



LAKE IN THE HILLS SANITARY DISTRICT

515 PLUM STREET • LAKE IN THE HILLS IL 60156 • P: 847-658-5122 • F: 847-658-4523

AGENDA REGULAR MEETING OF THE BOARD OF TRUSTEES October 10, 2019 7:00 P.M.

REGULAR MEETING OF THE BOARD OF TRUSTEES

Roll Call

Approval of the Minutes

Public Comments

Consent Agenda

- A. Award of the Richard Taylor Park Bypass Sewer project to Kanzler Construction in the amount of \$140,355.70.
- B. Approval of Task Order No. 19-03 to Applied Technologies for the Richard Taylor Park Bypass Sewer Construction Engineering and Inspection Services in the amount of \$16,184.00.

Specific Agenda

Treasurer's Report

Approval of Bills

Grand total of all bills presented for approval is \$252,974.71 of which \$23,547.32 is from the General Corporate Fund, \$117,608.63 is from the Operations and Maintenance Fund, \$33,200.00 is from the Construction Fund, and \$78,618.76 is from the Bond and Interest Fund.

Manager's Report

IEPA 2019 Inspection Report was received.

Permits have been issued for Heathers Senior Living and PetSuites.

Engineer's Report

Attorney's Report



LAKE IN THE HILLS

SANITARY DISTRICT

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**AGENDA REGULAR MEETING
OF THE BOARD OF TRUSTEES
October 10, 2019
7:00 p.m.
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Unfinished Business

New Business

Adjournment

**Lake in the Hills Sanitary District
Board of Trustees Regular Meeting Minutes
September 12, 2019**

Roll Call:

The regular meeting was called to order by President Hansen at 7:00 pm at the Sanitary District offices located at 515 Plum Street. Roll call was answered by President Eric Hansen, Trustee Cheryl Kehoe and Trustee Jessica Reed. Also present were District Manager Tamara Mueller, District Engineer Peter Kolb of Applied Technologies, District Attorney Ann Williams of Storino, Ramello & Durkin and District Treasurer/Clerk Karen Thompson.

Approval of Minutes:

Motion was made by Trustee Kehoe and seconded by Trustee Reed to approve the Minutes of the Regular Board Meeting of August 9, 2019 as presented. On a roll call vote, President Hansen, Trustee Kehoe and Trustee Reed voted aye.

Public Comments:

Terry Easler of Crystal Lake asked for clarification regarding Item C on the specific agenda. He also asked if the District had heard from the State's Attorney regarding the anonymous complaint that was forwarded to them. President Hansen said that they have not.

George Roach of GRA PC presented the annual audit and financials. He explained the audit process and highlighted some of the figures in the financials.

Consent Agenda:

Motion was made by Trustee Kehoe, seconded by Trustee Reed, to approve the Consent Agenda. There was no additional discussion.

- A. Approval of Contractor's Application for Payment No. 3 in the amount of \$18,155.63 to Schroeder Asphalt Services, Inc. for the Rear Drive Entrance project.

On a roll call vote President Hansen and Trustees Kehoe and Reed voted aye to approve the Consent Agenda as presented (Item A).

Specific Agenda:

- A. Approval of Lake in the Hills Sanitary District's Annual Financial Report for the Year Ended April 30, 2019, as presented by George Roach & Associates.

Motion was made by Trustee Kehoe, seconded by Trustee Reed to approve the District's Annual Financial Report for the Year Ended April 30, 2019 (Specific Agenda Item A) as presented. There were no additional questions or discussion. The motion passed after a roll call vote with President Hansen and Trustees Kehoe and Reed voting aye.

- B. Approval of Annual Treasurer's Report for Fiscal Year 2018 - 2019.

Motion was made by Trustee Kehoe, seconded by Trustee Reed to approve the Annual Treasurer's Report for Fiscal Year 2018-2019 (Specific Agenda Item B) as presented. The motion passed after a roll call vote with President Hansen and Trustees Kehoe and Reed voting aye.

C. Approval of Ordinance No. 400 - An Ordinance Abating the Taxes Levied for the Year 2019 to Pay General Obligation Bonds, Series 2014.

At the request of Trustee Reed, the District Manager provided an additional explanation regarding Item C. Motion was made by Trustee Kehoe, seconded by Trustee Reed to approve Ordinance No. 400 (Specific Agenda Item C) as presented. The motion passed after a roll call vote with President Hansen and Trustees Kehoe and Reed voting aye.

D. Approval of Ordinance No. 401 – An Ordinance Abating a Portion of the Taxes for Fiscal Year 2019-2020.

Motion was made by Trustee Reed, seconded by Trustee Kehoe to approve Ordinance No. 401 (Specific Agenda Item D) as presented. The motion passed after a roll call vote with President Hansen and Trustees Kehoe and Reed voting aye.

Treasurer's Report:

District Treasurer presented final written copies of the August 2019 Treasurer reports. She also provided a verbal summary of some of the receipts and expenses. She further stated that we are still waiting for the reports from Postl-Yore before we pay his invoice that was approved last month. Additionally, we still need final waivers before we release the payment that was approved last month to AMS Mechanical. Since the payments have not been made, the expenses are not reflected on the August 2019 Treasurer Reports. Some discussion took place regarding how to expedite receipt of these documents so that payments can be made.

Motion was made by Trustee Kehoe, seconded by Trustee Reed, to approve the August 2019 Treasurer reports. On a roll call vote, President Hansen and Trustees Kehoe and Reed voted aye.

Approval of Bills:

District Treasurer presented a list of bills for approval. She highlighted some of the bills that were atypical or higher than usual. She also brought all of the bills to the meeting in case any Trustee would like to see the detail.

Motion was made by Trustee Kehoe and seconded by President Hansen to approve the List of Bills as presented for payment totaling \$247,210.79 of which \$53,085.96 is from the General Corporate Fund, \$159,618.38 is from the Operations & Maintenance Fund, \$34,506.45 is from the Construction Fund and \$0 is from the Bond & Interest Fund.

The motion passed after a roll call vote; President Hansen, Trustee Kehoe and Trustee Reed voted aye. (A list of the approved bills will be kept with the Board Meeting documents).

Manager's Report:

District Manager prepared and presented the August 2019 Manager's Report and provided a verbal summary. She stated that the plant is operating well and the lift stations were able to handle the 2" of rain we received last night. The GIS updates are finished with the exception of a few buried ones which will be located by televising. In August, 9,089 feet of sewer was televised and 2 sections needed root cutting. Several staff attended the FVOA conference on August 15, 2019.

Motion was made by Trustee Kehoe, seconded by Trustee Reed, to approve the August 2019 Manager's Report as presented. On a roll call vote, President Hansen, Trustee Kehoe and Trustee Reed voted aye.

Engineer's Report:

District Engineer Peter Kolb of Applied Technologies provided a written report and a verbal recap.

Regarding Task Order 18-02 (Beach Lift Station Rehab) - The drawings and specification packets have been completed. The IEPA permit application has been given to District Manager for signature. Bid package should be out by late September. Construction will be November 2019 – February 2020.

Regarding Task Order 18-03 (Electrical Service & Plant Power Distribution) – Electrical Testing Solutions has been onsite collecting data and readings. Tomorrow they will de-energize the panel that is fed from ComEd so that the panel can be inspected. The District will go on emergency power during this time. The studies will be completed in October.

Regarding Task Order 18-04 (Richard Taylor Park Bypass) – The design drawings & specifications are complete and are available online and at the District office. Cost estimates are about \$110,000 plus an additional \$14,500 for engineering & inspection. Bid opening will be September 26th. Award will be on October 10th and construction in November. This is a short 2-week project.

Regarding Task Order 19-01 (Rear Entrance Drive Construction Services) – All original project work has been completed and the drive has been usable since August. Pay app #3 was approved tonight. There are some work change directives that will be included as a change order for a concrete curb, erosion protection and modifications to the rear gate. Current retainage is \$26,180.59. They anticipate that final costs will come in under the original award amount.

Regarding Task Order 19-02 (Electrical Upgrades & Filter Building Improvements) - This is in the design phase. A kickoff meeting was held with staff and design engineers to finalize the scope. They are preparing drawings for layout of equipment and appurtenances and have initiated discussions with the equipment manufacturer on the main breaker installation.

Attorney's Report:

District Attorney wanted to let the Board know that they have received some FOIA requests related to the personnel matters. They have complied with those requests and she has copies should anyone want to review them. Some parts of the FOIA requests were denied because they complied with the exemptions allowed in the Freedom of Information Act in terms of either privacy or disclosing a source. Other than these exemptions, everything was released as directed by President Hansen in an effort for complete transparency.

Unfinished Business:

None.

New Business:

Trustee Kehoe provided an update regarding quotes for HR consulting. District Manager has received one quote so far from a 3rd party HR firm who could do some onsite training. Discussion also took place regarding having a 3rd party firm do some compensation studies and/or personnel manual reviews. District Attorney indicated that the District does have a solid personnel manual, but it could be streamlined. The District could use either a 3rd party or the Attorney to handle this.

Executive Session:

President Hansen moved that we will now enter executive session for discussion of minutes of meetings lawfully closed under this Act, whether for purposes of approval by the body of the minutes or semi-annual review of the minutes as mandated by Section 2.06 (5 ILCS 120/2(c)21). Motion was seconded by Trustee Kehoe. The District Engineer and members of the public left the room.

The Board went into executive session at 7:47 pm.

Regular Meeting Reconvened:

The regular meeting was reconvened at 7:57 pm with President Hansen and Trustees Kehoe and Reed present. Also present were District Manager Tamara Mueller, District Attorney Ann Williams and District Treasurer/Clerk Karen Thompson.

President Hansen made a motion that we release the Minutes of the closed meetings that occurred over the past 6 months pending Attorney review. These meetings took place on March 14th, April 11th, May 23rd and August 8th of 2019. The Attorney review of these minutes will be completed by September 20, 2019 and if approved they will be released at that time. Motion was seconded by Trustee Kehoe. The motion passed after a verbal vote. All Board members who were present voted aye.

(On 9/24/19 the District Attorney further reviewed all closed meeting minutes. She recommended that the District release the Closed Meeting Minutes from March 14, 2019. All other minutes should remain closed at this time).

Adjournment:

There being no further business to bring before the Board, President Hansen asked for a motion to adjourn the meeting. Motion was made by Trustee Kehoe and seconded by Trustee Reed. The motion passed after a verbal vote. All Board members who were present voted aye.

The meeting was adjourned at 7:58 pm.

Respectfully Submitted,



Karen Thompson,
District Clerk

APPROVED this _____ day of _____, 2019 .

President Hansen



October 4, 2019

Tamara Mueller, District Manager
Lake in the Hills Sanitary District
515 Plum Street
Lake in the Hills, IL 60156

Re: Richard Taylor Park Bypass Sewer
Evaluation of Bids and Recommendation to Award

Dear Tamara and Board of Trustees:

We have completed our review of bids for the Richard Taylor Park Bypass Sewer, as opened at 10:00 a.m. on September 26, 2019. Four bids were received for the project and a summary of the bids are provided below:

Bidding Contractor	Bid Amount
Kanzler Construction Wauconda, IL	\$140,355.70 – As Corrected \$140,348.00 (As Read)
Abitua Sewer, Water & Plumbing Lake in the Hills, IL	\$152,510.00
Lifco Construction Carol Stream, IL	\$170,050.00
Copenhaver Construction, Inc. Gilberts, IL	\$171,070.00

See the enclosed bid tabulation.

We have reviewed these bids and provide the following comments and recommendations for the District's consideration:

1. The low bid for the project was submitted by Kanzler Construction in the amount of \$140,355.70.
2. Kanzler Construction has experience with this type of project and has completed other similar projects with positive responses.
3. Applied Technologies Inc. finds Kanzler Construction to be the lowest, responsive, responsible bidder. We recommend that the Lake in the Hills Sanitary District award the Richard Taylor Park Bypass Sewer Project to Kanzler Construction in the amount of \$140,355.70



Following the District's Award of the contract, we will send a Notice of Award to the contractor along with copies of the Contract Documents for their signature. Once documents are returned to the District for execution, a Notice to Proceed will be issued and a preconstruction conference scheduled.

Please call if you have any questions or comments regarding the above.

Sincerely,
Applied Technologies, Inc.

A handwritten signature in blue ink that reads "Peter E. Kolb".

Peter E. Kolb, P.E.

Lake in the Hills Sanitary District TASK ORDER NO. 19-03

Date: October 10, 2019 **Project No.:** 6255 **LITHSD Project Manager:** Tamara Mueller

Project Name: Richard Taylor Park Bypass Sewer - Construction Engineering and Inspection Services

ATI Point(s) of Contact: Peter Kolb, Bob Doeringsfeld

Project Description:

Provide construction engineering, contract administration, and inspection for the Richard Taylor Park Bypass Sewer for the Lake in the Hills Sanitary District. Project award to Kanzler Construction in the amount of \$140,355.70 with construction activities estimated to last two weeks in duration.

Scope of Services/Schedule:

Engineering Services within Task Order No. 19-03 include contract administration, site visits and construction observation, submittal review, request for information responses, applications for payment. The scope of services shall include the following tasks:

1. Construction Contract Administration and Progress Meetings
2. Design Clarifications and Field Orders
3. Change Order Processing
4. Submittal Reviews
5. Request for Information Responses
6. Applications for Payment
7. Record Drawings
8. Resident Engineer Site Visits and Construction Observation (10hrs/wk)
9. Full Time Resident Project Representative (40 hrs/wk)

Compensation: The Total Compensation for this Task Order is \$16,184 and is broken down into the following sub tasks:

Construction Contract Administration	\$4,544
Resident Engineer (10 hrs/2 wks)	\$2,840
Resident Project Representative (40 hrs/2 wks)	\$8,800
Total	\$16,184

PROJECT APPROVAL

Applied Technologies, Inc.

Accepted by Lake in the Hills Sanitary District

Signature: *Peter E. Kolb*
Printed Name: Peter E. Kolb
Title: Vice President
Date: October 3, 2019

Signature: _____
Printed Name: _____
Title: _____
Date: _____

LAKE IN THE HILLS SANITARY DISTRICT
MONTHLY TREASURER REPORT - GOVERNMENTAL FUNDS

Month of September, 2019

	BANK BAL AT BEGINNING OF PRIOR MONTH	BANK BAL AT BEGINNING OF THE CURRENT MONTH	BANK BAL AT THE BEGINNING OF THE FY
Beginning Cash and Investments			
First National Bank	1,493,121.63	1,488,753.20	1,322,636.54
Credit Cards	(35.02)	(449.00)	-
TOTAL BEGINNING CASH AND INVESTMENTS	1,493,086.61	1,488,304.20	1,322,636.54

	PRIOR MONTH	CURRENT MONTH	YTD	BUDGET
Revenues and Receipts				
Real Estate Taxes				
General Fund	15,321.61	120,199.67	283,480.76	240,000.00
Audit Fund	1,098.50	8,617.84	20,324.47	10,000.00
Chlorination Fund	895.08	7,022.02	16,560.84	15,000.00
Liability Insurance Fund	7,758.67	60,867.58	143,551.03	135,900.00
Social Security Fund	2,644.52	20,746.60	48,929.06	45,000.00
Retirement Fund	6,021.41	47,238.57	111,408.16	98,100.00
Replacement Taxes	33.64	-	789.18	-
Safety Grant Recvd from IL Public Risk Fund	-	-	-	-
Interest Income	317.43	334.35	1,563.26	1,000.00
TOTAL REVENUES AND RECEIPTS	34,090.86	265,026.63	626,606.76	545,000.00

Expenditures

GENERAL FUND

PERSONNEL SERVICES

Salaries of Trustees, Manager, Treasurer & Clerk	14,021.83	13,985.41	67,721.63	175,000.00
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CONTRACTUAL SERVICES

Professional Engineering	5,538.00	4,370.00	28,053.00	45,000.00
Legal Services	-	13,638.40	42,888.22	36,000.00
Other Professional Services	-	-	-	5,000.00
	5,538.00	18,008.40	70,941.22	86,000.00

ADMINISTRATIVE EXPENSES

Printing, Publications	1,198.98	53.59	1,443.21	5,000.00
Office Supplies, Equipment	-	203.09	203.09	3,000.00
Postage	-	-	430.65	1,000.00
Treasurer's Bond	-	-	-	4,000.00
Community Affairs	-	-	-	1,000.00
Memberships and Dues	130.00	-	130.00	4,000.00
	1,328.98	256.68	2,206.95	18,000.00

OPERATING EXPENSES

Building and Grounds Upkeep	357.89	830.86	5,161.23	15,000.00
Utilities	294.52	264.89	7,943.15	30,000.00
J.U.L.I.E.	-	-	-	3,000.00
Training and Education	-	-	-	2,000.00
Travel Expenses	-	-	-	2,000.00
Computer Hardware, Software & Support	157.79	938.52	1,678.87	8,000.00
	810.20	2,034.27	14,783.25	60,000.00

CONTINGENT AND MISCELLANEOUS EXPENSES

Not Otherwise Appropriated	-	-	-	1,000.00
	-	-	-	1,000.00

TOTAL GENERAL FUND	21,699.01	34,284.76	155,653.05	340,000.00
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	PRIOR MONTH	CURRENT MONTH	YTD	BUDGET
Expenditures (continued)				
CHLORINATION FUND	-	1,425.60	4,860.20	24,000.00
	-	1,425.60	4,860.20	24,000.00
AUDIT FUND	-	10,000.00	10,000.00	20,000.00
	-	10,000.00	10,000.00	20,000.00
PUBLIC LIABILITY INSURANCE FUND				
Workers' Compensation	-	3,939.00	7,878.00	24,000.00
Property	-	-	-	45,000.00
Vehicles	-	245.00	245.00	18,000.00
General Liability	-	-	-	80,000.00
Administrative Fee	-	119.00	238.00	800.00
	-	4,303.00	8,361.00	167,800.00
SOCIAL SECURITY FUND	4,828.96	4,380.62	22,415.25	55,000.00
IMRF FUND	12,345.30	11,143.82	58,350.77	230,000.00
OTHER EXPENDITURES (RECEIPTS)	-	-	-	-
TOTAL EXPENDITURES	38,873.27	65,537.80	259,640.27	836,800.00

EXCESS OF REVENUES OVER (UNDER) EXPENDITURES (4,782.41) 199,488.83 366,966.49 (291,800.00)

	BANK BAL AT END OF THE PRIOR MONTH	BANK BAL AT END OF THE CURRENT MONTH	BANK BALANCE AT THE END OF MAY
Ending Cash and Investments			
First National Bank	1,488,753.20	1,688,213.28	1,285,433.12
Credit Cards	(449.00)	(420.25)	-
TOTAL ENDING CASH AND INVESTMENTS	1,488,304.20	1,687,793.03	1,285,433.12
GENERAL CORPORATE FUND			

LAKE IN THE HILLS SANITARY DISTRICT
MONTHLY TREASURER REPORT - O&M/SEWERAGE FUNDS
 Month of September, 2019

		BANK BALS AT BEGINNING OF PRIOR MONTH	BANK BALS AT BEGINNING OF THE CURRENT MONTH	BANK BALS AT THE BEGINNING OF THE FY
Beginning Cash and Investments				
First National Bank - O & M Account	O&M	566,759.01	414,270.74	554,828.09
First National Bank - Certificate Fund	Bond & Int	67,022.01	80,045.64	27,978.27
First National Bank - Depreciation Account	Construction	2,078,487.94	2,149,964.30	2,040,661.06
First National Bank - Surplus Funds	Construction	13,790.14	221,103.20	37,837.21
First National Bank - Bond & Interest Fund	Bond & Int	681,704.34	747,655.28	606,836.79
First National Bank - Sinking Funds	Bond & Int	756,314.81	771,221.12	711,620.02
Algonquin Bank & Trust - Cash Mgr	O&M	1,070,533.30	727,681.44	939,069.95
Algonquin Bank & Trust - Operating	O&M	1,307.00	79.00	1,634.00
Home State Bank	O&M	14,656.27	14,803.79	11,609.76
Illinois State Bank	O&M	6,529.41	6,767.29	5,016.95
Credit Cards		(419.72)	(240.10)	(145.19)

TOTAL BEGINNING CASH AND INVESTMENTS
SEWERAGE FUNDS

	5,256,684.51	5,133,351.70	4,936,946.91
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	PRIOR MONTH	CURRENT MONTH	YTD	BUDGET
Revenues and Receipts				
Sewer Bill Income/User Charges	90,945.89	43,999.21	1,058,637.41	3,600,000.00
Septage Income	28,189.40	25,268.84	146,909.44	200,000.00
Wastewater Discharge Income	3,533.72	54.50	14,490.74	45,000.00
Refunds	(1,651.05)	(61.77)	(4,648.28)	-
Connection/Tap-On Fees	62,400.00	-	88,400.00	110,000.00
Annexation Fees (inc. GIS)	-	-	-	5,000.00
Downstream & Misc Charges	-	-	-	500.00
Liftstation Recapture	-	-	-	-
Gain/Loss - Sale of Equipment	-	-	-	-
Interest Income	2,725.50	2,450.89	14,301.91	25,000.00

TOTAL REVENUES AND RECEIPTS

	186,143.46	71,711.67	1,318,091.22	3,985,500.00
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Expenditures

PERSONNEL SERVICES

District Personnel Salaries	49,101.90	43,277.90	226,968.41	604,000.00
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ADMINISTRATIVE EXPENSES

Telephone	430.25	-	1,066.07	3,000.00
Postage	617.79	3,772.05	8,752.47	20,000.00
Printing and Publications	-	-	54.46	2,000.00
Office Supplies	468.74	367.35	1,994.97	7,500.00
Collection and Billing Expenses	8,214.68	3,820.92	29,372.19	75,000.00
Professional Services	61.63	974.10	1,387.91	10,000.00
Training, Travel and Education	35.00	-	250.00	5,000.00
Computer Hardware, Software, and Support	1,250.20	902.25	28,042.24	70,000.00
Community Affairs	-	-	-	2,000.00
Medical and Life Insurance	19,470.48	19,968.99	107,381.23	275,000.00
	30,548.77	29,805.66	178,301.54	469,500.00

OPERATIONS AND MAINTENANCE

Operating Supplies	2,302.48	6,664.00	23,319.63	60,000.00
Maintenance and Repair (Plant)	6,398.18	11,214.75	33,905.73	150,000.00
Maintenance and Repair (Collection Systems)	1,509.10	8,352.25	33,798.03	310,000.00
Utilities and Energy	40,808.52	35,306.93	191,832.21	420,000.00
Grounds Upkeep	-	7,421.55	11,565.55	30,000.00
Gasoline/Oil	466.47	590.31	4,336.86	20,000.00
Computer and Support Services	-	-	-	2,000.00
Emergency Communications	6,492.54	6,342.65	34,792.90	65,000.00
Sludge Management	2,482.63	25,087.24	27,628.18	250,000.00
Professional Services	578.55	3,171.10	8,647.16	24,000.00

	PRIOR MONTH	CURRENT MONTH	YTD	BUDGET
Residential Reimbursement	-	-	-	10,000.00
Compliance Requirements/Permits	-	-	17,500.00	28,500.00
GIS	-	-	-	10,000.00
	<u>61,038.47</u>	<u>104,150.78</u>	<u>387,326.25</u>	<u>1,379,500.00</u>

Expenditures (continued)

CAPITAL IMPROVEMENTS

New Construction	162,774.04	52,662.08	389,521.43	2,500,000.00
Plant Equipment	-	-	-	30,000.00
Collection System	4,842.50	-	4,842.50	300,000.00
Vehicles	-	-	15,236.00	45,000.00
Legal Expense	-	-	-	5,000.00
Engineering Expense	14,810.80	17,392.00	101,241.80	375,000.00
Bond, Finance Consulting Expense	-	-	-	1,000.00
	<u>182,427.34</u>	<u>70,054.08</u>	<u>510,841.73</u>	<u>3,256,000.00</u>

BOND TRANSFERS

2008 Debt Certificates, Principal	-	-	-	110,000.00
2008 Debt Certificates, Interest	-	-	-	48,000.00
Administration Fees - 2008 Debt Certs	-	-	-	3,500.00
	<u>-</u>	<u>-</u>	<u>-</u>	<u>161,500.00</u>

Series 2014 Bond, Principal	-	-	-	110,000.00
Series 2014 Bond, Interest	-	-	-	112,000.00
Administration Fees - 2014 Series Bond	-	-	-	3,500.00
	<u>-</u>	<u>-</u>	<u>-</u>	<u>225,500.00</u>

CONTINGENT AND MISCELLANEOUS EXPENSES

Not Otherwise Appropriated	-	-	-	3,000.00
	<u>-</u>	<u>-</u>	<u>-</u>	<u>3,000.00</u>

TOTAL EXPENDITURES

	<u>323,116.48</u>	<u>247,288.42</u>	<u>1,303,437.93</u>	<u>6,099,000.00</u>
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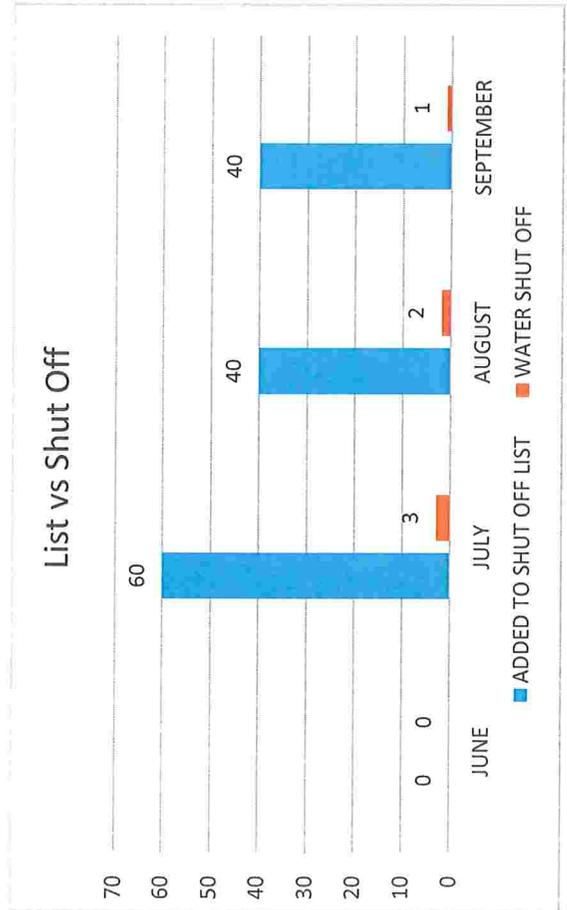
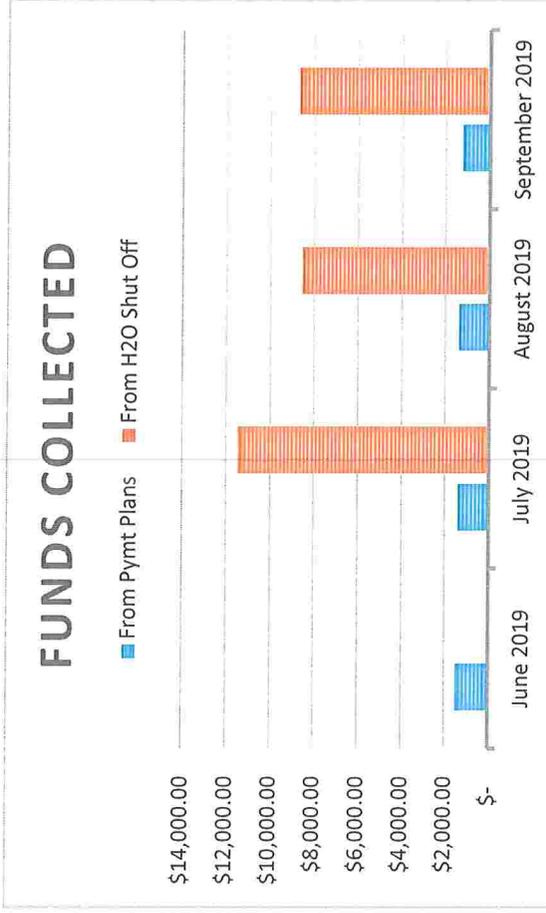
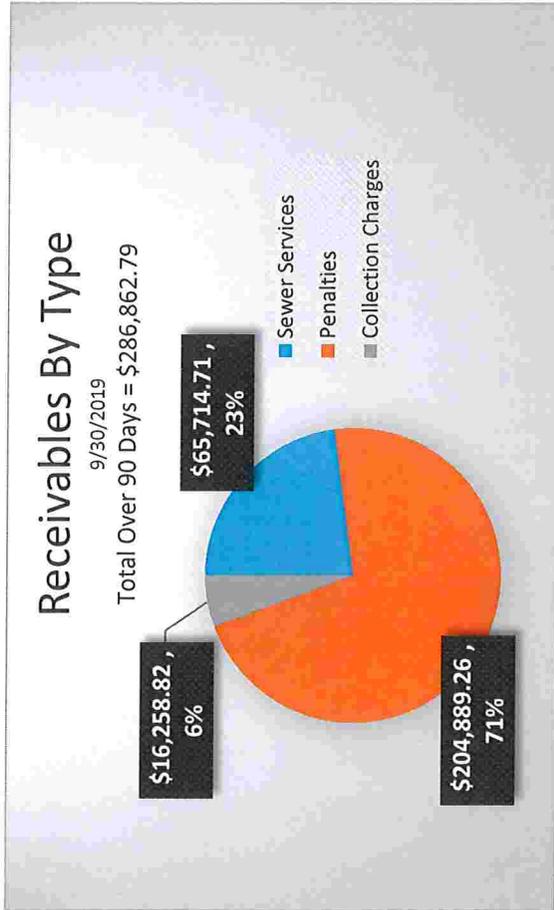
EXCESS OF REVENUES OVER (UNDER) EXPENDITURES

	<u>(136,973.02)</u>	<u>(175,576.75)</u>	<u>14,653.29</u>	<u>(2,113,500.00)</u>
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		BANK BAL AT END OF THE PRIOR MONTH	BANK BAL AT END OF THE CURRENT MONTH	BANK BAL AT THE END OF MAY
Ending Cash and Investments				
First National Bank - O & M Account	O&M	414,270.74	242,081.17	361,425.46
First National Bank - Certificate Fund	Bond & Int	80,045.64	93,569.44	40,988.34
First National Bank - Depreciation Account	Construction	2,149,964.30	2,151,793.28	2,054,418.48
First National Bank - Surplus Funds	Construction	221,103.20	168,498.18	13,843.29
First National Bank - Bond & Interest Fund	Bond & Int	747,655.28	753,810.50	673,153.54
First National Bank - Sinking Fund	Bond & Int	771,221.12	786,125.21	726,516.75
Algonquin Bank & Trust - Cash Mgr.	O&M	727,681.44	736,122.91	976,298.75
Algonquin Bank & Trust - Operating	O&M	79.00	195.00	421.00
Home State Bank	O&M	14,803.79	15,081.85	11,776.61
Illinois State Bank	O&M	6,767.29	6,846.78	5,017.16
Credit Cards	O&M	(240.10)	(276.87)	(469.35)
		<u>5,133,351.70</u>	<u>4,953,847.45</u>	<u>4,863,390.03</u>
TOTAL ENDING CASH AND INVESTMENTS				
SEWERAGE FUNDS				

Accounts Receivable Analysis

September 2019



Monthly Shut Off Summary

Lake in the Hills

- 1 Shut Off – Pd in full post shut off.

Huntley

- NONE

Crystal Lake

- NONE

**LITH SANITARY DISTRICT
Bills Paid Before Meeting
October 10, 2019 Meeting Date**

Name	Memo	Amount
General Fund		
Jones Insurance Services	Insurance - Vehicles, prorated to add dump truck	\$ 245.00
TOTAL GEN FUND BILLS PAID BEFORE MEETING		\$ 245.00
O & M Fund		
Accurate Security & Lock Corp	Pro Svs - Re-key Locks	\$ 876.51
AT&T	Emerg Comm	\$ 473.56
Flood Brothers Disposal & Recycling	Bldg & Grounds - Sept Trash & Recycling	\$ 321.82
Illinois Rural Water Association (IRWA)	Training, Travel & Education	\$ 480.00
Illinois State Treasurer's Office	Contingent & Misc Exp - 2019 Unclaimed Property	\$ 15.60
Verizon Wireless	Emerg Comm	\$ 346.36
TOTAL O & M BILLS PAID BEFORE MEETING		\$ 2,513.85

**LITH SANITARY DISTRICT
Recurring Bills
October 10, 2019 Meeting Date**

Name	Memo	Amount
General Fund		
Illinois Municipal Retirement Fund	Employer Portion of IMRF - September 2019	\$ 11,143.82
United States Treasury	District Pd Payroll Taxes (SS & Med)	\$ 4,380.62
TOTAL GENERAL FUND RECURRING BILLS		\$ 15,524.44
O & M Fund		
Humana	Health Insurance Premiums	\$ 16,865.05
Payment Services Network	Collections Expenses from August 2019	\$ 1,019.37
United States Postal Service	Postage - Quarterly Bills	\$ 3,772.05
TOTAL O & M RECURRING BILLS		\$ 21,656.47

Approved _____

President Hansen

**LITH SANITARY DISTRICT - Governmental Fund
Bills Presented to Board for Approval
October 10, 2019 Meeting**

Name	Memo	Amount
GENERAL CORP FUND BILLS		
Applied Technologies Inc	Engineering Services	\$ 4,822.00
First National Bank of Omaha - Visa	Computer Exp, Office Supplies	\$ 317.11
First National Bank of Omaha - Visa	Office Supplies	\$ 203.09
Interstate Gas Supply, Inc.	Utilities - Nat Gas delivered for August 2019	\$ 20.12
Logsdon Office Supply	Office Supplies	\$ 17.00
Logsdon Office Supply	Office Supplies	\$ 46.56
Minuteman Press	Printing & Publications - Business Cards	\$ 185.75
Nicor Gas	Utilities - Nat Gas	\$ 256.33
Pitney Bowes	Postage - Meter Rental 10/16-1/15/20	\$ 132.35
Shaw Suburban Media Group	Printing & Publications - Richard Taylor Bypass Bid	\$ 508.62
Storino Ramello & Durkin	Contractual Svs - Legal, Sept 2019	\$ 1,268.95
TOTAL GENERAL CORP FUND BILLS		\$ 7,777.88

**LITH SANITARY DISTRICT - O&M/Sewerage Fund
Bills Presented to Board for Approval
October 10, 2019 Meeting**

Name	Memo	Amount
O & M BILLS		
Accurate Security & Lock Corp	Pro Svs - Locks	\$ 228.66
Ansercall 24	Emerg Comm	\$ 200.00
Applied Technologies Inc	Cap Imprvmts - Engineering - 18-04 Richard Taylor Park Bypass	\$ 2,746.00
AT&T	Emerg Comm	\$ 244.74
AT&T	Emerg Comm	\$ 7,605.63
Cintas Corporation	Oper Supplies - Personnel	\$ 999.64
Comcast Cable	Comp Support & Telephone	\$ 406.41
ComEd, Inc.	Utilities - Coll Sys Beach LS	\$ 53.72
ComEd, Inc.	Utilities - Coll Sys Dam LS	\$ 401.24
Consolidated Electrical Distributors, Inc	Maint/Repair - Plant, Ballast for Main Office	\$ 14.82

Consolidated Electrical Distributors, Inc	Maint/Repair - Plant, Lighting Maintenance Office	\$	25.00
Controls Consulting, Inc.	Engineering - SCADA, Dev 2 new screens	\$	4,000.00
Controls Consulting, Inc.	Engineering - SCADA, Fiber Optics	\$	3,080.00
Controls Consulting, Inc.	Engineering - SCADA, Records & Upgrades	\$	6,790.00
Dynegy Energy Services	Utilities	\$	28,785.07
First National Bank of Omaha - Visa	Grounds Upkeep	\$	77.55
First National Bank of Omaha - Visa	Pro Svs - Intuit Payroll Fees	\$	59.50
First Security Systems, Inc.	Pro Svs - Contract for Fire Alarm Maint	\$	1,872.00
Hawkins, Inc	Sludge Mgt - Aqua Hawk	\$	3,769.50
Hawkins, Inc	Sludge Mgt - Aqua Hawk	\$	7,636.95
James Olvera - Reimbursement	Oper Supplies - Personnel, 2019 Clothing Allowance Reimb	\$	200.00
Joseph D. Foreman & Company, Inc.	Maint/Repair - Coll Sys	\$	156.00
Kaman Industrial Technologies	Maint/Repair - Plant, Oxy Ditch Motor Couplings	\$	425.63
Logsdon Office Supply	Office Supplies	\$	243.66
Logsdon Office Supply	Office Supplies	\$	22.31
Lou's Gloves Inc	Oper Supplies - Personnel	\$	186.00
Majestic Flag & Banner Co.	Office Supplies	\$	45.99
McHenry County Recorder	Collections	\$	16.00
Midwest Water Group Inc	Training, Travel & Education	\$	975.00
PetroChoice LLC	Gas/Fuel	\$	495.65
PetroChoice LLC	Gas/Fuel	\$	1,248.14
Phenova Inc	Oper Supplies - Lab	\$	315.76
Pitney Bowes Purchase Power	Postage - Meter Refill	\$	270.99
Ryco Landscaping	Grounds Upkeep - Sept Mowing	\$	1,480.00
Sartorius Corporation	Oper Supplies - Lab	\$	174.54
Storino Ramello & Durkin	Collections - Sept 2019 Releases	\$	584.00
Suburban Laboratories, Inc.	Pro Svs - Lab	\$	132.00
Suburban Laboratories, Inc.	Pro Svs - Lab	\$	324.00
Synagro-WWT, Inc.	Sludge Management - Sept 2019	\$	13,560.00
Technology Masters Inc	Computer Exp	\$	63.50
The Home Depot	Maint/Repair - Plant & Maint/Repair - Coll Sys	\$	139.82
Third Millennium Associates	Collections - QU Bills Rendering	\$	2,538.33
United Laboratories	Oper Supplies	\$	401.40
Village of Lake In The Hills	Collections - Water Shut Off Fees 9/24/19	\$	105.00
Warehouse Direct	Pro Svs - Copies	\$	18.44
Warehouse Direct	Pro Svs - Copies	\$	24.24
Water One, Inc.	Oper Supplies - Personnel, Drinking Water Equip Rental	\$	22.50
Ziegler's Ace Hardware	Oper Supplies	\$	272.98

TOTAL O&M FUND BILLS

\$ 93,438.31

CONSTRUCTION FUND BILLS

Applied Technologies Inc	Engineering - Task Order 19-01 Rear Drive Entrance CEI	\$	852.00
Applied Technologies Inc	Engineering - Task Order 19-02 Electrical Upgrades & Filter Bldg	\$	8,348.00
Controls Consulting	Cap Imprvmts - New Const, SCADA Components	\$	875.00
Controls Consulting	Cap Imprvmts - New Const, SCADA Components	\$	16,475.00
Electrical Testing Solutions	Pro Svs - Electrical Studies (partial amt due)	\$	6,650.00

TOTAL CONSTRUCTION FUND BILLS

\$ 33,200.00

BOND & INTEREST FUND BILLS

Bank of New York Mellon	Interest - 2008 Debt Certificates	\$	23,700.01
Bond Trust Services Corporation	Interest - 2014 Series Bonds	\$	54,918.75

TOTAL BOND & INTEREST FUND BILLS

\$ 78,618.76

GRAND TOTAL OF ALL BILLS PRESENTED FOR APPROVAL IS \$ 252,974.71 OF WHICH \$ 23,547.32 IS FROM THE GENERAL CORPORATE FUND, \$ 117,608.63 IS FROM THE OPERATIONS AND MAINTENANCE FUND, \$ 33,200.00 IS FROM THE CONSTRUCTION FUND, AND \$ 78,618.76 IS FROM THE BOND AND INTEREST FUND.

Approved _____

President Hansen

MANAGER'S REPORT

Month of September, 2019

<u>Customers:</u>	CURRENT	TOTAL for YEAR	DATA for Sept 2018
Total accounts through May 2019:	11,720		
New Customers:	2	12	4
Connections:	0	11	1
Permits Issued:	1	11	1
Permits Issued Past 13 Months:	23		
Total Permits Issued to Date:			
<i>Residential:</i>	10,083		
<i>Commercial:</i>	122		
<i>Industrial:</i>	1		

ILLINOIS E.P.A. SANITARY SEWER EXTENSION PERMITS ISSUED PAST 12 MONTHS

NAME	PE	DWELLINGS	Issued
Heathers Senior Living	75	3 multi-family bldgs	9/11/2019

COLLECTION SYSTEM EMERGENCY RESPONSES:

DATE	LOCATION	PROBLEM	DISTRICT PROBLEM
9/6/19	1015 Mason Lane	smell by sump pump pit	no

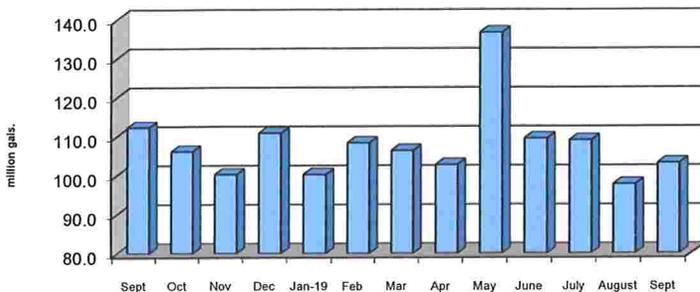
COLLECTION SYSTEM ACTIVITIES:

Twenty lines were televised (2,893') in the original part of town.

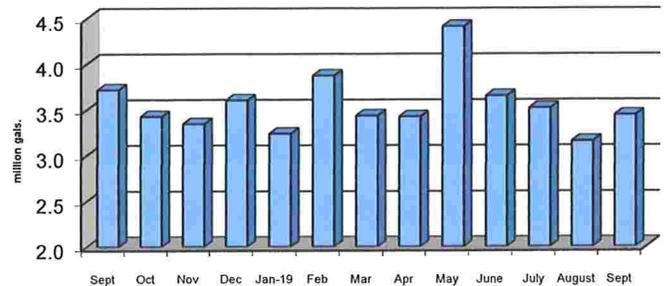
FLOWS:

Total Flow for Month:	103.161	million gallons
Average Daily Flow:	3.439	mgd
Maximum Daily Flow:	6.347	mgd
Precipitation Total:	7.99	inches
Precipitation This Month Last Year:	8.33	inches
Septage Accepted:	519,440	gallons

Total Monthly Flows



Monthly Average Daily Flows



MANAGER'S MONTHLY REPORT

September, 2019

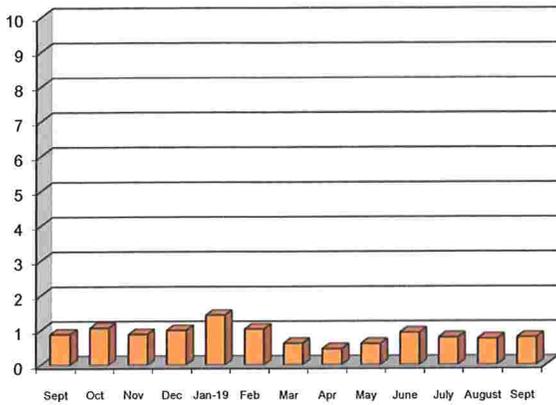
Page 2

TREATMENT PLANT OPERATIONS:

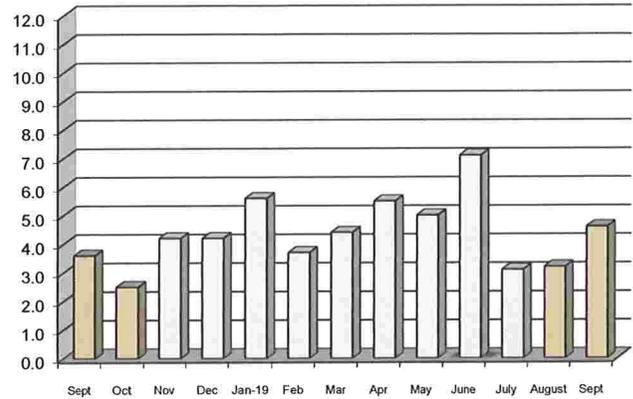
	<u>Average in</u>	<u>Average out</u>	<u>Average % reduction</u>
C.B.O.D:	143 mg/L	0.8 mg/L	99.4%
Total Suspended Solids:	292 mg/L	4.6 mg/L	98.4%
Ammonia Nitrogen:	14.4 mg/L	0.05 mg/L	99.6%
Phosphorus:		0.94 mg/L	
Fecal Coliform:		184 colonies (daily max.)	

This data represents the monthly averages taken from District records and not yet submitted to the Illinois E.P.A.

Effluent Monthly Average - C.B.O.D



Effluent Monthly Average - Total Suspended Solids



Shaded = Filters By-Passed Either Fully or Partially.

PLANT OPERATIONS SUMMARY:

Wasted:	3.490 million gallons
Decanted:	0.000 million gallons
Thickened	3.637 million gallons
To Digester	0.871 million gallons
Pressed	1.193 million gallons

PERSONNEL ACTIVITIES:

Staff attended two different manhole camera demos.

Respectfully submitted,

Tamara C. Mueller
District Manager



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

847/294-4000
847/294-4018 (Fax)

September 4, 2019

Ms. Tamara Mueller, District Manager
Lake in the Hills Sanitary District
515 Plum St.
Lake in the Hills, IL 60156

Re: Lake in the Hills S.D. WWTP
NPDES Number IL0021733
BOW ID Number W1110400003

Dear Ms. Mueller:

On July 12, 2019, a compliance evaluation inspection of the Lake in the Hills S.D. WWTP was conducted by Ms. Karen Katamay, representing the Illinois Environmental Protection Agency. The purpose of the visit was to review facility operations with regard to applicable state and federal water pollution control laws and regulations.

A copy of the inspection report is enclosed for your information.

Please contact Ms. Karen Katamay at 847/294-4000 if you have any questions regarding this inspection.

Sincerely,

DIVISION OF WATER POLLUTION CONTROL

Jay Patel, Regional Manager
Field Operation Section - Des Plaines

Enclosure

cc: Record Unit (01)
Regional File



EPA

United States Environmental Protection Agency Water Compliance Inspection Report

Section A: National Data System Coding (i.e., PCS)

Transaction Code NPDES yr/mo/day Inspection Type Inspector Fac Type
 1|N| 2|5| 3|I|L|0|0|2|1|7|3|3| 11 12|1|9|0|7|1|2| 17 18|C| 19|S| 20|1|

Remarks

 21 _____ 66
 Inspection Work Days Facility Self-Monitoring Evaluation Rating BI QA Reserved.....
 67| | | 69 70| | | 71| | | 72| | | 73| | | 74 75| | | | | 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) Lake in the Hills Sanitary District WWTP 515 Plum St. Lake in the Hills, IL 60156	Entry Time/Date July 12, 2019	Permit Effective Date Jan. 1, 2017
	Exit Time/Date July 12, 2019	Permit Expiration Date Dec. 31, 2021
Name(s) of On-Site Representative(s)/Title(s)/ Phone and Fax Number(s) Tamara Mueller District Manager (847) 658-5122	Other Facility Data	
Name, Address of Responsible Official/Title/Phone and Fax Number Eric Hansen District President (847) 658-5122	Contacted <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Flow Measurement	<input checked="" type="checkbox"/> Operation & Maintenance	<input type="checkbox"/> Storm Water
<input checked="" type="checkbox"/> Records/Reports	<input checked="" type="checkbox"/> Self-Monitoring Program	<input checked="" type="checkbox"/> Sludge Handling/Disposal	<input type="checkbox"/> Combined Sewer Overflow
<input checked="" type="checkbox"/> Facility Site Review	<input type="checkbox"/> Compliance Schedules	<input type="checkbox"/> Pretreatment	<input type="checkbox"/> Sanitary Sewer Overflow
<input checked="" type="checkbox"/> Effluent/Receiving Waters	<input checked="" type="checkbox"/> Laboratory	<input type="checkbox"/> Pollution Prevention	<input type="checkbox"/> MS4

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation Codes, as necessary)
 The facility was noted to be generally well operated and maintained. See attached report.

SEV Codes	SEV Description

Name(s) and Signature(s) of Inspector(s) <i>Karen Katamay</i> Karen Katamay, EPE III/CPESC	Agency/Office/Phone and Fax Numbers IEPA / DWPC / FOS-DES PLAINES 847/294-4000 FAX # 847-294-4018	Date August 28, 2019
Signature of Management Q A Reviewer <i>[Signature]</i>	Agency/Office/Phone and Fax Numbers IEPA / DWPC / FOS-DES PLAINES 847/294-4000 FAX # 847-294-4018	Date 8 / 29 / 19

cc: BOW /DWPC/FOS/ RU . BOW/DWPC/CAS. BOW/DWPC/REGION FILE



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

MEMORANDUM

cc: DWPC/RU (01)
DWPC/CAS

DATE: August 28, 2019
TO: Regional File
FROM: Karen Katamay, DWPC/FOS – Des Plaines
SUBJECT: Lake in the Hills S.D. WWTP
NPDES Number IL0021733
BOW ID Number W1110400003

On July 12, 2019, a Compliance Evaluation Inspection was conducted at the subject facility. Attached is a copy of the report.

Overall, the facility was noted to be well operated and maintained and is in general compliance with their permit requirements. They did exceed their ammonia nitrogen as (N) limits in June 2019, but this was a one-time occurrence due to their VLR maintenance. The facility is currently in compliance with their permit limits.

Attachment: Compliance Inspection Report



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

INSPECTION REPORT

FACILITY NAME: Lake in the Hills S.D. WWTP

NPDES PERMIT NO.: IL0021733

BOW ID NO.: W1110400003

DATE OF INSPECTION: July 12, 2019

BASIN CODE: DTZR-111-02

INSPECTION TYPE: CEI

INSPECTED BY: Karen Katamay, EPE III/CPESC

INTERVIEWED: Tamara Mueller, District Mgr.

GENERAL INFORMATION

Responsible Officials:

Eric Hansen, District President (847) 658-5122
 Tamara Mueller, District Manager (847) 658-5122

Plant Personnel and Certification Status:

Tamara Mueller	District Manager	Class 1
Ross K. Nelson	Chief Operator	Class 1 & CS
Mike Nelson	Maintenance	Class 1 & CS
James Olvera	Field Tech.	Class 1 & CS
John Caccamo	Maintenance <i>Supervisor</i>	Class 4 & CS
Jennifer Olson	Lab Tech	Uncertified

Plant Location and Mailing Address:

The Lake in the Hills Sanitary District WWTP and the Sanitary District offices are both located at 515 Plum St. The legal location is the NW ¼ of Section 21, T.43N-R.8E, Algonquin Township; McHenry County. The mailing address for the facility is as follows:

Lake in the Hills S.D.
 515 Plum St.
 Lake in the Hills, IL 60156

LITH SD WWTP CEI
 Inspection Date: July 12, 2019

Receiving Waters:

The plant discharges to Crystal Creek, tributary to the Fox River, tributary to the Illinois River. Crystal Creek is rated Class C (Moderate Aquatic Resource) and is considered a General Use Stream, with a 7Q10 of 3.8 cfs at the point of discharge.

NPDES Permit Requirements:

Effective Date:	January 1, 2017
Expiration Date:	December 31, 2021
Monthly Avg. CBOD:	10 mg/L
Monthly Avg. TSS:	12 mg/L
Monthly Avg. Amm-N	
March – Oct.:	1.2 mg/L
Nov. – Feb.:	2.5 mg/L
Phosphorus, monthly avg.:	1.0 mg/L

In addition to the above monitoring, the effluent is also monitored for flow, pH, Dissolved Oxygen, and Fecal Coliform. There are also monitoring only requirements (no permit limit) for Total Nitrogen, Dissolved Phosphorus, Nitrate/Nitrite, Total Kjeldahl Nitrogen (TKN), Alkalinity and Temperature. Influent is monitored for flow, BOD and TSS.

There are also twenty-one Special Conditions that apply. Of particular interest to this report are the following:

Special Condition No. 10 – requires semi-annual effluent monitoring for oil and metals, beginning 3 months from the permit effective date. This condition also provides for reporting of pretreatment activities.

Special Condition No. 15 – adds requirements for a Capacity, Management, Operations, and Maintenance (CMOM) plan by January 1, 2018.

Special Condition No. 18 – Requires participation in the Fox River Study Group.

Special Condition No. 19 – requires water quality sampling in the receiving stream.

Special Condition No. 21 – phases in barium removal and monitoring requirements.

Plant Description:

The Lake in the Hills S.D. WWTP is an activated sludge plant with preliminary, secondary and tertiary treatment with UV disinfection. Unit operations and processes include mechanical bar screens, grit removal, oxidation ditch, vertical loop reactor (VLR), secondary clarifiers, tertiary filters and UV disinfection.

LITH SD WWTP CEI
 Inspection Date: July 12, 2019

Sludge processing includes aerobic digestion, sludge holding tank, sludge press and sludge drying beds with land application. In addition, the WWTP also has a septic receiving station. A current flow schematic is attached (see Attachment A). Photos taken the day of the inspection are also attached.

Plant Capacity and Loading:

This facility services the Village of Lake in the Hills and portions of Huntley and Crystal Lake. Present population served is approximately 34,300, with the majority (29,000) being from Lake in the Hills. The plant is currently rated 4.5 MGD (DAF) and 10.4 MGD (DMF) with design loadings of 8131 lbs/day for BOD and 9021 lbs/day for TSS. The design P.E. is 45000.

The DMR summary for the period of July 2018 through June 2019 indicated the following:

Average Flow:	3.41 MGD
Average Flow, three lowest months:	2.98 MGD
Average Maximum Flow:	5.37 MGD
Avg. influent BOD loading:	129 mg/L
Avg. influent TSS loading:	251 mg/L

Critical Review/Restricted Status:

One sewer extension permit was issued within the past two years, totaling 388 P.E.

Current plant loading for the Lake in the Hills S.D. WWTP, based on the average flow of the three lowest months and P.E.'s added within the last two years, shows the following:

Average flow, three lowest months:	2.98 MGD
P.E.'s added, last two years:	388 P.E. (0.039 MGD)

$$\text{Percent of hydraulic design capacity} = \frac{(2.98 + 0.039)}{4.5} = 67.1 \%$$

Percent of organic loading capacity:

$$129 \text{ mg/L} \times 8.34 \times 2.98 \text{ MGD} = \frac{3206 \text{ lbs/day}}{8131 \text{ lbs/day}} = 39.4 \%$$

Percent of solids loading capacity:

$$251 \text{ mg/L} \times 8.34 \times 2.98 \text{ MGD} = \frac{6238 \text{ lbs/day}}{9021 \text{ lbs/day}} = 69.1 \%$$

Based on the above evaluation, the facility does not need to be considered for critical review or restricted status at this time.

SEWAGE COLLECTION SYSTEM

Type of System:

The sewers in the service area are all separate sanitary and storm. There are no combined sewers. There are over 125 miles of sewer lines tributary to this facility.

Lift Stations:

In addition to the main lift station at the plant, there are six lift stations tributary to this facility. Lift stations are operated and maintained by District personnel and checked weekly. The lift stations are as follows:

- | | |
|----------------|-------------------------------|
| 1. Decatur | own generator |
| 2. Concord | dual electrical feeds |
| 3. Dam | portable generator connection |
| 4. Beach | portable generator connection |
| 5. Pyott Rd. | portable generator connection |
| 6. Meadowbrook | own generator |

All lift stations have an automatic dialer to the operators and the major lift stations are monitored through the SCADA system. All stations either have their own generator or an auxiliary connection for a portable generator.

System Problems and Maintenance:

The collection system is maintained by District personnel. The District has been making infrastructure repairs and replacements as needed.

The district has a regular sewer maintenance plan that includes inspections, televising, cleaning, and sewer linings and repairs. They have their own televising equipment and are also mapping their sewer lines using GPS. They are televising all sewers on a 5 year cycle and problem areas more frequently. In addition, they are doing an inflow and infiltration study in the area tributary to the Dam lift station.

In the past year, they televised approximately 54,400 feet of sewer line and did cleaning and root cutting in approximately 12,600 feet of sewer. The district has also installed "smart covers" on some of their manholes which will sense the elevation of the flow through the manhole.

No back-ups or surcharges were noted within the past year.

Industrial Users:

There is only one industrial user of note within the District and that is Transport Services Company (formerly Enterprise Transportation Co.). The industry has a pretreatment system for their truck washing operation (permit no. 2017-EP-62531). The District monitors the discharge

from this facility and gave them a phosphorus limit. The plant treated approximately 1.9 million gallons from this facility last year.

The plant also receives ion exchange regenerant and filter backwash water from water treatment plants in Huntley and Lake in the Hills, which contains small amounts of barium and radium. In the last year, the district treated a total of approximately 39.6 million gallons of backwash water.

Domestic septage accounted for approximately 3.0 million gallons of the annual flow. Septage is checked visually and for pH with each load and a sample is taken of each load, although only random samples are sent out for analysis to a contract lab. The facility has composite samplers for both the influent and effluent that have temperature and pH monitoring capabilities, which also aids in monitoring the septage. Parts of the septic receiving system were recently rebuilt and no problems have been noted due to septage.

Not including the backwash water from the water treatment plants, it is estimated that less than 1% of the plant flows are from industry. No significant problems were noted due to industry or other flows received within the past year.

WASTEWATER TREATMENT PLANT

Inlet Structure:

There are four interceptors directing flows to the plant. They are 10 inch, 15 inch, 24 inch and 30 inch, respectively. The interceptors converge at the influent control facility. This facility has the capability to divert flows to the surge pond during high flows, if necessary. Any diverted flows are then returned to the head of the plant for treatment once flows return to normal.

Raw Sewage Pumping:

There are four pumps in the main lift station. Three of them are 75 HP constant speed pumps (3000 gpm), and one is a 150 HP VFD pump (4000 gpm). Usually only one or two pumps run at a time. At the time of the inspection, all pumps were operational. The pumps direct the sewage into two force mains.

Influent Flow Measurement:

The influent is measured using two magmeters, with one on each force main. The flows are then added to get the total influent flow. The meters are located in the vault next to the main lift station.

Screening:

There are two mechanical bar screens with ¼ inch spacing. There is one screen in each of the influent channels. Total hydraulic capacity for the screens is 20.8 MGD. Both screens were operational at the time of the inspection.

Grit Tanks:

There are two sets of horizontal flow grit chambers. The north units are 12 ft. x 12 ft. x 3 ft. each, followed by a grit washer/separator with a volume of 6463 gallons for both units. The south units are 16 ft. x 16 ft. x 4 ft. each, also followed by a grit washer/separator system, with a volume of 15,319 gallons for both units. Total volume for all units is 21,782 gallons and the detention time at DAF is 6.97 minutes. All grit and screenings are landfilled. There is also a secondary fine screen in the grit building that can be used if needed. A bypass channel will direct the flows around the secondary screen if it is not in use. There are separate buildings for the north and south units.

At the time of the inspection, the north grit chambers were off-line and only the new units were in use. All units are operational if needed and the units in service were operating satisfactorily.

Oxidation Ditch and Vertical Loop Reactor (VLR) Unit:

Following grit removal, flow then goes to the VLR unit and then to the oxidation ditch in series. The plant has the option of directing some of the flow directly to the oxidation ditch, bypassing the VLR unit, but all flows from the VLR go only to the oxidation ditch. The VLR unit consists of two side by side cells where the flow passes through a vertical loop with both anoxic and aerobic zones to aid in nutrient removal. The unit is 165,000 cubic feet (1.2 million gallons). The VLR also has VFDs that will ramp up or down based on ORP readings to allow adjustment of air flow to the unit.

The wastewater then flows to the four-channel oxidation ditch, which is 481,000 cubic feet (3.6 million gallons). Influent can be added to the first, second or third channels, but RAS is only blended with the influent in the outer channel. There are automatic D.O. meters in channels 1 and 4 and some of the aerators were turned off to allow for anoxic zones in the ditch. The oxidation ditch also has ORP controls that will turn aerator banks on or off as needed.

Total volume for both treatment units is 646,000 cubic feet (4.8 million gallons) and the detention time at DAF is 25.6 hours. At the time of the inspection, both units were operating satisfactorily with little to no foam. THE VLR had recently been drained for cleaning and maintenance but was back on-line at the time of the inspection.

Secondary Clarification:

Following aeration, there are four 75 ft. diameter clarifiers, with a total surface area of 17,672 sf. Surface settling rate with one clarifier out of service is 340 gpd/sf at DAF and 785 gpd/sf at DMF. There is a flow distribution box prior to the clarifiers that allow operators to adjust the flows to the different clarifiers. The clarifiers also have automatic sludge blanket monitors that can adjust pumping rates to control sludge blanket depth.

At the time of the inspection, there were three clarifiers in service. The remaining clarifier was off-line but could be put back into service if needed. The facility will switch the clarifiers

seasonally. The clarifiers that were in service appeared to be operating satisfactorily with only a light scum layer. Effluent appeared clear.

Tertiary Treatment:

Following the clarifiers, the flow goes to the five traveling bridge sand filters. The filters are each 9 ft. x 40 ft., with a surface area of 360 sq. ft. each (1800 sq.ft. total). Filtration rate at DAF is 1.73 gpm/sf. At the time of the inspection, two of the sand filters were off-line (not needed).

Effluent Disinfection:

Effluent passes through the ultraviolet disinfection system prior to discharge. The system consists of two channels, each equipped with banks of UV lights. The design dosage is 30,960 uW sec/cm². Usually only one channel is used at a time and they are rotated, but the system is set up so that the second bank will turn on if the second channel is needed during high flows. All the UV bulbs have been recently replaced.

Effluent Flow Measurement and Outfall Structure:

Effluent flow is monitored in two locations. The first is in the channel that leads to the wetlands pond and the second is in the direct discharge vault to Crystal Creek, which bypasses the pond. The effluent channel was designed to cascade the flows to allow additional aeration and to promote cooling of the effluent. This was considered to be especially important in the winter months to minimize impacts on a downstream lake and allow it to freeze over in the winter.

Both locations monitor flow using Parshall flumes and ultrasonic meters. The plant was using the effluent pipe at the time of the inspection.

SLUDGE HANDLING AND DISPOSAL

Aerobic Digesters and Sludge Processing:

Sludge is first pumped to the sludge holding tank that is 82 ft. in diameter x 16 feet deep with a volume of 572,750 gallons. From there it is sent to the gravity belt thickener. Once the sludge is thickened, it is directed to one of the digesters. Digester no. 910 is 96 feet in diameter x 18 feet deep and has a volume of 773,329 gallons. Digester no. 920 is 90 feet in diameter x 20 feet deep and has a volume of 856,530 gallons. Digester no. 930 is 90 feet in diameter by 20 feet deep and has a volume of 856,530 gallons. A fourth digester was recently added with a capacity of 1,000,000 gallons.

At the time of the inspection, the digesters appeared to be operating satisfactorily with very little foam. The facility did have an incident in June where one of the digesters foamed up and the foam overflowed onto the ground. Staff immediately addressed the situation and it did not reoccur.

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Drying Beds:

The plant still has some outdoor sludge beds, if needed, but currently all sludge is fed to the sludge press and then stored in the covered sludge area until it is hauled for land application.

Sludge Presses:

There is a 2.0-meter belt filter press. The press is now operated by plant personnel. There is also a gravity belt thickener unit that is used to thicken the sludge prior to being sent to the digesters.

Disposal:

Disposal of the sludge from this facility is through land application. The current hauler is Synagro. Approximately 706 dry tons were hauled in 2018. The plant has a current land application permit as follows:

Permit No.:	2018-SC-63654
Issue Date:	November 2, 2018
Expiration Date:	September 30, 2023
Amount permitted:	1000 dry tons (approx.)

MISCELLANEOUS

Plant Buildings and Grounds:

Plant buildings and grounds were in good condition and appear to be well kept and maintained. In addition, the facility has created a wetland environment in their outfall pond.

There are homes and condominiums near to the plant and the facility has taken extra efforts to minimize both noise and odors for the residents. No odor complaints have been received by the Agency within the past year.

Potable Water Supply Protection:

There are no known cross connections between potable and non-potable water and non-potable water sources are marked.

Plant Emergency Operations:

There is an on-site diesel generator that is rated 1000 KW. The plant also has a SCADA system with monitoring and alarm capabilities and all major units and equipment are alarmed.

NPDES PERMIT COMPLIANCE

Permit:

Permit verification was satisfactory. The permit is current and all known outfalls are included.

Records and Reports:

Records and reports appeared to contain all the required information. All required reports have been submitted in a complete and timely manner.

Flow Measurement:

Influent and effluent flows are both monitored, the meters appear to be adequately rated for the expected flows, and locations appear to be representative of the actual flows. Flow meters are calibrated as required and were last calibrated in July 2019.

Laboratory:

All regular NPDES permit parameters, including phosphorus, are done on site. The facility also runs process control tests, including, but not limited to, microscopic evaluations, MLSS, sludge units, SVI, and settleability tests.

Suburban Labs is used for metals, alkalinity, barium and total nitrogen, as well as spot checks on the septic haulers. In addition, Element Materials Technology (EMT) is the laboratory used for the sludge analyses, and ATI Environmental Midwest Lab is used for the radium results.

Laboratory equipment is maintained and calibrated as required and they recently replaced some of their probes. The permittee received all acceptable results on their last DMR-QA study.

Effluent and Receiving Waters:

The effluent appeared clear at the time of the inspection. A summary of the DMR results for the period of July 2018 through June 2019 indicated the following:

Monthly Avg. Effluent Flow:	3.51 MGD
Monthly Avg. CBOD:	0.92 mg/L
Monthly Avg. TSS:	4.5 mg/L
Monthly Avg. Amm-N:	0.29 mg/L
Monthly Avg. Phosphorus:	0.68 mg/L
Avg. Daily Minimum D.O.:	9.72 mg/L
Avg. BOD removal efficiency:	95.4 %
Avg. TSS removal efficiency:	98.2 %

The facility exceeded its Ammonia limits in June 2019 during their VLR maintenance. The exceedances were a one-time occurrence and no other exceedances were noted.

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Self-Monitoring Program:

Sampling and analysis of the influent and effluent have been performed at equal to or greater than the required frequency. Automatic composite samplers are used for the influent and effluent composite samples and the samples are refrigerated during the collection process. Sample locations appeared to be representative and holding times and analyses are in accordance with the 40 CFR requirements. The facility also runs process control tests and procedures and does regular microscopic analyses of the mixed liquor.

Operation and Maintenance:

All units were operational at the time of the inspection, with the only units out of service due to low flows and/or routine maintenance. The facility has a back-up power source in case of emergency and major equipment and units are alarmed. The facility keeps operational logs and routine maintenance activities are performed as required. Operating staff are well trained and properly certified.

Sludge Disposal:

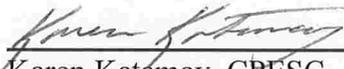
All sludge appeared to be disposed of in accordance with the NPDES and Sludge Land Application permits. Sludge from this facility is rated Class B and the requirements for Class B sludge have been met. The facility is using pathogen reduction alternative B1 (geometric mean of seven fecal samples) and vector attraction reduction option 10 (incorporation within 6 hours).

Performance Limiting Factors:

No performance limiting factors were noted at this time.

SUMMARY

Overall, the facility was noted to be well operated and maintained and is in general compliance with their permit requirements. They did exceed their ammonia nitrogen as (N) limits in June 2019, but this was a one-time occurrence due to their VLR maintenance. The facility is currently in compliance with their permit limits.



Karen Katamay, CPESC
Environmental Protection Engineer III - BOW

Attachments: Photos and flow diagram



Photo 1 – Mechanical screens



Photo 2 – Septic receiving station

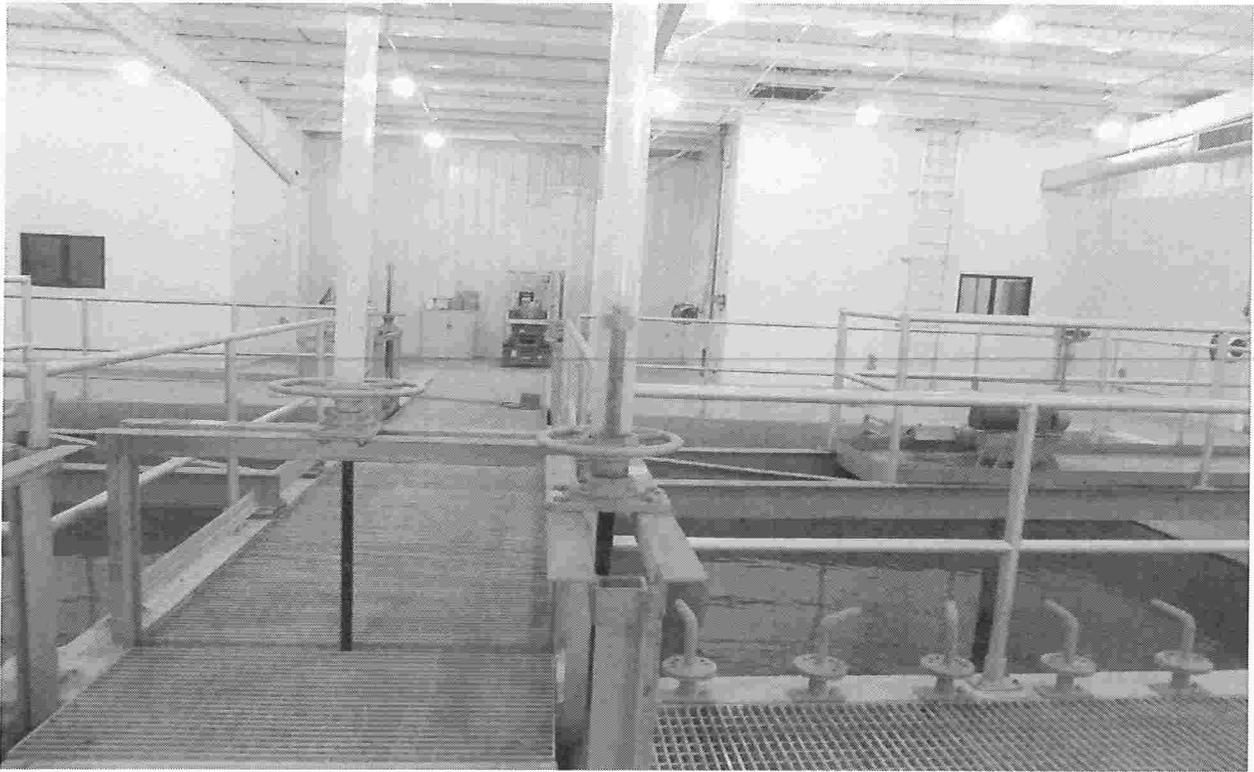


Photo 3 – Horizontal flow grit chambers

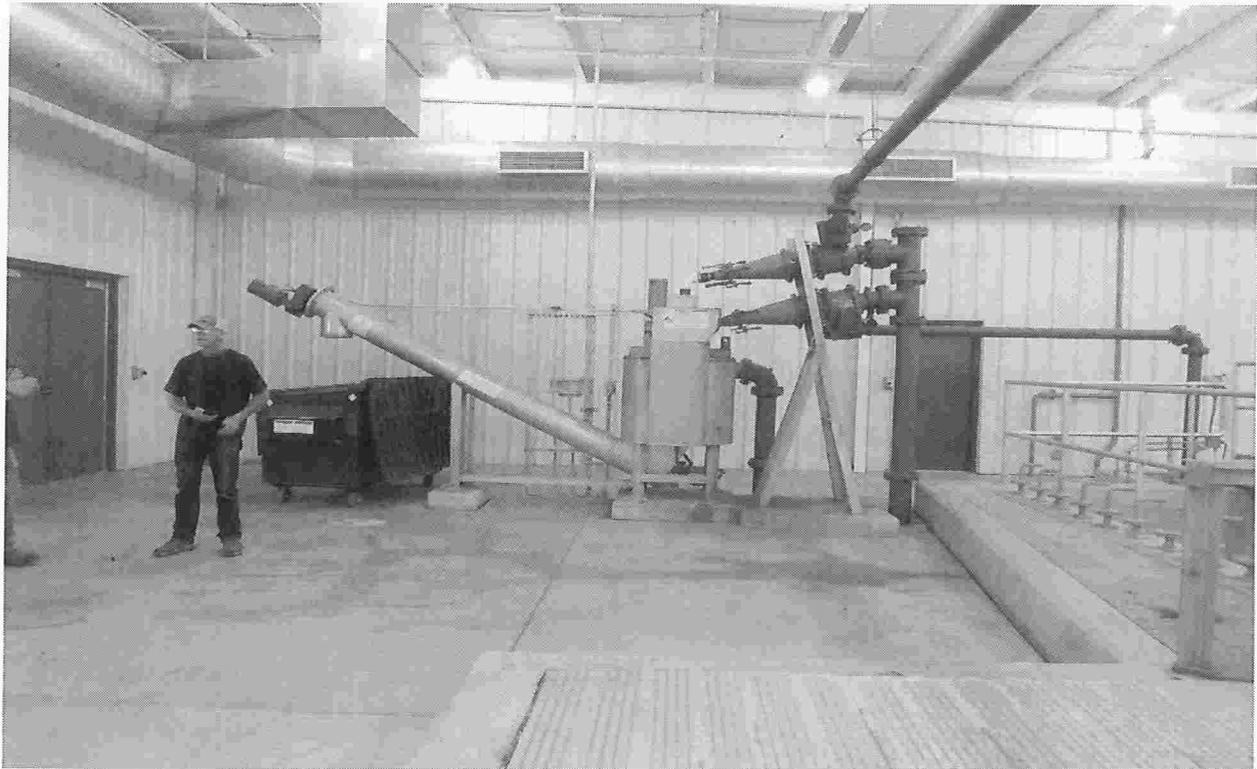


Photo 4 – Grit collection system



Photo 5 – Vertical loop reactor (VLR)



Photo 6 – Oxidation ditch



Photo 7 – One of the clarifiers in service.



Photo 8 – Another of the clarifiers in service.



Photo 9 – Another clarifier in service

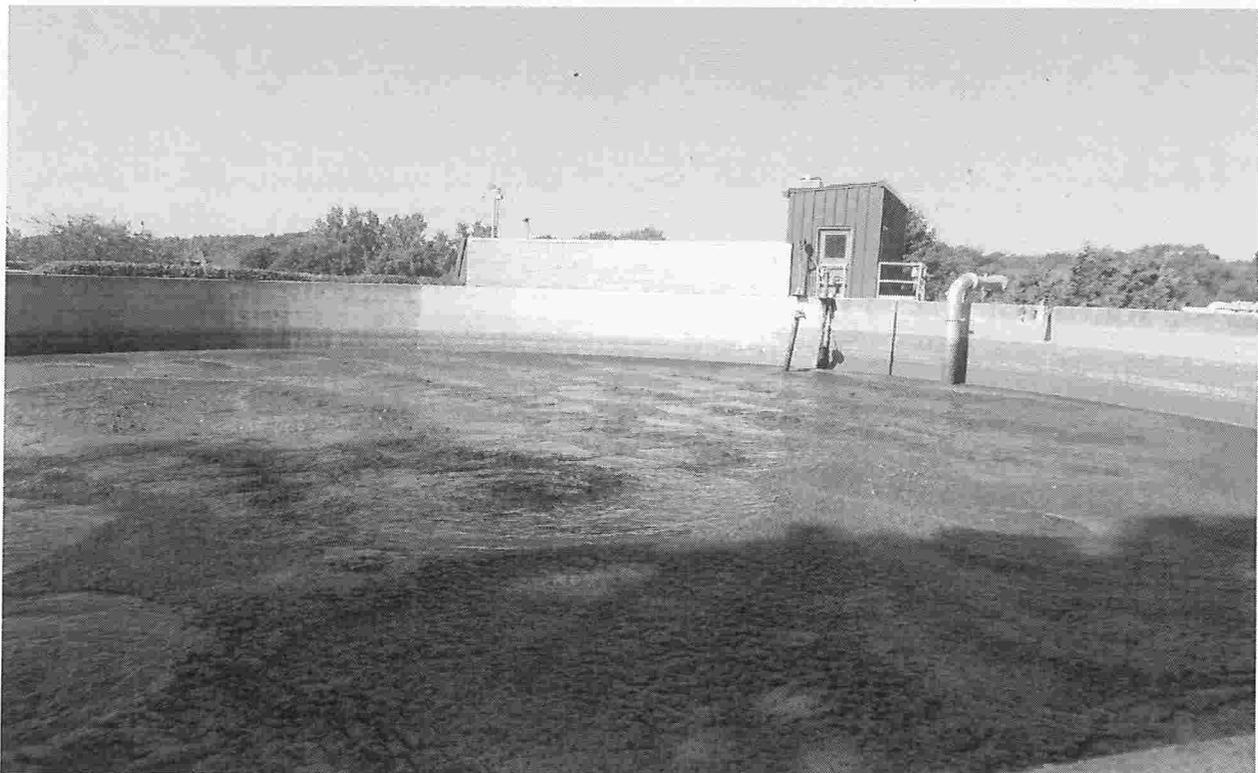


Photo 10 – One of the digesters

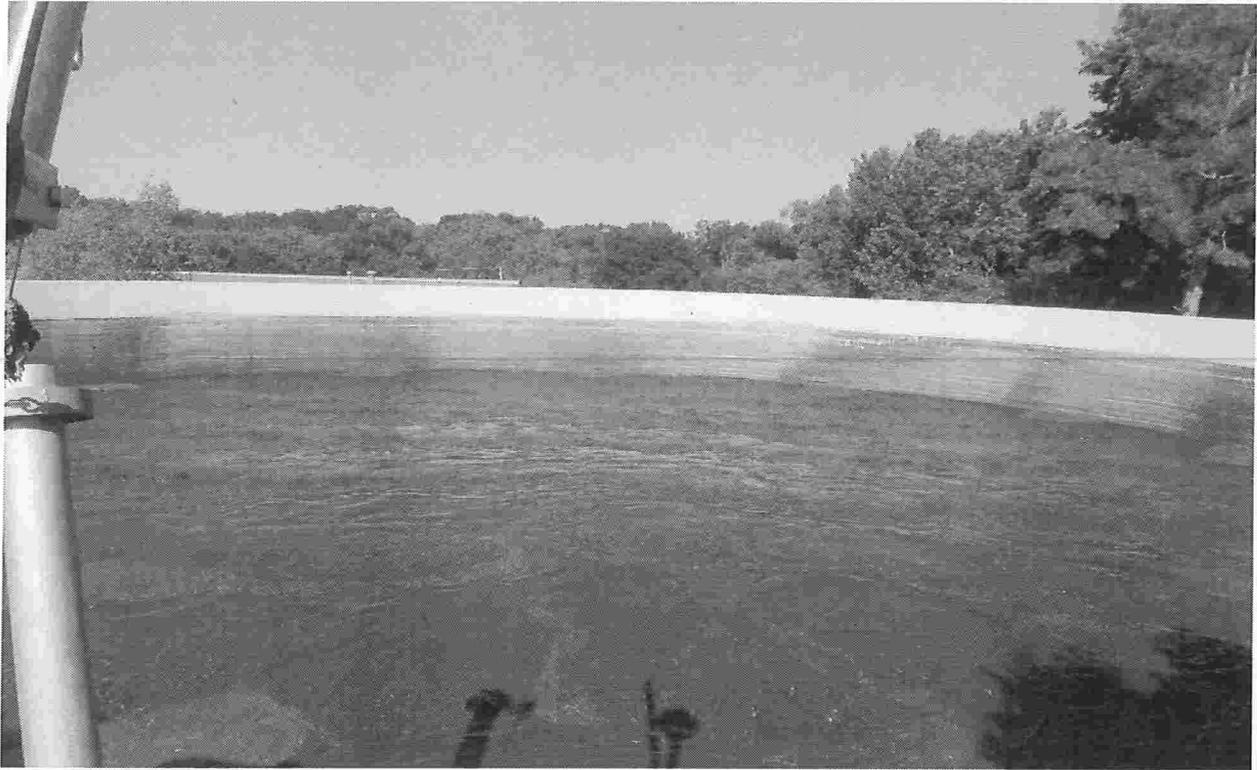


Photo 11 – Sludge holding tank

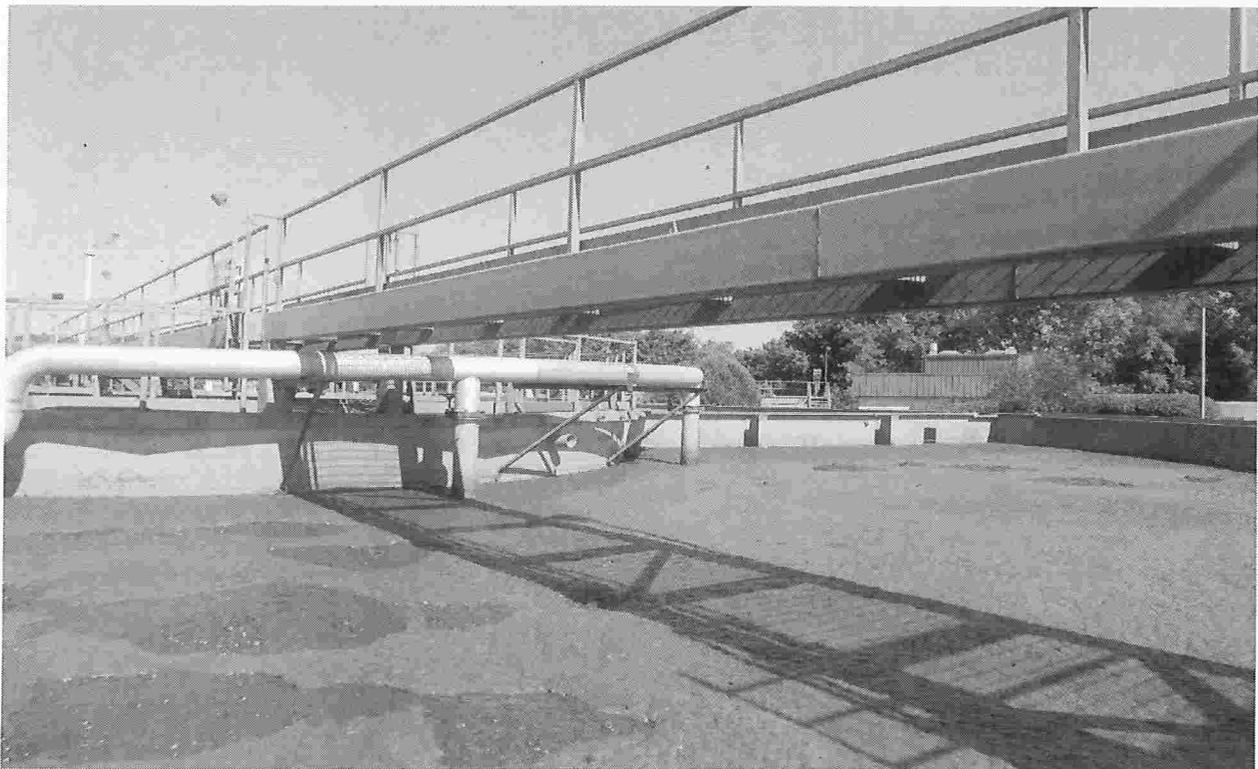


Photo 12 – Second digester



Photo 13 – Third digester (significant foam noted on this one).



Photo 14 – Fourth digester.



Photo 15 – Covered sludge holding area

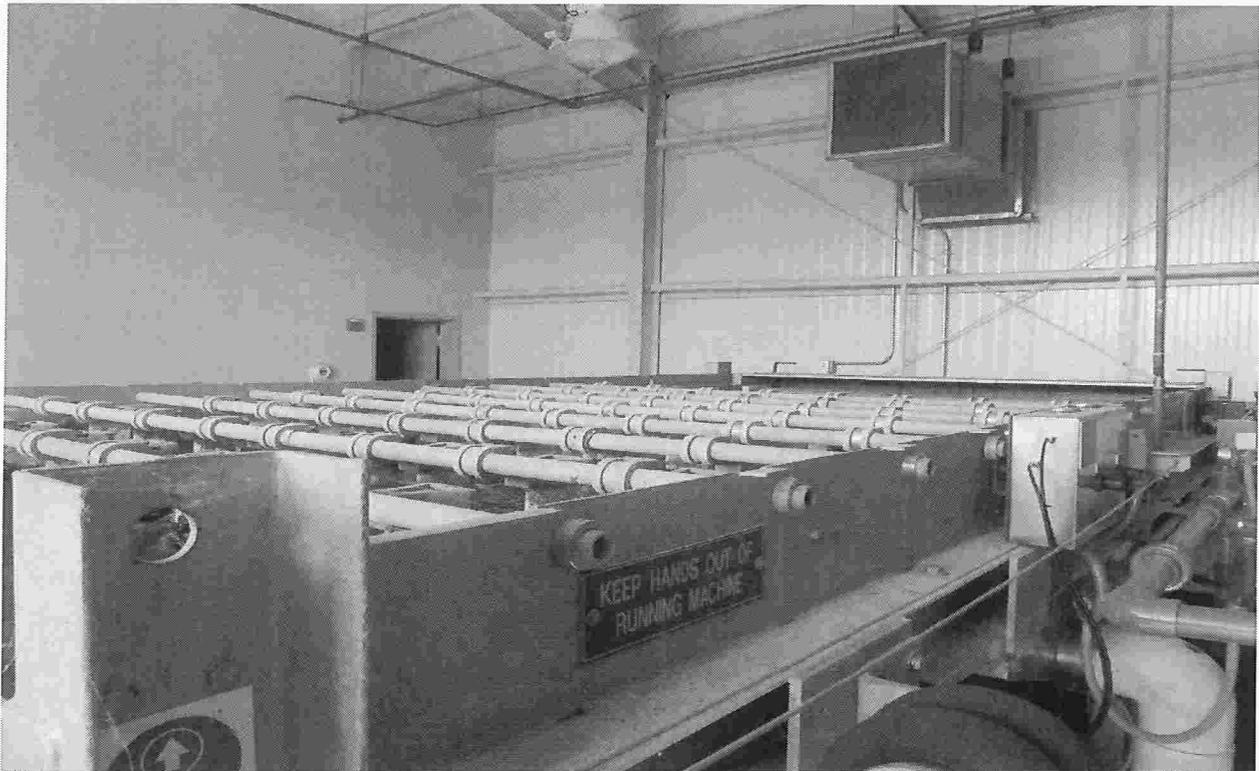


Photo 16 – Gravity belt thickener for sludge

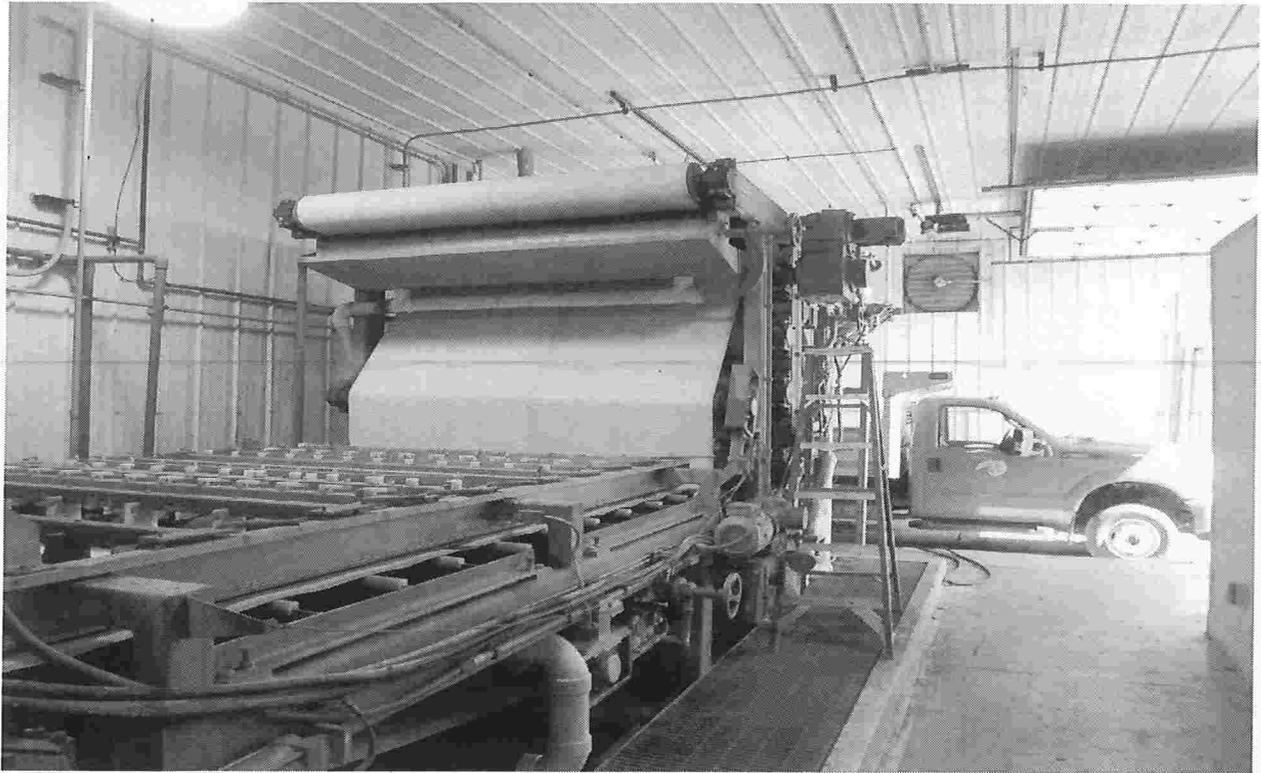


Photo 17 – Sludge belt press



Photo 18 – One of the traveling bridge sand filters



Photo 19 – Two more of the sand filters



Photo 20 – UV disinfection system



Photo 21 – Effluent after UV system



Photo 22 – Cooling channel (not currently in use).



Photo 23 – Outfall to creek

ATTACHMENT A



- BUILDING
- ▭ TANKS
- FLOW PROCESS

