare construction bid documents (plans & specifications)
5. Provide bidding services (if authorized by LCA)

(1) For Design Phase Only.

Please reference the cover Memo for additional information.

Design Phase:

Cost Estimate (not to be exceeded without further authorization): \$148,883

Time Table and Completion Deadline: As required to meet various critical deadlines as set forth in the proposal.



(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: May 26, 2015

To: Authority Board
From: John Parsons, Frank Leist
Subject: Allentown Division-Water Filtration Plant
Inspection/Rebuild of Filter #6

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Professional Services Authorization – Inspection/Rebuild of Filter #6	\$65,448.00

PROJECT OVERVIEW:

The Allentown Water Filtration Plant (WFP) was put into service in 1929. Major upgrades to the facility were completed in 1953 and again in 1998. The current maximum design capacity of the water plant is 30 MGD.

The original water plant included (8) dual media filters. An additional (8) dual media filters were added in 1953. During the last plant upgrade in the mid-1990s, the original (8) filters from 1929 were decommissioned and only the filters from 1953 remain in-use. However, they are still (62) years old now and are not up-to-date with current technology.

The filters must be periodically backwashed to remove any trapped sediment. Over time, the backwashing will wear down the size and shape of the anthracite layer, eventually reducing efficiency and leading to the need to fully replace the media. Also, small amounts of media will be lost with the backwashing process and eventually additional media will need to be added in order to maintain the design depths for each of the materials.

Another source of problems for the filters has to do with the high levels of hardness in the Little Lehigh Creek. There are thousands of 3/16” holes on the top of the filter underdrains. Scaling will eventually cause the hole sizes to decrease and the filters won't function as designed. The last time that the water plant filters were rebuilt all the way down to the tiles was in 1992. City of Allentown staff re-drilled the holes prior to replacing any media.

This project will determine the overall condition of the tiles, underdrains, piping, etc.,. It will then be possible to evaluate the need for a long-term replacement plan for the filters.

LCA is currently working towards the creation of a Water Master Plan. The evaluation of filter #6 will be invaluable to the consultants involved with the Master Plan as it will provide a thorough description of the current conditions of the filters. It is possible to re-construct the dual media filters into higher flow-rated, mixed media filters. Plant staff is also interested in replacing antiquated surface wash systems with state-of-the-art air scour systems. In order to determine the extent of future construction needed on all (8) of the existing filters, we need to fully understand their current condition and that is the intent of this investigation.

FINANCIAL:

This Project will be funded by the LCA Allentown Division.

PROJECT STATUS:

The project will move forward as soon as board approval is received.

THIS APPROVAL

Lehigh County Authority (LCA) intends to retain a firm which will provide professional services to fully evaluate and rebuild the Allentown Water Plant Filter #6. The following table summarizes the services to be performed:

Professional Services
1. Remove all anthracite, sand and gravel layers
2. Evaluate the condition of the underdrains, tiles and equipment
3. Re-drill all 3/16" holes on top of the existing tiles
4. Replace all media layers with new material
5. Complete a final project report

CONSULTANT SELECTION PROCESS:

Two firms, All Service Contracting Corporation and American Filter Service Corporation, both with experience in water treatment plants and filter projects, were contacted to provide proposals. The proposed costs are listed below:

Consultant	Cost ⁽¹⁾
All Service Contracting Corp.	\$65,448
American Filter Service Corp.	\$76,500

(1) Total Proposal Cost

Based upon our review of all aspects of the proposals submitted, we recommend award of the project to All Service Contracting Corporation. Their proposal is on scope and represents what we believe is the best overall value for the Authority.

FUTURE AUTHORIZATIONS-

There are currently no additional authorizations that are foreseen as part of this project.



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PROFESSIONAL SERVICES AUTHORIZATION

Professional: ALL SERVICE CONTRACTING CO
2024 East Damon Avenue
Decatur, Ill 62526-4749

Date: May 26, 2015
Requested By: John Parsons

Approvals
Department Head: _____
Chief Executive
Officer: _____

Allentown Water Plant Inspection/Rebuild of Filter #6

All Services Contracting Corporation will assist LCA in performing a full-scale inspection, evaluation and rebuild of the water plant filter #6.

Professional Services
1. Remove all anthracite, sand and gravel layers
2. Evaluate the condition of the underdrains, tiles and equipment
3. Re-drill all 3/16" holes on top of existing tiles
4. Replace all media layers with new material
5. Complete a final project report

Please reference the cover Memo for additional information.

Professional Services:

Cost Estimate (not to be exceeded without further authorization): \$65,448.00

Time Table and Completion Deadline: As required to meet various critical deadlines as set forth in the proposal.



(For Authority Use Only)

Authorization Completion:

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

**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION
Allentown Water Plant
Inspection/Rebuild of Filter #6**

(To be signed by Professional and returned to the Authority)

I am or represent the Professional indicated above, and as such I am authorized to:

- Accept the terms of the professional services authorization dated May 26, 2015 attached; and

- Agree to indemnify and hold harmless the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of all attorney fees and all incidental litigation expenses of the Authority, whether or not the Authority is held liable. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (signature):

Name (printed)

Title: _____