



LEHIGH COUNTY AUTHORITY

March 23, 2015

BOARD MEETING AGENDA

1. Call to Order
2. Review of Agenda
 - *Public Participation Sign-In Request*
3. Executive Sessions
4. Approval of Minutes
 - *January 26, 2015 Regular Meeting Minutes*
 - *February 23, 2015 Regular Meeting Minutes*
5. Public Comments
6. Action / Discussion Items

FINANCE AND ADMINISTRATION

- *Presentation of 2014 Risk Management Report*
- *Knowledge Management Update & SharePoint Program Implementation (Approval)*

WATER

- *Presentation of 2014 D & C Concession Work*

WASTEWATER

- *None*

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

APRIL MEETINGS

Workshop Meeting
Board Meeting

April 13 – 12:00 p.m.
April 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.

REGULAR MEETING MINUTES
January 26, 2015

The Regular Meeting of the Lehigh County Authority was called to order at 12:23 p.m., on Monday, January 26, 2015, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Brian Nagle, Tom Muller, Richard Bohner, Scott Bieber, Ted Lyons, and Norma Cusick was on the conference phone. Authority Staff present were Aurel Arndt, Liesel Adam, Bradford Landon, Ed Bielarski, Frank Leist, Robert Kerchusky, Pat Mandes, John Parsons, Phil DePoe, Jason Peters and Lisa Miller.

REVIEW OF AGENDA

EXECUTIVE SESSION

Mr. Arndt stated there would be an Executive Session immediately following the regular agenda items to discuss potential litigation.

APPROVAL OF MINUTES

November 24, 2014 Regular Meeting Minutes

On a motion by Richard Bohner, seconded by Scott Bieber, the Board unanimously approved the Minutes of the November 24, 2014 Regular Meeting (6-0). Brian Nagle abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Strategic Plan

Mr. Arndt gave an overview of the Proposed 2015 Strategic Plan along with a PowerPoint Presentation. The 2015 Update includes the following elements: Vision, Mission, Values, and Critical Goal Categories that will provide the framework for LCA to achieve its mission. A comprehensive list of LCA's Organizational and Individual 2015 Goals was distributed and reviewed. Mr. Arndt recommended Board approval of the Plan. Discussion followed.

On a motion by Tom Muller, seconded by Richard Bohner, the Board unanimously approved the 2015 Strategic Plan (7-0).

Suburban Division – Water Main Replacement Program cycles 1-3 – Design Phase Approval

Frank Leist gave an overview of the project. The Project is to replace approximately one mile of water main in the Suburban Division per year due to the aging infrastructure to prevent excessive leakage or disruptive water main breaks that can impact our customers. Mr. Leist is asking for approval of the Capital Project Authorization for the design phase in the amount of \$353,358 which includes the Professional Services Authorization for \$178,358 to Gannett Fleming, Inc. Some discussion followed.

On a motion by Scott Bieber, seconded by Ted Lyons, the Board unanimously approved the Capital Project Authorization in the amount of \$353,358 and the Professional Services authorization in the amount of \$178,358 to Gannett Fleming (7-0).

Allentown Division – WWTP: Digester Cover Replacements – Design Phase Approval

John Parsons gave an overview of the project. The scope of the project is the phased replacement of two anaerobic digester covers that, after 40 years of use, have reached the end of their expected service life. Mr. Parsons asked for approval of the Design Phase Capital Project Authorization for \$162,694 which includes the Professional Services Authorization for \$82,694 to GHD, Inc. Some discussion followed.

On a motion by Richard Bohner, seconded by Tom Muller, the Board unanimously approved the Capital Project Authorization in the amount of \$162,694 and the Professional Services Authorization in the amount of \$82,694 to GHD, Inc. (7-0).

SYSTEM OPERATIONS OVERVIEW

Mr. Kerchusky reported that the Coagulant Study is progressing well. Staff is also preparing to have a contractor remove all of the media from No.6 Filter at the water filtration plant (WFP), clean the media, inspect the underdrain tile, and then place the gravel, sand and anthracite back into the filter box. The large diameter pipes in the high lift gallery at the WFP will be sandblasted and painted. The belt press project at Kline's Island Wastewater Treatment Plant is progressing well. The Arcadia wastewater treatment plant has had high levels of ammonia, which may be aggravated by the cold weather. Mr. Leist said that we are conducting an inspection on customers and looking into operation methodology to address cold weather operations to bring this to resolution.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

Brad Landon presented and reviewed Resolution 1-2015-1. The Resolution authorizes the securing of funding from PennVEST for the purpose of providing funds to finance the wastewater collection system improvements for Wynnewood Terrace Development in North Whitehall Township and, among other things, sets forth who can sign the documents.

On a motion made by Scott Bieber, seconded by Ted Lyons, the Board unanimously approved Resolution 1-2015-1 (7-0).

OTHER COMMENTS

None.

EXECUTIVE SESSION

The Chairman called for an Executive Session at 1:40 p.m. to discuss potential litigation.

The session ended at 1:55 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:55 p.m.

Richard H. Bohner
Secretary

REGULAR MEETING MINUTES
February 23, 2015

The Regular Meeting of the Lehigh County Authority was called to order at 12:25 p.m., on Monday, February 23, 2015, Chairman Asa Hughes presiding. Other Members present at the commencement of the meeting were: Tom Muller, Richard Bohner, Ted Lyons, Norma Cusick and Linda Rosenfeld. Authority Staff present were Aurel Arndt, Liesel Adam, Bradford Landon, Ed Bielarski, Frank Leist, Robert Kerchusky, Pat Mandes, John Parsons, and Lisa Miller.

REVIEW OF AGENDA

EXECUTIVE SESSION

Mr. Arndt stated there would be three additional items; two action items regarding Budget amendments and one informational item as well as after Staff Comments, an Executive Session to discuss property acquisition.

APPROVAL OF MINUTES

December 15, 2014 Regular Meeting Minutes

On a motion by Richard Bohner, seconded by Norma Cusick, the Board unanimously approved the Minutes of the December 15, 2014 Regular Meeting (6-0).

January 12, 2015 Workshop Meeting Minutes

On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board unanimously approved the Minutes of the January 12, 2015 Workshop Meeting (5-0). Norma Cusick abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

ELECTION OF OFFICERS

Mr. Bohner, serving as the Nominating Committee, indicated he had polled the Board officers to determine if they are willing to serve in the same capacity as in 2014, to which they agreed. He then offered the following slate of nominations for 2015:

Asa M. Hughes, Chairman	Emrich M. Stellar, Jr., Treasurer
Thomas S. Muller, Vice Chairman	Richard H. Bohner, Secretary
Brian C. Nagle, Assistant Treasurer	Norma A. Cusick, Assistant Secretary

Mr. Hughes asked if there were any nominations from the floor, which there were not. Mr. Bohner made a motion to close the nominations, which was seconded by Mr. Bieber. With no additional nominations from the floor, on a vote of 6-0, the nominations were closed and the Chairman directed the Secretary to cast one ballot for each of the nominees, thus electing the officers for 2015.

Chairman Hughes thanked everyone for their service.

Allentown Division – Pre-Lease Valve Replacements – Design Phase – Approval

Mr. Leist gave an overview of the project. He recommends approval for the Design Phase of the Capital Project Authorization for \$83,546 and the Professional Services Authorization for \$23,546.

On a motion by Linda Rosenfeld, seconded by Tom Muller, the Board unanimously approved the Capital Project Authorization in the amount of \$83,546 which includes the Professional Services Authorization in the amount of \$23,546 (6-0).

Resolution 2-2015-1 – Wynnewood Terrace Pump Station and Force Main Replacement – Approval

Brad Landon presented and reviewed Resolution 2-2015-1. Because the collateral for this loan is only the revenues for the Wastewater Common Rate systems, PennVEST required additional action, such as this Resolution that pledges LCA to meet its financial obligations to PennVEST by setting necessary rates for those systems and is needed for closing for the Wynnewood Terrace Development project.

On a motion made by Scott Bieber, seconded by Norma Cusick, the Board unanimously approved Resolution 2-2015-1 (6-0).

SYSTEM OPERATIONS OVERVIEW

Robert Kerchusky stated that the weather has presented its challenges at the water filtration plant. Ice has been causing problems. Some exposed beds at the Kline's Island wastewater treatment plant are covered in ice but have been performing well. The Arcadia wastewater treatment plant has not been performing well due to the high levels of ammonia which is believed to be due to the cold weather. Some discussion followed. Mr. Leist informed the Board that Gannett Fleming has been hired to give LCA assistance on the evaluation of the function of the plant. Mr. Leist has also contacted HRG, the plant designer, about the plant and is working on resolving the issue with HRG.

Some discussion followed regarding Plant tours for the Board and Staff.

STAFF COMMENTS

Mr. Arndt provided the Board with a copy of a Budget Amendment Request. Pat Mandes explained the request for the City Signatory Flow Meter Evaluation Project that was approved in 2014 but was not carried over in the 2015 Budget. The amount of the request is \$150,000.

On a motion by Linda Rosenfeld, seconded by Tom Muller, the Board unanimously approved the Budget Amendment Request (6-0).

Bob Kerchusky presented a Budget Amendment Request for the Meter Station #5 Project which was designed by the Operations Department in 2014 but not included in a Capital Project. The amount of the request is \$200,000.

On a motion by Tom Muller, seconded by Linda Rosenfeld, the Board unanimously approved the Budget Amendment Request (6-0).

Mr. Arndt informed the Board that a consolidated collective bargaining agreement (CBA) between the SEIU and LCA, which has been developed by legal counsel and the bargaining unit. Previously it had been a CBA with additional terms and memoranda of agreement reached between the parties; the intent is to have one document so that all parties can readily determine the terms of their employment in a single document. Because none of the terms changed as a result of this consolidation, if the Board has no objection, it can be signed by Mr. Arndt. The Board was in agreement to have Mr. Arndt sign the consolidated CBA.

SOLICITOR'S COMMENTS

None.

OTHER COMMENTS

None.

EXECUTIVE SESSION

The Chairman called for an Executive Session at 1:10 p.m. to discuss property acquisition.

The session ended at 1:35 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:40 p.m.

Richard H. Bohner
Secretary

FINANCE & ADMINISTRATION

ACTION ITEMS

1. Presentation of 2014 Risk Management Report

The 2014 Risk Management Report presents our efforts to maintain a high safety awareness level, ensure a safe work environment by recognizing and reducing work hazards, and maintain reasonable insurance costs (*ivory*).

2. Knowledge Management Update & SharePoint Program Implementation (approval)

The Authority’s Knowledge Management (KM) program was initiated in 2011 to address the risk of knowledge loss resulting from higher rates of staff retirements begin to occur. The organizational change that has transpired since that time has been broad and quite significant, requiring a shift in focus on KM initiatives. An overview of the program will be presented along with a recommendation for implementation of SharePoint to address immediate KM needs for the new organization (*pink*).

DISCUSSION ITEMS

INFORMATION ITEMS

1. CMMS Upgrade and Expansion Project

Pilot Configuration of the CityWorks application is complete. Pilot phase training for plant personnel was completed the week of November 17th and December 8th. Android and iOS tablets are being evaluated by plant and field personnel. ‘Go Live’ was completed on schedule during the week of March 9, 2015.

2. WEB Map Upgrade Project

CDM has delivered the updated web map for LCA testing and evaluation. Refinements suggested during the testing phase are being completed. The map will be rolled out to all employees in April.

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	PSDLAF Collateralized CD		400,000.00	2/10/15	3/24/15	0.10
Cons Wtr (2)	PSDLAF Collateralized CD		155,000.00	2/10/15	3/24/15	0.10
Cons LL2 (314)	PSDLAF Collateralized CD		245,000.00	2/10/15	3/24/15	0.10
WW Capac	PSDLAF Collateralized CD		600,000.00	2/10/15	3/24/15	0.10
2010 Wtr Cons A	PSDLAF Flex Pool		2,500,000.00	2/10/15	3/24/15	0.10
Wtr R&R	PSDLAF Collateralized CD		1,000,000.00	2/10/15	3/24/15	0.10

Fund Descriptions for Investments:

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

WATER

ACTION ITEMS

1. **Presentation of 2014 City Division Distribution and Collection Concession Work**

An overview of concession lease work requirements and work accomplished in 2014 will be presented.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Arcadia West Pumping Station Modifications**

The Substantial Completion punch list was given to the general and electrical contractors to complete. Paving will be scheduled when temperatures warm up. SCADA system punch list items are also being addressed. **No current activity.**

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

Currently this pump station is a hydro-pneumatic system that has proven to be problematic over time. This project will convert the hydro-pneumatic operated equipment to a variable frequency drive controlled double pumping system (along with other miscellaneous improvements). A request for Board approval of the design phase is anticipated at the June Board meeting.

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

The project is to design and construct a facility or improvements that assure continuous chlorination of the Schantz Spring water supply. Barry Isett Inc. has completed an engineering study of chlorination options. A conceptual design has been submitted to the City for their review, and we are awaiting approval so we may begin work. This Project is identified as Un-Completed Work and will be funded by the City.

4. **Allentown Division – Water Main Replacement Program- Cycle 2**

The project is the replacement of 2-miles of aged and/or failing Cast Iron water main. Currently Gannett Fleming is addressing all comments received by LCA and the COA through the substantially complete plans and specifications review period. It is anticipated the Project will be out to bid by the end of March 2015. This Project is identified as Schedule-7 Work and will be funded by LCA.

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

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

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

The project is the replacement of approximately 55 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. As of February 23rd the project

has received Design Phase approval by the Board. Design is currently under way. This project is identified as Un-Completed Work and will be funded by the City.

7. Developments

Water system construction is occurring in the following developments:

- Estates at Mill Race, 26 residential lots (sfd), LMT
- Lehigh Hills, Lot 4, 1 commercial building, UMT
- Parkland Fields, Phase 3, 37 residential lots (sfd), UMT
- Valley West Estates, Phases 4, 5 & 6, 46 residential lots (sfd), UMT (currently on hold)

Water system plans are being reviewed for the following developments:

- Above & Beyond (personal care facility), 2 commercial lots, UMT
- Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT
- Grandview, 6 commercial units and 204 apartment units, LMT
- Grant Street Townes, 18 residential lots (sfa), WashT
- Hickory Park Estates, 3 residential lots (sfd), UMT
- Hillview Farms, 31 residential lots (sfd), LMT/SWT
- Indian Creek Industrial Park, 6 commercial lots, UMIIT, water and sewer
- Lehigh Hills, 247 residential lots (sfa/sfd), UMT
- Liberty at Mill Creek, 2 industrial lots, UMT
- Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer
- North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water and sewer
- Shepherd's Corner, 1 commercial lot, LMT
- Trexler Business Center, Lot 1, 1 commercial building, LMT
- Weilers Road Twins, 82 residential lots (sfa), UMT
- Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

1. *None.*

DISCUSSION ITEMS

1. *None.*

INFORMATION ITEMS

1. **Wastewater Treatment Capacity**

A Public Outreach event is being scheduled for early 2015. The 537 Consultant recently met with South Whitehall Township at the Township's request. They are now interested in answering a questionnaire presented to them at the onset of the 537 planning process. They may be interested in additional allocation. We are waiting for an official request from them and will determine if their request impacts the 537 plan timeline.

2. **Wynnewood Terrace Pump Station and Force Main Replacement**

The Pre-Construction meeting was held on February 11, 2015. A Notice to Proceed was issued for February 23. Work is expected to start around the end of March, and continue through August. PENNVEST settlement was completed on February 24, 2015.

3. **Park Pump Station Fuel Tank Replacement**

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

4. **Allentown Division - PPL Combined Heat & Power (CH&P) Facility**

The Combined Heat and Power (CH&P) facility at the Kline's Island WWTP which was constructed through Addendum No.3 of Energy Services Master Agreement between the City and PPL Energy Plus fired digester gas on all thirty-one days during the month of January. The CH&P produced a total of 493,200kWh of electricity which reduced the plant's use of commercial power from the grid by 50.9%. To produce the same amount of electricity at a traditional power plant the firing of approximately 408,326 pounds of coal would have been required. For the billing period Dec. 22 through Jan. 22 a cost saving of \$3,521.85 was achieved through the operation of the CH&P.

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

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

6. **Condition Assessments for Suburban Division Package Wastewater Treatment Plants**

Capital Works staff will be soliciting proposals to conduct condition assessments of the Wynnewood Terrace and Sand Spring Wastewater Treatment Plants. A Condition Assessment is a review/evaluation of all physical components of a facility, utilizing

industry accepted asset management protocols to determine its current condition; and provide recommendations and estimated costs for rehabilitation/improvements. A Request for Proposals (RFP) will be released in April, with due date later that month.

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

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

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

This project involved field investigatory work to identify sources of inflow and infiltration (I/I) in the City's sanitary sewer system. The work included closed circuit television (CCTV) inspection of approximately 102,000 linear feet of sanitary sewer mains (ranging in size from 8 to 36 inches in diameter), the inspection of approximately 550 manholes, sewer piping point repairs, smoke testing, and heavy cleaning. All field work has been completed. A final memorandum reporting on the project's findings was submitted to the City and LCA in late January. This project is identified as Administrative Order / Un-Completed Work and was funded by the City.

10. Allentown Division – Manhole Collars with Water Tight Frame and Covers – Cycle -2

This three year project will permanently secure the frame and cover of 105 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. The project is identified as Administrative Order will be funded by the City. The design phase has been administratively approved. A request for Board approval of the construction phase is anticipated in May.

11. Allentown Division - WWTP-Replacement of Motor Control Centers

This Project will replace five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The Construction Phase of the project has been approved by the Board. Notice to Proceed has been sent to both contractors and a pre-construction meeting was held on 2/13/15. This Project is identified as Schedule 7 project and will be funded by LCA.

12. Allentown Division – Roof Rehabilitation and Replacements

The Project consists of replacing 26 facility roofs that were identified as in need of immediate replacement in the Roof Evaluation report performed by D'Huy Engineering. The design of these replacements are proceeding. The project was presented to the City for review/approval as a Major Capital Project, but the city rejected it as such. The project will be funded by LCA.

13. SCADA System Installation – Kline's Island Wastewater Treatment Plant

All documents have been signed and the Kickoff Meeting is on Tuesday, March 17. This project is identified Un-Completed Work and will be funded by the City.

14. Allentown Division – WWTP: Digester Cover Replacements

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). This Project is identified as Schedule 7 project and will be funded by LCA. The

March 23, 2015

Design Phase has been approved and a kick-off meeting was held in February 2015. A request for Board approval of the construction phase is anticipated in October 2015.



LEHIGH COUNTY AUTHORITY

**2014 RISK MANAGEMENT
ANNUAL REPORT**

By: Risk Management Team

INTRODUCTION

The following report reviews the Lehigh County Authority 2014 Risk Management Program. Our program effort has been designed to maintain a high safety awareness level, ensure a safe work environment by recognizing and reducing work hazards, and maintain reasonable insurance costs. Employee training programs are outlined throughout this report.

2014 -2015 TEAM MEMBERS

Members of the Risk Management Team who contributed their efforts to achieve a successful year included: James Yoachim, Bill Brogan, Mike Walter, Andrew Werley, Bob Kennedy, Mike Brunovsky, Gretchen Schleppey, Joe Pychinka, George Lill, Dave Adams, Steven Stahlberg, Bob Keenan, Pete Martucci, Joe Thompson, Bob Adams, Lance Babbitt, Tim Geiger, Tony Oswald, Lywon Russaw, Dale Swoyer, John Maco, Kathy Martin and Kevin German.

RISK MANAGEMENT

Our mission

- Promote a safe and healthy work environment by performing regular site and equipment inspections.
- Reduce costs related to accidents and injuries.
- Protect the resources and assets of the Authority.

Lehigh County Authority continued its comprehensive risk management efforts in 2014. Delaware Valley Insurance Trust (DVIT) completed a comprehensive inspection of all our facilities including Water Filtration Plant, Wastewater Treatment Plant, Distribution and Collection Facility and Suburban Facilities. Managing the Authorities property and casualty risks is part of RM.

RISK CONTROL

Immunization Program

The immunization program offers booster shots for tetanus and inoculations for hepatitis B to all operation and lab personnel. This program is consistent with the recommendations of wastewater industry experts, and provides protection from possible exposure to disease-carrying microorganisms. A total of 15 Suburban employees participated in this program. There will be a total of 67 employees from the city participating in this program in 2015.

Safety Shoes

All employees that are required to wear safety shoes are reimbursed a portion of the purchase cost.

Fire Extinguisher Inspection

Fire extinguishers are inspected yearly. If any extinguisher fails the inspection they are replaced with a new fire extinguisher promptly.

Site Inspection

All water and wastewater facilities were inspected by the RM Team, for areas of potential high exposure. Linda Poole, Sr. Risk Control Consultant, Delaware Valley Workers Compensation Trust, also inspected our facilities in July 2014. There were no citations issued. Overall, the system inspections indicate that LCA continues to provide a safe work environment.

Workers Compensation, Accident Reports and Liability Claims

There were 10 workers compensation claims, 2 lost time accidents (less than 10 days), 12 property claims and 28 liability claims.

Safety Incentive Program

This program helps to promote safety throughout the year. Some of the portions of this program provide weekly safety talks. An employee safety luncheon was held in November on Common Sense in the Workplace.

Safety Training Program

Traditional training programs and formats were utilized during the year. DVD, videotapes, slides and “tail gate talks” continue to provide the most effective training participation and results. Ongoing training efforts focus on:

- Confined Space Entry
- Trenching and Shoring
- Personal Protective Equipment
- Defensive Driving
- First Aid Training
- Various tailgate talks
- Fork Lift Training
- Backhoe Safety

Areas of Exposure

Legal, General and Automobile Liability – Purchased from Pennsylvania Intergovernmental Risk Management Association (PIRMA, a local government risk pool). Insurance provider is H.A. Thomson Company.

Property Insurance – Acquired from our broker Murray Securus. Insurance provider is CNA Insurance Company. Authority asset values set at \$319,064,554.

Workers' Compensation –Workers Compensation is purchased from Delaware Valley Workers Compensation Trust (DVWCT).

Pollution Liability Policy – Purchased from Greenwich Insurance Company.

INSURANCE MANAGEMENT

The Authority has obtained its liability insurance coverage through the Pennsylvania Intergovernmental Risk Management Association (PIRMA) pool since 1991. In 2014, the cost for General Liability, Auto Liability and Comprehensive Damage and Public Officials Liability remains fairly stable since 2013.

Workers' Compensation Coverage has been obtained through the Delaware Valley Workers Compensation Trust, a municipal pool of 58 entities. For the past few years, the Authority was recognized as one of the top performers within the trust.

Commercial Property Insurance is controlled by Murray Secures. There was an increase in total property premium since the acquisition of the city facilities.

Pollution Liability Policy is provided by Greenwich Insurance Company. It covers the Wastewater Treatment Plant located on Route 100, Upper Macungie Township and Wastewater Treatment Plant located in the city.

LCA Safety Record

We received updated Safety Program Indicators from Delaware Valley Workers' Compensation Trust. For 2014, the Authority had ten reportable claims. Below is a comparison of LCA's injury incident rate, (calculated as the number of injuries divided by total productive man-hours worked, times 200,000) as compared to the latest Bureau of Labor Statistics data for the "water, sewage and other systems" NAICS code class (2213):

<u>2014</u>	
1.3	LCA Injury Incident Rate in 2014
4.2	Pennsylvania
4.4	United States - Overall
3.9	New York
12.5	New Jersey

The following table shows the 4-year trend in insurance costs.

**2014 Annual Report
Insurance Cost Trend**

	2011		2012		2013		2014	
	Annual Premium	% Change from Prior-yr						
PIRMA Pool:								
General Liability	\$ 48,213	-25%	\$ 50,773	5.31%	\$ 196,699	287.41%	\$ 192,239	-2.27%
Auto Liability & Comprehensive	\$ 11,307	0.52%	\$ 11,406	0.88%	\$ 45,339	297.50%	\$ 49,795	9.83%
Damage								
Public Officials Liability	\$ 10,985	0.48%	\$ 10,548	-3.98%	\$ 26,391	150.20%	\$ 33,198	25.79%
Property	\$ 49,620	15.66%	\$ 108,330	118.32%				
Contract with City					\$ 20,000	100%	\$ 20,000	0.00%
Total PIRMA	\$ 120,125	1.20%	\$ 181,057	50.72%	\$ 288,429	59.30%	\$ 295,232	2.36%
Other Insurance Costs:								
Murray Securus (Property)					\$ 155,200	43.27%	\$ 162,500	4.70%
Worker's Compensation	\$ 19,966	-19.58%	\$ 25,176	26.09%	\$ 83,555	231.88%	\$ 188,719	125.86%
WTP Property (MS)	\$ 60,661	-4.25%	\$ 54,300	-10.49%	\$ 41,993	-22.66%	\$ 35,300	-15.94%
WTP Pollution Liability	\$ 7,703	0.00%	\$ 8,191	6.34%	\$ 7,822	-4.50%	\$ 7,822	0.00%
Employee Dishonesty Bond	\$ 536	5.51%	\$ 540	0.75%	\$ 700	29.63%	\$ 971	38.71%
Treasurer Bonds	\$ 200	0.00%	\$ 200	0.00%	\$ 200	0.00%	\$ 190	-5.00%
Total Other Insurance	\$ 89,066	1.78%	\$ 88,407	-0.74%	\$ 289,470	227.43%	\$ 395,502	36.63%
Grand Total	\$ 209,191	1.44%	\$ 269,464	28.81%	\$ 577,899	114.46%	\$ 690,734	19.53%

Lehigh County Authority Risk Management

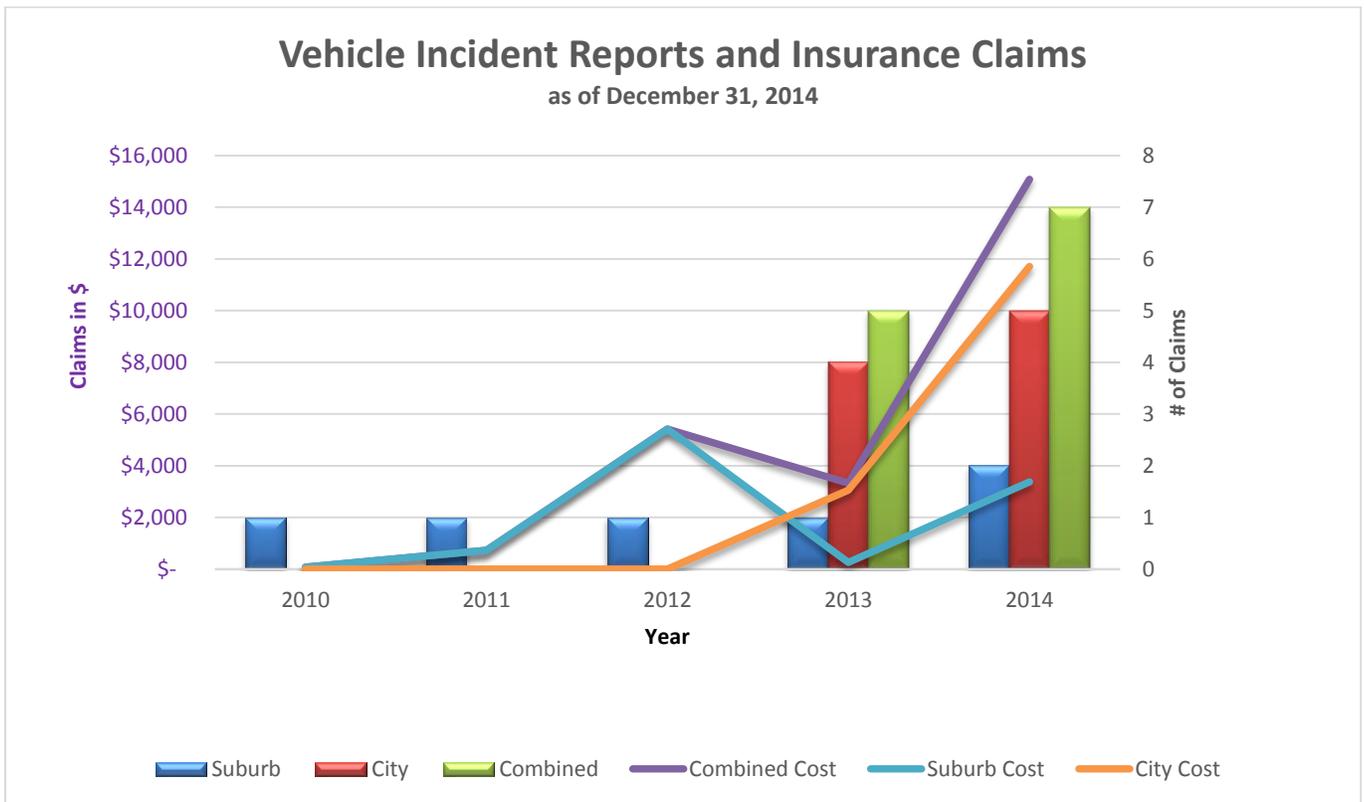
5-Year Expense History

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Immunizations	\$ 192	\$ 90	\$ -	\$ -	\$ 465
Safety Shoes	\$ 8,573	\$ 1,520	\$ 1,200	\$ 1,583	\$ 1,565
Fire Extinguishers	\$ 5,500	\$ 1,140	\$ 735	\$ 1,139	\$ 1,199
Safety Training & Equipment	\$ 33,233	\$ 310	\$ 100	\$ -	\$ 630
Luncheon/Incentive	\$ 4,200	\$ -	\$ 1,100	\$ 1,057	\$ 998
CDL Drug & Alcohol Tests	\$ 1,354	\$ 220	\$ 221	\$ 218	\$ 204
RM and Safety Training Salary	\$ 90,417	\$ 10,900	\$ 8,745	\$ 8,884	\$ 10,554
Total	\$ 143,469	\$ 14,180	\$ 12,101	\$ 12,881	\$ 15,615

2014 increase due to addition of city salaries, training and equipment.

LCA Vehicle Self Insured Claim History

Year	Suburban # of incidents	City # of incidents	Combined # of incidents	Combined Cost	Suburban Cost	City Cost
2010	1	0	0	\$ 75	\$ 75	\$ -
2011	1	0	0	\$ 728	\$ 728	\$ -
2012	1	0	0	\$ 5,420	\$ 5,420	\$ -
2013	1	4	5	\$ 3,326	\$ 267	\$ 3,059
2014	2	5	7	\$ 15,086	\$ 3,376	\$ 11,710



LCA SAFETY PERFORMANCE COMPARATIVE

Entity or Area	Year				
	2010	2011	2012	2013	2014
LCA	2.6	0.0	0.0	3.8	1.3
Pennsylvania	NA	4.0	4.2	4.1	4.2
New York	3.2	3.2	3.5	3.8	3.9
New Jersey	12.7	12.7	12.5	9.1	12.5
US-Overall	4.1	4.1	4.5	4.6	4.4

(# of injuries / hours worked x 200,000 = incident rate)

Accomplishments for 2014 and 2015 Plans for the Risk Management Team

The Risk Management Team remains committed to the safety of LCA employees and the protection of LCA assets. As such, the Team will continue to stress safety and will investigate and monitor all insurance options that will reduced costs and maintain adequate protection.

Accomplishments

- Created four individual safety teams to function as one.
- Update Health and Safety Manual.
- Processing 10 workers comp claims, 2 lost time, 5 restricted duty claims, 12 property claims and 28 liability claims.
- Implement weekly safety tailgate talks throughout LCA.
- Installation of 3 Automated External Defibrillator's in the city WFP, D/C and WWTP.
- Received 2014 Risk Management Innovation Award from DVIT for implementing of the Network Fleet GPS management system, demonstrates a resourceful use of new technology to enhance the safety and management of the mobile workforce.

Looking forward to 2015

- Update the Emergency Response Plan
- Hold a tabletop exercise to test ERP
- Decrease self-insurance cost
- Eliminate Workers Compensation Claims
- Installation of racks and shelving for PPE in the storage area of the Water Filtration Plant
- Eliminate security issues at City Wastewater Treatment Plant
- Add additional safety training for employees
- Inspect suburban facilities for security with the City Crime Prevention Team
- Upgrade old safety equipment throughout LCA facilities
- Install electronic safety signs in each facility (Days without reportable accident)

MEMORANDUM

Date: March 23, 2015

To: Authority Board
From: Liesel Adam
Subject: Knowledge Management Program Development
Capital Project Authorization – Amendment # 2
Professional Services Authorization

SharePoint Program Implementation

MOTIONS /APPROVALS REQUESTED:

No.	Motion /Approval Item	Amount
1	Capital Project Authorization (CPA) Amendment # 2 – SharePoint Program Implementation	\$ 66,900
2	Professional Services Authorization (PSA) - GHD (1)	\$ 31,900

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

OVERVIEW:

Lehigh County Authority (LCA) kicked off a “Knowledge Sharing Skills Development” project in July 2012 to assist with capture and transfer of institutional knowledge held by long-tenured employees to newer employees. The need for this program was well established through the work that was completed on LCA’s 2007 workforce plan, and further defined in 2011 through a Knowledge Management (KM) needs assessment project. The project focused on developing a series of tools for capturing employee knowledge through documentation of our processes, and sharing knowledge via mentoring and coaching programs. The program also included the development of the Operations Department Career Path Program, which has been completed along with the documentation of 110 skill documents as part of that program.

Prior Board Authorizations	\$596,248
Expenses to Date	\$427,830
Remaining Authorized Funds	\$168,418

The work remaining in the original authorization for LCA’s KM program includes design and implementation of programs that may no longer be appropriate. The KM program was designed prior to the Allentown Lease Concession Agreement and resulting organizational transition. As a result of this transition, LCA’s workforce initiatives have also changed.

This memo and supporting documentation outlines a change in project scope, requiring \$66,900 in additional funding, to implement a specific KM tool that will have broad organizational benefit and will be immediately useful for all 157 LCA employees.

PROJECT DESCRIPTION:

To better serve the needs of a large workforce spread across diverse locations, a primary need for document management has been identified. Employees are seeking access to data, policies and processes that are typically spread across many functional groups and departments. This is a theme that has been repeated in discussions with employee groups across the entire organization, where much time is spent searching LCA’s network or inquiring across multiple departments to find information needed to complete daily assignments.

SharePoint is a dynamic software tool offered by Microsoft that will address many of these needs by offering a platform for document control and sharing. Preliminary concepts regarding LCA’s potential use of SharePoint include:

- Document Management
- Dashboards / Data Integration / Visualization
- Skills & Competency Tracking
- SOP / Work Flow / Training Document Library
- Internal Wikis & Workgroups
- Project Management & Shared Scheduling

In addition, the Allentown treatment plants had previously used SharePoint as a method to share operator shift-change notes, which was lost with the LCA transition. This project would reinstate this functionality.

Implementing SharePoint at LCA will be immediately useful to all employees by providing greater access to information and linking people and data together in meaningful ways to remove roadblocks and eliminate time spent searching for correct information. This project will also leverage past KM work by tying together the large volume of operational training and process documentation together into a searchable format with proper version control.

CONSULTANT SELECTION & PROJECT COST:

Due to their work already under way on the Knowledge Sharing Skills Development project, the primary consultants from GHD, Inc. are uniquely positioned to begin the work immediately. Their primary project consultants have already established strong rapport with operations department employees, and have a strong understanding of LCA’s needs and the positive outcomes desired for this project. LCA has already dedicated significant project resources toward ensuring GHD’s success in this work via sharing a high volume of data on LCA’s operational history, personnel policies and programs, and organizational strategies.

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

Task	FEE
Task 1: Needs Assessment & Functional Requirements	\$11,300
Task 2: Installation of Software Components	\$7,900
Task 3: Configure Required Software Components	\$15,700
Task 4: SharePoint Administrator Training	\$8,300
Task 5: Implement LCA-Specific Functional Requirements*	\$56,763
Total:	\$99,963**

* Estimated hours for Tasks 1-4 = 249.5 Hours. Hours for task 5 to be determined based on results of Task 1, but will not exceed the costs noted for this task.

** GHD's original authorization (July 2012) for LCA's KM work includes \$68,083 that has not been expended. The amended Professional Services Authorization (PSA), therefore, includes only the additional \$31,900 needed to complete this work.

A more detailed explanation of each Task listed above is included in GHD's letter proposal attached.

In addition to these Professional Services, software licensing fees are expected to total \$35,000.

Payroll expenses have been previously authorized and are not included in this request.

PROJECT SCHEDULE: This project will kick off immediately upon approval by the LCA Board of Directors. The project is tentatively scheduled to kick off the week of April 1, 2015, with completion of all tasks outlined in the scope of work within 12 months.

CAPITAL PROJECT AUTHORIZATION Amendment No. 2

PROJECT NO.: W-12-5-2 BUDGET FUND: ADMINISTRATION - WATER CAPITAL

PROJECT TITLE: Knowledge Sharing Skills Development
- SharePoint program implementation

PROJECT TYPE:
 Construction
 Engineering Study
 Design
 Amendment

THIS AUTHORIZATION \$ 66,900
TO DATE (w/ ABOVE) \$ 663,148

DESCRIPTION AND BENEFITS

This project amendment encompasses a change in the scope of Lehigh County Authority's Knowledge Management (KM) program. Existing authorized funds would be combined with the funds requested in this amendment to implement and organization-wide document sharing program called SharePoint. This tool would connect employees across diverse locations and provide much needed document control and accessibility for all employees. It will also re-establish information sharing tools that had previously been available to Allentown Division employees, but which were lost during the LCA transition.

Previous Authorization	
Knowledge Sharing Skills Development	\$ 596,248
Requested This Authorization	
IT Services (software licensing)	\$ 35,000
Professional Services	\$ 31,900
Contingency	\$ -
Total This Authorization	\$ 66,900
Future Authorization	
None anticipated.	\$ -
Total Estimated Project	\$ 663,148

REVIEW AND APPROVALS

<p>_____ Project Manager Date</p>	<p>_____ General Manager Date</p>
<p>_____ Capital Works Manager Date</p>	<p>_____ Chairman Date</p>



Lehigh County Authority

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

**PROFESSIONAL SERVICES AUTHORIZATION
Amendment No. 2**

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

Date: March 23, 2015
Requested By: Liesel Adam

Approvals
Department Head: _____
General Manager: _____

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

GHD will provide management consulting services and IT services to design and implement a SharePoint program for LCA. This work replaces uncompleted work previously authorized under LCA's Knowledge Management program but requires additional funding in the amount of \$31,900.

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

Task	FEE
Task 1: Needs Assessment & Functional Requirements	\$11,300
Task 2: Installation of Software Components	\$7,900
Task 3: Configure Required Software Components	\$15,700
Task 4: SharePoint Administrator Training	\$8,300
Task 5: Implement LCA-Specific Functional Requirements*	\$56,763
Total:	\$99,963

* Estimated hours for Tasks 1-4 = 249.5 Hours. Hours for task 5 to be determined based on results of Task 1, but will not exceed the costs noted for this task.

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. All other terms of LCA's existing contract with GHD will remain in force.

Cost Estimate (not to be exceeded without further authorization):	\$ 99,963	Total Cost
	- 68,063	Previously Authorized
	\$ 31,900	This Amendment

Time Table and Completion Deadline: This project will begin immediately and shall be completed in no more than 12 months. Assuming a project start date of April 1, 2015, this project shall be completed by March 31, 2016.

(For Authority Use Only)

Authorization Completion :

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



March 3, 2015

Liesel Adam, Chief Administrative Officer
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106

Re: Proposed Modification to the LCA-GHD Knowledge Sharing Skills Development Contract

Dear Ms. Adam:

Based on discussions with Lehigh County Authority (LCA), GHD is pleased to provide this proposal for a modification to the LCA-GHD Knowledge Sharing Skills Development contract. As part of this contract, GHD has worked with LCA to develop SOPs, process maps, a mentoring program framework, and a knowledge map.

Over the course of project delivery, LCA has experienced significant organization change. As a result, LCA's priorities for knowledge management and knowledge sharing have also changed accordingly. While the original scope tasks remain important for LCA, there are updated priorities with respect to knowledge sharing that LCA would like to address in the short term.

The purpose of this proposal is to provide a revised scope focused on initiating set up and implementation of Microsoft SharePoint at LCA. GHD understands that LCA wants to implement SharePoint as a document management and knowledge sharing platform for the organization. Previously, plant operators at LCA had been using SharePoint for certain tasks but they are interested in restoring their access to and use of SharePoint. In addition, LCA wants to implement SharePoint across the entire 160-employee organization.

GHD has a business unit called eSolutions that specializes in SharePoint implementations. We propose to add a few key team members from eSolutions to our LCA project delivery team to support this revised scope.

The original total budget for the project is \$204,800.00 of which \$136,736.65 has been utilized on tasks completed to date. Therefore, \$68,063.35 remains currently available.

GHD proposes to perform the following tasks:

Task 1: Facilitate Initial Needs Assessment and Develop Functional Requirements Report

GHD will facilitate a one day needs assessment meeting on site with LCA staff to define the functionality that LCA is seeking for its SharePoint deployment. Prior to the facilitated needs assessment meeting, GHD will convene a conference call with LCA to identify the cross-section of LCA staff members who should participate in the needs assessment meeting and to outline the primary areas of desired SharePoint use. This conference call will help GHD prepare to facilitate the needs assessment meeting.

After the needs assessment meeting, GHD will provide a functional requirements report to LCA. This report will summarize the desired uses, layout, and setup for the various SharePoint components.

Task 2: Perform Installation of Software Components

GHD will perform a remote installation of SQL Server 2012 on an LCA identified SQL server. Then GHD will perform a remote installation of Microsoft SharePoint 2013 Enterprise version on two LCA identified web front end/application servers.

In order to facilitate the remote installation of the software components, GHD will require that the base Windows Operating systems be installed and that remote access be provided to these systems through some form of VPN or other remote mechanism.

For SharePoint 2013 Enterprise software installation, GHD recommends that LCA procure and make available a three-server virtualized farm. The following tables summarize GHD's hardware and licensing recommendations to LCA. Note that because it is typically advantageous cost-wise and service-wise for public agencies to procure SharePoint-related hardware and licenses, this proposal **does not** include pricing for the recommended hardware and licenses.

Licensing Requirements/Recommendation

3	Windows Server 2012 Standard
1 x CPU Core	SQL Server 2012 Standard (1 license required per physical CPU core)
1 for Each Named User	SharePoint Enterprise CAL
2	SharePoint Server 2013 Licensing

Combined Web and Application Hardware Recommendation

RAM	12 GB
Processor	64-bit, 4 cores
Hard Disk	80 GB for system drive

SQL Server Recommendation

Processor	64-bit, 4 cores for small deployments (fewer than 1,000 users)
RAM	8 GB for small deployments (fewer than 1,000 users) These values are larger than those recommended as the minimum values for SQL Server because of the distribution of data that is required for a SharePoint 2013 environment. For more information about SQL Server system requirements, see Hardware and Software Requirements for Installing SQL Server 2008 R2 .
Hard Disk	80 GB for system drive Hard disk space depends on how much content will be in the deployment. For information about how to estimate the amount of content and other databases for your deployment, see Storage and SQL Server capacity planning and configuration (SharePoint Server 2010) .

Task 3: Configure Required Software Components

Once the installation is complete, GHD will configure SharePoint and the User Profile Sync service to LCA's LDAP/Active directory. GHD will configure SQL Server 2012. GHD will also configure Search Service Provider and other primary SharePoint service applications required.

These software components control all background aspects of the Sharepoint environment including user synchronization, search, caching, metadata, friendly URLs, timer jobs and other crucial Sharepoint tasks.

GHD will work with LCA to determine what AD forest groups and users should be automatically synced and which properties will be included.

In addition, GHD will work with LCA to setup some basic backup tasks to back up the content database and farm systems. The backup procedure will be dependent on the physical and hardware infrastructure setup by LCA.

Task 4: Perform SharePoint Administrator Training

Upon completion of the primary configuration, GHD will provide SharePoint Administrator training via remote teleconference and software interface. The training will cover the SharePoint functionality that LCA system administrators need to have in order to serve in the administrator role. Training materials will be prepared and provided that can be used as reference documents for those who participate in the training. LCA can have up to five SharePoint administrators participate in the training.

Sharepoint administrators will have full control over the Sharepoint environment. The training will cover sub-sites, library creation and use, permissions and users, managing user alerts, creating list and site templates, and editing pages.

During the training, GHD will train LCA system administrators on establishing and managing basic site permissions. These permissions will enable LCA to define the level of SharePoint access and use according to function (e.g., administrator, user, etc.).

In addition, GHD will train LCA system administrators on the steps needed to set up the master SharePoint templates with LCA's logo and color scheme. The master SharePoint templates will include certain desired elements such as calendars, tasks lists, document libraries, or link libraries. Using this template LCA will be able to create sub sites quickly to facilitate additional use of the SharePoint environment. At the conclusion of the training, LCA system administrators will then be able to create "project" or "team" templates within SharePoint.

The training session usually takes approximately eight to ten hours dependent on the number of questions and the number of attendees. The training will take place over a two day period.

Note: At the conclusion of Task 4, LCA will have an installed and configured SharePoint 'empty shell' into which documents can be uploaded and accessed. This 'empty shell' stage is the basic configuration for SharePoint that would be a base requirement for any customization.

Task 5: Implement LCA-Specific Functional Requirements

Based on the results of the Initial Needs Assessment and Functional Requirements Report from Task 1, GHD will work with LCA to define which prioritized functional requirements are to be implemented based on the amount of available budget remaining. Exhibit A is a preliminary list of the potential types of LCA-specific functional requirements that could result from Task 1 and be implemented in Task 5. As SharePoint is powerful and flexible, there are many other potential functional components that could be added to the list in Exhibit A.

Price Estimate

Task ID	Task Name	KM Project Fee	IT Project Fee (to Create the SharePoint 'Empty Shell')	Total Labor Hours
Task 1	Facilitate Initial Needs Assessment and Develop Functional Requirements Report	\$11,300.00		59.0
Task 2	Perform Installation of Software Components		\$7,900.00	42.5
Task 3	Configure Required Software Components		\$15,700.00	85.5
Task 4	Perform SharePoint Administrator Training		\$8,300.00	62.5
Task 5	Implement LCA-Specific Functional Requirements ¹	\$56,763.35 ²		TBD ¹
	Totals	\$68,063.35	\$31,900.00 ³	

¹ Based on the results of Task 1.

² The remainder of the budget available under the current project to implement the highest priority items from Task 1.

³ As noted above, hardware and license costs are not included in this price estimate as direct procurement of those items is typically to the organization's financial and service benefit.

* Note that previously GHD had provided LCA a planning level estimate of ~\$200,000 for SharePoint implementation.

Schedule of Rates

Team Member Classification	Labor Fee (\$/hour)
MS SharePoint Consultant	\$185.00
MS SharePoint Trainer	\$131.50
Manager 2	\$245.00
Professional 2	\$120.00
Administrator	\$95.00

*Note: Rates are reviewed and adjusted annually as of July 1 of each year.

GHD very much appreciates the opportunity to continue to work with LCA and to help support LCA's knowledge sharing efforts. If you have any questions about these proposed tasks or wish to discuss further, please contact me at 240-206-6834 or at seth.yoskowitz@ghd.com.

Sincerely,

GHD INC.

A handwritten signature in black ink, appearing to read "Seth J. Yoskowitz". The signature is written in a cursive style with a large, stylized 'S' and 'Y'.

Seth Yoskowitz, PE
Principal

cc. Peter Burkhardt
David Grey
Varun Sekar

SJY/jnd

Attachments: Exhibit A: SharePoint LCA Concept Ideas



Exhibit A

SharePoint LCA Concept ideas

- I. Document Management
 - a. Individual SharePoint pages for various departments or groups at LCA with documents related to that particular department or group. For example, the SharePoint pages for the wastewater treatment plant would have documents exclusive to treatment plant operations which can be searched by an employee in SharePoint. Liesel could have her own set of SharePoint pages specific to information she wants to have access to.
 - b. Each set of SharePoint pages document contents can be searched, with permissions levels to documents based on the user's profile. For example, the Skills Documentation template may be viewable by all employees but the results of skills demonstration may only be viewed certain employees.
 - c. SharePoint can handle version control on skill documents in draft, review and finalization stages
- II. Dashboards / Data Integration / Visualization
 - a. Certain SharePoint pages could have a dashboard view with related metrics and customized information views based on the needs. For example, the dashboard for the accounting department could have metrics for 'Today's Receivables', or 'Treated Volume', etc. and a dashboard for field activities could have metrics for 'Number/Type of Work Orders' to be completed that day or "Open Work Orders", each with a visualization that has a priority indicator to them.
- III. Skills and Competency
 - a. SharePoint could display details of employee skill development and can have several different 'views' and sorting associated with this data. A search can also be made across LCA to find employee(s) with a particular skill
 - b. As part of the Skills Development program, when employee's skill changes the updates could be viewed in SharePoint. In SharePoint, employees could be able to see the next progression up and the skills needing to be acquired to achieve the next level.
 - c. A supervisor can have a specific view of the skills program, which could compare skills data to work activities data to help match up tasks with the appropriate resource assignment.
- IV. Standard Operating Procedures
 - a. Draft and Finalize SOP's can be uploaded in SharePoint libraries with metadata, and thus searchable and viewable in different ways.
- V. Wiki and Workgroups
 - a. Wiki pages can be created in SharePoint as a tool for teams creating information together in one accessible location.
 - b. Workgroups in SharePoint enable effective sharing of documents and information within a group. For example, all supervisors could be in a workgroup and the information in that site will be shared only between the supervisors. A workgroup for all wastewater field staff would enable information sharing within that workgroup.
- VI. Training
 - a. GHD can train staff on the various functionalities of SharePoint. Navigation, uploading, downloading, version control, setting views, can be elements of the training.