

**OSAGE BEACH / LAKE OZARK
JOINT SEWER BOARD MEETING
AGENDA
February 21st, 2023 @ 4:00 p.m.
LAKE OZARK CITY HALL**

1. CALL TO ORDER

2. ROLL CALL

Mayor, Lake Ozark, Dennis Newberry
Mayor, Osage Beach, Michael Harmison
City Administrator, Lake Ozark, Harrison Fry
City Administrator, Osage Beach, Jeana Woods
Alderman, Osage Beach, Kevin Rucker
Alderman, Lake Ozark, Pat Thompson
Public Works Director, Lake Ozark, Matt Michalik
Public Works Operations Manager, Osage Beach, Kevin Crooks
Member at Large, Mr. Gary Hamner

3. MINUTES

Page Numbers

Regular Meeting: January 17th, 2023

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4. REPORTS –

Bill List	4-10
Revenue Budget Analysis	11
Expenditure Budget Analysis	12
Income & Expense Summary	13

January 2023 Alliance Report of Operations

14-39

Approval of January 2023 Flow Chart

5. OLD BUSINESS

A. Board Representative Update

6. NEW BUSINESS

- A. Janitorial Contract to review/approval
- B. Lake Ozark/Osage Beach Joint Wastewater Plant Inventory and ERP discussion and possible approval
- C. 5-year CIP PLAN discussion/review/approval
- D. Review, discussion and possible action - Bids for a replacement Andco Actuator for Clarifier #2. Pg.40

7. ADDITIONAL DISCUSSION ITEMS

8. ADJOURNMENT

THE NEXT MEETING WILL March 21st, 4:00 PM @ LAKE OZARK CITY HALL

LAKE OZARK-OSAGE BEACH JOINT SEWER BOARD

Meeting Minutes – January 17th, 2023

CALL TO ORDER:

Mayor, Lake Ozark, Dennis Newberry called the meeting to order at 4:00 pm on Tuesday January 17th, 2023 at Lake Ozark City Hall.

ROLL CALL:

Mayor, Lake Ozark, Dennis Newberry – Present
 Mayor, Osage Beach, Michael Harmison- Present
 City Administrator Lake Ozark, Harrison Fry - Present
 City Administrator Osage Beach, Jeana Woods - Present
 Alderman Osage Beach, Kevin Rucker- Present
 Alderman Lake Ozark, Pat Thompson- Present
 Public Works Director Lake Ozark, Matt Michalik – Absent
 Public Works Operations Manager, Kevin Crooks – Present
 Resident Member, Mr. Gary Hamner - Present

MINUTES:

Alderman Lake Ozark, Pat Thompson motioned to approve the meeting minutes from November 15th, 2022. The motion was seconded Public Works Operations Manager, Kevin Crooks and passed unanimously.

REPORTS:

- Bill List –
- Revenue Budget Analysis -
- Expenditure Budget Analysis -
- Income & Expense Summary –

Bill List, Revenue Budget Analysis, Expenditure Budget Analysis and the Income & Expense Summary, Motion to approve by City Administrator Osage Beach, Jeana Woods. The motion was seconded by City Administrator Lake Ozark, Harrison Fry and was passed unanimously

ALLIANCE REPORT OF OPERATIONS:

Alliance Report of Operations: The average daily incoming flow for November was 1.055 mgd and 0.940 mgd for December. We had 4.5 inches of precipitation in November and 1.9 inches precipitation in December, measured at the WWTP.

Operationally, the plant's discharge was excellent, with an effluent monthly average BOD and TSS of 1.5 mg/l and 1.3 mg/l respectively for November and 2.8 mg/l and 2.6 mg/l for December which represents a 98.6 + % or better removal.

The MLSS average for both aeration basins was 3,939 mg/l in November and 4,362 mg/l in December. The total dry weight sludge inventory for November totaled 188,954 pounds and for December totaled 218,478 pounds. There were 8 tanker loads of biosolids or 28,800 gallons land applied in December. We received 38 loads of septage or 89,500 gallons for November and 33 loads of septage or 71,500 gallons for December.

Other –

- A. Alliance provided copies of the updated 2023 ERP and plant inventory for review and discussion.
- B. Alliance handed out a draft of the plants 5-year CIP plan for review and discussion.

Alderman Lake Ozark, Pat Thompson motioned to approve November and December Alliance Report. The motion was seconded by Resident Member, Mr. Gary Hamner and it was unanimously approved.

APPROVAL OF FLOW CHART

Alderman Lake Ozark, Pat Thompson motioned to approve the flow chart. The motion was seconded by Resident Member, Mr. Gary Hamner and it was unanimously approved.

OLD BUSINESS:

- A. Board Representative Update. Performing as expected. The annual I&I report will be submitted before 01/28/2023.

NEW BUSINESS:

- A. Sewer plant flow presented by Mr. Gary Hamner
- B. Lake Ozark/Osage Beach Joint Wastewater Plant Inventory and ERP reviewed and discussed.

ADDITIONAL DISCUSSION ITEMS:

Add janitorial contract to February's agenda for approval.

ADJOURNMENT:

With no further business to discuss, the meeting adjourned at 4:55 pm. Motion made by Alderman Osage Beach, Kevin Rucker to adjourn and was seconded by City Administrator Osage Beach, Jeana Woods.

Approved on:

Mayor, Dennis Newberry

Clerk, Robin Craig

JOINT SEWER BOARD
BILL LIST
FEBRUARY 21, 2023

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:	\$	-
OPERATING FUND BILLS TO BE PAID:	\$	44,043.86
EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:	\$	-
EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:	\$	855.37

TOTAL \$ 44,899.23

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Paid To:	Description:	Amount:
			\$ -
			\$ -
			\$ -
		TOTAL	\$ -

OPERATING FUND BILLS TO BE PAID:

Account	Paid To:	Description:	Amount:
4000	Equipment Replacement Fund	Payment into ER Fund	\$ 5,416.00
4020	Catalyst Electric	Labor Thermostat/heater/relay	\$ 333.63
4020	Catalyst Electric	Emergency Aerator #1 main wire	\$ 3,064.71
4020	Core & Main	Pipe Fitting for Headworks Bldg.	\$ 26.12
4020	Gralnger	Breaker for the Pista Grit	\$ 377.34
4020	Majestic Franchising Inc.	February	\$ 275.00
4020	M/C Calco Industrial Electronics, Inc	Overload relay for Pista Grit	\$ 46.62
4020	M/C Calco Industrial Electronics, Inc	Overload relay for Pista Grit	\$ (24.08)
4020	M/C Calco Industrial Electronics, Inc	Spider Gear Insert/bar screen	\$ 33.87
4020	M/C QuickBooks	Accounting Software	\$ 30.00
4020	Menards	Tester, Skrewdrivers	\$ 14.98
4020	Menards	Gasket Maker	\$ 9.96
4170	Alliance Water Resources, Inc.	February	\$ 29,466.00
4175	Ameren MO	11673321	\$ 4,752.81
4175	Ameren MO	98041275	\$ 56.63
4176	AT&T	February	\$ 104.61
4176	Republic	February	\$ 59.66
		TOTAL	\$ 44,043.86

EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:

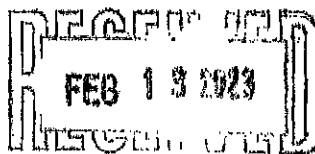
Account	Paid To:	Description:	Amount:
			\$ -
		TOTAL	\$ -

EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:

Account	Paid To:	Description:	Amount:
4000	USA Bluebook	Replacement Portable DO Meter	\$ 855.37
4000			\$ -
		TOTAL	\$ 855.37

Catalyst Electric

31 Rock House Rd
Linn Creek, MO 65052
573-552-8488
office@catalystelectric.com
www.catalystelectric.com

**INVOICE**

BILL TO
Joint Sewer Board
Joint Sewer Board
#3 Anderson Road
Lake Ozark, MO

INVOICE #
16903

DATE
02/13/2023

TERMS
Net 30

DUE DATE
03/17/2023

	DESCRIPTION	QTY	RATE	AMOUNT
Elec	Electricians: Zach, Andy and Mikael Date: 01/05/2023 - Troubleshoot aerator motor and controls and feeder wire. - Found a bad main switch in gear. - Re-piped and fixed broken area of feed wire. - Ran new conduit, feed wire and control wire to panel.	25	75.00	1,875.00
Elec	Electrician: Dave Date: 02/07/2023 - Changed out 2-pole 480V breaker.	1.50	75.00	112.50
Material	FT #4 THHN	150	1.521	228.15
Material	FT #12 THHN	350	0.27	94.50
Material	FT #10 THHN	50	0.42	21.00
Material	FT 1-1/4" PVC	50	2.587	129.35
Material	1-1/4" PVC TA W/ LOCK NUT & BSHG	2	3.705	7.41
Material	1-1/4" PVC 90D	2	9.152	18.30
Material	1-1/4" PVC COUP	3	0.624	1.87
Material	FT 1-1/4" CARFLEX	4	3.328	13.31
Material	1-1/4" CARFLEX CONN	1	11.145	11.15
Material	1-1/4" CARFLEX 90D CONN	1	23.715	23.72
Material	1-1/4" RIGID COMP CONN	1	29.052	29.05
Material	1-1/4" RIGID COUP	1	6.994	6.99
Material	10X10X6 PVC J BOX	1	96.135	96.14
Material	1-1/4" 1-HL STRAP	10	3.081	30.81
Material	2G POLARIS SPLICE	3	56.0925	168.28
Material	TAPCON	10	0.66	6.60

Material	BLUE/ORANGE WIRE NUT	20	0.104	2.08
Material	2P 15A 480V BRKR	1	188.50	188.50

PROPER
FEB 13 2023
RECEIVED

Thank you for your business!

BALANCE DUE

\$3,064.71

EMERGENCY REPAIR OF AERATOR #1
MAIN ELEC. WIRE

GL Acct#:

4020

Signature:

[Handwritten Signature]

Date:

2/13/23



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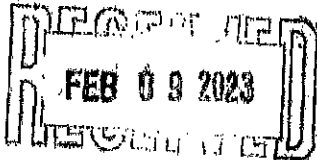
FOCUSED ENERGY. For life.

Account Number: 4580005832
Customer Name: ALLIANCE WATER RESOURCES INC
Service Address: 3 ANDERSON RD,
LAKE OZARK, MO 65049

Current Detail for Statement 02/09/2023

Total Electric Charges \$4,752.81

Total Amount Due \$4,752.81



AMOUNT DUE \$4,752.81

Due Date 03/03/2023

Amount After Due Date \$4,800.34

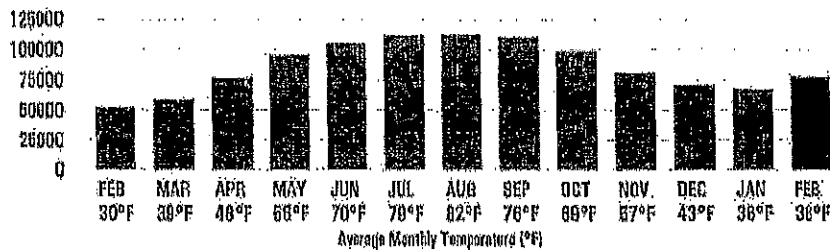
Previous Statement \$4,144.53

Total Payments \$4,144.53

Payment Received Thank You

Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using 28.5% more than last year.

2022 112,800 kWh

2023 144,960 kWh

Usage from Jan-Feb for 2022 & 2023

13073 041025 2174227 00001 016001 00010002

Keeping You Informed.

Update your account information so we can contact you when crews are working in your neighborhood. Fill out the slip and mail it in or update your online account. Don't have an online account? Sign up today at AmerenMissouri.com.

GL Acct#: 4175

Signature: [Signature]

Date: 2/9/23

Page 1 of 4

See next page for service details.

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Amount Due	Due Date
\$4,752.81	March 03, 2023
Delinquent Amount After Due Date	Account Number
\$4,800.34	4580005832

Amount Enclosed \$

>004123 2174227 0002 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1986
LAKE OZARK, MO 65049-1986

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

60600000 0045800058302 000004752810 000004752810



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Electric Service Details

Service from 01/09/2023 - 02/07/2023 (29 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
11673321	01/09 - 02/07	29	Total kWh	Actual	77600.0000	77386.0000	480.0000	160.0000	77600.0000
11673321	01/09 - 02/07	29	Peak kW	Actual	0.8280	0.0000	0.8280	160.0000	132.5000

Usage Summary

Total kWh	77600.0000	Non-Summer kWh	77600.0000
Peak kW	132.5000	Billing Demand	132.5000
Total Billing Demand	132.5000	October Winter Base kW	164.8000
Winter Base Demand	132.5000	Base kWh Ratio	1.0000
Base kWh (HUD)	77600.0000	Seasonal kWh (HUD)	0.0000

Rate 3M Large General Service

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Seasonal Energy Charge	0.00	kWh	@	\$ 0.03870000	\$0.00
Summer Demand Charge	132.50	kW	@	\$ 0.00000000	\$0.00
Winter Demand Charge	132.50	kW	@	\$ 2.18000000	\$288.85
Energy Charge/Hours Used	0.00	kWh	@	\$ 0.10540000	\$0.00
Base Energy Charge / Hours Used	19,875.00	kWh	@	\$ 0.06620000	\$1,315.73
Base Energy Charge / Hours Used	26,500.00	kWh	@	\$ 0.04820000	\$1,303.80
Base Energy Charge / Hours Used	31,225.00	kWh	@	\$ 0.03870000	\$1,208.41
Customer Charge					\$104.86
Fuel Adjustment Charge	77,600.00	kWh	@	\$ 0.00358170	\$276.39
Energy Efficiency Investment Charge	77,600.00	kWh	@	\$ 0.00857793	\$277.65
Renewable Energy Adjustment	77,600.00	kWh	@	\$ -0.00029482	\$ -22.88
Total Service Amount					\$4,752.81
Total Electric Charges					\$4,752.81

Questions? Contact Ameren Missouri at 1.877.426.3736 or visit AmerenMissouri.com.

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 City, State, Zip _____
 Phone Number _____

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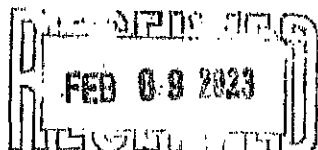
Account Number 6580005920
Customer Name ALLIANCE WATER RESOURCES INC
Service Address 3 ANDERSON RD
LAKE OZARK, MO 65049

AMOUNT DUE \$56.63
Due Date 03/03/2023
Amount After Due Date \$57.20
Previous Statement \$79.74
Total Payments \$79.74
Payment Received. Thank You.

Current Detail for Statement 02/09/2023

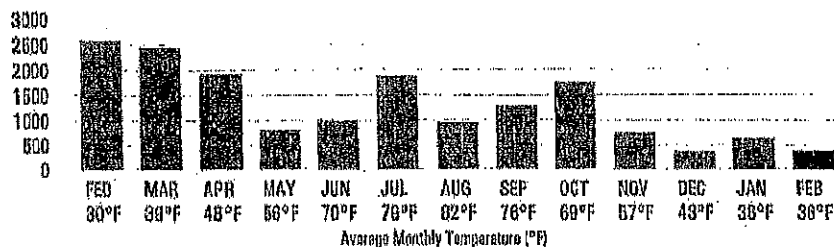
Total Electric Charges \$56.63

Total Amount Due \$56.63



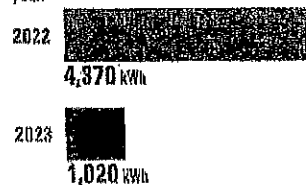
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using **78.7% less** than last year.



Usage from Jan-Feb for 2022 & 2023

5475 13073
04135 2174226 000267 016303 000170002

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GL Acct#: 4175

Signature: *Larry Stukelney*

Date: 2/9/23

» See next page for service details.

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Page 1 of 4

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Amount Due	Due Date
\$56.63	March 03, 2023
Delinquent Amount After Due Date	Account Number
\$57.20	6580005920

Amount Enclosed \$

>004135 2174226 0001 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1986
LAKE OZARK, MO 65048-1986

AMEREN MISSOURI
PO BOX 88088
CHICAGO IL 60680-1088

50633000 0055800057200 000000056630 000000056630



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Electric Service Details

Service from 01/09/2023 - 02/07/2023 (29 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
90041278	01/09 - 02/07	29	Total kWh	Actual	25472.0000	25434.0000	38.0000	10.0000	380.0000
90041278	01/09 - 02/07	29	Peak kW	Actual	0.5410	0.0000	0.5410	10.0000	5.4100

Usage Summary

Total kWh	380.0000	Non-Summer kWh	380.0000
Winter Base kWh	1000.0000	Current Base kWh	380.0000
Winter Cur Base kWh	380.0000	Seasonal kWh	0.0000

Rate 2M Sm Gen Svc - 3 Ph w/Dmd

Threshold - Peak Demand

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Base Energy Charge	380.00	kWh	@	\$ 0.08450000	\$32.22
Seasonal Energy Charge	0.00	kWh	@	\$ 0.04880000	\$0.00
Customer Charge					\$21.86
Fuel Adjustment Charge	380.00	kWh	@	\$ 0.00356170	\$1.35
Energy Efficiency Investment Charge	380.00	kWh	@	\$ 0.00343840	\$1.31
Renewable Energy Adjustment	380.00	kWh	@	\$-0.00029482	\$-0.11
Total Service Amount					\$56.03
Total Electric Charges					\$56.63

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
January 20, 2023	\$76.74

Questions? Contact Ameren Missouri at 1.877.426.3736 or visit AmerenMissouri.com.

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**MONTH-TO-DATE AND YEAR-TO-DATE
REVENUE/BUDGET ANALYSIS**

1/31/2023

Account Number	Account Name	2021 Actual	2022 Actual	2023 Budget	2023 Actual as of 1/31/2023	2023 January Revenue	Percent YTD
3020	Osage Beach	465,202.63	460,708.70	481,940.00	39,181.90	39,181.90	8%
3010	Lake Ozark	84,797.35	91,794.26	98,710.00	6,901.43	6,901.43	7%
3030	Misc.	22,000.00	1,094.92	0.00	0.00	0.00	0%
3100	Interest	2,700.22	2,462.35	2,500.00	694.67	694.67	28%
3060	Waste Haulers' Fee	60,520.00	49,490.00	56,000.00	2,990.00	2,990.00	5%
Total Operating Fund		635,220.20	605,550.23	639,150.00	49,768.00	49,768.00	8%
E/R Fund Income		5,508.47	3,568.63	4,000.00	1,400.77	1,400.77	35%
TOTAL INCOME		640,728.67	609,138.86	643,150.00	51,168.77	51,168.77	8%

MONTH-TO-DATE AND YEAR-TO-DATE
EXPENDITURE/BUDGET ANALYSIS
1/31/2023

Account Number	Account Name	2021 Actual	2022 Actual	2023 Budget	2023 Actual as of 1/31/2023	2023 January Expenses	Percent YTD
4000	Equipment Replace Fund	143,608.00	55,008.00	60,000.00	4,584.00	4,584.00	8%
4020	*Maintenance & Repair	104,853.81	60,030.11	93,500.00	4,817.61	4,817.61	5%
4140	Insurance	21,493.00	22,088.00	23,000.00	0.00	0.00	0%
4150	Vehicle Repair/Main	11,099.99	5,999.58	8,000.00	0.00	0.00	0%
4170	Contract Management	308,640.00	331,080.00	360,000.00	29,466.00	29,466.00	8%
4175	Electric	82,227.41	79,890.16	81,000.00	4,224.27	4,224.27	5%
4176	Utilities Misc.	3,528.17	3,694.18	5,000.00	1,163.35	1,163.35	23%
4190	Bank Charges	0.00	12.00	0.00	3.00	3.00	0%
4200	Audit	2,600.00	2,700.00	2,800.00	0.00	0.00	0%
4240	Capital Purchases	399.99	0.00	0.00	0.00	0.00	0%
	Totals	678,450.37	560,502.03	633,300.00	44,258.23	44,258.23	7%
	**E/R Expenses	202,161.70	11,092.76	103,000.00	324.79	324.79	0%
	TOTAL EXPENSES	880,612.07	880,612.07	736,300.00	44,583.02	44,583.02	6%

4020 DETAIL: Equip & Bldg. Repair/Main.

Auto Dialer Yrly Software Fee	500
Regular Maintenance	20,000
UV Bulbs, Quartz Sleeves, Misc	10,000
Painting RAS basement piping	30,000
Rock for road	3,000
Sandblasting & paint Clarifier #1	30,000

93,500.00

DETAIL: Equipment & Replacement

Replace wooden doors w/fiberglass	3,000
Replace flow meter for the effluent	25,000
*Replace aerator gear box - new	75,000

103,000.00

OPERATING FUND INCOME AND EXPENSE SUMMARY
1/31/2023

Beginning Balance	344,137.78
Income - Osage Beach	39,181.90
Income - Lake Ozark	6,901.43
Income - Other	-
Income - Waste Haulers' Fees	2,990.00
Interest - Checking	21.86
Income - CD Interest	672.81
Transfers From E/R Fund	-
Transfers To E/R Fund	(4,584.00)
Expenses	(39,674.23)
Ending Fund Balance	349,647.55
Central Bank - NOW Acct.	126,315.76
	-
CD First Bank of the Lake, 11/20/23 #8432	108,096.30
CD First Bank of the Lake, 10/22/23 #8433	115,235.49
	-
Outstanding Checks:	-
	349,647.55

EQUIPMENT REPLACEMENT FUND INCOME AND EXPENSE SUMMARY
1/31/2023

Beginning Balance	526,940.60
Interest - Checking	239.29
Income - CD Interest	1,161.48
Transfers From Operating Fund	4,584.00
Income - Miscellaneous	-
Expenses	(324.79)
Ending Fund Balance	532,600.58
First Bank of the Lake - Money Mkt.	151,198.93
CD First Bank of the Lake, 10/31/23 #8430	111,401.65
CD First Bank of the Lake, 2/07/23 #8434	270,000.00
	-
	-
Outstanding Checks:	-
	532,600.58

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Inc.

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65201

(573) 874-8080

WATER RESOURCES® Alliance

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REPORT OF OPERATIONS

LAKE OZARK/OSAGE BEACH
Joint Wastewater Treatment Plant No. 1

Month of January 2023

Submitted by Alliance Water Resources, Inc. for the

February 2023

Joint Sewer Board Meeting

SUMMARY OF FACILITY OPERATION

The Lake Ozark/Osage Beach Joint WWTP produced superior effluent quality throughout the month and was in full compliance with effluent limitations established in NPDES Permit No. MO-0103241. No leaks, no spills, and no unauthorized releases to waters of the state. No work-related lost time accidents have occurred during the month.

Detailed information relating to plant performance and operations is presented as follows.

PLANT EFFLUENT QUALITY

	BOD mg/l	TSS mg/l	pH	E.coli Colonies/100 ml	Coliform	Ammonia as N mg/L	O&G mg/L
Monthly/Quarterly Avg	2.7	2.3	N/A	0.0		0.20	< 4.9
Peak Day	3.5	3.6	8.1	0.0		0.67	< 4.9
Percent Removal	98.7	98.8	N/A	N/A		N/A	N/A

NPDES EFFLUENT LIMITATIONS

	BOD mg/l	TSS mg/l	pH	E.coli Colonies/100 ml	Coliform	Ammonia as N mg/L	O&G mg/L
Monthly/Quarterly Avg	30	30	6-9	126		3.1	10
Weekly Average	45	45		630			
Daily Max				N/A		12.1	15

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 0.961 MGD or 32% of Permitted flow with Lake Ozark contributing 13% of the total flow and Osage Beach contributing 87%. Daily influent flow BOD and TSS data is presented in Table A. Daily flow for the month and rainfall are shown in Figure 2. A three-year flow history for each of the two cities is presented in Table B.

Organic loading for the month was 50177 pounds of BOD.

BIOSOLIDS APPLICATION AND INVENTORY

Plant personnel land applied 0 tanker loads of bio-solids during the month equivalent to a total of 0 gallons and 0 pounds dry weight solids.

0 pounds of dry weight solids have been land applied year to date.

Bio-solids inventory in the storage tanks at the end of the month was 382,500 gallons with a level of 5.0 feet in Tank 1 and 3.5 feet in Tank 2.

WASTEHAULERS

The plant received 35 loads of septage during the month totaling 74,500 gallons.

WWTP OPERATIONS

- Decanting digesters and wasting weekly.
- Normal operations.

WWTP MAINTENANCE AND REPAIR

- Performed routine maintenance throughout the month as per Antero Maintenance Data Management schedule. (New version of Operator 10 Software)
- Catalyst Electric came in on the 1st of January to look at what needed to be done to get aerator #1 back up and going. They came back on the 3rd to replace main electrical feed line that the ice had weighted down under the basin deck. They ran the new line in conduit on top so this wouldn't happen again. After they completed that they started doing some line checks from the main breaker and found that the main breaker disconnect had lost/burnt one leg and needed replaced. We ordered a replacement and got it in on the 23rd.
- The ducking skimmer arm mechanism on clarifier #2 quit working on the 12th of January. We got it where we can use it manually until we try and fix it with parts from an old one that we had replaced in the past. A new one is \$16,000.00 + freight.
- The bar screen went down on the 19th of January, and we found a breaker was bad so ordered a replacement and got it going until the 24th when it quit again.
- Catalyst Electric was here on the 24th of January to put the replacement main breaker disconnect for aerator #1 in and while they were here, we asked for assistance with the pista grit control panel. They found that another breaker had severe corrosion and would need replaced. They found one cheaper than we could, so we had them go ahead and order it.
- PMF, the contractor that got the installation of the new aerator gear box was here to install it on the 24th of January. When they pulled the old aerator, they noticed that the bolt pattern was different, so they loaded it up and took it back to their shop to make a pattern to bring back and pre-drill new holes in the paddle/carrousel part of the aerator.

SAFETY

- We conducted our monthly Safety Meeting on Personal Protective Equipment & Violence in the Workplace on the 19th of January.

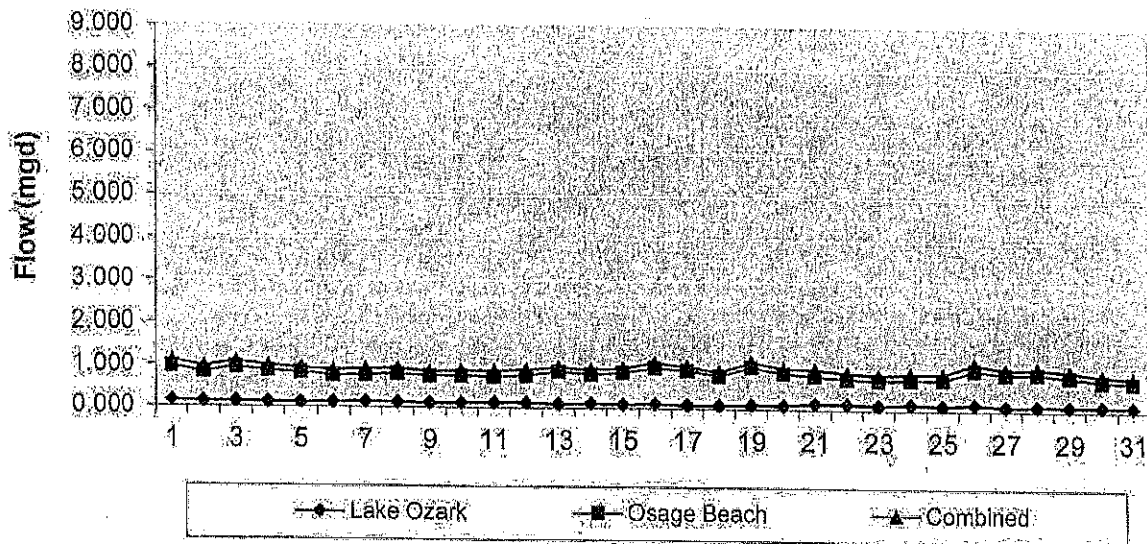
REGULATORY AGENCY, INSPECTION AND REPORTS

- We put both Cities completed 2022 MDNR I & I reports on the EDMR EPA MoGEM website on the 26th of January.
- We completed the Annual MDNR Form S Sludge Report & the online EPA Biosolids Annual Report on the 26th of January.
- We filled out the new EDMR on the EPA MoGEM website with an attachment of the Form S Sludge Report on the 3rd of February.

MISCELLANEOUS AND RECOMMENDATIONS

- Attached is a copy of the Jani-King 2023-2024 cleaning contract and an updated 5-year CIP.

Daily Flow
Figure 1



Effect of Rainfall on Flow
Figure 2

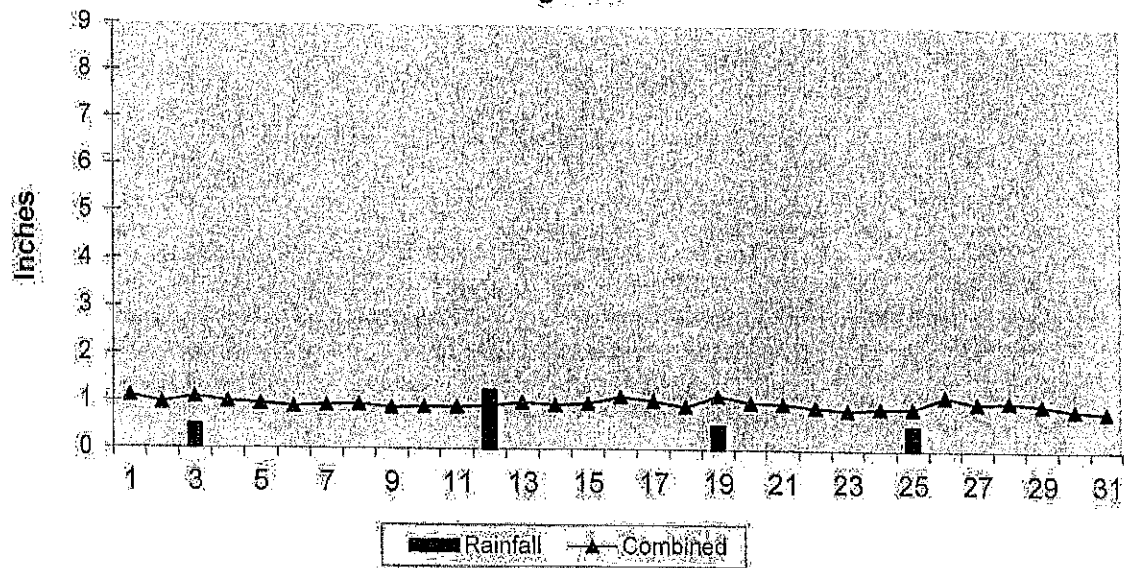


TABLE B
JOINT SEWER BOARD
Monthly Flows

2021	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	6.0	28,107,000	85%	4,855,000	15%	32,962,000	100%
February	3.0	22,136,000	85%	4,048,000	15%	26,184,000	100%
March	4.0	32,848,000	84%	6,450,000	16%	39,298,000	100%
April	5.2	30,179,000	84%	5,792,000	16%	35,971,000	100%
May	5.2	37,964,000	84%	7,479,000	16%	45,443,000	100%
June	8.0	41,695,000	85%	7,390,000	15%	49,085,000	100%
July	6.9	49,378,000	85%	9,000,000	15%	58,378,000	100%
August	1.8	41,691,000	85%	7,211,000	15%	48,902,000	100%
September	3.1	36,185,000	85%	6,306,000	15%	42,491,000	100%
October	6.0	32,925,000	85%	5,987,000	15%	38,912,000	100%
November	0.8	25,192,000	83%	5,025,000	17%	30,217,000	100%
December	2.3	25,041,000	82%	5,317,000	18%	30,358,000	100%

52.2	403,341,000	84%	74,860,000	16%	478,201,000	100%
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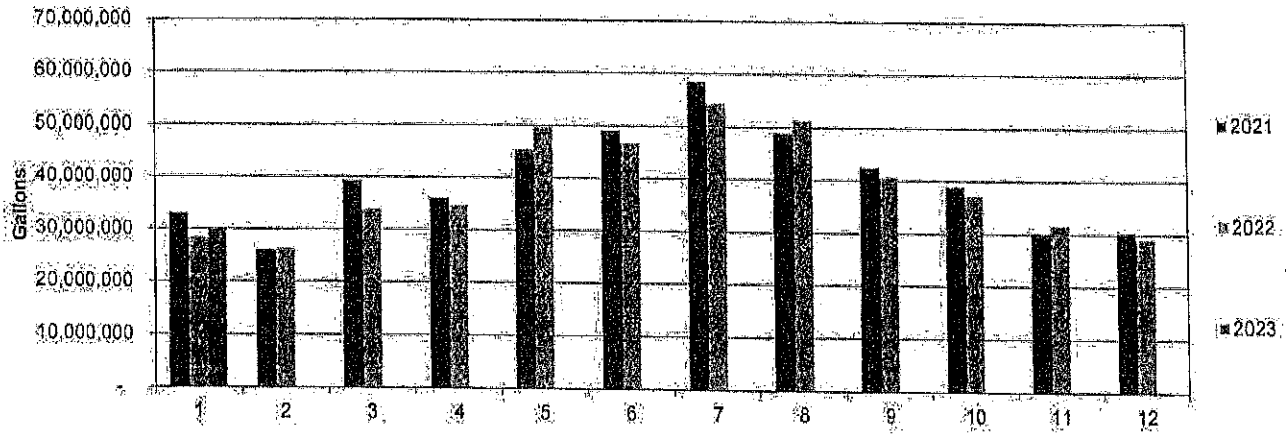
2022	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	1.7	23,599,000	83%	4,824,000	17%	28,423,000	100%
February	3.8	21,853,000	83%	4,610,000	17%	26,463,000	100%
March	5.2	28,266,000	83%	5,657,000	17%	33,923,000	100%
April	6.3	28,580,000	82%	6,088,000	18%	34,668,000	100%
May	9.1	41,076,000	83%	8,597,000	17%	49,673,000	100%
June	3.3	39,125,000	84%	7,563,000	16%	46,688,000	100%
July	2.6	45,728,000	84%	8,591,000	16%	54,319,000	100%
August	6.8	42,549,000	83%	8,716,000	17%	51,265,000	100%
September	2.4	34,238,000	84%	6,499,000	16%	40,737,000	100%
October	5.2	31,814,000	86%	5,317,000	14%	37,131,000	100%
November	4.5	26,905,000	85%	4,739,000	15%	31,644,000	100%
December	1.9	24,749,000	85%	4,376,000	15%	29,125,000	100%

52.7	388,482,000	84%	75,577,000	16%	464,059,000	100%
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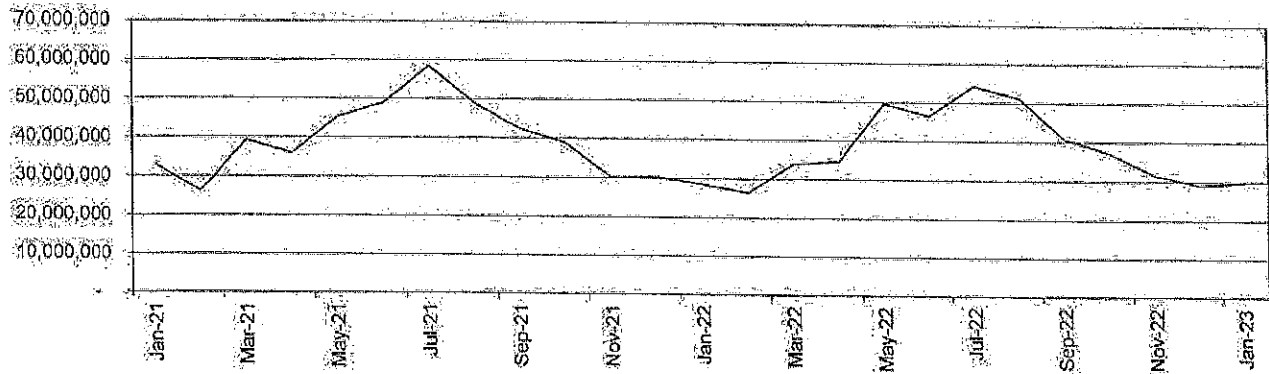
2023	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	2.8	25,972,000	87%	3,812,000	13%	29,784,000	100%
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

3	25,972,000	87%	3,812,000	13%	29,784,000	100%
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Monthly Influent Flow
Figure 3A

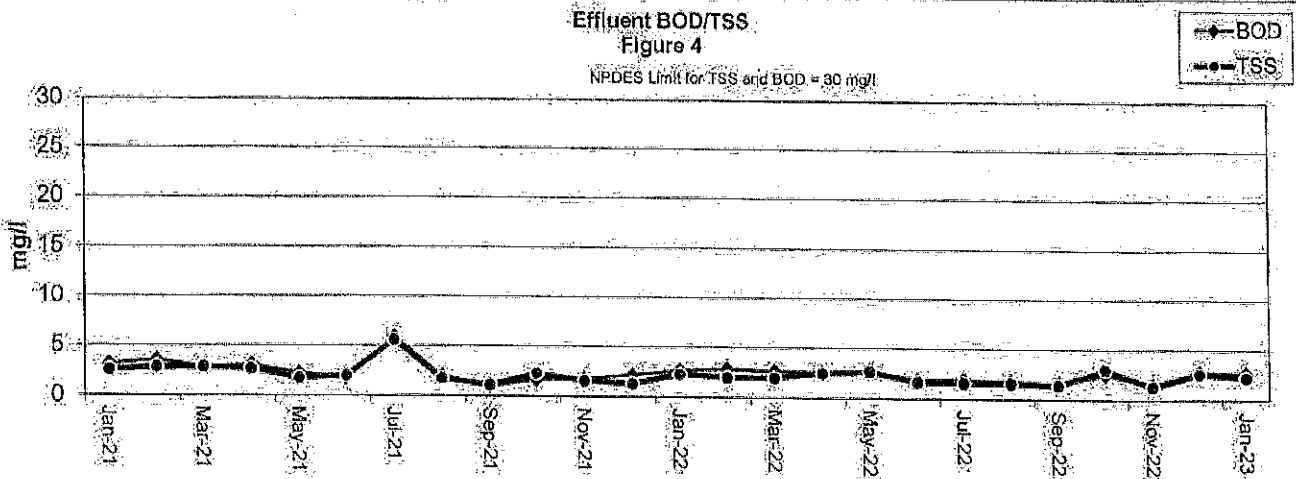


Monthly Influent Flow
Figure 3B



Effluent BOD/TSS
Figure 4

NPDES Limit for TSS and BOD = 30 mg/l

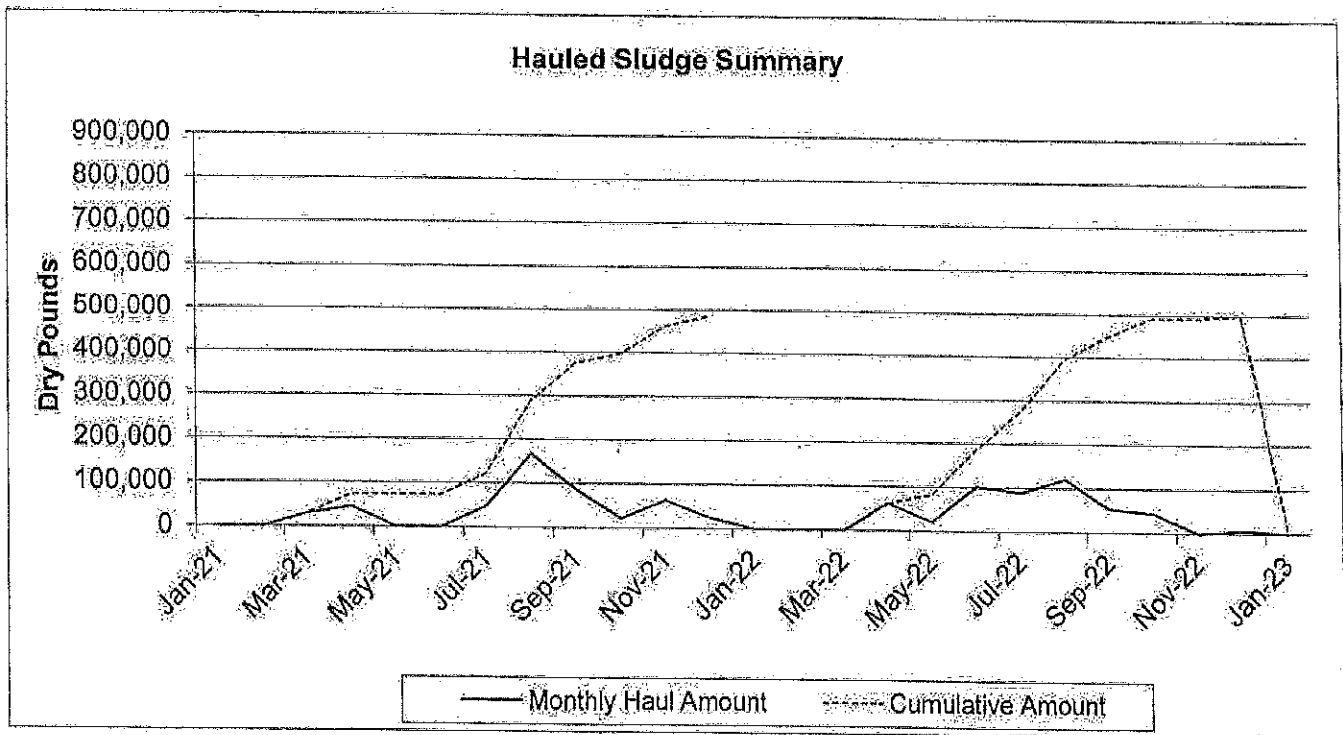
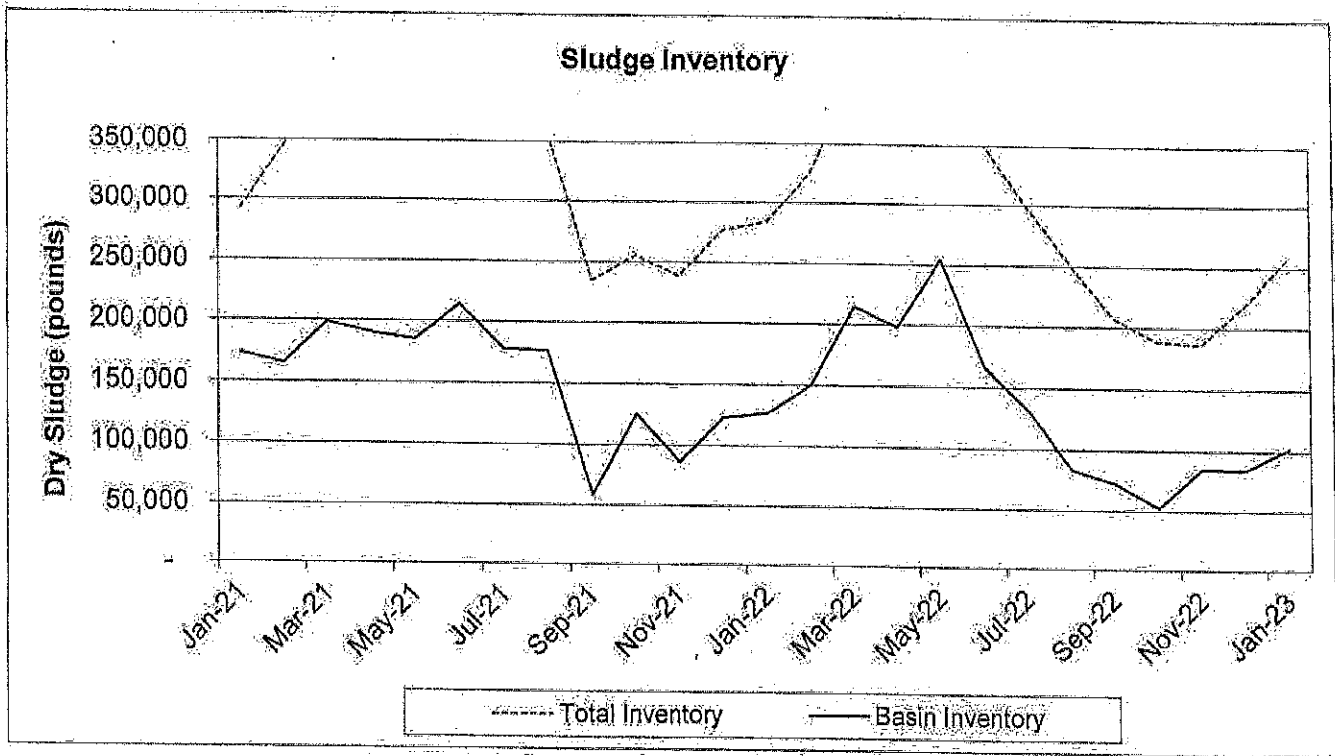


	Hauled Sludge				
	Loads	Gallons	# Dry	% Solids	Annual/Cumulative # Dry
Jan-21	0	-	0	4.4%	-
Feb-21	0	-	0	4.4%	-
Mar-21	23	85,100	28,883	4.1%	28,883
Apr-21	39	144,300	45,289	3.8%	74,152
May-21	0	-	0	3.8%	74,152
Jun-21	0	-	0	3.8%	74,152
Jul-21	40	144,000	47,378	3.9%	121,530
Aug-21	153	550,800	166,383	3.6%	287,893
Sep-21	92	331,200	87,226	3.2%	375,119
Oct-21	17	61,200	22,698	4.4%	397,817
Nov-21	46	165,600	83,621	4.6%	481,438
Dec-21	16	57,600	24,159	5.0%	485,577
Jan-22	0	-	0	4.5%	-
Feb-22	0	-	0	4.0%	-
Mar-22	0	-	0	4.4%	-
Apr-22	47	169,200	62,120	4.4%	62,120
May-22	16	57,600	21,017	4.4%	83,137
Jun-22	84	302,400	102,052	4.0%	185,189
Jul-22	80	288,000	88,981	3.7%	274,160
Aug-22	108	388,800	120,426	3.7%	394,576
Sep-22	51	183,600	54,073	3.5%	448,649
Oct-22	42	151,200	44,405	3.5%	493,054
Nov-22	0	-	0	3.5%	493,054
Dec-22	8	28,800	7,746	3.2%	500,800
Jan-23	0	-	0	3.2%	-

Basin Depths					
Tank #1	Tank #2	AB #1	Basin Gallons	# Dry	
7.0	3.5	0.0	472,500	173,389	
5.0	5.0	0.0	450,000	165,132	
6.0	7.0	0.0	585,000	198,549	
6.0	7.5	0.0	607,500	190,582	
6.0	7.0	0.0	585,000	185,398	
7.0	8.0	0.0	675,000	219,921	
5.0	7.0	0.0	540,000	177,568	
7.0	6.0	0.0	585,000	176,693	
2.0	3.0	0.0	225,000	59,257	
3.5	4.0	0.0	337,500	125,173	
3.0	2.0	0.0	225,000	86,442	
4.0	2.5	0.0	292,500	122,581	
4.5	3.0	0.0	337,500	126,664	
7.0	3.0	0.0	450,000	150,120	
6.0	7.0	0.0	585,000	214,672	
7.0	5.0	0.0	540,000	198,255	
8.5	7.0	0.0	697,500	254,503	
7.0	4.0	0.0	495,000	167,049	
7.0	2.5	0.0	427,500	132,051	
2.0	4.0	0.0	270,000	83,629	
3.5	2.0	0.0	247,500	72,893	
1.0	3.0	0.0	180,000	52,063	
4.0	2.5	0.0	292,500	85,381	
4.0	3.0	0.0	315,000	84,722	
5.0	3.5	0.0	382,500	102,092	

Blanket Depths			MLSS Inventory		Blanket and MLSS Inventory		MLSS	Total Dry
Clar #1	Clar #2	Clar #3	MLSS AB #1	MLSS AB #2	Gallons	# Dry	% Solids	Sludge Inventory
8.0	0.0	1.0	3,610	3,780	3,750,000	118,689	0.0038	292,077
5.0	8.0	0.0	5,490	5,750	3,830,906	179,558	0.00562	344,690
2.0	5.0	0.5	6,830	6,330	3,746,048	205,573	0.00658	404,122
12.0	5.0	1.0	8,890	5,350	3,945,382	201,375	0.00612	391,957
13.0	14.0	1.0	6,200	6,330	4,123,002	215,427	0.00627	400,825
8.0	7.5	2.0	7,260	8,060	3,928,543	234,903	0.00717	448,824
7.0	12.0	3.0	9,190	8,110	4,067,762	279,340	0.00823	457,007
1.0	1.0	0.5	6,160	5,840	3,657,238	183,008	0.0060	359,701
1.0	1.0	0.5	5,320	6,160	3,657,238	175,383	0.0058	234,640
1.0	0.5	0.5	4,490	4,140	3,648,357	130,381	0.0043	255,554
0.5	1.0	0.0	5,130	4,980	3,626,843	152,138	0.0050	238,560
1.0	1.0	0.0	4,540	5,630	3,635,524	154,179	0.0051	276,759
1.0	2.5	0.0	5,060	5,180	3,679,929	157,136	0.0051	283,800
4.0	1.5	0.0	6,280	5,030	3,697,691	174,393	0.0057	324,513
9.0	10.0	0.0	5,870	5,760	3,937,478	190,464	0.0058	405,135
10.0	10.0	1.0	7,100	5,600	3,998,668	211,765	0.0064	410,021
2.0	10.0	1.0	6,290	6,630	3,856,572	207,778	0.0065	462,281
4.5	0.5	1.5	5,760	6,010	3,753,952	184,247	0.0056	351,297
8.0	3.0	1.5	4,740	5,860	3,860,524	186,296	0.0052	298,348
1.5	1.0	0.5	5,490	5,420	3,686,119	166,789	0.0055	250,418
1.0	1.0	0.5	4,650	4,160	3,657,238	134,359	0.0044	207,251
0.5	0.5	0.5	4,590	4,390	3,639,476	136,286	0.0045	189,149
1.0	1.0	0.0	4,330	2,340	3,635,524	101,573	0.0034	186,954
1.5	1.5	0.0	4,510	4,270	3,653,288	133,756	0.0044	218,478
1.0	1.0	0.0	4,880	5,380	3,635,524	155,543	0.0051	257,625

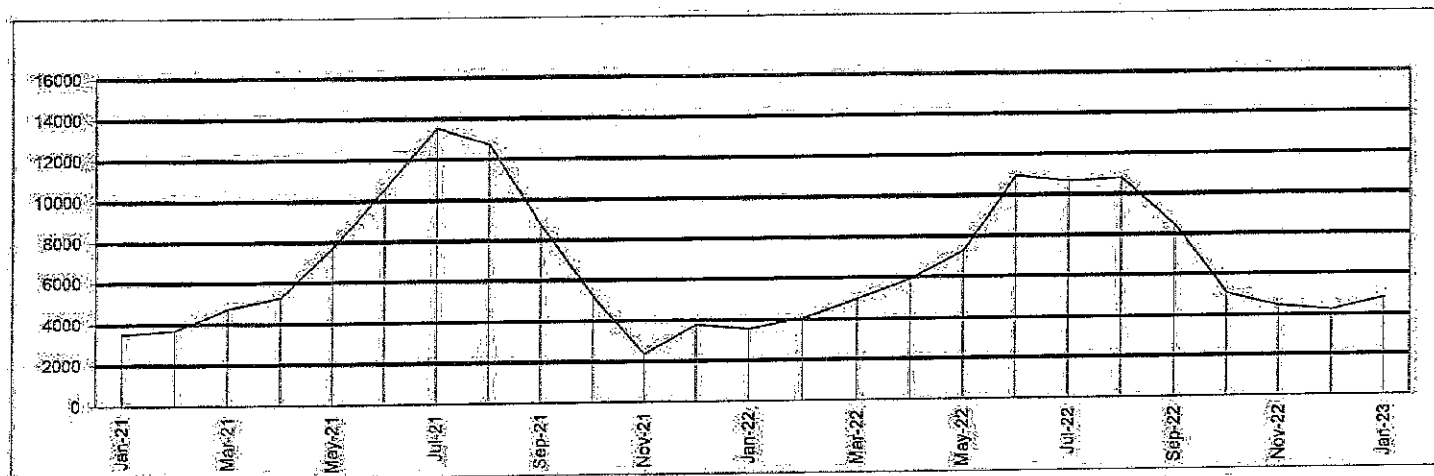
Accepted Septage	
Loads	Gallons
83	205,500
28	69,500
32	70,000
22	52,000
48	128,500
63	151,500
117	289,000
68	163,000
52	159,500
34	80,000
37	83,000
27	62,000
13	27,000
32	68,000
23	48,000
52	124,500
37	85,000
42	93,500
33	68,500
168	300,000
76	168,000
33	71,000
38	89,500
33	71,500
35	74,500



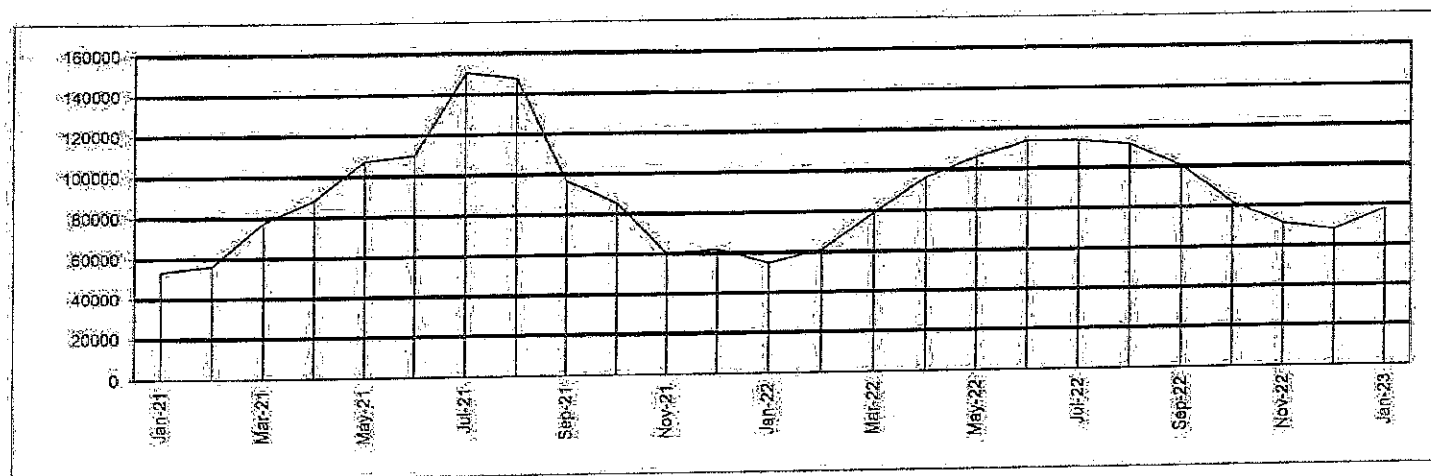
Electric Cost Kilowatts Used

Jan-21	3524	53,730
Feb-21	3696	56,370
Mar-21	4776	77,720
Apr-21	5281	88,390
May-21	7727	107,320
Jun-21	10610	110,130
Jul-21	13533	150,740
Aug-21	12737	147,810
Sep-21	8751	96,600
Oct-21	5233	85,530
Nov-21	2348	60,370
Dec-21	3776	62,100
Jan-22	3547	55,070
Feb-22	4063	61,330
Mar-22	4979	79,050
Apr-22	5907	96,160
May-22	7292	106,100
Jun-22	10958	113,870
Jul-22	10648	113,590
Aug-22	10800	111,690
Sep-22	8498	100,470
Oct-22	5071	82,030
Nov-22	4451	71,240
Dec-22	4224	68,000
Jan-23	4809	77,980

Electric Cost



Kilowatts Used





MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
 Discharge Monitoring Report For Municipal Wastewater Treatment Plants

NAME OF FACILITY							LOCATION ADDRESS & CITY							COUNTY/REGION		
Lake of the Ozarks Regional WWTP #1							#3 Anderson Road							Miller/SWRO		
MONTH/YEAR		PERMIT NUMBER					OUTFALL NUMBER		TYPE/TREATMENT FACILITY							
Jan-23		MO-0103241					#001		Oxidation Ditch/UV/Sludge Holding-sludge is land applied							
INFLUENT							EFFLUENT							% Removal		
DATE	pH UNITS	BOD mg/L	TSS mg/L	Ammonia as N mg/l	TEMP °C	FLOW MGD	pH UNITS	BOD mg/L	TSS mg/L	Ammonia as N mg/l	DO mg/L	E. coli COLFRM #/100 ML	TEMP °C	BOD mg/L	TSS mg/L	
1	7.2				11.7	1.669	7.6				11.0		10.2			
2	7.2				13.1	1.403	7.7				10.2		12.0			
3	7.2				14.0	1.543	7.6				11.1		12.9			
4	7.1			14.4	13.2	1.326	7.6			0.67	11.1		12.0			
5	7.7				10.7	1.310	7.8				11.0		10.7			
6	7.5	210	178		9.4	1.245	7.7	2.3	1.6		11.2		8.0	98.9	99.1	
7	7.2				11.6	1.408	7.7				11.1		9.8			
8	7.0				11.8	1.421	7.6				11.2		9.6			
9	7.0				11.3	1.346	7.5				11.3		8.5			
10	7.7				10.0	1.272	8.1				11.2		8.5			
11	7.0			20.0	12.5	1.367	7.8			0.04	11.2		10.8			
12	7.3				8.9	1.368	7.5				11.4		9.2			
13	7.8	228	212		9.7	1.515	7.8	2.2	2.1		11.5		9.7	99.0	99.0	
14	7.7				7.0	1.428	7.7				12.1		4.2			
15	7.7				10.4	1.511	8.0				11.4		8.3			
16	8.0				14.2	1.562	7.7				11.1		12.6			
17	7.4				11.5	1.465	7.9				11.1		10.2			
18	6.8			18.7	12.5	1.368	7.5			0.02	11.1		11.5			
19	7.8				10.2	1.558	7.6				11.1		9.2			
20	7.7	195	186		9.6	1.473	8.0	2.8	1.8		11.3		8.6	98.6	99.0	
21	7.1				9.4	1.513	7.4				11.4		7.6			
22	6.9				11.2	1.414	7.4				11.2		9.2			
23	6.8			32.0	10.9	1.362	7.6			0.05	11.4		9.2			
24	6.9				10.8	1.371	7.5				11.3		8.4			
25	7.2				12.5	1.282	7.8				11.1		9.8			
26	7.6				7.6	1.670	8.0				12.1		6.2			
27	7.6	175	188		11.2	1.646	7.9	3.5	3.6		12.1		9.1	98.0	98.1	
28	7.7				10.8	1.557	7.9				12.1		8.6			
29	7.8				8.7	1.448	8.0				12.1		7.1			
30	7.5				6.7	1.401	8.0				12.1		4.7			
31	7.7				6.6	1.416	7.9				12.3		5.2			
Total						44.538										
Avg		202	191	21.3	10.6	1.437		2.7	2.3	0.20	11.4	0.0	9.1	98.6	98.8	
Min	6.8	175	178	14.4	6.6	1.245	7.4	2.2	1.6	0.02	10.2	0.0	4.2	98.0	98.1	
Max	8.0	228	212	32.0	14.2	1.670	8.1	3.5	3.6	0.67	12.3	0.0	12.9	99.0	99.1	

MONTHLY EFF MONITORING				QUARTERLY EFF MONITORING				MONTHLY INF MONITORING		
DATE	Phosphorus mg/L	TKN mg/L	Nitrite+Nitrate mg/L	Oil & Grease mg/L	TR Cadmium mg/L	Selenium mg/L	Hardness mg/L	Phosphorus mg/L	TKN mg/L	Nitrite+Nitrate mg/L
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11	2.7	0.96	20.5	<4.9	<5.0	<1.0	322	4.9	26.6	<0.10
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Total	2.7	0.96	20.5	<4.9	<5.0	<1.0	322	4.9	26.6	<0.10
Avg	2.7	0.96	20.5	<4.9	<5.0	<1.0	322	4.9	26.6	<0.10
Min	2.7	0.96	20.5	<4.9	<5.0	<1.0	322	4.9	26.6	<0.10
Max	2.7	0.96	20.5	<4.9	<5.0	<1.0	322	4.9	26.6	<0.10

OPERATIONAL CONTROLS/LABORATORY TEST REQUIRED FOR "ACTIVATED SLUDGE" PROCESSES

DATE Jan-23	SLUDGE DISP. LBS. DRY WEIGHT	#1 Aeration Basin, O-Ditch, Etc.				#2 Aeration Basin, O-Ditch, Etc.				*Weather Conditions		
		MIXED LIQUOR				MIXED LIQUOR				Outside	*RAIN Inches	Time
		* DO	** MLSS	*Settleability		* DO	** MLSS	*Settleability		* Ambient		
		mg/l	mg/l	*30 min ml	Temp °C	mg/l	mg/l	*30 min ml	Temp °C	Temp °F		
1		1.9	4,550	640	10.4	2.1	3,940	430	11.2	42	0	7:30
2		2.1	4,750	640	12.1	2.4	3,780	540	12.7	46	0	7:30
3		3.1	4,310	520	12.9	2.1	4,480	470	13.2	57	0.5	7:30
4		3.1	4,230	450	11.2	3.0	5,160	690	11.8	40	0	7:30
5		3.1	4,710	510	10.5	2.1	5,060	560	11.5	36	0	7:30
6		5.1	5,120	640	9.3	5.0	4,330	490	9.8	31	0	7:30
7		5.9	5,330	760	9.9	6.4	4,110	410	10.2	45	0	7:30
8		4.8	6,120	830	9.8	6.5	3,490	350	9.9	39	0	7:30
9		4.3	6,640	860	8.4	5.5	2,430	290	9.1	30	0	7:30
10		6.1	5,970	850	10.2	7.0	3,350	330	10.1	31	0	7:30
11		6.1	5,580	730	9.6	5.1	4,130	540	10.4	37	0	7:30
12		5.3	5,590	730	8.6	4.6	4,380	460	9.3	38	1.25	7:30
13		6.2	4,950	580	10.1	5.5	4,880	610	10.5	32	0	7:30
14		7.5	4,740	560	7.8	6.4	5,210	750	8.4	22	0	7:30
15		7.1	4,590	550	9.0	6.1	5,370	700	10.0	38	0	7:30
16		6.1	4,830	600	11.5	4.1	5,450	710	11.9	55	0	7:30
17		6.1	4,690	670	10.1	4.2	5,490	790	10.4	38	0	7:30
18		6.2	4,470	520	11.4	4.1	5,450	770	11.6	46	0	7:30
19		6.1	4,600	600	10.5	4.1	5,020	770	11.2	39	0.5	7:30
20		7.1	4,390	670	9.9	5.5	4,880	730	10.5	36	0	7:30
21		6.4	5,150	750	7.7	6.0	4,950	560	8.1	29	0	7:30
22		6.4	5,250	780	9.2	6.4	4,440	500	9.7	38	0	7:30
23		5.6	5,400	820	9.0	6.1	4,240	410	9.1	38	0	7:30
24		6.0	6,050	800	8.5	7.1	4,020	470	8.9	33	0	7:30
25		5.1	4,800	650	9.9	5.1	4,790	620	9.9	39	0.5	7:30
26		6.3	4,530	570	8.4	5.1	5,140	770	9.3	28	0	7:30
27		7.1	4,570	600	9.0	4.3	5,280	720	9.6	41	0	7:30
28		6.1	5,180	700	9.3	5.2	4,910	700	10	37	0	7:30
29		5.1	5,660	790	9.4	5.3	4,280	450	10.9	30	0	7:30
30		5.1	5,040	670	7.9	5.3	5,070	750	8.1	24	0	7:30
31		7.3	4,880	680	7.3	6.3	5,380	750	7.7	23	0	7:30

COMMENTS:

TESTS PERFORMED BY (PRINT)

John Hornback

SIGNATURE



PHONE #

(573)365-0455

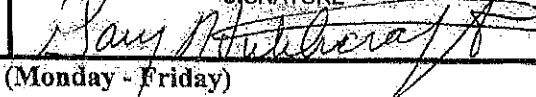
DATE

2/3/2023

REPORT APPROVED BY (PRINT)

Gary Hutchcraft

SIGNATURE



PHONE #

(573)365-0455

DATE

2/3/2023

*Required Daily (Monday - Friday)

**Required 1/week

Lake of the Ozarks Regional
WWTP 1
#3 Anderson Road
LAKE OZARK, MO, Miller

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Central Field Operations
P.O. Box 176
Jefferson City, MO, 65102

Permit Number	Outfall Number
MO0103241	001M
Monitoring Period	
1/1/23	1/31/23
NODI:	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
Flow, in conduit or thru treatment plant	*****	*****	*****	*****	1,670	1,437	Mgal/d
Mon. Location: End of Pipe	*****	*****	*****		Daily Max.: Monitoring Required	Monthly Avg.: Monitoring Required	
Sample Type: Total Measured							
Frequency: Daily							
BOD, 5-day, 20 deg. C	*****	3.5	2.7	mg/L	*****	*****	*****
Mon. Location: End of Pipe	*****	Weekly Avg.: 45	Monthly Avg.: 30		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Weekly							
Total Suspended Solids (TSS)	*****	3.6	2.3	mg/L	*****	*****	*****
Mon. Location: End of Pipe	*****	Weekly Avg.: 45	Monthly Avg.: 30		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Weekly							
Phosphorus, total (as P)	2.7	*****	2.7	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, Kjeldahl, total (as N)	0.96	*****	0.96	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrite plus nitrate total (as N)	20.5	*****	20.5	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, ammonia total (as N)	0.67	*****	0.20	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.: 12.1	*****	Monthly Avg.: 3.1		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Weekly							

Lake of the Ozarks Regional
WWTP #1
#3 Anderson Road
LAKE OZARK, MO, Miller

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National Pollutant Discharge Elimination System (NPDES)
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Central Field Operations
P O Box 176
Jefferson City, MO, 65102

pH	7.4	****	8.1	SU	****	****	****
Mon. Location: End of Pipe	Minimum: 6.0	****,****	Maximum: 9.0		****,****	****,****	
Sample Type: Grab							
Frequency: Weekly							
BOD, 5-day, percent removal	****	****	98.0	%	****	****	****
Mon. Location: End of Pipe	****,****	****,****	Monthly Avg. Min: 85		****,****	****,****	
Sample Type: Calculated							
Frequency: Monthly							
Suspended Solids, percent removal	****	****	98.1	%	****	****	****
Mon. Location: End of Pipe	****,****	****,****	Monthly Avg. Min: 85		****,****	****,****	
Sample Type: Calculated							
Frequency: Monthly							
Comments:							

Lake of the Ozarks Regional
WWTP 1
#3 Anderson Road
LAKE OZARK, MO, Miller

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Central Field Operations
P.O. Box 176
Jefferson City, MO, 65102

Permit Number	Outfall Number
MO0103241	INFIM
Monitoring Period	
1/1/23	1/31/23
NODI:	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
BOD, 5-day, 20 deg. C	*****	*****	202	mg/L	*****	*****	*****
Mon. Location: Influent	*****	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Total Suspended Solids (TSS)	*****	*****	191	mg/L	*****	*****	*****
Mon. Location: Influent	*****	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, ammonia total (as N)	32.0	*****	21.3	mg/L	*****	*****	*****
Mon. Location: Influent	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Phosphorus, total (as P)	4.9	*****	4.9	mg/L	*****	*****	*****
Mon. Location: Influent	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, Kjeldahl, total (as N)	26.6	*****	26.6	mg/L	*****	*****	*****
Mon. Location: Influent	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrite plus nitrate total (as N)	<0.10	*****	<0.10	mg/L	*****	*****	*****
Mon. Location: Influent	Daily Max.: Monitoring Required	*****	Monthly Avg.: Monitoring Required		*****	*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							

Comments:

Lake of the Ozarks Regional
WWTP 1
#3 Anderson Road
LAKE OZARK, MO, Miller

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Central Field Operations
P O Box 176
Jefferson City, MO, 65102

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

eSignature Gary Hutchcraft	Submission Date February 3, 2023	User Phone Number (573)365-0455
-------------------------------	-------------------------------------	------------------------------------

Lake of the Ozarks Regional
WWTP 1
#3 Anderson Road
LAKE OZARK, MO, Miller

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Central Field Operations
P.O. Box 176
Jefferson City, MO, 65102

Permit Number	Outfall Number
MO0103241	0010
Monitoring Period	
1/1/23	3/31/23
NODI	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
Oil and grease	<4.9	*****	<4.9	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.:15	*****,*****	Monthly Avg.:10		*****,*****	*****,*****	
Sample Type: Grab							
Frequency: Quarterly							
Cadmium, total recoverable	<5.0	*****	<5.0	ug/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.:Monitoring Required	*****,*****	Monthly Avg.:Monitoring Required		*****,*****	*****,*****	
Sample Type: 24 Hour Composite							
Frequency: Quarterly							
Selenium (Se), total recoverable	<1.0	*****	<1.0	ug/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.:Monitoring Required	*****,*****	Monthly Avg.:Monitoring Required		*****,*****	*****,*****	
Sample Type: 24 Hour Composite							
Frequency: Quarterly							
Hardness, total (as CaCO3)	322	*****	322	mg/L	*****	*****	*****
Mon. Location: End of Pipe	Daily Max.:Monitoring Required	*****,*****	Monthly Avg.:Monitoring Required		*****,*****	*****,*****	
Sample Type: Grab							
Frequency: Quarterly							
Comments:							

Lake of the Ozarks Regional
WWTP #1
#3 Anderson Road
LAKE OZARK, MO, Miller

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Central Field Operations
P O Box 176
Jefferson City, MO, 65102

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

eSignature
Gary Hutchcraft

Submission Date
February 7, 2023

User Phone Number
(573) 365-0455

~~FOR~~ JANUARY 2023

Use following abbreviations: R-rain, S-snow, O-overcast, C-clear, PC-partly cloudy

Prepared by Y.R. JEH. GLE

Approved by: CH

• **উদ্ভিদ**

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AMENDMENT TO MAINTENANCE AGREEMENT

REGION: <u>Columbia</u>	DATE: <u>11-1-22</u>
CLIENT: <u>JOINT SEWER BOARD</u>	CONTACT: <u>GARY HUTCHERSON</u>
NAME OF COMPANY: <u>Alliance Water</u>	TELEPHONE: _____
BUILDING NAME: <u>ADMIN BLDG.</u>	FAX: _____
ADDRESS: <u>3 Anderson Road</u>	FRANCHISEE: <u>022</u>
	ACCOUNT #: <u>022-039</u>
ORIGINAL CONTRACT DATE: <u>8-26-18</u>	
NEW PRICE:	\$ <u>275-</u> per month
OLD PRICE:	\$ <u>197.15</u> per month
AMOUNT INCREASED/DECREASED:	\$ <u>77.85</u> per month
REASON FOR INCREASE/DECREASE: (Attach copy of revised cleaning schedule.)	
1. _____	
2. <u>Minimum 1x/week price</u>	
3. <u>Price locked until 1-1-25</u>	
ALL OTHER TERMS AND CONDITIONS TO REMAIN THE SAME.	
EFFECTIVE DATE: <u>1-1-23</u>	
CLIENT:	JANI-KING
<u>X</u> <u>Gary Hutcherson</u>	<u>Russ Semmel</u>
AUTHORIZED SIGNATURE	AUTHORIZED SIGNATURE
DATE: <u>X 1/2/23</u>	DATE: <u>1/1/23</u>

Lake of the Ozarks Regional Wastewater Treatment Plant #1 Equipment List						
	LIFE EXP.		EST. RUN	LAST REBUILT	ORIGINAL	ESTIMATED
RAS PUMPS & MOTORS	YEARS	AGE IN YEARS	TIME HRS	REPLACED/NEW	EST. COST	REPLACEMENT COST
RAS Pump #1	15	36	24/7	2021	\$7,500	\$40,000 to \$80,000
RAS Pump #2	"	"	"	2021	"	"
RAS Pump #3	"	"	"	2022	"	"
RAS Pump #4	"	"	"	2019	"	"
RAS Pump #5	"	"	"	2022	"	"
Pumps 1, 2, 4 & 5 are alternated every other day, #3 runs continuous						
Motors have never been rebuilt, just pumps						
Replacement cost is pump, motor and complete install w/pipe & fittings						
RAS BUILDING PIPE GALLERY & VALVES						
8" RAS Ball Check Valves are very inefficient valves which restricts flow causing the pumps to plug more often. We spend at least 1 hr/day cleaning pumps.	30	36	n/a		\$1,500	\$3,500
Painting of the pipe gallery, valves and room	5	"	n/a	2017	\$5,000	\$30,000
8" Manual Gear globe valves, used only when cleaning pumps	30	"	n/a			
RAS Building Electrical Panel in basement	30	3	24/7	2019	\$40,000	\$50,000 to \$75,000
Electrical panels in RAS valve room	30	36	24/7		\$3,000	\$10,000 to \$15,000
2 - 8" RAS Auma electric pinch valve in Headworks RAS valve room used when adjusting RAS flows to each ditch	30	36	n/a		\$5,000	\$10,000 to \$15,000 ea
PISTA GRIT SYSTEM						
Pista Grit turbo pump & motor	20	36	8 to 10hr/day	2022	\$7,500	\$15,000 to \$20,000
Gear box drive motor	"	"	24/7	2013	\$1,000	\$2,000 to \$3,000
Grit Lift tube	"	1	8 to 10hr/day	2022	\$4,000	\$5,000 to \$8,000
Red Valve pinch valve	10	10	8 to 10hr/day	2012	\$1,000	\$1,500 to \$2,500
Main Electrical panel	"		"		\$5,000	\$10,000 to \$15,000
Vac & Air pressure pumps	"	1	"	2022 (vac)	\$1,000	\$3,000 to \$4,000
Secondary Electrical panel where pumps are located	"		"		\$1,000	\$2,000 to \$5,000

BAR SCREENS	LIFE	AGE	EST. RUN	REBUILT/NEW	ORIGINAL COST	REPLACE COST
Bar Screen #1 & #2 w/ 1/2 inch screen & rakes	30	20	24/7	2002	\$40,000	\$100,000 to \$300,000
would like to go with 1/4 inch to remove more grit/trash from system						
Bar Screen Control Panels	10	20	24/7	2002	\$5,000	\$15,000 to \$30,000
OXIDATION DITCH AERATORS GEARBOXES & MOTORS						
Gearbox #1 thru #6	20	36	24hrs/day		\$25,000	\$75,000 to \$150,000
Motor #1 thru #6	"	36	"		\$10,000	\$25,000 to \$30,000
Electrical disconnect at aerator	"	36	"			
Main Electrical Panel in Headworks Building Electrical Room	"	36	"		\$60,000	\$100,000 to \$200,000
OXIDATION DITCH GRIT REMOVAL						
Grit removal from Aeration Basins 1 & 2 and necessary lab testing and	10	#1 - 2017	24hrs/day		\$137,000	\$100,000 to \$150,000
repair/replace mud valves in ditches and drain pit by outfall for UV system		#2 - 2011	"		\$67,000	\$100,000 to \$150,000
CLARIFIERS 1, 2 & 3						
Main Gear Drives 1 & 2 / & 3 (we take #3 off line in winter due to freezing)	20	36/20	24hrs/day		\$35,000	\$75,000 to \$100,000
Gear drive motors 1 & 2 / & 3	"	36/20	"		\$1,000	\$2,000 to \$3,000
Ducking skimmer arm mechanism/motors on 1 & 2	30	36	"	#1 in 2019	\$4,000	\$16,000 to \$20,000
Clarifier #3 skimmer arm mechanisms	"	20	"		\$3,000	\$5,000 to \$7,500
Ducking skimmer arm on 1 & 2 bushings, piping and replacement parts	"	36	"		\$3,500	\$5,000 to \$7,500
Rotating framework for upper & lower rake assembly w/ brass squeegees	"	36	"		\$25,000	\$50,000 to \$100,000
Replace outer gasket on rotating ducking skimmer troughs on Clarifiers 1 & 2	"	36				
Sandblasting & Painting of all metal parts inside Clarifiers #1	6 to 10	8		2014	\$32,000	\$75,000 to \$100,000
Sandblasting & Painting of all metal parts inside Clarifiers #2	6 to 10	2		2021	\$69,000	\$75,000 to \$100,000
Sandblasting & Painting of all metal parts inside Clarifiers #3	6 to 10	4		2019	\$69,000	\$75,000 to \$150,000
UV SYSTEM						
Main Control Center w/ battery back up	30	16	8mo/yr		\$200,000	\$300,000 to \$400,000
Outdoor electrical/air junction box at UV modules	"	16	"		\$50,000	\$100,000
UV Modules (6)	"	16	"		\$150,000	\$200,000 to \$300,000
Wiper cylinders (6)	2 to 3		"		\$3,000	\$1,000 to \$3,000 ea
Wiper sleeves (144)	"		"		\$1,440	\$3,000 to \$5,000
Bulbs (72)	10,000 hrs		"		\$7,200	\$13,000 to \$18,000
Quartz Sleeves (72)			"		\$8,500	\$15,000 to \$20,000
Air Dryer system	2	2	"	New 2021	\$1,000	\$2,000 to \$3,000

SLUDGE BASINS	LIFE	AGE	EST. RUN	REBUILT/NEW	ORIGINAL COST	REPLACE COST
Aerator motor	20	35	n/a		\$5,000	\$8,000 to \$10,000
Aerator blower	"	35	"		\$12,000	\$15,000 to \$20,000
EDI Large Bubble Aerator diffusers	"	35	"		\$15,000	\$35,000 to \$50,000
SLUDGE TRUCK						
Sludge Truck	10	1	n/a	New 2021	\$186,000	\$250,000 to \$300,000
Sludge Truck Tires	3 to 5	1	n/a	New 2021	\$6,000	\$8,000 to \$10,000
SLUDGE DECANT LIFT STATION						
Pump #1	15	5	n/a	2022	\$2,500	\$6,000 to \$10,000
Pump #2	"	35	n/a	2015	\$2,500	\$8,000 to \$10,000
Electrical Panel	"	35				
UPPER LIFT STATION						
Pump #1	20	37	n/a	2008	\$5,000	\$10,000 to \$20,000
Pump #2	"	37	n/a	2020	\$5,000	\$10,000 to \$20,000
Electrical Panel	"					
EMERGENCY/STANDBY GENERATOR						
Cummins Generator Set w/a GE Zenith transfer switch	20	3	1/wk/1hr	New 2019	\$160,000	\$200,000 to \$300,000
RIDING LAWNMOWER						
John Deere Z915E Ztrak zero turn	5	1	n/a	New 2021	\$7,500	\$10,000 to \$15,000
NON-POTABLE PUMPS & PRESSURE TANKS						
Non-pot pump & tank #1 w/ shared control panel	30	36	n/a		\$20,000	\$30,000 to \$50,000
Non-pot pump & tank #2	"	36	n/a		\$20,000	\$30,000 to \$50,000
WELL HOUSE PUMP						
Submergible deep well pump and pressure tank	30	4	n/a	New 2019	\$8,500	\$10,000 to \$15,000

PARKING LOT SEALCOAT	LIFE	AGE	EST. RUN	REBUILT/NEW	ORIGINAL COST	REPLACE COST
Clean, hot tar cracks & apply sealcoat	3 to 5	1	n/a	2022	\$2,300	\$3,000 to \$5,000
FLOW METERS						
Effluent flow meter w/transducer	10	13	24hrs/day	2009	\$4,000	\$6,000 to \$10,000
Lake Ozark flow meter w/transducer	"	14	24hrs/day	2008	\$4,000	\$6,000 to \$10,000
Osage Beach flow meter w/transducer	"	3	24hrs/day	2020	\$4,000	\$6,000 to \$10,000
RAS flow meter w/ dual transducers	"	1	24hrs/day	2022	\$5,000	\$7,000 to \$12,000
LAB EQUIPMENT						
BOD Incubator	10	1		2022	\$2,500 used	\$4,000 to \$6,000
TSS Incubator	"	36			\$1,000	\$3,000 to \$4,000
Dry bath coliform incubator	"	36			\$1,000	\$3,000 to \$4,000
Benchtop BOD meter & probe	"	4		2018	\$3,500	\$4,000 to \$5,000
Portable DO meter & probe	"	1		New 2022	\$2,500	\$3,000 to \$4,000
Ammonia meter & probe	"	2		2020	\$2,500	\$3,000 to \$4,000
pH meter & probe	"	7		2015	\$2,500	\$3,000 to \$4,000
5-YEAR CAPITAL IMPROVEMENT PLAN						
Wastewater Treatment Plant		2023	2024	2025	2026	2027
Replace RAS Pump & Motor w/ Option 1, ABBA direct replacement			\$120,000 to \$150,000			
Replace RAS Pump & Motor w/ Option 3, Sewabloc non clog			\$180,000 to \$210,000			
Replace RAS Pump & Motor w/ Option 2, Flygt non clog			\$240,000 to \$270,000			
Vendors are recommending to replace 3 pumps, necessary piping & check valves						
Painting of the pipe gallery, valves and room		\$30,000				\$50,000 to \$60,000
Electrical panels in RAS valve room				\$10,000 to \$12,000		
Pista Grit turbo pump & motor			\$15,000 to \$20,000			
Gear box drive motor					\$5,000 to \$8,000	
Grit lift tube						\$2,000 to \$3,000
Red Valve pinch valve				\$1,500 to \$2,500		
Main Electrical panel				\$4,000 to \$5,000		
Vac & Air pressure pumps				\$2,000 to \$5,000		
Secondary Electrical panel where pumps are located						

	2023	2024	2025	2026	2027
Bar Screen #1 & #2 Rakes & Screens; replace existing 1/2" with 1/4"				\$60,000 to \$80,000	
Bar Screen Control Panels					\$15,000 to \$20,000
Replace aerator gear box when need is present	\$80,000		\$100,000 to \$125,000		\$110,000 to \$150,000
Grit removal from Aeration Basins 1 & 2 and all required lab testing and repair/replace mud valves in ditches and drain pit by outfall for UV system			\$75,000 to \$100,000	\$100,000 to \$125,000	
Gear Drive Motors for Clarifiers 1, 2 & 3				\$2,000 to \$3,000	
Ducking skimmer arm on 1 & 2, bushings, piping and replacement parts					\$5,000 to \$7,500
Clarifier #1 & 2 skimmer arm mechanisms	\$16,000				
Clarifier #3 skimmer arm mechanisms			\$5,000 to \$7,500		
Rotating framework for upper & lower rake assembly w/ brass squeegees					
Replace outer gasket on rotating ducking skimmer troughs on Clarifiers 1 & 2					
Sandblasting & Painting of all metal parts inside Clarifiers #1				\$75,000 to \$90,000	
Sandblasting & Painting of all metal parts inside Clarifiers #2					\$80,000 to \$100,000
Sandblasting & Painting of all metal parts inside Clarifiers #3	\$30,000				
UV Bulbs, Quartz sleeves, ballasts and miscellaneous parts	\$10,000	\$11,000	\$12,000	\$13,000	\$14,000
Vehicle Maintenance/tires for the sludge truck	\$8,000	\$9,000	\$10,000	\$11,000	\$12,000
Replacement Lawn Mower				\$10,000 to \$15,000	
Parking lot Sealcoat			\$3,000 to \$5,000		
Replacement of all flow meters	\$25,000				
BOD Incubator				\$4,000 to \$6,000	
Rock for the road	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
All prices are estimated due to the rising cost of raw material, manufacturing, shipping and labor.					
Estimated Total Cost	\$202,000	\$235,500	\$250,500	\$315,500	\$330,000

Add Hydro MicroScreen unit's past existing Bar Screens to remove 80% BOD & TSS	\$1,232,000 in 2022
Unit was demo'ed at treatment plant in 2008.	



Bids for a Replacement Andco Actuator for Clarifier #2

Bidder	Budget	Total Bid	Equipment
Ovivo	Not budgeted	\$27,474.14	Andco Actuator, 7105TX0HA-01142LO-T24
			1 year warranty from time of installation
Municipal Equipment	"	\$18,325.00	"
			"
Dresser Utility Solutions	"	\$15,455.00	"
			"

Freight is not included in bids.