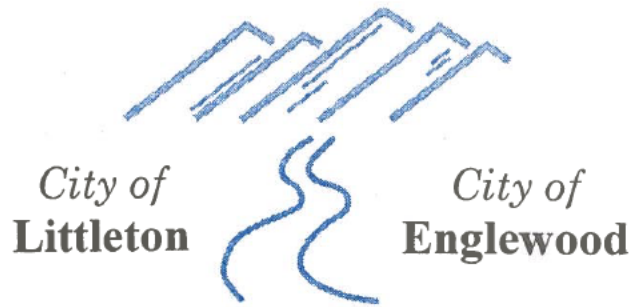


**LITTLETON/ENGLEWOOD
WASTEWATER TREATMENT PLANT**

2900 S. Platte River Drive
Englewood, Colorado 80110
(303) 762-2600
FAX 762-2620



**MINUTES
SUPERVISORY COMMITTEE MEETING
November 17, 2016
9:00 a.m.**

ATTENDING:	Eric Keck	Englewood City Manager
	Dave Henderson	Englewood Public Works Director
	Fred Bromberger	Action Littleton Public Works Director
	David Robbins	Hill & Robbins
	Matt Montgomery	Hill & Robbins
	Dennis Stowe	Plant Manager, L/E WWTP
	Chong Woo	Engineering/Maintenance Division Manager, L/E WWTP
	Cindy Goodburn	Business Services Division Manager, L/E WWTP
	Dan DeLaughter	Environmental Compliance Division Manager, L/E WWTP
	Jim Tallent	Treatment Division Manager, L/E WWTP
	Jon Bridges	Industrial Pretreatment Administrator, L/E WWTP
GUESTS:	Daniel Siegrist	Senior Network Engineer, City of Englewood
	Gunter Ritter	Project Engineer II, L/E WWTP
	Sarah Reeves	Brown and Caldwell

SECTION III - TOPICS FOR ACTION, DISCUSSION AND/OR REVIEW

I. ACTION ITEMS

Biogas Use Application Project Feasibility Study – Engineering Services – Gunter Ritter

Gunter Ritter began with a review of the Biogas Use Project. The Biogas Use Project was previously presented to the Supervisory Committee (Committee) during the July Committee meeting; and to the Littleton and Englewood City Councils at the Joint-Council Meeting on October 17, 2016.

Consistent with the Committee's recommendation at the July meeting, the Littleton/Englewood Wastewater Treatment Plant (L/E WWTP) Energy Improvement Program (EIP) has negotiated a Professional Services Agreement with Carollo Engineers, Inc., to perform a feasibility study for the Biogas Use Project. The EIP requested the Committee's approval for a Professional Services Agreement with Carollo Engineers, Inc., in the amount of \$61,500.00.

Dennis provided a brief summary of other utilities that are looking into completing similar work for similar costs.

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SUPERVISORY COMMITTEE MEETING
November 17, 2016
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ACTION TAKEN – *The Supervisory Committee approved a Professional Services Agreement with Carollo Engineers, Inc., for the Biogas Use Application Project, in the amount of \$61,500.00. Eric Keck moved, Fred Bromberger seconded, all ayes, no nays, Mark Relph absent.*

ESX Host Upgrade 2016 – Daniel Siegrist

Dennis introduced Daniel Siegrist from the City of Englewood IT Department (IT Department). The IT Department proposed an upgrade to the core computing infrastructure at the L/E WWTP. The L/E WWTP's core computing components are at the end of their service life, they are no longer covered under warranty, and they are no longer supported by the manufacturer.

When analyzing computing solutions and addressing the required deliverables for this upgrade, the IT Department was very concerned with the survivability of L/E WWTP's data center given the highly critical nature of the facilities involved and the ramifications of a failure. The IT Department proposes to replace the five (5) separate servers within the L/E WWTP data center with properly sized systems in order to allow for adequate computing capacity if there is a hardware failure. This will allow only minutes of down-time if there is a failure, rather than hours or days. Additionally, this will serve as a critical component of a viable and enhanced backup and a disaster recovery system. The goal would be to put all five (5) of these individual servers into one (1) computing system with 3 blade servers that would not only serve the immediate needs of the L/E WWTP, but also could serve as a disaster recovery and failover site for the City of Englewood's Civic Center's data center and the Police Department's data center.

The IT Department recommended that Peak Resources, Inc., perform this upgrade. According to the IT Department, Peak Resources, Inc., will be able to complete this work with a high level of expertise, and is familiar with LE/WWTP and Englewood's computing environments.

Fred Bromberger asked the IT Department about the possible implications of having L/E WWTP's data center as a potential back up to two (2) of the City of Englewood's data centers. David Robbins explained that it was important that the size of the L/E WWTP's data center was not based on the need to provide backup to the City of Englewood. Instead, L/E WWTP's computing system should be configured as if it were not associated with the Police or Civic Center systems. Otherwise, if L/E WWTP's system is more robust than need-be to support the City of Englewood's data centers, then the costs of the system should be prorated so that Littleton is only paying for what this data center upgrade would do for the L/E WWTP alone.

Daniel explained that the benefits of the proposed setup flow to both the cities of Littleton and Englewood because the L/E WWTP data center can fail over to the Civic Center and Police Department's systems. Daniel further clarified that Englewood would only rely on L/E WWTP's data center in the event of a disaster, and it would not be used on a routine basis. In addition, Daniel explained that this setup will benefit L/E WWTP by reducing time, labor, and costs when the system needs to be powered down to test and perform preventive maintenance.

Fred asked Daniel if the L/E WWTP upgrades could be completed with only two (2) blade servers instead of three (3). Daniel confirmed this could be done. The cost of one server is estimated at \$7,800. Daniel will provide the Supervisory Committee with additional documentation (attached to minutes) to support this discussion.

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SUPERVISORY COMMITTEE MEETING
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David summarized for the Committee that the expenditure should be transparent so that L/E WWTP can represent to each city that it is getting the same dollar value for its investment. If the return to the City of Englewood is slightly higher than the return to the City of Littleton, then the expenditures need to be prorated to reflect this.

The Committee concluded that the return to both cities from the proposed setup was equal.

ACTION TAKEN – *The Supervisory Committee approved the purchase of one Cisco Unified Computing System (UCS) Mini blade chassis and three Cisco UCS blade servers and associated cabling and hardware from Peak Resources, Inc., for the ESX Host Upgrade 2016, in the amount of \$61,250.09. Fred Bromberger moved, Eric Keck seconded, all ayes, no nays, Mark Relph absent.*

II. INFORMATIONAL ITEMS

Lighting Replacement 2016 Project Update – Dennis Stowe

Dennis Stowe discussed the Lighting Project that was approved by the committee on Thursday, September 15, 2016. This project was not approved by the Englewood City Council so L/E WWTP is not moving forward at this time. L/E WWTP will reevaluate the Lighting Project in 2017. Eric would like for L/E WWTP to look at the specifications and see if the wireless lighting piece can be included when the project is re-bid next year.

L/E WWTP Response to Joint Council meeting – Dennis Stowe

Dennis Stowe discussed the status of the response to the request for information by both cities councils at the annual Joint Council Meeting on Monday, October 17, 2016. Hill and Robbins is working on a memorandum that analyzes the legal and regulatory ramifications of down-rating the plant. Brown and Caldwell prepared draft questions to summarize some of the Council Members' concerns.

The Committee discussed the possibility of down-rating L/E WWTP's current 50 mgd capacity to 35 or 40 mgd, and the potential issues L/E WWTP may face. David pointed out that the Water Quality Control Division (WQCD) would not just hold any extra capacity that L/E WWTP gives up; instead, the capacity would be allocated to another facility. As a result, the costs of reacquiring any forfeited capacity would probably increase exponentially in the future. David pointed out that this decision would also effect the connector districts because L/E WWTP is obligated to treat all waste from these districts. Some of the connector districts have an opportunity for growth, and this may create potential issues from giving away available capacity. Eric suggested that these questions need to be analyzed from a legal, a technical and an operational perspective. Eric asked for a timeframe on when he could expect to have the memorandum available for the City Councils. The Committee will aim for completion of the memorandum by early December 2016.

The Committee discussed including a footnote about population projections in relation to the last study completed by CDM. Eric asked Sarah Reeves, Brown and Caldwell, to get the current numbers for population projections from the State Demographer so this memorandum is using the most current data available.

The Committee discussed ways to improve communication with both City Councils. The Committee directed staff to develop a draft, one page fact sheet or dashboard in the quarterly packets given to both Councils. David

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suggested the graphs will be key in quickly showing both Councils how well L/E WWTP performs. Dennis said that he would bring a sample template to next month's meeting for review.

Recognition as a Director – Eric Keck

With the recruitment of a new plant manager coming up in the near future, Eric Keck said that it is time to recognize that the plant manager is a Director level position. Therefore, Eric has promoted Dennis to Director of the L/E WWTP. Congratulations to Dennis. Eric expressed his desire to include the City of Littleton in the selection process for the new Director.

Interceptor Ownership Status –

Fred Bromberger inquired on the status of the documentation needed for the delineation of the Littleton's interceptor ownership. David Robbins noted a draft agreement was recently provided to Mark Relph. Dennis explained that this document should address only Littleton's interceptor, and not L/E WWTP's other interceptors. Dennis clarified that L/E WWTP will need a similar document for the Valley interceptor as well.

III. **ADJOURNMENT**

The next Supervisory Committee meeting is scheduled for Thursday, December 15, 2016. This meeting will be held at 9:00 am at the Littleton / Englewood Wastewater Treatment Plant.

Adjourned at 9:59 am

Recording Secretary Signature


A blue scribble is present below the redacted signature.



Quote Issued to:
City of Englewood

Account Executive:
Mat Brown
Office: 303-934-1200
mbrown@peakresources.com

PEAK Resources Inc. Headquarters
2750 West 5th Avenue
Denver, CO 80204
Phone: 303-934-1200
Toll Free: 1-800-925-PEAK
Fax: 303-934-1250

Project: UCSMini - Prod
Date: 9/19/2016
Quote Valid Until: 10/19/2016
Quote ID: 09192016SB02/
Config ID: 120152011-1
Note

Line Number	Product Number	Description	Quantity	Unit Price	Extended Price
1	UCS-SP-MINI	UCS SP SELECT 5108 AC2 CHASSIS W/FI6324	1	\$9,676.00	\$9,676.00
2	CON-SSC4P-UCSPMINI	SOLN SUPP 24X7X40S UCS SP SELECT 5108 AC2 CHASSIS W/FI6324,	1	\$611.06	\$611.06
3	CAB-C19-CBN	CABINET JUMPER POWER CORD, 250 VAC 16A, C20-C19 CONNECTORS	4	\$0.00	\$0.00
4	UCSB-PSU-2500ACDV	2500W PLATINUM AC HOT PLUG POWER SUPPLY - DV	4	\$0.00	\$0.00
5	N20-FAN5	FAN MODULE FOR UCS 5108	8	\$0.00	\$0.00
6	N20-FW013	UCS BLADE SERVER CHASSIS FW PACKAGE 3 0 FOR FI6324 ONLY	1	\$0.00	\$0.00
7	UCS-FI-M-6324	UCS 6324 IN-CHASSIS FI WITH 4 UP, 1X40G	2	\$0.00	\$0.00
8	CON-SSC4P-FIM6324	SOLN SUPP 24X7X40S UCS 6248UP AND 16P EXPANSION MODULE WITH	2	\$3,234.35	\$6,468.70
9	UCSB-5108-PKG-HW	UCS 5108 PACKAGING FOR CHASSIS WITH HALF WIDTH BLADES	1	\$0.00	\$0.00
10	N20-CBLK1	BLADE SLOT BLANKING PANEL FOR UCS 5108/SINGLE SLOT	8	\$0.00	\$0.00
11	N20-CAK	ACCESS. KIT FOR 5108 BLADE CHASSIS INCL RAILKIT, KVM DONGLE	1	\$0.00	\$0.00
12	N01-UAC1	SINGLE PHASE AC POWER MODULE FOR UCS 5108	1	\$0.00	\$0.00
13	N10-MGT013	UCS MANAGER 3.0 FOR 6324	2	\$0.00	\$0.00
14	UCS-SP-B200M4-BA3	UCS SPSELECT B200M4 ADV3 W/2XE52650V4,8X32GB,VIC1340 + C1	3	\$0.00	\$0.00
15	UCS-SP-B200M4-B-A3	(NOT SOLD STANDALONE)B200M4 ADV3 W/2XE52650V4,8X32GB,VIC1340	3	\$7,380.00	\$22,140.00
16	CON-SSC4P-B200BA3	SOLN SUPP 24X7X40S, (NOT SOLD STANDALONE)B200M4 ADV3 W/2XE52	3	\$3,326.11	\$9,978.33
17	UCS-CPU-E52650E	2.20 GHZ E5-2650 V4/105W 12C/30MB CACHE/DDR4 2400MHZ	6	\$0.00	\$0.00
18	UCS-MR-1X322RV-A	32GB DDR4-2400-MHZ RDIMM/PC4-19200/DUAL RANK/X4/1.2V	24	\$0.00	\$0.00
19	UCSB-MLOM-40G-03	VIC 1340 MODULAR LOM FOR M4 BLADE SERVERS	3	\$0.00	\$0.00
20	UCSB-LSTOR-BK	FLEXSTORAGE BLANKING PANELS W/O CONTROLL	6	\$0.00	\$0.00
21	UCS-M4-V4-LBL	CISCO M4V4 CPU ASSET TAB ID LABEL (AUTO-EXPAND)	3	\$0.00	\$0.00
22	UCSB-HS-EP-M4-F	CPU HEAT SINK FOR UCS B200 M4 SOCKET 1 (FRONT)	3	\$0.00	\$0.00
23	UCSB-HS-EP-M4-R	CPU HEAT SINK FOR UCS B200 M4 SOCKET 2 (REAR)	3	\$0.00	\$0.00
24	GLC-T=	1000BASE-T SFP	8	\$237.00	\$1,896.00
25	SFP-H10GB-CU2M=	10GBASE-CU SFP+ CABLE 2 METER	8	\$60.00	\$480.00
26	PEAK-SVCS	Peak Engineering Services Day Rate	4	\$2,500.00	\$10,000.00
				Grand Total	\$61,250.09

All Applicable Discounts, Promotions and Rebates, Solutions Assurance, Pre-Delivery Integration Charges Have Been Reflected
Miscellaneous expenses are not included (e.g. taxes, shipping charges, freight insurance, etc.) Information contained herein is Confidential.



Specialty
Power Systems Elite
System Storage Elite
System x Elite

Authorized Software Value Plus
Security
Tivoli

Authorized PureSystems
PureFlex System





Quote Issued to:
City of Englewood

Account Executive:
Mat Brown
Office: 303-934-1200
mbrown@peakresources.com

PEAK Resources Inc. Headquarters
2750 West 5th Avenue
Denver, CO 80204
Phone: 303-934-1200
Toll Free: 1-800-925-PEAK
Fax: 303-934-1250

Project: UCSMini - Waste Water
Date: 9/19/2016
Quote Valid Until: 10/19/2016
Quote ID: 09192016SB02/
Config ID: 120152075-1
Note

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System Storage Elite
System x Elite

Authorized Software Value Plus
Security
Tivoli

Authorized PureSystems
PureFlex System

