Kent Sewer Commission Regular Meeting January 12, 2016 4:30 P.M. Town Hall

Present: John Casey, Nicole Chase, Stan Jennings, Matt Palumbo, Elissa Potts and Susi Williams.

Also present: Bart Clark, Barbara Herbst and Butch Walsh.

Ms. Potts called the regular meeting of the Kent Sewer Commission to order at 4:32 p.m.

The Pledge of Allegiance was recited.

Mrs. Williams made a motion to approve the agenda, as submitted. Mr. Jennings seconded the motion and the motion carried.

### Approval of minutes:

Mrs. Williams made a motion to approve the minutes of the December 8, 2015 regular Sewer Commission meeting, as submitted. Mr. Palumbo seconded the motion and the motion carried.

#### **Public Communication:**

Oral:

None.

Written:

None.

### Report of Chairman:

Ms. Potts stated that Bart Clark sent her an e-mail (attached) stating that Justin Money was stacking large rocks in the sewer easement. Ms. Potts stated that she sent Mr. Money a letter asking him to remove the rocks from the sewer easement area.

### **Report of Superintendent:**

Mr. Walsh stated the following:

- 1.6 million gallons passed through the plant in December
- Pump # 2 is currently in the repair shop waiting for an estimate

### **Kent Sewer Commission Treasurer:**

Mrs. William made a motion to hire Barbara Herbst as the Sewer Commission treasurer retroactive back to January 1, 2016 at the same salary as the previous treasurer. Mr. Casey seconded the motion and the motion carried.

### Report of Treasurer:

Ms. Herbst provided the following reports:

- Check Detail for December 9 January 12, 2016
- Balance Sheet as of January 12, 2016
- Profit & Loss Budget vs. Actuals July through December 2015

Mrs. Herbst stated that at the next meeting she would provide condensed versions of the reports for the commission to review. Mrs. Herbst requested that a current singer on the bank account obtain a new signature card from the bank to add her as a signer on the account.

Mrs. Williams made a motion to approve the Check Detail for December 9 – January 9, 2016, as submitted. Mr. Casey seconded the motion and the motion carried.

Mr. Casey made a motion to add Barbara Herbst as a signer on the Kent Sewer Commission bank account. Mrs. Williams seconded the motion and the motion carried.

### Report of Collector:

Ms. Devaux did not attend the meeting and did not provide a report.

### Report of Consulting Engineer:

Mr. Clark presented the attached aeration system upgrade report. He reviewed several options outlined in the report. The commission agreed that the first step would be to contact the USDA and confirm any available funding and then decide which options to move forward with.

#### Route 7 manholes:

Ms. Potts stated she had no additional information.

#### Capital projects:

No action taken.

### Website Update:

Ms. Potts stated that Ms. Bush-Suttman provided a disc with updates to be made.

#### Water Sampling:

Mr. Walsh stated that there have been some issues with Tunxis. He would like to obtain a bid and report back to the commission next month. The commission was in agreement.

Ms. William made a motion to adjourn the meeting at 5:19 p.m. Mr. Jennings seconded the motion and the motion carried

Administrative Assistant

These are draft minutes and the Kent Sewer Commission at the subsequent regular meeting may make corrections. Please refer to subsequent regular meeting minutes for possible corrections and approval of these minutes.

"An equal opportunity employer and service provider."

KENT SEWER COMMISSION REGULAR MEETING MINUTES, JANUARY 12, 2016
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#### **AGENDA**

# KENT SEWER COMMISSION REGULAR MEETING

January 12, 2016 4:30 P.M. TOWN HALL

### **Regular Meeting**

- 1. Call to order and Pledge of Allegiance
- 2. Elevate alternate
- 3. Amend agenda/approve agenda
- 4. Approval of Minutes
  - a December 8, 2015 Regular meeting
- 5. Public Communication
  - a Oral
  - b Written
- 6. Report of Chairman
- 7. Report of Superintendent
- 8. Report of Treasurer
- 9. Report of Collector
- 10. Report of Consulting Engineer
- 11. New Business
  - a Kent Sewer Commission Treasurer
- 12. Old Business
  - a Route 7 manholes
  - a Capital project
  - b Website Update
  - c Water Sampling
- 13. Adjourn

<sup>&</sup>quot;An equal opportunity employer and service provider and employer."





### Fwd: Maple St Ext Sewer Easement

Elissa Potts <egtpotts@snet.net>

Wed, Jan 13, 2016 at 10:40 AM

To: Joyce Kearns <adminassist@townofkentct.org>

For our files. Elissa

----- Original Message -----

Subject:Maple St Ext Sewer Easement
Date:Thu, 07 Jan 2016 09:19:26 -0500

From:Bart Clark <oakwoodea@optonline.net>

To: 'Butch (John) Walsh' <iwalsh@kentsewer.org>, 'Elissa Potts' <egtpotts@snet.net>, jcasey@kentsewer.org

Hi:

I was just driving by Justin Money's property on Maple St Ext. I see that he has started storing large quantities of stone on top of the Sewer Easement. While using the easement for some storage is ok. The amount of stone he has stored here is excessive and may block access to the manhole.

I would suggest that the Commission discuss this with Justin to help educate him to what is acceptable and what is not.

Bart Clark, P.E.

Oakwood Environmental Associates

27 Reverie Lane

Warren, Connecticut 06754-1513

Phone: 860-868-1367

This email has been checked for viruses by Avast antivirus software.

# Kent Sewer Commission

PO Box 144 Kent, CT 06757

January 10, 2016

Mr. Justin Money Irish Rock Art 24 Maple Street Ext. Kent, CT 06757

Dear Justin:

I just took over the chair position at the Sewer Commission from John.

As we were driving on MSE the other day, we noticed that construction material is being stored on the permanent easement on your property. There is a concern that the weight of the material will compress the soil and ultimately crack the pipes. There is also a concern that, in the event of an emergency, we will have a difficult time accessing the sewer main and man hole. Could you move this please? I know it's a pain in the neck in best case, but it's a matter of public health and safety.

(A)y

I'm happy to talk to you further about it at any time. Best wishes for the New Year.

Sincerely,

Elissa Potts

**Chair Kent Sewer Commission** 

. A. .

# Kent Sewer Commission Balance Sheet

As of January 12, 2016

	Jan 12, 16
ASSETS	
Current Assets Checking/Savings	
Union Bank Capital MMA	625,502.95
Union Bank DDA	106,586.67
Union Bank Septage MMA	123,026.92
USB Grant/Loan Construction A	Acc 732.00
Total Checking/Savings	855,848.54
Other Current Assets	
Accounts Receivable	4,398.65
Total Other Current Assets	4,398.65
Total Current Assets	860,247.19
Fixed Assets	
Accumulated Depreciation	-1,135,138.87
Property and equipment	4,763,683.56
Total Fixed Assets	3,628,544.69
TOTAL ASSETS	4,488,791.88
LIABILITIES & EQUITY Liabilities Current Liabilities	
Other Current Liabilities	
Federal Taxes Payable	1 200 67
Payroll Liabilities	1,309.67 47.76
State Taxes Payable	194.78
Total Other Current Liabilities	
	1,552.21
Total Current Liabilities	1,552.21
Long Term Liabilities	
USDA Loan 92-04	492,703.41
USDA Loan 92-08	81,320.13
Total Long Term Liabilities	574,023.54
Total Liabilities	575,575.75
Equity	
*Retained Earnings	1,931,939.21
Opening Bal Equity	420,287.36
Retained Earnings	1,518,401.72
Net Income	42,587.84
Total Equity	3,913,216.13
TOTAL LIABILITIES & EQUITY	
	4,488,791.88

# Kent Sewer Commission Profit & Loss Budget vs. Actual July through December 2015

	Jul - Dec 15	Budget	% of Budget
Ordinary Income/Expense			
Income	20.045.00	<b>50.000.00</b>	
Septage Fees	38,045.00	70,000.00	54.49
Sewer User Charges Connection Fees	4 265 00		
User Charges	4,355.00	200.000.00	46.207
Oser Charges	137,933.17	298,000.00	46.3%
Total Sewer User Charges	142,288.17	298,000.00	47.79
Total Income	180,333.17	368,000.00	49.09
Expense			
General & Admin Expenses			
Accounting/Bookkeeping Ser	3,300.00	7,000.00	47.1%
Audit	0.00	3,500.00	0.0%
Miscellaneous Admin Expense	99.00	500.00	19.8%
Office Supplies	200.00	500.00	40.0%
Outside services-Admin	294.12	750.00	39.2%
Printing & Advertising	462.14	500.00	92.4%
Software/Licensing Fees	1,367.22	1,600.00	85.5%
Total General & Admin Expenses	5,722.48	14,350.00	39.9%
Operating Expenses			
Electricity	12,645.96	35,000.00	36.1%
Fuel	935.96	7,000.00	13.4%
Insurance			
Dental Insurance	458.10	1,300.00	35.2%
Liab Auto Prop Insura	1,248.00	7,500.00	16.6%
Life Insurance	54.50	150.00	36.3%
Medical	10,119.66	21,000.00	48.2%
Workman's Comp	5,054.00		
Total Insurance	16,934.26	29,950.00	56.5%
Lab exams	6,432.80	13,500.00	47.7%
Materials and supplies			
New Equipment	65.98	1,500.00	4.4%
Purchases & supplies	2,175.65	6,000.00	36.3%
Total Materials and supplies	2,241.63	7,500.00	29.9%
Miscellaneous	35.80	500.00	7.2%
Outside Services-Operating	4,864.23	5,000.00	97.3%
Parts & Repairs	3,493.41	10,000.00	34.9%
Payroll Expenses	57,799.24	120,000.00	48.2%
Payroll taxes	4,339.34	9,120.00	47.6%
Pension	1,333.77	2,500.00	53.4%
Permit fees	2,011.25	2,011.00	100.0%
Postage	850.77	1,700.00	50.0%
Professional fees			
Engineering fees	5,263.61	35,000.00	15.0%
Legal fees	2,094.00	10,000.00	20.9%
Total Professional fees	7,357.61	45,000.00	16.4%
Telephone	1,643.30	3,000.00	54.8%

# **Kent Sewer Commission** Profit & Loss Budget vs. Actual July through December 2015

	Jul - Dec 15	Budget	% of Budget
Uniforms	500.00	1,300.00	38.5%
Total Operating Expenses	123,419.33	293,081.00	42.1%
Total Expense	129,141.81	307,431.00	42.0%
Net Ordinary Income	51,191.36	60,569.00	84.5%
Other Income/Expense			
Other Income Investment income	160.17	300.00	53.4%
Total Other Income	160.17	300.00	53.4%
Other Expense			
Transfer Out	5,211.37		
USDA Loan Interest 92-04	-555.47	25,000.00	-2.2%
USDA Loan Interest 92-08	-65.74		
Total Other Expense	4,590.16	25,000.00	18.4%
Net Other Income	-4,429.99	-24,700.00	17.9%
Net Income	46,761.37	35,869.00	130.4%

Date	Num	Name	Memo	Account	Paid Amount
12/10/15		QuickBooks Payr	Created by Payroll Service on 1	Union Bank DDA	
			Fee for 3 direct deposit(s) at \$1		-5.25
		QuickBooks Payr	Sales Tax for CT Created by Payroll Service on 1	Payroll Expenses Direct Deposit Li	-0.05 -3,025.34
		Quickbooks Fayi	Created by Payron Service on 1	Direct Deposit Li	
TOTAL					-3,030.64
12/11/15	DD1130	Sommers, Lyle R	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	-1,528.32
			Direct Deposit	Payroll Expenses	-382.08
			Direct Deposit Direct Deposit	Dental Insurance Medical	2.41 21.76
			Direct Deposit	Medical	15.63
			Direct Deposit	Payroll Liabilities	47.76
			Direct Deposit	Federal Taxes Pa	284.00
			Direct Deposit	Payroll taxes	-115.98
			Direct Deposit	Federal Taxes Pa	115.98
			Direct Deposit	Federal Taxes Pa	115.98
			Direct Deposit	Payroll taxes	-27.13
			Direct Deposit	Federal Taxes Pa Federal Taxes Pa	27.13 27.13
			Direct Deposit Direct Deposit	State Taxes Pay	85.84
			Direct Deposit	Direct Deposit Li	1,309.89
TOTAL			·	·	0.00
12/11/15	DD1131	Walsh, John H.	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	· -227.92
			Direct Deposit	Payroll Expenses	-455.84
			Direct Deposit	Payroli Expenses	-1,139.60
			Direct Deposit	Payroll Expenses	-455.84
			Direct Deposit	Dental Insurance	2.41
			Direct Deposit	Medical	21.76
			Direct Deposit	Medical	15.63
			Direct Deposit Direct Deposit	Federal Taxes Pa Payroll taxes	376.00 -138.85
			Direct Deposit	Federal Taxes Pa	138.85
			Direct Deposit	Federal Taxes Pa	138.85
			Direct Deposit	Payroll taxes	-32.48
			Direct Deposit	Federal Taxes Pa	32.48
			Direct Deposit	Federal Taxes Pa	32.48
			Direct Deposit	State Taxes Pay	108.94
			Direct Deposit	Direct Deposit Li	1,583.13
TOTAL.					0.00
12/11/15	DD1129	Kearns, Joyce	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	-143.28
			Direct Deposit	Payroll taxes	-8.88
			Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit	Payroll taxes	-2.08
				Federal Taxes Pa	2.08
			-	Federal Taxes Pa	2.08
			Direct Deposit	Direct Deposit Li	132.32

Date	Num	Name	Memo	Account	Paid Amount
TOTAL					0.00
12/11/15	0025	Two Value Keek	77046	Hatan Baali BBA	
12/11/15	9935	True Value, Kent	77016	Union Bank DDA	
11/30/15			Account 77016	Purchases & sup	-28.55
TOTAL					-28.55
12/11/15	9936	US Environment	Customer ID KENSEW001 Inv	Union Bank DDA	
11/30/15	RT17437		quarterly reporting	Outside Services	-172.80
TOTAL					-172.80
12/11/15	9937	Welsh Sanitation		Union Bank DDA	
11/30/15			Outside Services	Outside Services	-21.27
TOTAL					-21.27
12/22/15	9938	Town of Kent	041-66-2249 401(k)	Union Bank DDA	
			041-66-2249 401(k)	Payroll Liabilities	-95.52
TOTAL			.,	•	-95.52
					55.52
12/23/15		QuickBooks Payr	Created by Payroll Service on 1	Union Bank DDA	
			Fee for 3 direct deposit(s) at \$1 Sales Tax for CT	Payroll Expenses Payroll Expenses	-5.25 -0.05
		QuickBooks Payr	Created by Payroll Service on 1	Direct Deposit Li	-3,025.39
TOTAL					-3,030.69
12/24/15	DD1133	Sommers, Lyle R	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	-1,910.40
			Direct Deposit Direct Deposit	Dental Insurance Medical	2.41 21.76
			Direct Deposit	Medical	15.63
			Direct Deposit	Payroll Liabilities	47.76
			Direct Deposit Direct Deposit	Federal Taxes Pa Payroll taxes	284.00 -115.97
			Direct Deposit	Federal Taxes Pa	115.97
			Direct Deposit	Federal Taxes Pa	115.97
			Direct Deposit	Payroll taxes	-27.12
			Direct Deposit Direct Deposit	Federal Taxes Pa	27.12
			Direct Deposit	Federal Taxes Pa State Taxes Pay	27.12 85.84
			Direct Deposit	Direct Deposit Li	1,309.91
TOTAL				· -	0.00
12/24/15	DD1134	Walsh, John H.	Direct Deposit	Union Bank DDA	
· •			•		
				Payroll Expenses	-1,367.52
				Payroll Expenses Dental Insurance	-911.68 2.41
			Direct Deposit	Medical	21.76

Date	Num	Name	Memo	Account	Paid Amount
			Direct Deposit Direct Deposit Direct Deposit	Medical Federal Taxes Pa Payroll taxes	15.63 376.00 -138.84
			Direct Deposit	Federal Taxes Pa	138.84
			Direct Deposit	Federal Taxes Pa	138.84
			Direct Deposit Direct Deposit	Payroll taxes Federal Taxes Pa	-32.47 32.47
			Direct Deposit	Federal Taxes Pa	32.47 32.47
			Direct Deposit	State Taxes Pay	108.94
			Direct Deposit	Direct Deposit Li	1,583.15
TOTAL					0.00
12/24/15	DD1132	Kearns, Joyce	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	-143.28
			Direct Deposit	Payroll taxes	-8.88
			Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit	Payroli taxes Federal Taxes Pa	-2.07 2.07
			Direct Deposit	Federal Taxes Pa	2.07
			Direct Deposit	Direct Deposit Li	132.33
TOTAL					0.00
12/28/15	9942	FedEx	2432-7273-4	Union Bank DDA	
12/15/15	5-253-84684		Account 2432-7273-4 Inv. 5-25	Postage	-147.15
TOTAL					-147.15
12/28/15	9943	John Walsh-Rei		Union Bank DDA	
12/15/15	October			Telephone	-80.00
TOTAL					-80.00
12/28/15	9944	Sommers, Lyle		Union Bank DDA	
12/15/15	November bill			Telephone	-80.00
TOTAL					-80.00
12/28/15	9945	Pupper Septic Inc.	Inv. 47241	Union Bank DDA	
12/15/15	47241		Inv. 47241	Outside Services	-450.00
TOTAL					-450.00
12/28/15	9946	Superior Plus En	Account 33051 Invoice 823682	Union Bank DDA	
12/10/15	823682		Account 33051 Invoice 823682	Fuel	-157.02
TOTAL					-157.02
12/28/15	9940	Town of Kent	gasoline 10/7-12/8	Union Bank DDA	
12/15/15	14-181		gasoline 10/7-12/8	Fuel	-81.45

Date	Num	Name	Memo	Account	Paid Amount
TOTAL					-81.45
12/28/15	9941	Tunxis Laborator		Union Bank DDA	
11/30/15 12/10/15 12/10/15	1529857.0 1529960.0 1529961.0		1529857.0 1529960.0 1529961.0	Lab exams Lab exams Lab exams	-243.10 -243.10 -243.10
TOTAL					-729.30
12/28/15	9947	Eversource	11/12 - 12/14/15	Union Bank DDA	
12/15/15	11/12-12/14		MSE pump stnt	Electricity	-55.64
TOTAL					-55.64
12/28/15	9948	Eversource	51041723065	Union Bank DDA	
12/15/15	11/13-12/15		pump stn	Electricity	-142.36
TOTAL					-142.36
12/30/15		QuickBooks Payr	Created by Payroll Service on 1	Union Bank DDA	
			Fee for 1 direct deposit(s) at \$1 Sales Tax for CT	Payroll Expenses Payroll Expenses	-1.75 -0.02
		QuickBooks Payr	Created by Payroll Service on 1		-464.69
TOTAL					-466.46
12/31/15	DD1135	Devaux, Debora	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses Federal Taxes Pa Payroll taxes Federal Taxes Pa Federal Taxes Pa Payroll taxes Federal Taxes Pa Federal Taxes Pa Direct Deposit Li	-541.08 35.00 -33.54 33.54 33.54 -7.85 7.85 7.85 464.69
TOTAL					0.00
12/31/15	9939	Town of Kent	Pension pymt Sewer Commissio	Union Bank DDA	
12/31/15	Pension Q4		Joyce Kearns Lyle Sommers	Pension Pension	-50.15 -668.64
TOTAL				T CHOIGH	-718.79
12/31/15	9949	Eversource	Account 51545723082	Union Bank DDA	
12/22/15	11/13-12/15		Plant	Electricity	-2,556.85
TOTAL					-2,556.85
12/31/15	9950	Jennifer Weigel	December Final Invoice	Union Bank DDA	

Date	Num	Name	Memo	Account	Paid Amount
12/31/15	449		December	Accounting/Book	-550.00
TOTAL					-550.00
12/31/15	9951	John Walsh-Rei		Union Bank DDA	
12/28/15	December bill			Telephone	-80.00
TOTAL					-80.00
12/31/15 TOTAL	9952	Sommers, Lyle	VOID: Incorrect amount	Union Bank DDA	0.00
TOTAL					
12/31/15	9953	Sommers, Lyle		Union Bank DDA	
12/28/15	December bill			Telephone	-80.00
TOTAL					-80.00
01/05/16	E-pay	CT Commissione	7268998-000 QB Tracking # 30	Union Bank DDA	
			7268998-000 QB Tracking # 30	State Taxes Pay	-389.56
TOTAL					<b>-389.56</b>
01/05/16	E-pay	United States Tr	06-1354645 QB Tracking # 301	Union Bank DDA	
			06-1354645 QB Tracking # 301 06-1354645 QB Tracking # 301 06-1354645 QB Tracking # 301 06-1354645 QB Tracking # 301 06-1354645 QB Tracking # 301	Federal Taxes Pa Federal Taxes Pa Federal Taxes Pa	-1,355.00 -560.94 -560.94 -131.20 -131.20
TOTAL					-2,739.28
01/07/16		QuickBooks Payr	Created by Payroll Service on 0	Union Bank DDA	
		QuickBooks Payr	Fee for 3 direct deposit(s) at \$1 Sales Tax for CT Created by Payroll Service on 0	Payroli Expenses	-5.25 -0.05 -3,026.37
TOTAL					-3,031.67
01/08/16	DD1137	Sommers, Lyle R	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses Payroll Expenses Dental Insurance Medical Medical Payroll Liabilities Federal Taxes Pa Payroll taxes Federal Taxes Pa Payroll taxes Federal Taxes Pa	-1,528.32 -382.08 2.41 21.76 15.63 47.76 283.00 -115.98 115.98 115.98 -27.12 27.12

01/10/16

### Kent Sewer Commission Check Detail

Date	Num	Name	Memo	Account	Paid Amount
			Direct Deposit Direct Deposit	State Taxes Pay Direct Deposit Li	85.84 1,310.90
TOTAL			• ***	-	0.00
04 400 44	• •••				3.33
01/08/10	6 DD1138	Walsh, John H.	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroll Expenses	-1,823.36
			Direct Deposit Direct Deposit	Payroll Expenses Dental Insurance	-455.84
			Direct Deposit	Medical	2.41 21.76
			Direct Deposit	Medical	21.76 15.63
			Direct Deposit	Federal Taxes Pa	376.00
			Direct Deposit	Payroll taxes	-138.84
			Direct Deposit	Federal Taxes Pa	138.84
			Direct Deposit	Federal Taxes Pa	138.84
			Direct Deposit Direct Deposit	Payroll taxes	-32.47
			Direct Deposit	Federal Taxes Pa Federal Taxes Pa	32.47
			Direct Deposit	State Taxes Pay	32.47 108.94
			Direct Deposit	Direct Deposit Li	1,583.15
TOTAL					0.00
01/08/16	DD1136	Kearns, Joyce	Direct Deposit	Union Bank DDA	
			Direct Deposit	Payroil Expenses	-143.28
			Direct Deposit	Payroll taxes	-8.88
			Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit	Federal Taxes Pa	8.88
			Direct Deposit	Payroll taxes	-2.08
			Direct Deposit Direct Deposit	Federal Taxes Pa	2.08
			Direct Deposit	Federal Taxes Pa  Direct Deposit Li	2.08
TOTAL				birect beposit Li	132.32
					0.00
01/12/16	9954	A1 Janitorial Sup	Ten, Dissolve Sewer and lift sta		
12/25/15	A1S19121		Ten, Dissolve Sewer and lift sta	Purchases & sup	-131.26
TOTAL					-131.26
01/12/16	9955	LEA	Additional Services: reviewed a	Union Bank DDA	
12/10/15 TOTAL	48KT3.04-27		Additional Services: reviewed a	Engineering fees	-1,164.50
TOTAL					-1,164.50
01/12/16	9956	Nutmeg Internat	Two, OV DEF fluid	Union Bank DDA	
12/30/15	7-253640004		Two, OV DEF fluid	Purchases & sup	-27.96
TOTAL					-27.96
01/12/16	0057	<b></b>			
01/12/16	9957	True Value, Kent	77016	Union Bank DDA	
12/31/15	77016		Pro Map/Pro LP Torch	New Equipment	-45.99
			3LB Drilling Hammer	New Equipment	-19.9 <del>9</del>
			48" ORG safety marker	Purchases & sup	-23.94
					•

01/10/16

# **Kent Sewer Commission** Check Detail December 9, 2015 through January 12, 2016

Date	Num	Name	Memo	Account	Paid Amount
			Prem Polypro Coil 1/2 x 50' 14.1oz pol gas cylinder	Purchases & sup Purchases & sup	-11.99 -3.99
TOTAL					-105.90
01/12/16	9958	Tunxis Laborator		Union Bank DDA	
12/28/15 12/30/15	1530157 1530162			Lab exams Lab exams	-243.10 -243.10
TOTAL					-486.20

(860)868-1367

# **MEMORANDUM**

From: Bart Clark

Date:

January 11, 2016

TO:

Kent Sewer Commission

Re:

WWTP Aeration System Upgrade

Feasibility of New Higher Efficiency Blowers

The Sewer Commission is considering replacing the existing blowers at the plant with new high efficiency blowers in an effort to reduce the power consumption at the treatment plant.

I have gathered operations data for one year of operation, review as-built drawings of the plant and current configuration of the modified diffuser system for the Aeration tank and sludge digester in an effort to be able to select a blower correctly sized to the Plants needs. This information has led me to the following

- The existing diffuser system is not sized correctly to provide proper treatment at the design flow. The Plant currently has process upsets and occasionally exceeds the 20 mg/l monthly average BOD allowed in the permit.
- 2. The Plant is at or very near its maximum treatment capacity with the current air supply system. (i.e. - few additional customers should be added without an upgrade to the system.)
- 3. The existing Blowers appear capable of providing the air flow required; however, the blower motor is oversized for the power required.
- 4. The Power use at the Plant may increase once the correct amount of air is being provided to the treatment tanks.
- The payback period to provide a high efficiency blower is too long to make it attractive from strictly an economic point of view.

My recommendations are:

- Upgrade the diffuser system to allow the proper amount of air to enter the tanks. A. B.
- Install a new premium efficiency 30 HP Blower motors to reduce energy consumption. C.
- Do not apply to the USDA for a project that involves installing high efficiency blowers. The cost to upgrade the diffusers and replace motors is far lower that the threshold to apply for their financing.

#### Discussion:

To support my conclusions and recommendations, please consider the following information:

One year worth of operations reports were reviewed. This is nearly the first year that there is a record of the Dissolved Oxygen (DO) in the Aeration Tank and the plant effluent.

- These records show that the DO is generally under 0.5 mg/l. The DO should be over 1.0 mg/l.
- The average flow rate varies from 64,000 gpd to 92,000 (80,000 gpd yearly average). The plant design flow is 142,000.
- The records also show that the wastewater is unusually high stregnth for a small community. The BOD averages 320 mg/l with spikes as high as 1000 mg/l. (Normal Averages are about 225 to 250)
- The ammonia is also high averaging around 40 mg/l with spikes over 80.

Due to the higher strength wastewater and the inability to provide oxygen to the treatment tanks, the treatment system has a limited capability to accept additional wastewater eventhough the flow rate to the Plant is at 56% of the permitted design flow.

Based on discussion with Lamson Blower Technical Support, the Blowers were design to provide 525 cfm of air flow at 7 psi pressure in the aeration system. The current system is producing about 200 cfm based on the pressure of 8.4 psi at the Blowers and the performance curve provided by Lamson. The high pressure at the blowers indicates that the diffuser restrict the air flow to the tank. Additional diffusers are needed to provide more air to the treatment tanks.

On reviewing the air flow requirements with a diffuser manufacturer, they indicated that the air flow required to treat the waste at the plant is 200 cfm using 168 diffusers set at 14.0 ft for the aeration tank and 100 cfm using 60 fine bubble diffusers set at 12 ft. This will replace the 66 diffuser in the aeration tank and the home made diffusers in the sludge digester. The existing blowers appear capable of providing the required air for treatment and the air lifts. The total air flow is estimated to be 430cfm.

Based on preliminary Estimates, the cost for the diffusers system is anticipated to be \$40,000 for materials only. Installation is estimated to cost \$30,000.

Two manufacturers, Aerzen and Neuros, have a high efficiency turbo blower capable of providing the air flow that is needed. They blowers would operate at 75% of the Name plate horse power (25 to 30 hp) to provide the air required. This would mean an approximate savings of 25% off the electricity to operate the

The Commission's current electricity bill is approximately \$35,000/yr. The cost of delivering air to the process will increase because more air will be being delivered to provide for better treatment. The increase is difficult to estimate. The bill is divided between various uses as described in the following table:

Total Bill	Annual power costs
	\$35,000
Power for Judd Ave Pump Station	\$3,600
Maple St Extension Pump Station	\$720
Assume 20% for Miscellaneous uses around Plant	\$6200
Power for Blowers	\$24,480

The high efficiency blower could save the Commission (.25 x \$24,480) \$6120 per year. The Cost of each blower is roughly \$100,000 installed. If only one blower is installed, the payback is 16 plus years. Typically, these blowers are installed in pairs; however, as long as the Commission had one spare using one of the older blowers, only one turbo blower would be needed.

The Commission could replace the existing 40 HP motors with a 30 HP premium efficiency motor and could expect to see a power savings of 2 to 5%. This could be done at a cost of about \$5000 per blower for parts and installation. The only caution about a 30 HP motor is that it can be overloaded. This occurs at flow rates far in excess of the anticipated design flow, so, this should not be an issue. The "softstarts" motor relays at the plant will need to be reprogrammed for the smaller motor which is a relatively simple process. This savings should keep the power usage about the current levels and would have a 3 to5 year payback.

The existing blowers have an estimated remaining useful life of about 20 years. My recommendation would be to continue the use of the existing blowers through their useful life using a higher efficiency 30 HP motor. At the end of their useful life, replace the blowers with a more efficient blower.

Due to the generally low cost of the project, I would recommend avoiding using funds from a government funding agency due to the high level of requirements for bidding, construction related requirements such as prevailing wage rates, bonding, and others.

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