



## LEHIGH COUNTY AUTHORITY

July 23, 2012

### BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
  - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
  - *June 4, 2012 Workshop Meeting Minutes*
  - *June 18, 2012 Regular Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

#### **FINANCE AND ADMINISTRATION**

- *Knowledge Sharing Skills Development Project (Approval)*

#### **WATER**

- *Sand Spring Road Waterline Relocation – Resolution 7-2012-1 (Approval)*

#### **WASTEWATER**

- *LCA Wastewater Capacity Program – Act 537 Facilities Planning (Approval)*

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

#### **AUGUST MEETINGS**

Workshop Meeting  
Board Meeting

August 13 – 12:00 p.m.  
August 27 – 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.

## **WORKSHOP MEETING MINUTES**

### **June 4, 2012**

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The Workshop Meeting of the Lehigh County Authority was called to order at 12:17 p.m., on Monday, June 4, 2012, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Thomas Muller, Richard Bohner, Brian Nagle, Norma Cusick, and Scott Bieber. Authority Staff present were: Aurel Arndt, Doug Young, Bradford Landon, Frank Leist, Patricia Mandes, Joseph McMahan, Liesel Adam, and Cristin Garger.

#### **Agenda Review**

Mr. Arndt stated there were two additional items to be addressed after the regular agenda items. He also noted that an Executive Session will be needed after the regular agenda to address personnel matters.

#### **2012 1st Quarter Unaudited Financial Statements (Statements) (Acceptance)**

Mr. Young explained the statements indicate Authority financials are stable and show lower usage for the first quarter, per usual. He noted that revenues are slightly higher because the 2011 water rate increase has been in effect for a full year. Mr. Young also noted that City of Allentown costs are estimated because the Authority has yet to receive a bill for 2012.

On a motion from Mr. Bohner, seconded by Mr. Muller, the Board unanimously accepted the 2012 1<sup>st</sup> Quarter Unaudited Financial Statements (6-0).

#### **2011 Risk Management (RM) Annual Report (Acceptance)**

Mr. Young noted that while insurance coverage and costs remain fairly flat, property insurance costs went up slightly because of new wells and other system acquisitions. He also stated that worker's compensation costs decreased about 20% because of low claims history.

Mr. Nagle inquired about risk control.

Mr. Young noted that site and equipment inspections are performed routinely as part of that program.

Mr. Arndt stated that a more comprehensive asset management program is in development as part of Risk Management.

On a motion from Ms. Cusick, seconded by Mr. Muller, the board unanimously accepted the 2011 Risk Management Annual Report (6-0).

#### **SCADA Communication Design (Approval)**

Mr. McMahan explained that with changing communication channels and technology, changing FCC licensing, loss of line-of-sight radio communications and a geographically expanding LCA territory, LCA pursued a review of the existing communications for mission critical operations. He explained TuWay Communications performed a high level SCADA Communication Study in 2011, which included an existing system assessment and future needs analysis, a computer model analysis of RF (radio frequency) line-of-sight for RF transmission of SCADA data, and a list of recommendations. Mr. McMahan stated approval is needed to perform the detailed engineering, including site visits, final path

profiles, and generation of equipment lists, determination of equipment and antenna installation locations, and cabling requirements. to implement the RF SCADA recommendations contained in the February 2012 report.

On a motion from Mr. Nagle, seconded by Mr. Bieber, the Board unanimously approved the Capital project Authorization for SCADA Communication Design (6-0).

**GIS Mobile Application Amendment** (Approval)

Mr. Leist explained in February of 2011, the Board approved the Capital Project Authorization (CPA) for the GIS mobile application project which included an update to the existing GIS Needs Assessment and required the consultant to provide recommendations on hardware and software for a mobile application. It was originally envisioned, prior to the start of the project, that internet enabled hardware such as laptops would be used and the project costs for hardware and software were based on this assumption. He explained that the consultant provided various options and costs for field hardware including larger units like Toughbooks and laptops, as well as handheld devices such as tablets and smart phones because technology is constantly changing and becoming less expensive. The Operations department evaluated the benefits of switching their cell phone technology for all operational personnel from basic "phone call" capabilities to Android-based smart phones that also provide email, internet access, the ability to run applications such as web-based mapping, and much more. It was determined that upgrading to Android based smart phones provided, among other benefits, added value to the GIS mobile project and a platform for future applications accessible at any time from the field. Mr. Leist stated that 25 new phones were purchased in March for \$6,250 and this amount was allocated to the GIS mobile project. He stated that in order to deploy web-based mapping to both Android devices and other non-Android internet enabled hardware such as laptops, two individual ArcGIS Server web mapping sites need to be developed – one on an Android platform for the smart phones and one on a Microsoft Silverlight platform for the laptops. Total project costs will not increase because of equipment cost savings that were realized with the purchase of the Android based smart phones. An amendment to the Professional Services Authorization for Wendel Duchscherer was requested for the development of the Silverlight platform.

On a motion from Mr. Muller, seconded by Mr. Nagle, the Board unanimously approved Professional Services Authorization Amendment No. 1 in the amount of \$18,300 for Wendel Duchscherer for the Mobile GIS Application Development Project (6-0).

**Little Lehigh Relief Interceptor (LLRI) Pipe Condition Assessment** (Approval)

Ms. Mandes explained that the Physical Condition Assessment (PCA) Program began in 2004. The purpose of the Program is to inspect the Western Lehigh Interceptor (WLI) pipe and assess the extent of the defects in order to reduce infiltration and extend the life of the pipe. The Program consists of in-pipe CCTV inspection utilizing Pipeline Assessment Certification Program (PACP) ratings and a review of the inspection records by Malcolm Pirnie. She stated that approximately 120,000 linear feet (LF) of the inspection of the WLI has been authorized out of the 140,000 LF total. In 2011 and early 2012, the Board approved PCAs for 45,000 LF of the WLI. The LCA staff provided the in-pipe CCTV inspection and has completed the CCTV work, and Malcolm Pirnie is providing the assessment and follow-up. A Professional Services Authorization is needed for Malcolm Pirnie in the amount of \$99,000 for the assessment of 20,000 LF of the LLRI from Keck's Bridge to Park Pump Station, which is the last section of the interceptor pipe to be assessed. In addition to the pipe assessment and report, Malcolm Pirnie is also providing the CCTV inspections for this section of the WLI instead of Authority staff because of sizing of the pipe is larger which requires a different camera head, extensive manpower and other Signatory CCTV commitments.

On a motion from Mr. Bieber, seconded by Ms. Cusick, the Board unanimously approved the Professional Services Authorization for Malcolm Pirnie in the amount of \$99,000 (6-0).

**Single Audit Report**

Mr. Young explained that because the Authority received more than \$500,000 in federal funds during 2011, a single audit needed to be conducted by auditors for all the projects which received these funds. He stated that projects included within the separate audit were the Vera Cruz Sanitary Sewer System, the Flow Equalization Basin, and the Water Meter Upgrade. Mr. Young noted one deficiency was reported where the Authority received more reimbursement than expenses incurred; a request for reimbursement submitted in 2012 was reduced to correct the deficiency. He also stated that the Authority is in the process of another single audit being done retroactively for 2010. Some discussion followed.

**OTHER ITEMS**

**Resolution 6-2012-1**

Mr. Landon requested action on a resolution declaring the official intent of the Authority to reimburse funds used to pay the Western Weisenberg Wastewater Treatment Plant Project costs from project financing proceeds the Authority may receive from the Pennsylvania Infrastructure Investment Authority (PennVEST) or other financings. Settlement is presently scheduled on this PennVEST loan for 26 July 2012 so there will be a series of documents before the Board in this regard during the next few meetings.

On a motion from Mr. Muller, seconded by Mr. Nagle, the Board unanimously adopted Resolution 6-2012-1 (6-0).

**EXECUTIVE SESSION**

The Chairman called for an Executive Session at 1:08 p.m. in regard to employment matters. All Staff members were excused from the meeting with the exception of Mr. Arndt. The Session ended at 3:20 p.m.

**Budget Amendment**

Mr. Arndt distributed a proposed Budget Amendment regarding funding supplemental work on the Little Lehigh water quality monitoring study.

On a motion from Mr. Bohner, seconded by Mr. Muller, the Board unanimously approved the 2012 Budget Amendment in the amount of \$5,000 for the Little Lehigh Water Monitoring Study (6-0)

There being no further business, the Chairman adjourned the meeting at 3:30 p.m.

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Richard H. Bohner  
Secretary

**REGULAR MEETING MINUTES**  
**June 18, 2012**

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The Regular Meeting of the Lehigh County Authority was called to order at 12:28 p.m. on Monday, June 18, 2012, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Tom Muller, Richard Bohner, Norma Cusick, Scott Bieber, Emrich Stellar, and Brian Nagle. Authority Staff present were: Aurel Arndt, Douglas Young, Joseph McMahon, Patricia Mandes, Frank Leist, Bradford Landon, and Cristin Garger.

**REVIEW OF AGENDA**

Mr. Arndt noted that there was one additional item regarding PennVEST funding to be addressed after the regular agenda items.

**EXECUTIVE SESSION**

Mr. Arndt stated there is potential for an Executive Session.

**APPROVAL OF MINUTES**

**May 14, 2012 Workshop Meeting Minutes**

On a motion by Ms. Cusick, seconded by Mr. Stellar, the Board unanimously approved the minutes of the May 14, 2012 Workshop Meeting (6-0). Mr. Bohner abstained due to his absence at the meeting.

**ACTION AND DISCUSSION ITEMS**

**Wastewater Capital Recovery Fees** *(Approval)*

Mr. Young stated that there were some changes in fees because the 2010 Census data was used for calculations. He also stated there were no new connections to the Little Lehigh Relief Interceptor last year. Mr. Young added that gallons per day discharged to the Western Lehigh Interceptor (WLI) increased; therefore the fee was increased. He also explained that there is an increase in tapping fees because according to the tapping fee law, the Authority fees must be able to cover debt service. Some discussion followed.

Ms. Mandes noted that she has distributed the fees to the Western Lehigh Interceptor Signatories for review and has not received any feedback to date.

On a motion from Mr. Bohner, seconded by Mr. Muller, the Board unanimously approved the Wastewater Capital Recovery Fees (7-0).

**Sand Spring Road Waterline Relocation** *(Approval)*

Mr. Leist explained that Pennsylvania Department of Transportation (PaDOT) will be widening the intersection of Route 309 and Sand Spring Road in North Whitehall Township. He stated that approximately 300 feet of waterline will have to be relocated to accommodate PaDOT's project. He included that construction may be incorporated into the PaDOT contract and is anticipated to be 50% reimbursable through PaDOT.

On a motion from Mr. Bieber, seconded by Ms. Cusick, the Board unanimously approved the Capital Project Authorization for the Design Phase of the Sand Spring Road Waterline Relocation in the amount of \$12,300 (7-0).

**Route 309 Crossing at Sand Spring Road** (Approval)

Mr. Leist explained that previous capital planning anticipated a west to east waterline crossing of Route 309. He explained that it is economical to construct the casing for a future water line during the PaDOT widening project for Route 309. Mr. Leist stated that this future water line extension would put the Authority in position to provide water service to the western side of Route 309 and possibly an interconnection with the Lehigh Carbon Community College water system.

On a motion from Mr. Muller, seconded by Ms. Cusick, the Board unanimously approved the Capital Project Authorization for the Design Phase of the Route 309 Crossing in the amount of \$11,900 (7-0).

**Upper Milford Central Division Radon Evaluation and Mitigation Study** (Approval)

Mr. Leist stated that in 2006, LCA took ownership of the Phillip M. Buss Water Company, a community water system serving 100 residential connections in Upper Milford Township, Lehigh County. It was renamed as the Upper Milford Central Division (UMCD). The water system includes two permitted wells and approximately 14,000 LF of distribution pipeline. He explained in 2007, the Authority was selected by the Pennsylvania Department of Environmental Protection (DEP) to participate in a radon sampling program to determine the level of radon in the water at both entry points as well as at various homes in the system. The results of this sampling showed that radon levels were substantially higher than the proposed EPA limit of 4,000 picocuries per liter (pCi/L). Even though no regulatory limits were in place at the time of the sampling (nor are any in place today), EPA recommended that customers be notified when radon in drinking water exceeded 10,000 pCi/L. Mr. Leist said that regulatory limits on radon in drinking water have not yet been adopted, but there is reason to believe that it will occur in the future. To be proactive, LCA will conduct a study to determine the best approach to provide water to the customers of UMCD that will meet future EPA radon level limits. He stated that the selected firm, working under a Professional Services Authorization, will start by evaluating the current radon conditions in the system and determine if there is any possibility of changing the way the existing wells are operated that would reduce the radon to acceptable levels without installing specialized radon mitigation equipment. If no viable options are identified, the consultant will then assess various pre-determined scenarios to provide water from other sources or treat water from the wells. Mr. Leist stated that Cowan Associates provided the lowest cost proposal for the Design Phase of this project and recommended that they be awarded the contract. Some discussion followed.

On a motion from Mr. Bohner, seconded by Ms. Cusick, the Board unanimously approved the Capital Project Authorization for the Design Phase of the Radon Evaluation and Mitigation Study in the amount of \$38,040 (7-0).

**Allentown Interconnection Phase 2** (Approval)

Mr. Leist stated that a Professional Services amendment is necessary for out-of-scope work and because of the extended construction schedule for this project. He noted that the out-of-scope work is due to required revisions to the NPDES permit and redesign efforts, where the additional inspection services are needed because of the extended construction schedule.

On a motion from Mr. Muller, seconded by Mr. Stellar, the Board unanimously approved the Professional Services Authorization Amendment 1 for Barry Isett & Associates for the Allentown Interconnection, Phase 2 in the amount of \$66,476 (7-0).

**Existing CCTV Physical Condition Assessment (PCA)** (Approval)

Ms. Mandes explained that in 2008, DEP required LCA and the Signatories to generate a Corrective Action Plan for the areas identified as having significant infiltration and inflow (I/I) conditions. In addition, the U.S. Environmental Protection Agency (EPA) has issued a Compliance Order to the City of Allentown, LCA and all municipalities tributary to the City wastewater treatment plant to eliminate all SSOs within a five year period (2014). She stated that the LCA 2009-2017 Signatory I/I Investigation & Remediation Project Capital Plan was developed so that LCA could take the lead in working with

the Signatories to address the overload and SSO issues. A Sewer Capacity Assurance & Rehabilitation Program (SCARP) Outline was drafted by Malcolm Pirnie that provides a formalized and planned method of evaluating the LCA and Signatory systems, prioritizing and conducting sewer rehabilitation by all the LCA Signatory Partners. She explained that the flow monitoring work performed in 2009 identified areas within the Signatory collector systems with high leakage rates totaling 142 miles of pipe. Closed-circuit television (CCTV) inspections were performed in 50 miles of the Signatory collector pipes within the last three years. Of the 50 miles, 28 miles are in the areas identified as high leakage. Ms. Mandes explained that the next step is to review the CCTV inspections. She stated the review will determine if the pipe is in need of rehabilitation and if so, determine the type of rehab needed. Ms. Mandes said that the Western Lehigh SCARP Partnership I/I consultant, Malcolm Pirnie, will review the existing CCTV inspection records of 148,000 LF of pipe, access, rate, and recommend follow-up actions. It is recommended that Malcolm Pirnie provide the PCA of the Signatory pipes because of their expertise and to maintain consistency with the PCA of the WLI and consistency between the Signatories.

On a motion from Mr. Bieber, seconded by Mr. Muller, the Board unanimously approved a Capital Project Authorization and Professional Services Authorization for the Physical Condition Assessment for Malcolm Pirnie, Inc. (7-0).

**Western Weisenberg (Arcadia West) West WWTP Improvements (Approval)**

Mr. Leist explained that an agreement is in the final stages of being negotiated with Hillwood Associates, developer of the proposed West Hills Business Center, which will receive wastewater treatment service from the new plant, whereby LCA will be reimbursed 30% of the project costs. Project funding will be provided via a low-interest loan from PennVEST. Construction proposals were received on June 1, 2012 for the second time because the bids received on March 17, 2011 were ultimately rejected because DEP maintained that the bid documents did not meet PennVEST requirements. Mr. Leist explained that when the bids were reviewed, the three lowest bidders for Contract #1 submitted bids which were based on equipment from Siemens Company. Siemens did not sign the Manufacturer's Guarantee Certificates that were in the bid documents, as required by the bid documents, but provided marked-up certificates and a letter stating that they would sign the revised certificates if awarded the contract. This did not meet the bid requirements; therefore Mr. Leist recommended that the Authority disregard the bids for Contract #1 that were based on Siemens Company equipment as non-responsive, and award the contract to the lowest responsible bidder, who was using Ashbrook Simon-Hartley equipment since Ashbrook Simon-Hartley did execute the Manufacturer's Guarantee Certificates in the form provided by the bid documents. Mr. Leist recommended award of Contract No. 1 to JEV Construction, LLC in the amount of \$2,074,500; Contract No. 2 to J. Hayden, Inc. in the amount of \$349,000; and Contract No. 3 to Dual Temp Co., Inc. in the amount of \$95,450, all contingent upon; (1) execution of the cost sharing agreement between Hillwood Associates and LCA; (2) settlement of the PennVEST loan; (3) receipt of required bonds, insurance and other required documentation from the aforementioned contractors. In addition Mr. Leist also requested approval of Capital Project Authorization, Amendment No. 1 - Construction Phase in the amount of \$3,034,500 and a Professional Services Authorization – Construction Phase for HRG, Inc. in the amount of \$174,100.

**EXECUTIVE SESSION**

The Chairman called for an Executive Session at 1:34 p.m.

The Session ended at 1:46 p.m.

On a motion from Mr. Muller, seconded by Mr. Stellar, the Board unanimously approved the Capital Project Authorization Amendment, Construction Contract Awards, a Professional Services Authorization, and rejected the three non-compliant bidders (7-0), authorizing the appropriate staff to execute all proper documents.

Mr. Landon then introduced to the Board proposed Resolution No. 6-2012-2, necessary to authorize the closing, and transactions involved with the closing, on the PennVEST loan for construction of this

project. He explained that the Authority also has a request in to PennVEST, which will be considered at the PennVEST July 18<sup>th</sup> meeting, for an increase in funding due to the increased costs of this project with the second request for bids. This resolution reflects a not-to-exceed amount based on the increase requested. Closing is presently scheduled for July 26<sup>th</sup>, although that would definitely have to be postponed if the increased loan amount request is approved, and may have to be in any case. Mr. Landon asked if there were any questions, which there were not, and then recommended approval.

On a motion from Mr. Bohner, seconded by Mr. Nagle, the Board unanimously approved Resolution No. 6-2012-2 (7-0).

### **SYSTEM OPERATIONS OVERVIEW**

Mr. McMahon had no comments.

### **STAFF COMMENTS**

Mr. Young noted that a single audit for \$1 million from H2O-PA for Vera Cruz was completed with no negative findings and 2 more program audits are being conducted regarding PennVEST funding for the Flow Equalization Basin and the Meter Replacement Project.

### **SOLICITOR'S COMMENTS**

Mr. Landon had no additional comments.

### **OTHER COMMENTS**

None.

### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 2:07 p.m.

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Richard H. Bohner  
Secretary



## FINANCE & ADMINISTRATION

### ACTION ITEMS

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1. **Knowledge Sharing Skills Development Project (Approval)**

Five proposals have been received for consulting services to assist in developing internal capabilities for knowledge sharing, including development of standing operating procedures and process maps, and conducting mentoring and coaching programs. The scope of work includes prioritizing this work for 12-month and 3-year time horizons, and developing program structure and templates to ensure organization-wide consistency in implementing the tools. Board memo, Capital Project Authorization, Professional Services Authorization, and Budget Amendment are attached (**blue**) for Board review and approval.

### DISCUSSION ITEMS

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1. **None.**

### INFORMATION ITEMS

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	Discover Bank	Greenwood, De	46,000.00	6/22/12	6/23/14	0.900
2010 Wtr Cons A	PSDLAF Flex Pool		5,300,000.00	6/29/12	9/28/12	0.150
2010 Wtr Cons AA	PSDLAF Flex Pool		400,000.00	6/29/12	9/28/12	0.150
Cons Wtr (2)	Merrick Bank	South Jordan, UT	150,000.00	6/29/12	6/28/13	0.500
WW Capac	GE Capital Financial Inc.	Salt Lake City, Ut	99,000.00	6/29/12	6/30/14	1.000
Wtr R&R	PSDLAF Collateralized CD		1,000,000.00	7/2/12	6/28/13	0.350
WW Capac	PSDLAF Collateralized CD		355,000.00	7/2/12	6/28/13	0.350
Cons LL2 (314)	PSDLAF Flex Pool		245,000.00	7/2/12	6/28/13	0.350
LLRI CR	Beal Bank Nevada	Las Vegas, Nv	245,000.00	7/5/12	6/5/13	0.450
WW Capac	Wright Financial Services		245,000.00	7/5/12	7/5/13	0.500
LLRI CR	Union National B&T	Elgin, IL	99,000.00	7/11/12	1/11/14	0.780
2010 WDSR	PSDLAF Collateralized CD		380,000.00	7/11/12	7/11/13	0.350
LLRI CR	Safra National Bank of NY	New York, NY	147,000.00	7/17/12	7/17/13	0.500

Fund Descriptions for Investments:

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

## WATER

### **ACTION ITEMS**

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1. **Sand Spring Road Waterline Relocation – Resolution 7-2012-1** (Approval)

Preliminary plans and specifications have been completed and submitted to PaDOT for comment/approval. PaDOT is placing the road widening project out to bid in July. Resolution 7-2012-1, authorizing the negotiation of reimbursement for water line relocations is attached (*tan*) and recommended by the Staff for approval.

### **DISCUSSION ITEMS**

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1. *None.*

### **INFORMATION ITEMS**

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1. **Interconnection with Allentown**

Phase 2 - Connection to City Transmission System at 26<sup>th</sup> and Chew Streets – Work continues in the Cedar Beach area. The crossing of Cedar Creek was completed on July 11. Approximately 1,100 linear feet of pipe remains to be installed along Ott and Chew Streets. After testing and disinfection, final paving and restoration will begin (anticipated the second week of August.)

DRBC: The City of Allentown requests that we change the proposed methodology to calculate DRBC water withdrawal fees for water purchased by LCA. We are exploring options. DRBC requires a plan to be submitted 120 days before using the Phase 2 Interconnection.

2. **Water Main Replacement Project – Oakland Park (UMT)**

DEP issued our NPDES permit on July 9. We anticipate going out to bid in late July with construction beginning as early as September. We still expect to reach substantial completion of this project in 2012, though final restoration will most likely occur in spring 2013.

3. **Water Main Relocation Project – Slatedale**

Our water facilities on West Grant Street were successfully relocated in June of 2011. Work on Main Street was completed in May 2012. Staff is assembling costs for presentation to PaDOT in consideration of the cost sharing agreement. Our exposure, by PaDOT Agreement, is about \$25,000.

4. **Water Meter Replacement Project**

Phase 2 - TSE, Inc. has replaced 3,844 out of 3,868 aging meters, radio-read units and backflow preventers through May 25. There were 15 accounts removed from the project where the water has been turned off. This leaves 9 accounts where meters must be upgraded. TSE is also addressing accounts that were identified as incomplete and/or had deficiencies identified in our quality control checks. Substantial completion was issued on June 9, 2012.

5. **Arcadia West Pumping Station Modifications**

We returned comments on the contract plans and technical specifications for the pumping station improvements that T&M Associates had submitted on May 30. We plan to meet with T&M to discuss equipment layout and permitting issues.

6. **Route 309 Crossing @ Sand Spring Road (formerly @ Education Park Drive)**

Preliminary plans and specifications have been completed and submitted to PaDOT for comment/approval. PaDOT is placing the road widening project out to bid in July.

7. **Developments**

Water system construction is occurring at the following developments:

Trexler Fields, Phases 2, 3, 4 & 5 (Partial), 35 residential lots (sfa & sfd), UMT  
Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT *(There has not been any construction activity at this development in over two years.)*

Water system plans are being reviewed for the following developments:

Above & Beyond (personal care facility), 2 commercial lots, UMT  
Diocesan Pastoral Center, 2 commercial lots, 3 additional lots, & residual lot for existing cemetery, LMT  
Grant Street Townes, 18 sfa residential lots, WashT  
Hamilton Crossings, 2 commercial lots with 20 buildings having retail, financial, convenience and restaurant uses, LMT  
Hickory Park Estates, 3 residential lots (sfd), UMT  
Highgate, Phase 3 (Dunbar Tract), 63 sfa & 22 sfd residential lots, 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  
Morgan Hills, 40 residential lots (sfd), Water & Sewer, WeisT  
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer  
Parkland Fields (formerly Rabenold Farms I), 205 residential lots (sfd), (Portion south of I-78), UMT  
Rabenold Farms II, 288 apartment units and clubhouse, (Portion north of I-78), UMT  
Route 100 Bypass & Cetronia Road Proposed Commercial Development, 1 commercial lot with 4 buildings having auto, convenience, financial and day care uses, UMT  
Shepherd's Corner, 1 commercial lot, LMT  
Spring Creek Properties Subdivision 1, 14 commercial and industrial lots, LMT  
Trexler Business Center, Lot 1, 1 commercial building, LMT  
Trexler Senior Living Center, 2 commercial lots, LMT *(In bankruptcy)*  
Weilers Road Twins, 82 residential lots (sfa), UMT  
West Hills Business Center, 8 industrial lots, WeisT  
Woodmere Estates, 60 residential units (sfd), UMT

## WASTEWATER

### **ACTION ITEMS**

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1. **LCA Wastewater Capacity Program – Act 537 Facilities Planning** (Approval)

LCA and the City have agreed to the development of a common, regional Plan to encompass both LCA's and the City's wastewater service areas for the purpose of adding 4 mgd of wastewater capacity for LCA use. LCA and the City are currently negotiating with Arro Consulting to prepare the Plan and expect to have the final cost and scope of work prior to the Board Meeting. A description of the consultant selection process will be provided to the Board via memorandum.

Both LCA and the City have agreed to utilize our own wastewater consultants to represent our individual interests related to the Study. Therefore, Malcolm Pirnie has been asked for a scope and budget for on-call assistance related to the 537 Plan. There will be times when we need to bring Malcolm Pirnie in for review of reports and will also need Malcolm Pirnie for providing background information to Arro so that previously completed work is not duplicated. All modeling work associated with analyzing the conveyance capacity and costs related to capacity increases necessary for the additional 4 mgd will be performed by the City and LCA wastewater consultants. The Malcolm Pirnie proposal includes costs for modeling the LCA system as directed by Arro as part of the study. LCA is currently finalizing the scope and budget with Malcolm Pirnie for this 537 Planning Assistance and modeling.

A Memorandum to the Board, Capital Project Authorization, and Professional Services Authorizations will be provided at the Board Meeting. If the negotiations and final scope of work and costs are not ready for the July Board Meeting, the discussion and request for approval will occur at the August Workshop meeting.

### **DISCUSSION ITEMS**

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1. ***None.***

### **INFORMATION ITEMS**

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1. **Vera Cruz Area Sewer Project**

Final paving throughout the project area, was completed in June.

The Project Team and PACT have met to discuss closeout documents for the project. PACT is claiming changes for additional work. However, they have not substantiated their claims, nor filed a request for change order. Staff has directed them to complete the requests and submit with appropriate justification and documented costs. The largest item on their list is the cost of final pavement restoration in PaDOT right of way.

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

A meeting was held with the SCARP Partners to identify potential projects for 2012 that will provide a reduction in I & I. The Partners were in agreement to initiate these "low hanging fruit" projects that will require LCA capital funding. A Partner meeting is scheduled in July to discuss the scope and budget for the 2012 projects.

Areas have been identified as needing CCTV work to determine the extent of the leakage and for determining the basis of rehabilitation. The total footage includes over 57,000 LF of pipe and is located in Upper Macungie Township and Lower Macungie Township with a

few segments in Macungie Borough. The CCTV work is expected to be completed in 2012.

The WLI Physical Condition Assessment of the Albutis/Macungie Branch has been completed. The results and report were presented to LCA in May 22. Malcolm Pirnie is currently reviewing that CCTV work completed on three other areas of the WLI and will provide the report later this year. LCA will decide on the method and schedule for rehabilitation of the areas identified through the PCA when the final reports are presented. The LLRI CCTV work by an outside contractor will begin in July.

### **3. Wastewater Treatment Capacity**

LCA has not yet received the executed Memo of Understanding regarding working together on a joint Act 537 Plan from the City. It is my understanding that the document is in the City's Solicitor's office. The City representatives continue to work on the selection of the consultant despite not having an executed MOU.

We received qualifications from seven consulting firms for the joint 537 Plan Study. Two firms have been interviewed and we are currently negotiating with the selected firm. Board approval of the selected firm will be requested at the July Board Meeting.

Whole Effluent Toxicity Testing has been scheduled in July on the LCA WTP effluent to determine if there are any toxicity issues related to the plants effluent that could limit the plants ability to discharge directly into the Jordan Creek or Lehigh River.

Talks with Coplay-Whitehall Sewer Authority and Salisbury Townships may result in the sale and/or lease of allocation. An offer was presented to Salisbury for consideration several months ago and LCA received a counter offer from the Manager from Salisbury. LCA has responded to the counter-offer and is waiting a response.

### **4. Northern Lehigh Wastewater System**

The project is proceeding in a number of areas:

#### **Wastewater Treatment Plant (on a 5 acre tract at Kids Peace)**

In March, LCA representatives met with NWT Supervisor, Steve Panny; Solicitor, Lisa Young; and Township Manager, Jeff Bartlett to discuss the Act 537 Plan. In summary, for the westside of Rt. 309 (the 1-5 year service area) LCA has agreed to limit the size of the WTP to 200,000 GPD which in essence reflects the need for this area. Any expansion beyond 200,000 GPD would require NWT approval). For the eastside of Rt. 309, LCA has agreed to work with NWT in developing a solution for the wastewater treatment needs for this area, which may include one (or more) WTP(s) that discharge to the Coplay Creek. NWT wills the lead on this effort, with LCA providing support and expertise. After which NWT would amend the Act 537 Plan.

On April 2, 2012 LCA submitted a Conditional Use application which was accepted by NWT. The Planning Commission at their May 22, 2012 meeting recommended the Conditional Use to the Board of Supervisors. The Conditional Use hearing in front of the Board of Supervisors started at the June 4, 2012 meeting was continued to June 12, July 2, July 17 and August 6, 2012. LCA has presented it's side of the case and the Opposition is in the process of completing their presentation. We expect that the August 6<sup>th</sup> meeting will conclude the hearing, after which the North Whitehall Board of Supervisor will render their decision.

The total cost of the WTP including soft costs and Kids-Peace acquisition costs is estimated at \$4.69 million. We are currently evaluating various Wastewater Treatment Plant options to identify cost savings.

Offsite Conveyance Facilities (OSCF)

- a) Wal-Mart has stopped design of the necessary conveyance facilities, which includes gravity sewers, a pump station and force main to deliver the wastewater from their proposed development and other future wastewater customers to the wastewater treatment facilities until a cost sharing agreement is reached with LCA. Wal-Mart has proposed that LCA assume the responsibility of designing, permitting and constructing the OSCF, which is a change from the previous plan where Wal-Mart had the responsibility. Ongoing cost-sharing negotiations are still on hold while Wal-Mart internally reevaluates the proposed store's financial viability.

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

Kids Peace Agreement

- a) An amendment to the agreement with KidsPeace is being negotiated to reflect the changed circumstances since the original agreement was signed in 2006.

**5. Park Pump Station Improvements**

Fuel Tank Replacement – Staff has received and is reviewing the plans for replacement of the fuel tank at the Park Pump Station. We are in the process of acquiring additional easement area from the COA for the tank. The project is anticipated to go to bid in 2012.

**6. LCA WTP- Truck Waste Receiving Station & Digester Mixer Replacement**

Truck Waste Receiving Station: The project design is underway.

Digester Mixer Replacement: Procurement of six 24-inch diameter digester mixers was awarded to Olympus Technologies at the April Board meeting. The construction (installation) contracts are expected to be bid by the end of July with a recommendation to award at the August 27, 2012 Board meeting

The current schedule anticipates completion of both the aforementioned improvements in the second quarter of 2013.

**7. Arcadia West WWTP Improvements**

The three apparent low bidders have submitted the necessary signed agreements, bonds, and insurances, which are under review.

A request has been sent to PENNVEST to increase the loan amount by \$317,465 to \$3,248,635, due to the increases in construction contract values since the time of the funding application. Loan settlement is currently scheduled for July 26. However, settlement will likely be delayed, pending action of the PENNVEST Board at their July 18 meeting.

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## MEMORANDUM

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**Date:** July 17, 2012

**To:** Authority Board  
**From:** Liesel Adam  
**Subject:** Knowledge Management Program Development  
Capital Project Authorization  
Professional Services Authorization  
Phase 2 – Planning & Implementation

**MOTIONS /APPROVALS REQUESTED:**

No.	Motion /Approval Item	Amount
1	Capital Project Authorization (CPA) – Planning & Implementation Phase	\$ 393,800
2	Professional Services Authorization (PSA) - GHD (1)	\$ 204,800
3	2012 Budget Amendment	\$ 75,000

(1) The amount listed for the PSA is also included within the CPA amount.

**PROJECT OVERVIEW:** Lehigh County Authority (LCA) intends to retain the services of a management consulting firm for a Knowledge Sharing Skills Development program to assist with capture and transfer of institutional knowledge held by long-tenured employees to newer employees.

The need for a Knowledge Management (KM) program was established via LCA's 2007 workforce plan, and further defined in 2011 through a KM needs assessment project. The KM needs assessment project identified knowledge areas and processes that are critical to LCA's operations, and pose a high risk of loss due to retirement of LCA personnel. These risk areas are generally categorized into five key areas that must be addressed in order to maintain LCA's standards of business and operational performance as employees begin to depart the organization with greater frequency. These areas are:

- Compliance
- Financial Planning/Strategy
- Operations Management
- Strategic/Organizational Planning
- Wastewater Operations & Maintenance

The 2011 project also identified KM methods that would be appropriate for LCA's size, technology and organizational culture. The primary tools LCA has selected to begin this work fall into two primary categories: process/task documentation and person-to-person knowledge transfer.

Process/task documentation includes developing standard operating procedures (SOPs) and process maps / flow charts to document current practices and the flow of information between employees, departments or outside agencies. By documenting how employees complete their work, this knowledge can more easily be shared with others, and business process improvements can be made along the way. The resulting SOPs and process maps will add value to LCA's future workforce development programs as they can be used to develop training programs and competency models for the next generation of workers.

Person-to-person knowledge transfer is required to capture more ingrained knowledge that individual employees have gathered over time, such as their understanding of historical practices, awareness of LCA mission and strategies, relationships with other organizations, etc. This type of knowledge is extremely valuable to LCA's operations in that many long-tenured employees can work almost instinctively to complete their duties. However, this type of knowledge is difficult to write down in an SOP or process map. Therefore, efforts must be undertaken to generate opportunities for employees to share knowledge with each other, via mentoring, coaching and peer team programs.

To get LCA started on this important work, the Knowledge Sharing Skills Development project is intended to build a framework for employees to begin sharing their knowledge in an organized and thoughtful way, with the ultimate goal of weaving knowledge-sharing activities into our daily work, promoting long-term organizational sustainability.

**PROJECT SCOPE:** LCA's Request for Proposals (RFP) outlined overall program objectives as described above, along with the following primary project activities / tasks:

#### Objective A – SOPs & Process Mapping

- Refine prioritization work completed in the KM needs assessment, and develop listing of top-priority tasks & processes that LCA should document with a 12-month and 3-year timeframe.
- Develop framework for developing SOPs & process maps including file organization system, templates, employee training and program benchmarking
- Provide recommendations for system(s) to deploy SOPs and process maps to employees for use in their daily work assignments
- Work with employees and teams to develop the first set of 10 SOPs and 3 process maps to ensure employee proficiency with the new tools

#### Objective B – Mentoring, Coaching & Peer Teams

- Refine prioritization work completed in the KM needs assessment, and develop listing of critical knowledge areas that would be best captured via person-to-person methods.
- Develop framework for mentoring, coaching & peer teams including candidate selection processes, relationship-building techniques and documentation standards to track performance
- Work with employees and teams to develop capabilities for mentoring, coaching and working in teams, and track progress through the initial period of the program

The project activities listed above are a summary of the details provided in the RFP, which is available upon request. Additional considerations described in the RFP included: special



measures to ensure knowledge transfer occurs prior to upcoming planned retirements; some expected level of collaboration between this KM project to other related projects in the IT arena; and a requirement that consultant include efforts to minimize duplication of effort while also engaging all employees in the knowledge-sharing process to improve program effectiveness.

**CONSULTANT SELECTION PROCESS:** On May 23, 2012, an RFP for this work was sent to 10 firms and individuals who were pre-qualified for this work based on their response to the 2011 KM needs assessment consultant selection process. Five proposals were received by the June 15, 2012 deadline, with cost proposals provided under separate cover to ensure a qualification-based review of the proposals could be conducted.

LCA’s internal KM Team reviewed all proposals, and two firms were selected for additional investigation based on their proposed project plan and qualifications, as follows:

<b>Table 1</b>	
<b>LCA Qualification-Based Ranking</b>	<b>Firms Submitting a Proposal</b>
1	GHD
2	Stratus & TAP Resources
	EMA, Inc.
	MWH
	The Delphi Group

The top two firms shown above were interviewed by the KM Team on July 2 and July 9, 2012. Because the firms had already provided adequate statements of their qualifications during the 2011 project selection process, the focus of the interviews was to clarify their proposals and to provide an opportunity to determine the team dynamics that could be encountered in conducting this work with the consultants. Because of the high level of expected employee involvement in this project, the team felt that the selected consultant would be required to demonstrate strong team-building and communication skills in order to relate to employees at all levels of the organization.

Based on the results on the interviews, the team concluded that the GHD proposal would offer the most effective approach to completing this work. The cost breakdown for both GHD and Stratus are shown in Table 2.

<b>Table 2</b>					
<b>LCA Value-Based Ranking</b>	<b>Firms Submitting a Proposal</b>				
	<b>Firm</b>	<b>Hours</b>	<b>Cost</b>	<b>Travel</b>	<b>Total</b>
1	<b>GHD (Recommended)</b>	1,142	\$175,800	\$29,000	\$204,800
2	Stratus & TAP Resources	1,005	\$169,613	\$14,355	\$183,968

GHD's recommended approach includes a high level of proficiency in the KM tools LCA has selected for implementation, along with a strong approach to engaging all employees in the knowledge-sharing process. A few key elements in GHD's approach that LCA's team found especially valuable included:

- Strong support for mentors & coaches following implementation of the mentoring & coaching programs, including on-site visits and targeted efforts to develop employees' mentoring skills
- Dedicated efforts to develop ongoing performance measures for the knowledge-sharing program
- Large library of utility best practices, in the form of process maps and SOPs, that can serve as basis for building LCA-specific documents
- Focused efforts to help facilitate a culture shift toward knowledge sharing, to help incorporate these efforts into employees' daily work, rather than being viewed as "extra" work

Based upon our review of all aspects of both the Technical and Cost Proposals submitted by the two firms, we recommend award of the Knowledge Sharing Skills Development project to GHD.

The primary difference in cost between the top two firms is related to travel expense, which is an appropriate cost increase due to the high level of on-site work that will be required to implement the project as envisioned in their proposal. GHD's proposal includes a higher number of consultant hours, but a lower hourly cost due to their ability to bring in lower-level technical employees to assist with the development of SOPs and process maps with LCA's employees.

**PROJECT SCHEDULE:** This project will kick off immediately upon approval by the LCA Board of Directors. It will be important to begin this work as soon as possible in order to address some high-priority areas prior to the retirement of Doug Young, LCA's business manager. The project is tentatively scheduled to kick off the week of August 6, 2012, with completion of all tasks outlined in the scope of work within 18 months.

Because the intent of the project is to incorporate new knowledge-sharing programs into LCA's employees' daily work, no additional future phases of work are envisioned. However, some additional projects may be initiated within the IT arena to support this project, including tools to deploy SOPs and process maps to employees for their ongoing use in completing their work assignments.

## CAPITAL PROJECT AUTHORIZATION

PROJECT NO.: W-12-5 BUDGET FUND: ADMINISTRATION - WATER CAPITAL

PROJECT TITLE: Knowledge Sharing Skills Development

PROJECT TYPE:

- |                                     |                   |
|-------------------------------------|-------------------|
| <input type="checkbox"/>            | Construction      |
| <input type="checkbox"/>            | Engineering Study |
| <input checked="" type="checkbox"/> | Design            |
| <input type="checkbox"/>            | Amendment         |

COST ESTIMATE: \$393,800

### DESCRIPTION AND BENEFITS

Lehigh County Authority (LCA) intends to retain the services of a management consulting firm for a Knowledge Sharing Skills Development program to assist with capture and transfer of institutional knowledge held by long-tenured employees to newer employees.

The need for a Knowledge Management (KM) program was established via LCA's 2007 workforce plan, and further defined in 2011 through a KM needs assessment project. The KM needs assessment project identified knowledge areas and processes that are critical to LCA's operations, and pose a high risk of loss due to retirement of LCA personnel. In addition, the needs assessment identified KM methods that would be appropriate for LCA's size, technology and organizational culture. The primary tools LCA has selected to begin this work fall into two primary categories: process/task documentation and person-to-person knowledge transfer.

To get LCA started on this important work, the Knowledge Sharing Skills Development project is intended to build a framework for employees to begin sharing their knowledge in an organized and thoughtful way, with the ultimate goal of weaving knowledge-sharing activities into our daily work, promoting long-term organizational sustainability.

With retirement eligibility of LCA employees surpassing the 50% mark within the next five years, the development of a practical KM program today is of critical importance to ensure long-term business performance can be maintained.

Requested This Authorization	
<b>Project Totals</b>	
Payroll (includes application training and testing)	\$ 159,000
Professional Services	\$ 204,800
Contingency	\$ 30,000
<b>Total Project Cost</b>	<b>\$ 393,800</b>
Future Authorization	
Additional work to be incorporated into normal daily operations	\$ -
<b>Total Estimated Project</b>	<b>\$ 393,800</b>

### REVIEW AND APPROVALS

Project Manager	Date	General Manager	Date
Capital Works Manager	Date	Chairman	Date



Lehigh County Authority

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

**PROFESSIONAL SERVICES AUTHORIZATION**

**Professional:** GHD  
16701 Melford Boulevard,  
Suite 330  
Bowie, MD 20715  
240.206.6852 (office)  
240.206.6811 (fax)

**Date:** July 23, 2012  
**Requested By:** Liesel Adam

**Approvals**  
**Department Head:** \_\_\_\_\_  
**General Manager:** \_\_\_\_\_

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

GHD will provide management consulting services to conduct a Knowledge Sharing Skills Development program with Lehigh County Authority. This project is intended to develop structure for LCA’s use in implementing knowledge-sharing programs including documentation of processes and tasks, and creating a mentoring, coaching and peer teams program.

LCA’s Request for Proposals, the technical and cost proposals submitted by GHD, and the agreement between LCA and GHD are all included as part of this authorization, as they provide greater detail of the work that is expected by LCA, and the approach GHD intends to take to achieve LCA’s project objective. These documents are available for viewing by any Board or staff member upon request.

The following task breakdown shows the project tasks and GHD’s proposed hours and costs:

Project Activity / Task	Hours	Cost
1. Project Initiation and Organization	70	\$ 12,840
2. Determine knowledge management tools	168	\$ 25,280
3. Process Mapping and SOP Creation	282	\$ 41,160
4. Facilitating, Mentoring, Coaching, and Peer Teams	596	\$ 118,780
5. Facilitate defining significant measures	10	\$ 2,860
6. Evaluate Process and set plan to move forward	16	\$ 3,880
<b>TOTAL</b>	<b>1,142</b>	<b>\$ 204,800</b>

This authorization is a not-to-exceed contract. GHD shall submit invoices to LCA on a monthly basis, with invoices including a breakdown of activities, hours and costs.

**Cost Estimate ( not to be exceeded without further authorization ) :** \$204,800

**Time Table and Completion Deadline :** This project will begin immediately and shall be completed in no more than 18 months. Assuming a project start date of July 23, 2012, this project shall be completed by January 31, 2014.

**(For Authority Use Only)**

**Authorization Completion :**

**Approval :** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



**AGREEMENT  
BETWEEN**

**Lehigh County Authority**

**AND**

**GHD Inc.**

**FOR  
SERVICES**

**FOR**

**KNOWLEDGE SHARING SKILLS DEVELOPMENT**

**OWNER Reference Number [11015]**

**GHD Reference Number [860903976]**



**GHD – USA**  
**Services Agreement**

**General Details:**

Project Name	Lehigh County Authority (LCA) Knowledge Sharing Skills Development Project
The Project is <i>(brief project description)</i>	Develop LCA's internal capabilities for knowledge sharing to address critical areas identified in the 2011 knowledge management needs assessment.
“OWNER” and the “Client” means <i>(name, address, phone #)</i>	Lehigh County Authority PO Box 3348 Allentown, PA 18106 610-398-2503
OWNER’s Designated Representative(s) is <i>(name, title phone/e-mail)</i>	Liesel Adam, Customer Care & Communications Manager 610-398-2503 / lieseladam@lehighcountyauthority.org
OWNER’s Authorized Signer is <i>(name, title phone/e-mail)</i>	Aurel M. Arndt, General Manager 610-398-2503 / aurelarndt@lehighcountyauthority.org
GHD’s Designated Representative is <i>(name, title, phone-mail)</i>	Bradley Jurkovic Principal Consultant/Project Director +1-240-206-6852 bradley.jurkovic@ghd.com
GHD’s Authorized Signer is <i>(name, title, phone/e-mail)</i>	John Eick Business Group Manager +1-919-890-0606 john.eick@ghd.com

**Services: *(brief description of services)***

Professional management services to conduct a Knowledge Sharing Skills Development program with Lehigh County Authority. This project is intended to develop structure for LCA’s use in implementing knowledge-sharing programs including documentation of processes and tasks, and creating a mentoring, coaching and peer teams program. as further defined in Exhibit A.

**Fees: *(by phase)***

\$204,800  
as further defined in Exhibit A.

**Period of Service:**

Effective Date of this Agreement: 7/23/2012  
 [ All ] Phase(s) will be completed within [ 548 ] Calendar days of authorization by owner, as further defined in Exhibit A.

**Additional Exhibits: *(please list all additional exhibits (if any) that are included in this Agreement)***

Exhibit A - Scope of Work & Consultant Fees



**GHD – USA**  
**Services Agreement**

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Duly authorized representatives to execute this Agreement:

**On Behalf of GHD:**

	John Eick	Business Group Manager	
..... (Signature)	..... (Print name)	..... (Title)	..... (Date)

**On Behalf of OWNER:**

	Aurel M. Arndt	General Manager	
..... (Signature)	..... (Print name)	..... (Title)	..... (Date)

**Additional Signatures, if required:**

..... (Signature)	..... (Print name)	..... (Title)	..... (Date)

..... (Signature)	..... (Print name)	..... (Title)	..... (Date)



# GHD – USA Services Agreement

## Services

1. The standard of care for any professional services performed or furnished by GHD under this Agreement will be the care and skill ordinarily used by members of the profession practicing under similar circumstances at the same time and in the same locality. GHD makes no warranties, express or implied, under this Agreement or otherwise, in connection with GHD's services.
2. Any questions in relation to the services being provided by GHD can be directed to the Job Manager.
3. Change of Scope. The scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement. For some projects involving conceptual or process development services, scope may not be fully definable during initial phases. As the Project progresses, facts discovered may indicate that scope should be changed. GHD will promptly inform OWNER in writing of such situations, and if the facts discovered constitute a material change in project assumptions, the parties shall renegotiate the amended scope of this Agreement as necessary.
- (c) Part or all of the Services are delayed or suspended (other than as a result of GHD's breach of the Agreement);
- (d) OWNER fails to pay an amount due under the Agreement; or
- (e) OWNER ends the Agreement before GHD has completed the services.
6. GHD will submit monthly invoices for services rendered and payment will be made within 30 days of OWNER's receipt of such invoices. Interest at 1% per month will be charged on all past due amounts. When the Fees are on the basis of a lump sum, fixed fee, or a percentage of construction cost for the Project, GHD's invoices will be based upon GHD's estimate of the proportion of the services actually completed at the date of the invoice. If OWNER objects to any invoice submitted by GHD, OWNER shall so advise GHD in writing giving reasons therefore within fourteen (14) days of receipt of such invoice. If no such objection is made, the invoice will be considered acceptable by OWNER.

## Information and Documents

4. OWNER shall designate and advise GHD of a person to act as OWNER's Representative who has complete authority with respect to the services. OWNER shall do the following in a timely manner:
  - (a) Provide all criteria and full Information as to OWNER's requirements for the Project;
  - (b) Assist GHD by providing all available Information pertinent to the Project (e.g. previous reports), all of which GHD may use and rely upon in performing the services; GHD will not be obligated to verify the accuracy of OWNER provided Information unless verification is included in GHD's scope of work;
  - (c) Arrange for site and property access as required for GHD to perform the services;
  - (d) Give prompt written notice to GHD of any event that affects the scope or timing of GHD's services.
7. GHD shall maintain continuously during the life of this Agreement the following minimum insurance requirements:
  - (a) Workers' Compensation Insurance with statutory limits;
  - (b) Comprehensive General Liability Insurance with limits of not less than \$1,000,000 applicable to bodily injury, sickness, or death in any one occurrence or in the aggregate and not less than \$1,000,000 for loss of, or damage to, property in any one occurrence or in the aggregate;
  - (c) Automobile Liability Insurance covering all owned, non-owned, or hired vehicles used by GHD with limits of not less than \$1,000,000 applicable to bodily injury, sickness, or death of any one person per occurrence and \$1,000,000 for loss of or damage to property in any one occurrence;
  - (d) Professional Liability Insurance in the amount of \$1,000,000 covering claims, damages and Liability arising out of, or resulting from, GHD's professional negligence in performance of the services.

## Payment

5. Method of Payment. OWNER shall pay GHD the Fees as defined under the Exhibits.

Additionally, OWNER will pay for any additional approved services GHD undertakes, and any Liability, cost or expense GHD incurs, if:

  - (a) The general approved scope, schedule, extent or character of Services is changed materially. In this event, the amount of compensation provided for herein shall be subject to equitable adjustment in accordance with paragraph 3, Change of Scope;
  - (b) Any Information OWNER (or OWNER's employees, agents or contractors) provides to GHD is not complete and accurate;
8. The policies under 7. (b) and 7. (c) above shall: (1) name OWNER as an Additional Insured; (2) be endorsed to be primary and non-contributory to any other insurance maintained by OWNER.
9. GHD will provide OWNER with satisfactory evidence of the above insurances upon request.





#### **Total Liability for Damages**

10. (a) Notwithstanding any other provisions of this Agreement, but subject to clause 10(b) below, to the maximum extent permitted by law, the total aggregate Liability of GHD to OWNER and/or anyone claiming by, through, or under OWNER shall be limited to the amounts set out in clause 7 for the relevant insurance policy or, if no insurance is applicable, to \$1,000,000.
- (b) With respect to professional errors or omissions only, notwithstanding any other provision of this Agreement, to the maximum extent permitted by law, the total aggregate Liability of GHD to OWNER and/or anyone claiming by, through, or under OWNER, for all Liabilities arising out of, or resulting from the professional errors or omissions of GHD in the performance or non-performance of the services shall be limited to \$1,000,000, or the total Fees actually paid to GHD under this Agreement, whichever is greater.
- (c) Neither party to this Agreement shall be liable to the other for any indirect, special, incidental, punitive or consequential damages, including but not limited to loss of profits, arising in connection with the performance or non-performance of this Agreement.

#### **Intellectual Property**

11. All Documents prepared or furnished by GHD are instruments of service in respect of the Project and GHD shall retain an ownership and property interest therein whether or not the Project is completed. Any reuse without written verification or adaptation by GHD for the specific purpose intended will be at OWNER's sole risk and without Liability or legal exposure to GHD, and OWNER shall indemnify and hold harmless GHD from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom.

#### **Confidentiality, documents and information**

12. GHD agrees to keep confidential and not disclose to any person or entity, other than GHD's employees and subcontractors, without the prior written consent of OWNER (which consent shall not be unreasonably withheld, delayed, or conditioned), all data and Information not previously known to GHD and marked "CONFIDENTIAL" by OWNER and provided in the course of GHD's performance of the services. This provision shall not apply to data or Information which is in the public domain or which was acquired by GHD independently from third parties not under any obligation to OWNER to keep such data and Information confidential or which GHD is required to disclose under any law, rule, regulation, ordinance, code, standard, or court order.

#### **Termination**

13. (a) The obligation to provide further services under this Agreement may be terminated by either party upon thirty days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. Upon such termination, OWNER shall pay to GHD all amounts owing to GHD under the Agreement, for all work performed up to the effective date of termination, plus reasonable termination costs.
- (b) This Agreement may be terminated for convenience by OWNER upon thirty days prior written notice to GHD. In the event of termination for convenience by OWNER, GHD shall be entitled to receive all amounts owing to GHD under the Agreement, for all work performed up to the effective date of termination, plus reasonable termination costs.

#### **Indemnification**

14. To the maximum extent permitted by law, each party shall indemnify and hold harmless the other party, its appointed and elected officials, partners, officers, directors, employees, and agents; from and against any and all Liabilities arising from the negligent or wrongful acts, errors, or omissions, or breach of contract, by a party; but only to the extent of that party's relative degree of fault.
15. In furtherance of these obligations, and *only* with respect to OWNER, GHD waives any immunity it may have or limitation on the amount or type of damages imposed under any industrial insurance, worker's compensation, disability, employee benefit, or similar laws. GHD ACKNOWLEDGES THAT THIS WAIVER OF IMMUNITY WAS MUTUALLY NEGOTIATED.

#### **Dispute Resolution**

16. Both parties agree in good faith to attempt to resolve amicably, without litigation, any dispute arising out of or relating to this Agreement or the work to be performed hereunder. In the event that any dispute cannot be resolved through direct discussions, the parties agree to endeavor to settle the dispute by mediation. Either party may make a written demand for mediation, which demand shall specify the facts of the dispute. The matter shall be submitted to a mediator mutually selected by the parties. The mediator shall hear the matter and provide an informal nonbinding opinion and advice in order to help resolve the dispute. The mediator's fee shall be shared equally by the parties. If the dispute is not resolved through mediation, the matter may be submitted to the judicial system, in the courts of general jurisdiction where the Project is located, in which event all litigation and collection expenses, witness fees, court costs and attorneys' fees shall be paid to the prevailing party.



#### **Independent Contractor**

17. GHD shall act as an independent consultant and not as an agent or employee of OWNER, and will be solely responsible for the control and direct performance of the services provided by its employees and agents.

#### **Assignment**

18. This Agreement may be assigned by either party with the prior written consent of the other party.

#### **Health and Safety**

19. GHD shall only be responsible for the activities of its own employees and agents on the Project site with respect to safety.

#### **Compliance with Laws, Permits and Licenses**

20. This Agreement shall be governed by the law of the state where the Project is located. GHD shall perform its Services in accordance with applicable laws, regulations, ordinances, permits, licenses, and other rules.

#### **Severability**

21. The parties agree that, in the event one or more of the provisions of this Agreement should be declared void or illegal, the remaining provisions shall not be affected and shall continue in full force and effect.

#### **No Third-Party Beneficiaries**

22. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by OWNER or GHD to any third party. All duties and responsibilities undertaken under this Agreement shall be for the sole and exclusive benefit of OWNER and GHD. There are no intended third-party beneficiaries. Notwithstanding the foregoing, should a court find a third party to be a beneficiary of this Agreement, it is the intent of the parties that the judicially created third-party beneficiary be bound by and subject to all of the terms and conditions of this Agreement.

#### **Notification Period**

23. Any applicable Statute of Limitation shall be deemed to commence running on the date which the claimant knew, or should have known, of the facts giving rise to their claims, but in no event later than the date of the final invoice for GHD's services under this Agreement. To the maximum extent permitted by law, as a condition precedent to commencing a judicial proceeding, a party shall give written notice of their claims, including all amounts claimed, and the factual basis for their claims, to the other party within two (2) years of when the claimant knew, or should have known, of the facts giving rise to their claims, but in no event later than two (2) years from the date of GHD's final invoice for Services under this Agreement.

#### **Complete Agreement**

24. This Agreement represents the entire understanding between the OWNER and GHD, and supersedes all prior negotiations, representations, understandings or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the parties hereto.

25. All notices or other written communications required under this Agreement shall be given personally upon delivery or by certified mail, return receipt requested, upon deposit in a U.S. Mail receptacle to the appropriate parties at the addresses shown on the signature page.

26. This Agreement applies to all services undertaken by GHD for OWNER relative to this Project, including any services undertaken prior to the Effective Date hereof.

#### **Definitions**

27. Unless the context otherwise requires, in the Agreement:

**"Additional Insured"** means that the interests of the client will be noted on the relevant policy, but does not mean that the client is an "Insured" under that policy.

**"Agreement"** means the agreement executed by the parties in connection with the services, including these terms and exhibits.

**"Designated Representative"** means specific individuals who act as Engineer's and OWNER's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of OWNER under this Agreement. Such an individual shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of the respective party whom the individual represents.

**"Document"** or **"Documents"** includes a written or electronic document.

**"Fees"** means the amount set out in the agreement details including disbursements.

**"Information"** includes documents and information provided pertinent to the project.

**"Liability"** or **"Liabilities"** means any and all liabilities for actions (whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise); claims (including, but not limited to, claims for bodily injury, death, property damage, (including bodily injury, death, or property damage to employees) or arising under environmental laws); and costs or damages of every nature without limitation (including, but not limited to, reasonable attorneys' fees and costs of defense).

**"Project"** means the project(s) that the services relate to.

**"Services"** means the services set out in the agreement details (or otherwise the services GHD undertakes).

**"OWNER"** means the person(s) set out in the agreement details (and if more than one person, "OWNER" means each of those persons severally and all of them jointly).

## **Lehigh County Authority (LCA) – GHD Agreement**

### **LCA Knowledge Sharing Skills Development Project**

#### **Exhibit A – Scope of Work & Consultant Fees**

**PROJECT OVERVIEW:** Lehigh County Authority (LCA) intends to retain the services of a management consulting firm for a Knowledge Sharing Skills Development program to assist with capture and transfer of institutional knowledge held by long-tenured employees to newer employees.

The need for a Knowledge Management (KM) program was established via LCA's 2007 workforce plan, and further defined in 2011 through a KM needs assessment project. The KM needs assessment project identified knowledge areas and processes that are critical to LCA's operations, and pose a high risk of loss due to retirement of LCA personnel. These risk areas are generally categorized into five key areas that must be addressed in order to maintain LCA's standards of business and operational performance as employees begin to depart the organization with greater frequency. These areas are:

- Compliance
- Financial Planning/Strategy
- Operations Management
- Strategic/Organizational Planning
- Wastewater Operations & Maintenance

The 2011 project also identified KM methods that would be appropriate for LCA's size, technology and organizational culture. The primary tools LCA has selected to begin this work fall into two primary categories: process/task documentation and person-to-person knowledge transfer.

Process/task documentation includes developing standard operating procedures (SOPs) and process maps / flow charts to document current practices and the flow of information between employees, departments or outside agencies. By documenting how employees complete their work, this knowledge can more easily be shared with others, and business process improvements can be made along the way. The resulting SOPs and process maps will add value to LCA's future workforce development programs as they can be used to develop training programs and competency models for the next generation of workers.

Person-to-person knowledge transfer is required to capture more ingrained knowledge that individual employees have gathered over time, such as their understanding of historical practices, awareness of LCA mission and strategies, relationships with other organizations, etc. This type of knowledge is extremely valuable to LCA's operations in that many long-tenured employees can work almost instinctively to complete their duties. However, this type of knowledge is difficult to write down in an SOP or process map. Therefore, efforts must be undertaken to generate opportunities for employees to share knowledge with each other, via mentoring, coaching and peer team programs.

To get LCA started on this important work, the Knowledge Sharing Skills Development project is intended to build a framework for employees to begin sharing their knowledge in an organized and

thoughtful way, with the ultimate goal of weaving knowledge-sharing activities into our daily work, promoting long-term organizational sustainability.

**PROJECT SCOPE:** LCA's Request for Proposals (RFP) dated May 23, 2012 outlined overall program objectives as described above, along with the following primary project activities / tasks:

Objective A – SOPs & Process Mapping

- Refine prioritization work completed in the KM needs assessment, and develop listing of top-priority tasks & processes that LCA should document with a 12-month and 3-year timeframe.
- Develop framework for developing SOPs & process maps including file organization system, templates, employee training and program benchmarking
- Provide recommendations for system(s) to deploy SOPs and process maps to employees for use in their daily work assignments
- Work with employees and teams to develop the first set of 10 SOPs and 3 process maps to ensure employee proficiency with the new tools

Objective B – Mentoring, Coaching & Peer Teams

- Refine prioritization work completed in the KM needs assessment, and develop listing of critical knowledge areas that would be best captured via person-to-person methods.
- Develop framework for mentoring, coaching & peer teams including candidate selection processes, relationship-building techniques and documentation standards to track performance
- Work with employees and teams to develop capabilities for mentoring, coaching and working in teams, and track progress through the initial period of the program

The project activities listed above are a summary of the details provided in the RFP, which is available upon request. Additional considerations described in the RFP included: special measures to ensure knowledge transfer occurs prior to upcoming planned retirements; some expected level of collaboration between this KM project to other related projects in the IT arena; and a requirement that consultant include efforts to minimize duplication of effort while also engaging all employees in the knowledge-sharing process to improve program effectiveness.

**GHD PROJECT APPROACH:** LCA has selected GHD for this work based on the proposed project approach provided in their proposal dated June 15, 2012. The approach shown below is excerpted from section 4 of the GHD proposal.

**Task One: Project Initiation and Organization**

This work focuses on establishing the content and project guidelines that will govern this scope of work.

**Task 1.1: Conduct a Project Kick-off and Planning Meeting**

The LCA and GHD project teams will conduct a ½ day kick-off and planning meeting. The outcome of this meeting will be a draft project plan, therefore the purpose of the meeting is to:

- Validate the critical knowledge and processes for codification [LCA's existing Knowledge Map will inform this validation]
- Present samples of knowledge codification in various formats for consideration by the KM Team
- Broadly categorize the critical knowledge and processes for codification by the most appropriate methodologies for capture e.g. SOP, Process Map, Mentoring, Coaching, Peer Team
- Jointly identify a set of criteria for prioritization of knowledge and process codification
- Assign initial priorities to completing the knowledge and process codification for 12 month and 3 year categorization
- Loosely establish a 12 month schedule of work to be validated in review of the project plan

In advance of this kick off meeting, GHD will review the work previously completed by LCA that addressed knowledge management, SOP creation, process maps and the methods and templates used in their creation. This review will suggest the body of work for inclusion in this project, suggest priorities for completing the work and provide GHD with background knowledge prior to conducting a project kick-off

It is not an expectation of this meeting that LCA provide a review of all work completed to date on this topic. There may, however, be specific areas of review that will benefit GHD's understanding of LCA's expectations for project outcomes. It is our intent to use our knowledge of LCA, the project documentation provided, and our expertise in utility operations to facilitate this discussion and planning session.

As this project is initiated, it is recommended that LCA identify an internal resource to assume long-term responsibility for this program to facilitate knowledge sharing by GHD resources during project execution.

### **Task 1.2 Conduct Key Project Team Interviews**

One-hour interviews will be conducted with the Project Manager (who is also the Customer Care and Communications Manager), the General Manager, the Business Manager, Operations Manager and Capital Works Manager. The purpose of the interviews is to gain a perspective of priorities and challenges to completing this Knowledge Sharing Skills Development Project. The interviews will be conducted in conjunction with the project kick-off and planning meeting.

### **Task 1.3 Create and Submit Draft and Final Project Plans**

Based on the activities completed in Tasks 1.1 and 1.2, GHD will create a draft Project Plan and Schedule for review by the LCA Knowledge Management (KM) Team. After review by the LCA KM Team, a conference call will be scheduled with the GHD team for purposes of review and revision of the plan and schedule.

### **Task Two: Determine Knowledge Management Tools**

This work focuses on determining the best tools to be used for storage and retrieval of codified knowledge – process maps, SOPs, checklists, training materials, videos, and so on.

### **Task 2.1 Conduct Review of LCA Electronic Data Storage Resources and Survey Employees on Tool Preferences**

GHD will team with LCA's Computer Systems Administrator to review the structure and usability of LCA's existing network resources for ease of storage, search and retrieval of knowledge documentation. GHD will review the Strategic Information Technology Plan to gain an understanding of LCA's future plans for IT expansion, particular as they relate to document storage and management or use of web-based social media tools.

Working with the Knowledge Management Team, GHD will construct a survey aimed to gather data on employee preferences for knowledge management tools. The survey will be distributed via Survey Monkey to all employees and take less than 15 minutes to complete. Survey questions will focus on

- Identifying the methods employees currently use to access data to complete their work (data that is both internal and external to LCA)
- Understanding the shortcomings of current LCA data retrieval tools
- Gain a sense of employee literacy in using social media tools such as wikis and blogs

Survey results will be summarized for LCA review.

### **Task 2.2 Provide Recommendations for Knowledge Management Tools**

GHD will present the LCA KM Team with our findings from Task 2.1 and recommend options for Knowledge Management Tools including the storage of team files (for Peer Team reviews). While it is understood that this RFP only requests a recommendation for Knowledge Management Tools and not implementation, LCA may want to consider piloting tools as a part of this project. Piloting would provide LCA employees the opportunity to test drive tools prior to making final decisions on which tools to use and a better understanding on the return on investment. *Note: If LCA is interested in the pilot approach, an estimate of fees for pilot development and rollout will be provided.*

A minimum of three recommendations for Knowledge Management Tools accompanied by an estimate of the associated costs, benefits and return on investment for each tool will be provided. The recommendations will consider tools already owned or soon to be implemented by LCA (e.g. as part of the Strategic IT Plan), tools that are available at little or no cost such as wiki and blog tools, and tools specifically designed for Knowledge Management that require a cost investment on the part of LCA. The recommendations will be presented to the LCA KM Team in a ½ day facilitated workshop and will include a facilitated process to identify the criteria for determining tool selection.

### **Task Three: Process Mapping and SOP Creation**

This work addresses the steps in facilitating completion of SOPs and process maps with LCA employees and GHD's approach for training LCA employees in the use of knowledge capture tools. The development of SOPs and process maps needs to occur within the context of LCA's business model. GHD will begin this activity with a review of the knowledge map, build on the work catalogue by considering frequency and complexity of the defined work, and create a business model specifically for the purpose of guiding us through the tasks of this activity. Once we share a clear understanding of the work completed by LCA, GHD will develop

recommendations for SOP and Process Mapping development. Recommendations will be prioritized based on criticality and risk analyses of the assembled processes.

### **Task 3.1 Facilitate Creation of 10 Standard Operating Procedures**

Assessing existing and developing new SOPs for a complex organization such as LCA requires three key components. First, the review of existing SOPs should be conducted by industry content experts who understand the core and support functions of the business. Second, the assessment of existing and development of new SOPs should be based on industry-recognized best practices that apply to all aspects of the organization. And third, the development of new SOPs must respect the variation of highly technical and professional work functions that are the focus of the organization. We understand the complexity of these issues and propose a multi-pronged approach to ensure all three key components are addressed.

First, we will conduct a process commonly referred to as “Resource Loading Analysis”. This tool will further define processes that occur within the LCA business model and knowledge map by gathering detailed information about those processes including: frequency, time required, complexity, difficulty, and resources used to complete (to name a few). Next, we will align this information to data collected during the previous LCA projects that indicate potential risks to the organization based on anticipated retirements and other staff turnover. Finally, armed with these “data points”, GHD will work with LCA to determine the order in which SOPs will be developed based on risk mitigation. Using the Pareto Principle as our guide, we will work with the LCA Knowledge Management Team to determine the theoretical 20% of SOPs that address 80% of the risk associated with knowledge management.

The process for developing SOPs involves two steps. First, it is necessary to establish a template for all SOPs. Ideally, this template should be created to support not only SOP functions but also training and competency demonstration. When SOPs are developed in this way, LCA will be achieving three important organization goals with one task.

Using the template, GHD will work closely with the LCA staff involved in each of ten selected processes to generate SOPs for those processes as well as an SOP for the process of developing SOPs and an SOP for the process of developing process maps. This approach will provide LCA participants with the opportunity to train in SOP creation and development as we execute this task. To achieve the multiple goals noted above and in your RFP, the SOP template will include more than the steps in the process being documented. The SOP template will also include information such as tools, skills, and knowledge required; prerequisite training; certifications (internal and external); safety considerations; and more. GHD has templates from prior projects with other water/wastewater utilities to draw from that will optimize the level of effort necessary to develop the template and ensure that LCA’s template is comprehensive. GHD has used Microsoft Word, Visio, and other tools for SOP development.

### **Task 3.2 Facilitate Processing Mapping Sessions**

Similar to developing SOPs, Process Mapping for a complex organization such as LCA requires several key components. First, the review of existing process flow maps should be conducted and a template, or standard, for future process maps should be established. Second, the development of new process maps should be based on current practices but also used as an opportunity to reflect on industry best practices. In this regard, the development of SOPs and process maps is an opportunity to consider how LCA conducts business and to look for improvement potential along

the way. Third, the development of new process maps must capture the intricate “hand offs” between individuals and across organization boundaries.

GHD has used Visio for the documentation of many process maps. From the earlier resource loading analysis exercises, we will capture the processes that occur within the LCA business model. Next, we will work with cross-functional teams of LCA staff to capture three of these processes in detail. GHD will develop draft process maps for each process in advance based on our industry knowledge and experience. The work sessions will focus on altering these “straw models” to match the exact process flow at LCA. In using this approach, LCA saves time and expense by altering an existing flow vs. starting with a blank sheet and creating everything from scratch. Our past experience with other utilities enables us to provide this advantage. Finally, the GHD and LCA teams will together review these process maps, which typically include “swim lanes” for each resource, to ensure that the relationships, or hand offs, that occur are sound, well-documented, and supported within the business model. GHD will work with LCA to determine the order in which future process mapping will be accomplished based on risk mitigation and to develop a schedule to meet your stated timeframe.

Following the development of these first three process maps, GHD will work with LCA to schedule and conduct three process mapping/SOP development training sessions with LCA staff. These sessions will be designed to: demonstrate the process mapping process, show how process maps are read and used, and “lessons learned” from this and past process mapping and SOP development efforts that can be used for future process mapping activities. LCA’s RFP does not specifically call for SOP training however GHD’s experience indicates that training in both of these tools during the same sessions provides users with a better understanding of the relationship between these important knowledge management tools.

### **Task 3.3 Document the Standard Processes for SOP and Process Map Development**

As previously noted, GHD will work with the LCA Knowledge Management Team to develop SOPs for SOP and process mapping development. These SOPs will be developed using the same methodology as other SOPs and will use the same SOP template developed earlier in the process per the discussion above.

### **Task 3.4 Facilitate Learning on the Use of Knowledge Capture Products**

We believe that this SOP development and process mapping work is strongly connected to form the primary methodology for knowledge retention and management. As such, we plan to provide training on both tools and processes during these training sessions so that participants gain a better understanding of how both efforts combine to provide optimum knowledge management. The training will primarily focus on process mapping, however SOP development will be discussed during the training introduction and then throughout the process mapping discussion to show the linkage between the two tools.

This training will, in part, focus on defining the various advantages to knowledge management through the development of SOPs and process mapping. Advantages discussed will include:

1. Knowledge Capture
2. Performance Consistency and Improvement
3. Process Understanding



#### 4. Best Practices Leverage

Training will demonstrate how, working in teams, LCA's staff can achieve all of these advantages more efficiently and effectively than working as individuals.

GHD will provide all training materials and conduct sessions using the tools selected by LCA for this project.

#### **Task Four: Facilitating Mentoring, Coaching and Peer Teams**

This work focuses on identifying methods to be used for mentoring, coaching and working as peer teams in the knowledge capture/transfer process, describes a process to be used to identify participants in the coaching and mentoring process, describes our training and support process and the method by which GHD will work with participants to facilitate the process and ensure its successful outcome.

While we agree with LCA that mentoring and coaching are two different approaches to knowledge sharing, we propose to plan the structure for those activities together, assuming the implementation of that plan will define separate tasks for each knowledge capture method.

#### **Task 4.1 Determine Methodologies for Mentoring, Coaching and Using Peer Teams**

To be successful, mentoring, coaching and peer team programs must be deployed, supported and evaluated through a structured process, yet the process must be tailored to fit the culture and organization patterns of LCA. A boilerplate methodology will not bring the desired success. To determine the ideal mentoring, coaching and peer team processes to implement at LCA, GHD will facilitate a ½ day work session with the LCA Team. The outcome of this work session will be a structure for moving forward that determine program components such as:

- The appropriate mentoring structure: one-on-one or teams
- The appropriate coaching structure
- Criteria and process for selecting mentors and coaches
- The mentoring, coaching and peer team orientation process
- Criteria and process for selecting 'coaching and mentoring clients
- The training process, content and schedule
- The commitment for participants
- Tools for evaluating progress
- Content for focus in mentoring or coaching
- Measuring results
- The process GHD will use for supporting participants in mentoring and coaching relationships

GHD will provide templates and tools to facilitate this discussion and ensure a draft structure is in place at the end of this planning session. The outcome of this workshop will be the draft structure for LCA's approach to mentoring, coaching and use of peer teams. We will document this structure for review by the LCA Team.

#### **Task 4.2 Participant Identification and Pairing**

Based on the structure defined in the previous task, GHD will support the LCA Team in the process of approving participant selection, reviewing applications (if used) against determined criteria, conducting interviews if that is a step defined in the structure to be used, and pairing participants in mentoring and coaching relationships. Until the structure is determined, the exact areas of GHD and LCA participation in this process are not clear. This may be an area where GHD takes the lead and the LCA Team reviews our recommendations for participants and pairings, reducing the time requirements for the LCA team.

We understand that LCA has identified at least two candidates to act as mentors and coaches based on their pending retirements – the Business Manager and General Manager. It is likely other candidates are being considered or tagged as employees who should participate in this knowledge, skill and relationship transfer. To encourage voluntary participation, it may be prudent to conduct a one-hour coaching and mentoring orientation open to all employees. This would allow employees who may be interested to view the structure and process before tossing their hat into the ring.

If LCA has not recently conducted a personal styles or strengths evaluation of employees, it may prove useful to do that prior to beginning this process.

#### **Task 4.3 Provide Training and Coaching in the Coaching and Mentoring Process**

Mentoring and coaching are both experiential learning processes – which for adults is the best way to take in new information and concepts, maximize retention, and effect positive behavior change. Both partnerships focus on learning that is immediately useful and applicable, include hands-on experience with the material being learned, involve a balance of intellectual and emotional components, and occur in a safe and supportive environment for trying new behavior. Both processes include a commitment from the participants involved in the partnership and both are guided by clearly stated objectives that meet the learning needs of *both* participants in the partnership. GHD's training in Mentoring and Coaching is built on this learning foundation.

Mentor training will be provided to the five or six designated LCA mentors and coaching training will be provided to the six to eight designated LCA coaches. Initial training for both programs will be 8 hours with quarterly training focused on skill development and process improvement. (*The quarterly training is included in Task 4.4 as a support process provided by GHD.*)

Based on our understanding of LCA's definitions of the mentoring and coaching processes, we propose to deliver training for coaches and mentors in a single process. The significant differentiator between the two processes is the level of performance evaluation and competency that the coach or mentor is required to assess. The broad enterprise mentoring relationship does not lend itself to detailed and specific evaluation of the competency developed in a specific area, whereas the focused coaching relationship does. In general, the knowledge and skill needed by the coach or mentor overlap. Therefore we propose combining the initial training and the quarterly training sessions for coaches and mentors. Our individual support of coaches and mentors will address the nuances of each process.

GHD will work with the LCA Project Manager to determine the training schedule that best fits LCA's needs. For example, the eight hours might be structured in two consecutive half-day

sessions to support LCA time restrictions. The content to be addressed in the initial training session is shown in the matrix below.

Mentor Training	Coaching Training
The Mentoring Relationship	The Coaching Relationship
How Adults Learn	How Adults Learn
Initiating the Relationship, Setting Expectations, Deciding Content Focus	Initiating the Relationship, Setting Expectations, Deciding Content Focus
Listening and Communicating	Listening and Communicating
Assessing the Level of Knowledge Transfer	Assessing Performance and Competency
Providing Feedback	Providing Feedback

#### **Task 4.4 Initiate the Coaching and Mentoring Process**

GHD will facilitate a two-hour session with all participants designated to participate in the coaching and mentoring process to initiate the processes. The purpose of the session is to review the objectives of the processes, review the structure that guides the process and remind participants of the support available during the processes. We recommend scheduling this the week following the mentor and coach training with the expectation that mentors and coaches will initiate their relationships that week. GHD resources would then remain on site an additional day to provide support.

#### **Task 4.5 Support the Coaching and Mentoring Process**

GHD will provide ten months support to the mentoring and coaching program, assuming support begins in month three of the overall project schedule. In the process of defining the structure for the mentoring and coaching programs, we will define a schedule and suggested activities such as the frequency of meetings for the pairs, the content focus of initial meetings, use of logs and progress reports, coaching for the mentors and coaches, skill development sessions and group check-in sessions.

Support activities provided by GHD for ten months include:

- Conduct monthly onsite check-in sessions with each coaching and mentoring pair including observation of a session (one hour per pair for 10 months, 14 pairs)
- Conduct two monthly onsite group check-in sessions (at months 5 and 8) to monitor the overall program progress and implement immediate improvements (two hours per participant, 28 participants)
- Conduct a mid-month telephone check-in with participants including review of the coach and mentor logs (15 to 30 minutes per participant)
- Conduct a quarterly skill development session for coaches and mentors (4 sessions, 4 hours per session for all participants)
- Provide telephone support as requested by participants (40 hours allotted in GHD’s level of effort estimate)

Our level of effort estimate is based on supporting 14 ‘pairs’ or 28 LCA employees for the ten-month duration of these processes. Based on the program structure determined, all 28 participants may not be actively participating for the entire ten months thus impacting the proposed level of effort. Until the program structure and participants are determined, a more precise level of effort cannot be estimated. Onsite support activities will be coordinated with other project activities when possible. Updates to the LCA Knowledge Management Team will occur at regular progress meetings.

#### **Task 4.6 Facilitate Peer Teams in the Knowledge Sharing Process**

Processes designated for Peer Team review will initially be identified in *Activity One: Project Initiation and Organization*. We propose conducting two peer team reviews over the course of the project with one occurring in early December prior to the retirement of the Business Manager. This Peer Team Review should focus on either the annual budget process or annual Capital Plan development assuming the Business Manager is highly engaged in both of those processes.

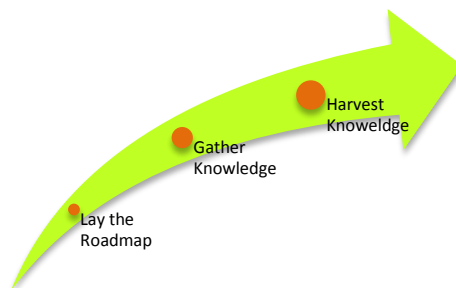
Prior to conducting the first Peer Team review, GHD will conduct two ½ day training sessions for up to 8 participants on leading teams and facilitating team meetings. The sessions will focus on teaching a process for initiating teams, guiding and documenting the work of the team, managing team meetings, appropriate team behaviours and concluding a team. These sessions will be scheduled in conjunction with other on-site project activities with one occurring prior to the December Peer Team review.

GHD will facilitate the first Peer Team review and LCA will facilitate the second Peer Team review with GHD providing coaching and support for the process. Pre-meeting communication will include identification of participants and their expected role in the process, the materials to be reviewed in advance of the session, materials to be brought to the session (as well as can be known), and anticipated outcomes of the review.

The Peer Team review will begin with a ‘tailgate’ meeting on the purpose and expected outcome of the session and a review of the guidelines for team contribution. The review will wrap up with a team evaluation of the team’s success in walking through the process, identify areas for improvement in their teaming skills, and identify areas of improvement for the Peer Team review process. Each review will be 6 hours in length with 6 to 8 employees involved in each review.

#### **Task Five: Recommendations for Measuring the Impact of the Program**

This work focuses on measuring the impact of the knowledge sharing program by constructing a set of measures for capture by LCA. Measuring success of a knowledge-sharing program varies depending on the stage of its development.



At the initial stage of you are laying the roadmap for the program, measuring its impact is more qualitative than quantitative in nature. Of significance are defining the critical knowledge to be

gathered and the processes for codifying the knowledge. That changes significantly as you gather and harvest the knowledge. Once the program is underway, measures focus on program participation and progress then eventually the business bottom line.

During the third quarter of this project, GHD will conduct a two-hour session with the LCA’s Team to define significant measures for the program. We will use a framework that is compatible with other performance measures currently in use at LCA.

**Task Six: Evaluate Progress and Set the Plan to Move Forward**

GHD will conduct a two-hour session to evaluate the progress and success of the Knowledge Sharing Skills Program, identify program improvements, and determine the plan and schedule for continuing this work. Improvement suggestions will be gathered from the coaching, mentoring, SOP creation, process mapping and peer team activities (including addressing the way in which knowledge sharing participation is formalized in LCA’s human resource activities). In facilitating this discussion, GHD will propose an approach and schedule for continuing this work based on our observation and assessment of LCA’s capacity to complete it. The product of this session will be a documented plan for moving forward.

**GHD PROJECT FEES:** The following task breakdown shows the project tasks outlined above and GHD’s proposed hours and costs:

<b>Project Activity / Task</b>	<b>Consultant Hours</b>	<b>Consultant Fees</b>	<b>Travel &amp; Other Reimbursable Expenses</b>
1. Project Initiation and Organization	70	\$ 11,840	\$ 1,000
2. Determine Knowledge Management Tools	168	\$ 23,280	\$ 2,000
3. Process Mapping and SOP Creation	282	\$ 35,160	\$ 6,000
4. Facilitating, Mentoring, Coaching, and Peer Teams	596	\$ 100,780	\$ 18,000
5. Facilitate defining significant measures	10	\$ 1,860	\$ 1,000
6. Evaluate Process and set plan to move forward	16	\$ 2,880	\$ 1,000
<b>Totals</b>	<b>1,142</b>	<b>\$ 175,800</b>	<b>\$ 29,000</b>

**Total Consultant Fees: \$204,800**



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

**BUDGET AMENDMENT REQUEST**  
**Budget Year - 2012**

Date: 7/17/12

Type:            Transfer \_\_\_\_\_  
                  Addition   X    
                  Deletion \_\_\_\_\_

Requested By:   L. Adam    
Approved By: \_\_\_\_\_

Budget:              Water Capital  

Amount:             \$75,000  

**Item(s) Requested:**  
Knowledge Management            \$75,000

**Source(s) of Funds:**  
Operating Reserves            \$75,000

**Reason:** To cover the cost proposal of the recommended Knowledge Management consultant and expected LCA costs to be incurred in 2012 for the implementation phase. 2012 costs are expected to equate to \$185,000 versus the \$110,000 budgeted.

## **RESOLUTION NO. 7-2012-1**

(Duly adopted 23 July 2012)

***A RESOLUTION AUTHORIZING THE NEGOTIATION OF COST REIMBURSEMENT FROM THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AS A RESULT OF UTILITY RELOCATIONS FOR THE HIGHWAY IMPROVEMENT PROJECT OF STATE ROUTE 0309 (ROUTE 309) LOCATED IN NORTH WHITEHALL TOWNSHIP.***

WHEREAS, Lehigh County Authority ("Authority") is a municipal authority formed pursuant to the Municipality Authorities Act to provide water and wastewater services in the Lehigh Valley; and

WHEREAS, the Pennsylvania Department of Transportation ("PennDot") is designing and will construct a highway improvement project in regard to State Route 0309, Section 07S, between Station 447+00 and Station 481+50, located in North Whitehall Township in Lehigh County (the "Project") in the Authority's service area; and

WHEREAS, construction of the Project will cause the relocation of Authority water facilities at various locations in the Project, some of which are presently in public rights-of-way; and

WHEREAS, PennDot has requested the Authority to relocate such facilities outside of the public rights-of-way, but has not determined to what extent it will reimburse the Authority for the cost of doing so; and

WHEREAS, the parties are in the process of negotiating the terms of such reimbursement;

NOW THEREFORE, the Authority, pursuant to the powers granted it and in accordance with the requirements of the PennDOT Design Manual - Part 5, §8.01, does hereby authorize the submission of the attached request for the Pennsylvania Department of Transportation to provide 50% reimbursement to the Authority for all costs incurred in relocating its public water system facilities affected by the Project necessitated by the PennDOT highway improvement in Lehigh County. Furthermore, the General Manager, Chief Financial Officer or Business Manager of the Authority are authorized to sign the attached Agreement on its behalf and also, that the Solicitor or Customer Care & Communications Manager are authorized to attest the General Manager's, Chief Financial Officer's or Business Manager's signature on the reimbursable utility agreement for this highway project.

On motion of \_\_\_\_\_, seconded by \_\_\_\_\_, this Resolution was adopted the 23<sup>rd</sup> day of July 2012.

July 19, 2012

Mr. Michael Rebert, District Executive  
PA Department of Transportation  
Engineering District 5-0  
Allentown, PA

Lehigh County  
RE: S.R. 0309  
Section: 07S  
Cost Sharing Request

ATTN: Dave Rader, Utility Relocation Administrator

Dear Sir or Madam:

This correspondence is submitted in accordance with Chapter 8.1.C of Design Manual Part 5, Utility Relocation, for referral to the Secretary of Transportation.

The proposed Highway Improvement Project of State Route 0309, Section 07S, between Station 447+00 and Station 481+50, located in North Whitehall Township in Lehigh County requires the relocation and/or adjustment of certain water facilities owned by the Lehigh County Authority, which are presently located in private and public right-of-way.

It is understood that the cost of relocating and/or adjusting our facilities in public right-of-way are normally at our cost and expense, but that under the provisions of Section 412.1 of the Act of June 1, 1945, P.L. 1242, as amended (36 P.S. 670-412.1), the Secretary of Transportation may determine that the Department will share in such cost.

Accordingly, it is hereby requested that the Department of Transportation share in the costs of the relocation and/or adjustment of our water facilities, the total cost of which is estimated to be \$ 94,200.00.

The Lehigh County Authority hereby offers to pay (50%) per centum of the actual cost to relocate and/or adjust our water facilities presently located in public right-of-way, which is estimated to be \$ 20,979.00 provided the Department of Transportation will share in the balance of the actual cost thereof, less any betterment.

The Lehigh County Authority hereby certifies that the forgoing offer is based on the (Authority)'s ability to pay with available uncommitted funds and that this request is substantiated by our attached summary justification.

If the secretary of transportation accepts our offer and determines that the Department will share in the said costs as above stated, the Lehigh County Authority hereby agrees to enter into and execute an Agreement prepared by the Department of Transportation with such terms and conditions as the Secretary may deem necessary and advisable.

Attached hereto and made a part hereof is an executed resolution authorizing (General Manager) to make the within offer.

Sincerely,

(SEAL)

The

ATTEST: \_\_\_\_\_  
(Solicitor)

By: \_\_\_\_\_  
(General Manager)