OSAGE BEACH / LAKE OZARK
JOINT SEWER BOARD MEETING AGENDA
January 16, 2018 @ 4:00 p.m.
LAKE OZARK CITY HALL

1. CALL TO ORDER

2. ROLL CALL

Mayor, Lake Ozark, Johnnie Franzeskos
Mayor, Osage Beach, John Olivarri
City Administrator, Osage Beach, Jeana Woods
City Administrator, Lake Ozark, Dave Van Dee
Alderman, Lake Ozark, Gerry Murawski
Alderman, Osage Beach, Richard Ross
Public Works Director, Osage Beach, Nick Edelman
Public Works Director, Lake Ozark, Matt Michalik
Resident Member, Mr. Gary Hamner

3. MINUTES

	PAGE NUMBERS
Regular Meeting; November 21, 2017	3-4

PUBLIC COMMENT

This time is set aside on the Agenda for citizens and visitors to address the Joint Sewer Commission on any topic that is not a Public Hearing. The Joint Sewer Commission welcomes input and feedback from the public. Speakers will be restricted to three minutes for non-agenda items; five minutes for agenda items unless otherwise permitted. Minutes may not be donated or transferred from one speaker to another.

4. REPORTS

Bill List	5-28
Revenue Budget Analysis	29
Expenditure Budget Analysis	31
Income & Expense Summary	33
Check Registers & Bank Statements	35-40
Alliance Report of Operations	41-76
Approval of Flow Charts	
November, 2017	45
December, 2017	63

5. OLD BUSINESS: None

6. NEW BUSINESS:

A. Discussion and possible action regarding approval of the Inventory List. **77-83**

B. Discussion and possible action regarding the Emergency Response Plan. **85-120**

7. ADDITIONAL DISCUSSION ITEMS

8. ADJOURNMENT

THE NEXT MEETING WILL BE FEBRUARY 20, 2018, 4:00 PM @ LAKE OZARK CITY HALL

LAKE OZARK-OSAGE BEACH
JOINT SEWER BOARD
Meeting Minutes-November 21, 2017

CALL TO ORDER:
Mayor Johnnie Franzeskos called the meeting to order at 4:00pm on Tuesday, November 21, 2017 at Lake Ozark City Hall

ROLL CALL:
Mayor, City of Lake Ozark, Johnnie Franzeskos-Present
Mayor, Osage Beach, John Olivarri-Present
City Administrator, Osage Beach-Jeana Woods-Present
City Administrator, City of Lake Ozark-Dave Van Dee-Present
Alderman, Osage Beach-Richard Ross-Present
Alderman, Lake Ozark-Gerry Murawski-Present
Public Works Director, Osage Beach, Nick Edelman-Present
Public Works Director, City of Lake Ozark-Matt Michalik-Present
Resident Member, Mr. Gary Hamner-Present

MINUTES:
Public Works Director Edelman made a motion to approve the meeting minutes of October 17, 2017, seconded by Public Works Director Michalik. Motion passed unanimously.

REPORTS:
Public Works Director Michalik made a motion to approve the Bills List with the additional bill added from Roemer's Heavy Equipment, seconded by Alderman Murawski, motion passed unanimously.

The Revenue Budget, Expenditure Budget Analysis, Income & Expense Summary and Check Registers and Bank Statements were reviewed. Motion was made by Mayor Olivarri to acknowledge the review of the documents. Seconded by Public Works Director Edelman. Motion passed unanimously.

Alliance Report of Operations: The average daily incoming flow for October was 1.575mgd. They had 7.4 inches of precipitation measured at the WWTP in October.

Operationally, the plant's discharge was excellent, with an effluent monthly average BOD of 1.0 mg/l and TSS of 1.5 mg/l respectively for October, which represents a 99.1 + % or better removal.

The MLSS average for both aeration basins was 3.739 mg/l in October. The total dry weight sludge inventory for October totaled 253,182 pounds. There were 20 tanker loads of 74,000 gallons of biosolids land applied in October. We also received 10 tanker loads or 23,500 gallons of septage for the month of October.

APPROVAL OF FLOW CHART

Motion was made by City Administrator Woods to approve the Flow Chart, seconded by Public Works Director Edelman, motion passed unanimously.

OLD BUSINESS: None

NEW BUSINESS:

A. Discussion and possible action on approval of the 2018 budget:

With no questions or comments, motion was made by Mayor Olivarri to approve the proposed 2018 Budget. The motion was seconded by Resident Member Hamner. The motion was then unanimously approved.

Alderman Ross had questions on the distribution of the monies for the generator. Mayor Franzeskos explained this has been an ongoing process and was approved to budget the expense in this manner in past sessions. Discussion was also held regarding bids for design companies. The committee is to research and report back in January.

B. Authorization to pay bills in December, due to "No December Meeting".

Motion was made by Public Works Director Michalik to authorize payment, seconded by Public Works Director Edelman. Motion passed unanimously.

ADJOURNMENT:

At 4:40pm Public Works Director Michalik made a motion to adjourn, seconded by Alderman Ross, motioned passed unanimously.

Approved On:

Mayor, Johnnie Franzeskos

City Clerk, Kimberly Baker

JOINT SEWER BOARD
BILL LIST
JANUARY 16, 2018

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:	$	44,894.55
OPERATING FUND BILLS TO BE PAID:	$	34,524.87
EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:	$	1,014.97
EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:	$	-
TOTAL	$	80,434.39

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:		Amount:
4150	3629	Roemer's Heavy Equip	Rebuild fuel pump Field Gimme	$	2,293.40
4185	3630	Ameren MO	Nov. Service	$	3,738.46
4000	3631	Equipment Replacement Fund	Payment into ER Fund	$	3,467.00
4170	3632	Alliance Water Resources, Inc.	Management Fee	$	25,936.82
4150	3633	Alliance Water Resources, Inc.	Field Gymmy Inc.	$	208.96
4020	3633	Alliance Water Resources, Inc.	Grainger Supp Protector	$	138.99
4150	3634	Roemer's Heavy Equip	Brake wk 94 GMC Volvo Trk	$	2,436.92
4020	3635	Scott's Handyman Services	Paint RAS room/pipe	$	6,675.00
			TOTAL	$	44,894.55

OPERATING FUND BILLS TO BE PAID:

Account	Check	Paid To:	Description:		Amount:
4185	3636	Ameren MO	Dec. Service	$	3,909.17
4000	3637	Equipment Replacement Fund	Payment into ER Fund	$	3,467.00
4170	3638	Alliance Water Resources, Inc.	Management Fee	$	26,584.22
4020	3639	Alliance Water Resources, Inc.	Calibration, testing for permit renewal	$	564.48
				$	-
				$	-
				$	-
				$	-
			TOTAL	$	34,524.87

EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:		Amount:
	1023	Alliance Water Resou	SQD Control Reconditioned	$	1,014.97
				$	-
			TOTAL	$	1,014.97

EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:

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

ROEMER'S HEAVY EQUIPMENT
& TRUCK REPAIR
P.O. Box 191
Osage Beach, Missouri 65065
(573) 348-3733

19212

QTY	PART NO. AND DESCRIPTION	PRICE			
1	3208 Rebuilt Inj. Pump			1385	00
1	9Y6348 Gasket Kit			28	40
(MAY BE CONTINUED ON OTHER SIDE)	TOTAL PARTS			1413	40

ACCESSORIES					
	TOTAL ACCESSORIES				

NAME: Lake Ozark-Osage Beach Joint Sewer Board
CUSTOMER SERVICE NO.:
DATE: Nov-1-2017
ADDRESS:
ORDER WRITTEN BY:
PROMISED: A.M. P.M.
CITY, STATE, ZIP:
HOME PHONE: 216-8398
BUSINESS PHONE: EXT.
ODOMETER IN:
YEAR, MAKE AND MODEL: 4WD Field Gimme
LICENSE NUMBER:
ODOMETER OUT:
SERIAL NUMBER:
MOTOR NUMBER:
TERMS:

DESCRIPTION OF WORK — **AMOUNT**

☐ LUBE ☐ CHANGE OIL ☐ OIL FILTER ☐ TUNE-UP ☐ TRANS. ☐ DIFF.

Service Call -
Check Engine for not starting.
Found no fuel to injectors. And plungers
Stuck in injector pump. Set Engine
Timming and Remove pump. Install
Rebuilt Pump and Assemble. Bleed
fuel System, and Start Engine,
Run + Check.

LITERS/GALS. OF GAS @
LITERS/QTS. OF OIL @
kg/LBS OF GREASE @

RECEIVED
NOV 21 2017

TOTAL LABOR	880 00
TOTAL PARTS	1413 40
ACCESSORIES	
GAS, OIL & GREASE	
SUBLET REPAIRS	
ERA/WASTE DISPOSAL	
TAX	
TOTAL	2293. 40

I hereby authorize the above repair work to be done along with the necessary materials. You and your employees may operate above vehicle for purposes of testing, inspection, or delivery at my risk. An express mechanics lien acknowledged on above vehicle to secure the amount of repairs thereto. It is also understood that you will not be held responsible for loss or damage to cars or articles left in cars in case of fire, theft or any other cause beyond your control.

SAVE OLD PARTS? ☐ YES ☐ NO

SIGNATURE: Doug Hutchcroft

THANK YOU!

Ameren MISSOURI

- AmerenMissouri.com
- 1.877.426.3736
- PO Box 88068 Chicago, IL 60680-1068
  Ameren payment processing center

FOCUSED ENERGY. For life.

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

AMOUNT DUE **$3,681.22**

Due Date **01/02/2018**

Amount After Due Date $3,736.44

Previous Statement $4,719.86
Total Payments $4,719.86
Payment Received. Thank You.

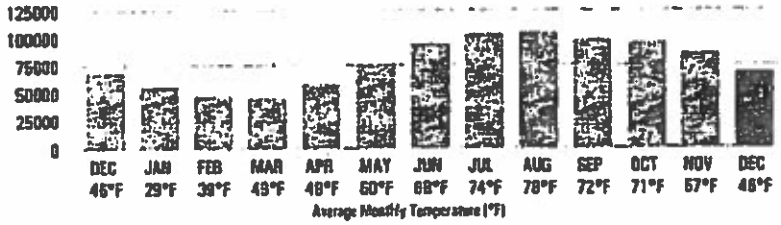
RECEIVED DEC 08 2017

Current Detail for Statement 12/07/2017

Total Electric Charges	$3,681.22
Total Amount Due	**$3,681.22**

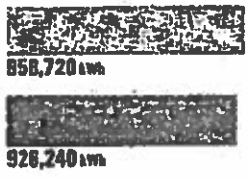
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using **3.4% less** than last year.



Usage from Jan-Dec for 2016 & 2017

13073 00015 2293975 00037 0001 03 0001

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.

» See next page for service details.

Keep this portion for your records.

Please return this portion with your payment.

Ameren MISSOURI

☐ Check if you have address changes on back.

Amount Due	Due Date
$3,681.22	January 02, 2018
Delinquent Amount After Due Date	**Account Number**
$3,736.44	4580005832

Amount Enclosed $ _____

>000203 2293975 0003 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK, MO 65049-1985

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

60600000 0045800058302 000003681220 000003681220

Electric Service Details — Service from 11/02/2017 - 12/05/2017 (33 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
11673321	11/02 - 12/05	33	Total kWh	Actual	44101.0000	43678.0000	423.0000	160.0000	67680.0000
11673321	11/02 - 12/05	33	Peak kW	Actual	0.6190	0.0000	0.6190	160.0000	99.0400

Usage Summary

Total kWh	67680.0000	Peak kW	99.0000
Total Billing Demand	100.0000	October Winter Base kW	131.2000
Winter Base Demand	99.0000	Base kWh Ratio	1.0000
Base kWh (HUD)	67680.0000	Seasonal kWh (HUD)	0.0000

Rate 3M Large General Service

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Seasonal Energy Charge	0.00	kWh	@	$ 0.03890000	$0.00
Demand Charge	100.00	kW	@	$ 2.00000000	$200.00
Base Energy Charge / Hours Used	14,650.00	kWh	@	$ 0.06650000	$987.53
Base Energy Charge / Hours Used	19,890.00	kWh	@	$ 0.04940000	$978.12
Base Energy Charge / Hours Used	33,030.00	kWh	@	$ 0.03890000	$1,284.97
Customer Charge					$95.07
Fuel Adjustment Charge	67,680.00	kWh	@	$-0.00026000	$-17.60
Energy Efficiency Program Charge	67,680.00	kWh	@	$ 0.00020000	$13.54
Energy Efficiency Investment Charge	67,680.00	kWh	@	$ 0.00206400	$139.69
				Total Service Amount	$3,681.22
				Total Electric Charges	**$3,681.22**

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
November 27, 2017	$4,719.86

Address Changes or Corrections

Name _____
Address _____
City, State, Zip _____
Phone Number _____

AmerenMissouri.com/WaysToPay

- ONLINE E-CHECK
- PHONE 866.258.3729
- IN PERSON FIND A PAY STATION AT AMERENMISSOURI.COM/PAYSTATION
- ONLINE CREDIT CARD
- MAIL STUB & CHECK

Ameren MISSOURI

- AmerenMissouri.com
- 1.877.426.3736
- PO Box 88068 Chicago, IL 60680-1068
  Ameren payment processing center

FOCUSED ENERGY. For life.

Account Number 5580005920
Customer Name ALLIANCE WATER RESOURCES INC
Service Address 3 ANDERSON RD
LAKE OZARK, MO 65049

AMOUNT DUE $57.24

Due Date 01/02/2018

Amount After Due Date $58.10

Previous Statement $154.57
Total Payments $154.57
Payment Received. Thank You.

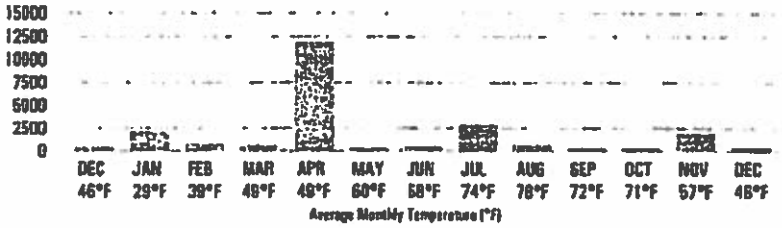
RECEIVED DEC 08 2017

Current Detail for Statement 12/07/2017

Total Electric Charges	$57.24
Total Amount Due	**$57.24**

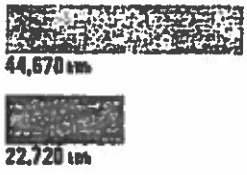
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using **49.1% less** than last year.



Usage from Jan-Dec for 2016 & 2017

13073 00075 2293975 000121 000241 000000002

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.

» See next page for service details.

Keep this portion for your records.

Please return this portion with your payment.

Ameren MISSOURI

☐ Check if you have address changes on back.

Amount Due	Due Date
$57.24	January 02, 2018
Delinquent Amount After Due Date	**Account Number**
$58.10	5580005920

Amount Enclosed $ _____

>000075 2293975 0003 092139 1oz

ALLIANCE WATER RESOURCES INC
PO BOX 1885
LAKE OZARK, MO 65049-1885

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

90633000 005580005920 000000057240 000000057240

Electric Service Details — Service from 11/02/2017 - 12/05/2017 (33 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
98041275	11/02 - 12/05	33	Total kWh	Actual	16232.0000	16190.0000	42.0000	10.0000	420.0000
98041275	11/02 - 12/05	33	Peak kW	Actual	3.7650	0.0000	3.7650	10.0000	37.5500

Usage Summary

Total kWh	420.0000	Winter Base kWh	1000.0000
Current Base kWh	420.0000	Seasonal kWh	0.0000

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

Threshold - Peak Demand

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Base Energy Charge	420.00	kWh	@	$ 0.08360000	$35.11
Seasonal Energy Charge	0.00	kWh	@	$ 0.04820000	$0.00
Customer Charge					$21.43
Fuel Adjustment Charge	420.00	kWh	@	$-0.00026000	$-0.11
Energy Efficiency Program Charge	420.00	kWh	@	$ 0.00010000	$0.04
Energy Efficiency Investment Charge	420.00	kWh	@	$ 0.00182000	$0.77
				Total Service Amount	$57.24
				Total Electric Charges	$57.24

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
November 27, 2017	$154.57

Address Changes or Corrections

Name _____
Address _____
City, State, Zip _____
Phone Number _____

AmerenMissouri.com/WaysToPay

- ONLINE E-CHECK
- PHONE 866.268.3729
- IN PERSON FIND A PAY STATION AT AMERENMISSOURI.COM/PAYSTATION
- ONLINE CREDIT CARD
- MAIL STUB & CHECK

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
206 South Keene Street
Columbia, Missouri 65201
(573) 874-8980 Fax (573) 443-0833

INVOICE

Invoice No: 7619

Invoice Date: 1-Dec-17

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
c/o Kerri Bell
City of Osage Beach
1000 City Parkway
Osage Beach, MO 65065

Customer No: 20220

Terms: 30 days

REFERENCE	DESCRIPTION	AMOUNT
	Wastewater Plant operating service for month of: Dec-17 Base Fee	$26,935.82
	TOTAL DUE	$26,935.82

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
206 South Keene Street
Columbia, Missouri 65201
(573) 874-8080 Fax (573) 443-0833

INVOICE

Invoice No:	7620
Invoice Date:	1-Dec-17
Customer No:	20220
Terms:	30 days

SOLD TO:
Lake Ozark/Osage Beach Joint Utility Board
c/o Karri Bell
City of Osage Beach
1000 City Parkway
Osage Beach, MO 65065

REFERENCE	DESCRIPTION	AMOUNT
	Field Gymmy Inc - Invoice #0012 - 50%	$208.98
	Grainger - Invoice #9810374523 - 50%	$138.99
	Southland Electrical Supply - Invoice # 3071077	$1,014.97
	TOTAL DUE	$1,362.92

4 50
40 00
F 1

QUICK-CHANGE
LIQUID OR DRY
HIGH FLOTATION

FIELD GYMMY INC.

GEARED TO THE JOB....

P.O. BOX 121
GLANDORF, OHIO 45848
PHONE (419) 538-6311

Our FINANCE CHARGE on past due accounts is a fixed amount of 1 1/2% per month which is 18% ANNUAL PERCENTAGE on unpaid balance staying 30 days after account date.

CUSTOMER ACCT. NO. _____ DATE 9-12-17

NAME ALLIANCE WATER RESOURCES

ADDRESS #3 ANDERSON RD.

CITY STATE ZIP LAKE OZARK, MO 65049 CUSTOMER ORDER NO. _____

RECEIVED
NOV 06 2017

DATE	CHARGE	CASH	C.O.D.	PAID OUT	CREDIT	ACCOUNT	MDSE	PAID OUT	
	X								RUSS

1 - 6"X4" BALLHOOK 90° SPREADING ELBOW			180 00
1 - SPREADING	CONE		20 95
1 - SURFACE SPREADING DELETER	PLATE		86 24
			387 19
	S&H		30 74
		#	417 93

The undersigned hereby claims exception on the purchase of tangible personal property made under this certificate and certifies that this claim is based upon the purchaser's proposed use of the item purchased, the activity of the purchase or both, as shown hereon.

0012

SALES TAX

TOTAL $

ROYAL ESD TO

GL Acct#: 6702-20 208.97 1220-20 $208.96 4150

Signature: Larry Studebaker

Date: 11/6/17

GRAINGER

808 N. CEDARBROOK AVE.
SPRINGFIELD, MO 65802-2522
www.grainger.com

SHIP TO

ALLIANCE WATER RESOURCES
3 ANDERSON RD
LAKE OZARK MO 65049-0000

BILL TO
ALLIANCE WATER RESOURCES
PO BOX 1985
LAKE OZARK MO 65049-1985

ORIGINAL INVOICE

GRAINGER ACCOUNT NUMBER	858374754
INVOICE NUMBER	9610374523
INVOICE DATE	11/08/2017
DUE DATE	12/08/2017
AMOUNT DUE	$291.93

PO NUMBER:	GARY
CALLER:	GARY HUTCHCRAFT
CUSTOMER PHONE:	5733650455
ORDER NUMBER:	1305648102
INCO TERMS:	FOB ORIGIN

RECEIVED
NOV 10 2017

THANK YOU!

FEI NUMBER 36-1158280
FOR QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL *1-800-472-4643*

PO LINE #	ITEM #	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
	2GNL2	SUPP PROTECTR,20A,3P,C,277/480VAC,125VDC MANUFACTURER # MG24469 Delivery #8377809097 Date Shipped:11/08/2017 Carrier: UPS GROUND No of Pkgs:1 Wt: 0.800 Trk #:1Z2X98300336425364 SHIPPED FROM: DC FOUNTAIN INN 003 101 SOUTHCHASE BLVD,FOUNTAIN INN,SC 29644-9019 GL Acct#: 6705-20 $152.94 1220-20 $138.99 4020 Signature: Date: 11/10/17	1	267.00	267.00

THIS PURCHASE IS GOVERNED EXCLUSIVELY BY GRAINGER'S TERMS OF SALE, INCLUDING: (I) DISPUTE RESOLUTION REMEDIES, AND (II) CERTAIN WARRANTY AND DAMAGES LIMITATIONS AND DISCLAIMERS IN EFFECT AT THE TIME OF THE ORDER, WHICH ARE INCORPORATED BY REFERENCE HEREIN. GRAINGER'S TERMS OF SALE ARE AVAILABLE AT WWW.GRAINGER.COM/ PRODUCT RETURN INSTRUCTIONS ARE AVAILABLE AT WWW.GRAINGER.COM/RETURNS

INVOICE SUB TOTAL	267.00
SHIPPING	10.98
TAX	13.95

These items are sold for domestic consumption. If exported, purchaser assumes full responsibility for export controls. Diversion contrary to US law prohibited.

PAY THIS INVOICE. NO STATEMENT WILL BE SENT. PAYMENT TERMS Net 30 days IN U.S. DOLLARS.

AMOUNT DUE *$291.93*

PLEASE DETACH THIS PORTION AND RETURN WITH YOUR PAYMENT

BILL TO:

ALLIANCE WATER RESOURCES
PO BOX 1985
LAKE OZARK MO 65049-1985
UNITED STATES OF AMERICA

REMIT TO:
GRAINGER
DEPT. 858374754
P.O. BOX 419267
KANSAS CITY, MO 64141-6267

858374754961037452310000291931000139510001098100000017120&HH

X	ACCOUNT NUMBER	DATE	INVOICE NUMBER	AMOUNT DUE
	858374754	11/08/2017	9610374523	$291.93

FOR COMMENTS OR CHANGE OF ADDRESS, ENTER INFORMATION ON REVERSE SIDE

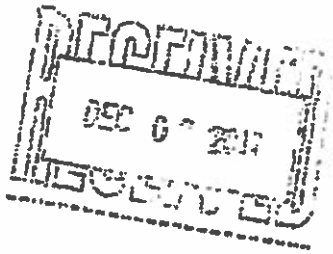
INVOICE

SOUTHLAND ELECTRICAL SUPPLY
147 N Main Street - P.O. Box 1329
Burlington, NC 27217
Phone: 800.476.1486 - Fax: 336.222.1065

INVOICE	Invoice Date
3071077	12/5/2017
ORDER NUMBER	
1062432	

Bill To:
Alliance Water Resources Inc
PO Box 1985
Lake Ozark, MO 65049
US

Ship To:
Alliance Water Resources Inc
#3 Anderson Rd
Lake Ozark, MO 65049
US



Customer ID	PO Number	Term Description	Net Due Date	Ordered By
113950	Gary	NET 30	1/4/2018	ACCOUNTS PAYABLE

Invoice Date	Pick Ticket No	Primary Salesrep Name	Taker
12/5/2017	2058081	Default Sales	Cathy Webster

L.	Item ID / Manufacturer / Condition Item Description	Ordered	Shipped	Unit Price UOM	Extended Price
Carrier: UPS	*Tracking #:* 1Z4V6V210355506137				
1	SQD-CONTROL-R / Square D / Reconditioned Square D Control Parts Square D Model 4, 30 inch door with HOA, s reset button as shown in picture	3	3	325.00 EA	975.00

SUB-TOTAL:	975.00
TOTAL FREIGHT:	39.97
TAX:	0.00
AMOUNT DUE:	1,014.97

GL Acct#: 1220-20 100% E/R
Signature: Gary Hutchison
Date: 12/7/17

ROEMER'S HEAVY EQUIPMENT & TRUCK REPAIR

P.O. Box 191
Osage Beach, Missouri 65065
(573) 348-3733

19224

JOINT SEWER BOARD

QTY	PART NO. AND DESCRIPTION	PRICE			
4	STM3929131 SEAL KIT	52	46	209	84
2	KIT8042 CAM BSH KIT	12	73	25	46
4	VK21245150 REMAN KIT	67	48	269	92
2	30130 PARK BRAKE CHAMBERS	72	40	144	80
1	22ND H7522 RH CAMSHAFT			38	75
1	22ND J7524 CAMSHAFT			38	75
1	22ND W7537 CAMSHAFT			34	13
1	22ND V7536 CAMSHAFT			34	17
2	FLTR801073 ADSUSTER	70	39	140	68
2	R810019 CRUIS KIT	12	44	24	88
1	DIFF HOUSING VENT			12	61
1	360008 HEATER CHORD			28	40
1	B7700 OIL FILTER			12	67
1	33528 FUEL FILTER			14	68
1	BW5071 COOLANT FILTER			12	97

RECEIVED
DEC 08 2017
DISCUSSED

(MAY BE CONTINUED ON OTHER SIDE) TOTAL PARTS 1,042 67

ACCESSORIES

SERVICE TRUCK - CHANGE OIL, OIL FILTER, FUEL FILTER & COOLANT FILTER. GREASE CHASIS. CHECK & FILL ALL FLUID LEVELS.					
TOTAL ACCESSORIES					

NAME	LAKE OZARK OSAGE BEACH
CUSTOMER SERVICE NO.	
DATE	12-7-17
ADDRESS	P.O. Box 1985
ORDER WRITTEN BY	
PROMISED	A.M. / P.M.
CITY, STATE, ZIP	Lake Ozark MO 65049
HOME PHONE	216-8398
BUSINESS PHONE / EXT.	
ODOMETER IN	
YEAR, MAKE AND MODEL	94 GMC VOLVO WHITE
LICENSE NUMBER	
ODOMETER OUT	
SERIAL NUMBER	SR833094
MOTOR NUMBER	
TERMS	

DESCRIPTION OF WORK — AMOUNT

☐ LUBE ☐ CHANGE OIL ☐ OIL FILTER ☐ TUNE-UP ☐ TRANS. ☐ DIFF.

SERVICE CALL - CHECK PARK BRAKES FOR NOT RELEASING BLOCK AIR TO RIGHT REAR PARK CHAMBER AND RELEASE BRAKE. BRING TO SHOP AND REPAIR. REMOVE ALL WHEELS AND DRUMS, REMOVE AND REPLACE ALL BRAKE SHOES, CAM SHAFTS & BUSHINGS. REPLACE ALL WHEEL SEALS, REPLACE PARK BRAKE CHAMBERS, AND SLACK ADJUSTERS ON REAR AXLES. ASSEMBLE AND ADJUST ALL BRAKES. FILL BOTH DIFFS W/ FLUID. CHECK ENG. BLOCK HEATER AND REPLACE ELECTRICAL CHORD.

LITERS/GALS. OF GAS				TOTAL LABOR	1,230 00
6 GALS. LITERS/GTS. OF OIL 15W40	14.25	85	50	TOTAL PARTS	1,042 67
26 LBS. OF GREASE 80W90	2.06	53	56	ACCESSORIES	
1½ GALS Antifreeze		25	19	GAS, OIL & GREASE	164 25
		164	25	SUBLET REPAIRS	
				ENVIRONMENTAL WASTE DISPOSAL	
				TAX	
				TOTAL	2,436 92

I hereby authorize the above repair work to be done along with the necessary materials. You and your employees may operate above vehicle for purposes of testing, inspection, or delivery at my risk. An express mechanics lien acknowledged on above vehicle to secure the amount of repairs thereto. It is also understood that you will not be held responsible for loss or damage to cars or articles left in cars in case of fire, theft or any other cause beyond your control.

SAVE OLD PARTS? ☐ YES ☐ NO

SIGNATURE

THANK YOU!

(CK#)

Job# 87694

Date 12/11/2017

Scott's Handyman Services
1256 Osage Beach Road
Osage Beach, MO 65065
(573)746-1166
shs.homeoffice@gmail.com

RECEIVED
DEC 12 2017

INVOICE

Customer:

Joint Sewer Board
P.O. Box 1985
Lake Ozark, MO 65049

Job Site Location/Address:

Joint Sewer Board
#3 Anderson Road
Lake Ozark, MO 65049

Item Description		Amount
Prime 1 coat Kem Kromike piping, valves and pumps.		
Paint piping Brown, 2 coats Alked Enamel.		
Paint valves Red 2 coats Alked Enamel.		
Paint pumps Grey 2 coats Alked Enamel.		
Painr pum Room walls White A100 Satin SW.		
Total Labor:		$2,400.00
Miller County labor prevaling order # 24 applied		
	Pre-Total	$2,400.00
	Labor	$4,275.00
	Total	$6,675.00

4020

Thank you for the opportunity,

William S. Rasmussen

Ameren MISSOURI

- AmerenMissouri.com
- 1.877.426.3736
- PO Box 88068 Chicago, IL 60680-1068
  Ameren payment processing center

FOCUSED ENERGY. For life.

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

AMOUNT DUE $3,759.58

Due Date 02/01/2018

Amount After Due Date $3,815.87

Previous Statement $3,681.22
Total Payments $3,681.22
Payment Received, Thank You.

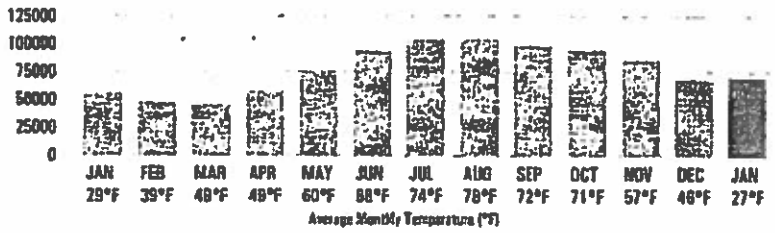
RECEIVED
JAN 10 2018

Current Detail for Statement 01/10/2018

Total Electric Charges	$3,759.58
Total Amount Due	**$3,759.58**

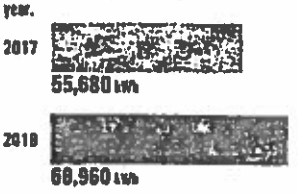
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using **23.9% more** than last year.



Usage for Jan 2017 & 2018

13073 00142 2299791 000259 000819 000100002

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.

» See next page for service details.

Keep this portion for your records.

Page 1 of 4

Please return this portion with your payment

Ameren MISSOURI

☐ Check if you have address changes on back.

Amount Due	Due Date
$3,759.58	February 01, 2018
Delinquent Amount After Due Date	Account Number
$3,815.87	4580005832

Amount Enclosed $ _____

>000142 2299791 0002 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK, MO 65049-1885

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

40600000 0045800058302 000003759580 000003759580

Electric Service Details — Service from 12/05/2017 - 01/08/2018 (34 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
11673321	12/05 - 01/08	34	Total kWh	Actual	44532.0000	44101.0000	431.0000	160.0000	68960.0000
11673321	12/05 - 01/08	34	Peak kW	Actual	0.6400	0.0000	0.6400	160.0000	102.4000

Usage Summary

Total kWh	68960.0000	Peak kW	102.4000
Total Billing Demand	102.4000	October Winter Base kW	131.2000
Winter Base Demand	102.4000	Base kWh Ratio	1.0000
Base kWh (HUD)	68960.0000	Seasonal kWh (HUD)	0.0000

Rate 3M Large General Service

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Seasonal Energy Charge	0.00	kWh	@	$ 0.03890000	$0.00
Demand Charge	102.40	kW	@	$ 2.00000000	$204.80
Base Energy Charge / Hours Used	15,360.00	kWh	@	$ 0.06650000	$1,021.44
Base Energy Charge / Hours Used	20,480.00	kWh	@	$ 0.04840000	$1,011.71
Base Energy Charge / Hours Used	33,120.00	kWh	@	$ 0.03890000	$1,288.37
Customer Charge					$95.07
Fuel Adjustment Charge	68,960.00	kWh	@	$-0.00026000	$-17.93
Energy Efficiency Program Charge	68,960.00	kWh	@	$ 0.00020000	$13.79
Energy Efficiency Investment Charge	68,960.00	kWh	@	$ 0.00206400	$142.33
				Total Service Amount	$3,758.58
				Total Electric Charges	$3,758.58

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
December 28, 2017	$3,681.22

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

Address Changes or Corrections

Name _____
Address _____
City, State, Zip _____
Phone Number _____

AmerenMissouri.com/WaysToPay

- ONLINE E-CHECK
- PHONE 866.268.3729
- IN PERSON FIND A PAY STATION AT AMERENMISSOURI.COM/PAYSTATION
- ONLINE CREDIT CARD
- MAIL STUB & CHECK

Ameren MISSOURI

- AmerenMissouri.com
- 1.877.426.3736
- PO Box 88068 Chicago, IL 60680-1068
  Ameren payment processing center

FOCUSED ENERGY. For life.

Account Number 5580005920
Customer Name ALLIANCE WATER RESOURCES INC
Service Address 3 ANDERSON RD
LAKE OZARK, MO 65049

AMOUNT DUE **$149.59**

Due Date **02/01/2018**

Amount After Due Date $151.83

Previous Statement $57.24
Total Payments $57.24
Payment Received. Thank You.

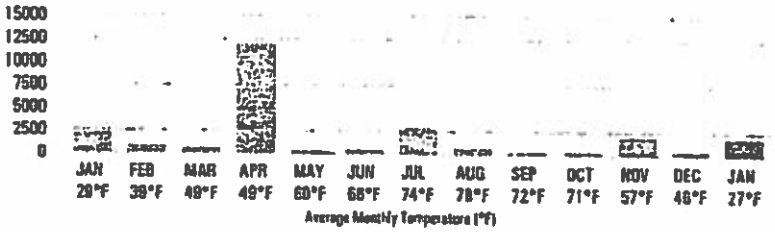
RECEIVED
JAN 10 2018

Current Detail for Statement 01/10/2018

Total Electric Charges	$148.59
Total Amount Due	**$149.59**

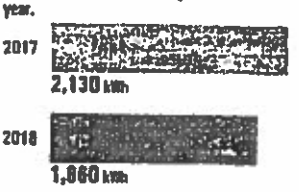
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using **12.7% less** than last year.



Usage for Jan 2017 & 2018

13073 00291 2299791 000000 001111 80010022

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.

» See next page for service details.

Keep this portion for your records.

Please return this portion with your payment.

Ameren MISSOURI

☐ Check if you have address changes on back.

Amount Due	Due Date
$149.59	February 01, 2018
Delinquent Amount After Due Date	**Account Number**
$151.83	5580005920

Amount Enclosed $ _____

>000291 2299791 0002 092139 10Z

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK, MO 65049-1985

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

50633000 0055800059200 000000149590 000000149590

Electric Service Details - Service from 12/05/2017 - 01/06/2018 (34 days)

Electric Meter Read

METER NUMBER	SERVICE FROM - TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
88041275	12/05 - 01/08	34	Total kWh	Actual	16418.0000	16232.0000	186.0000	10.0000	1860.0000
88041275	12/05 - 01/08	34	Peak kW	Actual	1.0130	0.0000	1.0130	10.0000	10.1300

Usage Summary

Total kWh	1860.0000	Winter Base kWh	1000.0000
Current Base kWh	1000.0000	Seasonal kWh	860.0000

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

Threshold - Peak Demand

DESCRIPTION	USAGE	UNIT		RATE	CHARGE
Base Energy Charge	1,000.00	kWh	@	$ 0.08360000	$83.60
Seasonal Energy Charge	860.00	kWh	@	$ 0.04820000	$41.45
Customer Charge					$21.43
Fuel Adjustment Charge	1,860.00	kWh	@	$-0.00026000	$-0.48
Energy Efficiency Program Charge	1,860.00	kWh	@	$ 0.00010000	$0.19
Energy Efficiency Investment Charge	1,860.00	kWh	@	$ 0.00182800	$3.40
				Total Service Amount	$149.59
				Total Electric Charges	$149.59

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
December 28, 2017	$57.24

Address Changes or Corrections

Name _____
Address _____
City, State, Zip _____
Phone Number _____

AmerenMissouri.com/WaysToPay

ONLINE E-CHECK
PHONE 866.268.3729
IN PERSON FIND A PAY STATION AT AMERENMISSOURI.COM/PAYSTATION
ONLINE CREDIT CARD
MAIL STUB & CHECK

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
206 South Keene Street
Columbia, Missouri 65201
(573) 874-8080 Fax (573) 443-0833

INVOICE

Invoice No: 7668

Invoice Date: 1-Jan-18

Customer No: 20220

Terms: 30 days

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
c/o Karri Bell
City of Osage Beach
1000 City Parkway
Osage Beach, MO 65065

REFERENCE	DESCRIPTION		AMOUNT
	Wastewater Plant operating service for month of:	Jan-18	
	Base Fee		$26,584.22
		TOTAL DUE	$26,584.22

Alliance WATER RESOURCES
Professional Water and Wastewater Operations

November 27, 2017

Board of Directors
Lake Ozark/Osage Beach Joint Wastewater Plant Board
City of Osage Beach
c/o Karri Bell
1000 City Parkway
Osage Beach, MO 65065

Board of Directors:

As per the terms and conditions of the Alliance O&M Agreement, the base fee is adjusted on January 1st each year to reflect the change in the Consumer Price Index and the other terms of the agreement.

The Agreement specifies the use of the Department of Labor's CPI- All Urban Consumers Midwest – Size Class D, not seasonally adjusted (Series ID: CUURD200SA0). The most recent CPI data used to calculate the 2018 base contract fee was September 2017. Accordingly, the 2018 base contract fee will use the 12 month period from October 2016 through September 2017.

The appropriate indices and resulting contract adjustment is calculated as follows:

CPI	September 2017	226.242
CPI	October 2016	223.683

CPI Increase = (226.242 – 223.683) / 223.683
= + 1.1%

Per contract, the base fee is adjusted annually at the CPI percentage increase/decrease plus 0.5% but not less than 2.5% annually nor more than 6.5% annually. The CPI adjustment plus the 0.5% is 1.6%, therefore the base rate is adjusted at + 2.5% beginning January 2018.

Adjusted O&M Fee:

Previous Monthly Fee= $25, 935.82 x 1.025
New Monthly Fee = $26,584.22

The invoice for January 2018 will reflect the new base fee of $26,584.22 per month.

206 South Keene Street • Columbia, MO 65201 • 573-874-8080 • Fax: 573-443-0833 • www.alliancewater.com

On behalf of Gary Hutchcraft, and our entire staff at Alliance Water Resources, thank you for letting us be of service to your communities.

Sincerely,
Alliance Water Resources

Gary Johnson
Divisional Manager

cc: Board of Directors
Tim Geraghty
Gary Hutchcraft

Databases, Tables & Calculators by Subject

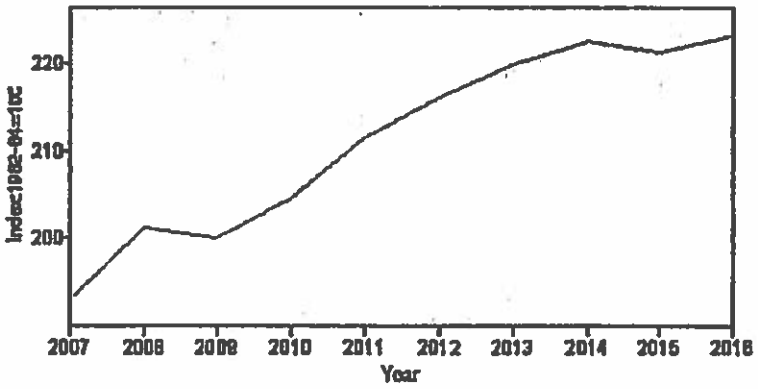
Change Output Options: From: 2007 To: 2017 GO

☑ Include graphs ☐ Include annual averages More Formatting Options

Data extracted on: November 6, 2017 (10:05:05 AM)

CPI-All Urban Consumers (Current Series)

Series Id: CUURD200SA0
Not Seasonally Adjusted
Series Title: All items in Midwest - Size Class D, all urban consumers, not seasonally adjusted
Area: Midwest - Size Class D
Item: All items
Base Period: 1982-84=100



Download: xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2007	187.587	188.122	190.365	191.685	193.467	194.442	194.815	194.716	195.483	195.054	196.569	195.819	193.177	190.945	195.409
2008	196.708	197.596	199.472	200.841	202.720	205.122	206.435	206.251	205.522	202.086	197.883	195.383	201.335	200.410	202.260
2009	195.843	196.421	197.267	197.644	198.911	201.157	200.908	201.823	201.918	202.499	203.047	202.738	200.015	197.874	202.156
2010	203.490	203.274	204.204	204.326	204.026	203.749	203.992	204.985	205.100	205.565	206.014	206.136	204.572	203.845	205.299
2011	207.551	208.156	209.713	211.314	212.210	211.717	212.261	213.009	213.606	212.476	212.907	212.505	211.452	210.110	212.794
2012	213.649	214.524	215.784	216.658	215.251	215.625	216.045	217.300	217.986	217.467	216.253	215.962	216.042	215.249	216.836
2013	217.217	219.311	219.603	218.915	220.614	220.610	220.713	220.769	220.439	219.220	219.582	219.291	219.690	219.378	220.002
2014	220.129	221.297	222.821	223.141	223.215	223.766	223.621	223.432	224.125	222.847	221.237	219.393	222.419	222.395	222.443
2015	218.080	219.279	220.708	220.790	221.748	222.372	222.828	222.932	222.183	222.397	221.204	219.511	221.169	220.496	221.843
2016	220.001	220.259	222.932	223.418	224.110	224.758	224.279	224.097	224.599	223.603	222.632	223.039	223.151	222.580	223.722
2017	224.482	224.793	225.085	225.850	226.144	225.745	226.194	226.956	226.242					225.350	

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
206 South Keene Street
Columbia, Missouri 65201
(573) 874-8080 Fax (573) 443-0833

INVOICE

Invoice No:	7659
Invoice Date:	1-Jan-18
Customer No:	20220
Terms:	30 days

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
c/o Karri Bell
City of Osage Beach
1000 City Parkway
Osage Beach, MO 65065

REFERENCE	DESCRIPTION	AMOUNT
	TG Technical Services - Invoice #14472 - 50%	$61.48
	Pace Analytical - Invoice #1760041150	$503.00
	TOTAL DUE	$564.48

TG Technical Services
P.O. Box 775
613 SW 3rd. Street - Suite B
Lees Summit, MO 64063

Invoice

Date	Invoice #
12/4/2017	14472

Bill To

Alliance Water Resources
Gary Hutchcraft
P.O. Box 1985
Lake Ozark, MO 65049

Ship To

Alliance Water Resources
Gary Hutchcraft
3 Anderson Road
Lake Ozark, MO 65049

P.O. Number	Terms	Rep	Ship	Via	F.O.B.
	Net 30	BK	12/4/2017	Federal Express	PP & A

Quantity	Item Code	Description	Price Each	Amount
1	TG-34SG-IH	3-4 Gas Instrument Calibration - In House Xam-2000, SN# 8318910	110.00	110.00T
1	Shipping	Shipping and Handling Fee FEDEX 788742480755	12.95	12.95T
		Sales Tax - Lees Summit	7.85%	9.65

GL Acct#: 6705-20 $71.12 1220-20 $61.48

Signature: [signature]

Date: 12/8/17

816-524-8100	julia@tgtechservices.com	**Balance Due** $132.60

Pace Analytical™
www.pacelabs.com

INVOICE

Pace Analytical Services, LLC
9608 Loiret Blvd
Lenexa, KS 66219
Phone: (913)599-5665

Invoice Number: 1760041150
Date: 12/26/2017
Total Amount Due: $503.00

Sold To:
Gary Hutchcraft
Alliance Water Resources
#3 Anderson Road
Lake Ozark, MO 65049
(573)365-0455

RECEIVED
DEC 29 2017

Please Remit To:
Pace Analytical Services, LLC
P.O. Box 684056
Chicago, IL 60695-4056

Client Number/Client ID	Purchase Order No.	Pace Project Mgr.	Terms	Page
60-531557 / Alliance Oza		Heather Wilson	Net 30 Days	1

Client Project: EXPANDED EFF TEST # 1
Pace Project No: 60260023
Report Sent To: Gary Hutchcraft, Alliance Water Resources
Comments:

Client Name: Alliance Water Resources_Lake Ozark MO
Sample Received: 12/12/2017

ANALYTICAL CHARGES

Quantity	Unit	Description	Method	Matrix	Price	Total
1	Ea	200.7 Metals, Total + Hardness	EPA 200.7	Water	$26.00	$26.00
1	Ea	200.8 ICPMS Metals	EPA 200.8	Water	$112.00	$112.00
1	Ea	245 1 Mercury	EPA 245.1	Water	$20.00	$20.00
1	Ea	4500CNE Cyanide, Total	SM 4500-CN-E	Water	$35.00	$35 00
1	Ea	624 Volatile Organics	EPA 624 Low	Water	$85.00	$85 00
1	Ea	625 Semivolatile Organics	EPA 625	Water	$185.00	$185.00
1	Ea	Chromium, Hexavalent	SM 3500-Cr B	Water	$25.00	$25.00
1	Ea	Shipping/Courier Charges	Miscellaneous Charges	Water	$0.00	$0 00
1	Ea	Trivalent Chromium Calculation	Trivalent Chromium Calc	Water	$15.00	$15.00
					Analytical Subtotal	$503.00

Total Number of Charges 9 — Total Invoice Amount $503.00

Samples Received for analysis:

Lab ID	Client Sample ID	Received
60260023001	EXPANDED EFF TEST #1	12/12/2017

If you have any questions, please contact Heather Wilson at Pace.
Phone: 1(913)563-1407 Email. heather.wilson@pacelabs.com

****1.5% MONTHLY FINANCE CHARGE ASSESSED AFTER 30 DAYS OR TERMS OF CONTRACT.**
PLEASE REFERENCE THE INVOICE NUMBER ON ALL REMITTANCE ADVICE.

Please complete and return copy of invoice with your payment. FIRST ROUND OF TESTING FOR NEXT PERMIT RENEWAL

INVOICE TOTAL $503.00 4020

GL Acct#: 1220-20 100%

Amount Paid: $ _____

Signature: Gary Hutchcraft

Check No: _____

Date: 12/29/17

Customer No: 60-531557 Invoice No: 1760041150

MONTH-TO-DATE AND YEAR-TO-DATE
REVENUE/BUDGET ANALYSIS
12/31/2017

Account Number	Account Name	2015 Actual	2016 Actual	2017 Budget	2017 Actual as of 12/31/2017	2017 December Revenue	Percent YTD
3020	Osage Beach	477,172.03	475,802.57	473,000.00	478,614.41	39,888.83	101%
3010	Lake Ozark	72,827.98	74,197.42	77,000.00	71,385.58	5,944.50	93%
3100	Interest	54.79	368.52	200.00	781.57	61.64	391%
3060	Waste Haulers' Fee	32,400.00	33,460.00	35,000.00	30,500.00	700.00	87%
	Total Operating Fund	582,454.80	583,828.51	585,200.00	581,281.56	46,594.97	99%
	E/R Fund Income	2,188.83	2,847.67	1,500.00	1,452.72	84.31	97%
	TOTAL INCOME	584,643.63	586,676.18	586,700.00	582,734.28	46,679.28	99%

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MONTH-TO-DATE AND YEAR-TO-DATE
EXPENDITURE/BUDGET ANALYSIS
12/31/2017

Account Number	Account Name	2015 Acutal	2016 Acutal	2017 Budget	2017 Actual as of 12/31/2017	2017 December Expenses	Percent YTD
4000	Equipment Replace Fund	41,606.04	41,606.04	41,604.00	41,604.17	3,467.00	100%
4010	ERF Repayment	0.00	0.00	0.00	0.00	0.00	0%
4020	*Maintenance & Repair	33,878.90	18,735.50	28,000.00	129,789.11	7,022.95	464%
4140	Insurance	16,306.00	16,977.00	17,500.00	17,144.00	0.00	98%
4150	***Vehicle Repair/Maint	1,508.78	951.93	8,000.00	12,047.61	2,436.92	151%
4160	Haulers Fees to Contractor	8,000.00	8,000.00	8,000.00	8,000.00	0.00	100%
4170	Contract Management	296,233.08	303,638.88	312,750.00	311,229.84	25,935.82	100%
4185	Electric	76,751.19	72,637.17	77,000.00	69,261.90	3,738.46	90%
4190	Bank Charges	0.00	14.85	0.00	24.35	0.00	0%
4200	Audit	2,000.00	2,158.50	2,200.00	2,200.00	0.00	100%
4220	Professional Service	2,369.99	9,193.09	0.00	1,200.00	0.00	0%
4240	Capital Purchases	0.00	0.00	150,000.00	0.00	0.00	0%
	Totals	478,653.98	473,912.96	645,054.00	592,500.98	42,601.15	92%
	**E/R Expenses	1,869.72	7,980.42	26,500.00	7,554.68	1,014.97	29%
	TOTAL EXPENSES	480,523.70	481,893.38	671,554.00	600,055.66	43,616.12	89%

****Equipment & Replacement**

Normal E/R	10,000.00
Replace impellers for RAS pumps	7,500.00
Rebuild Arm Support Clarifier #2	5,000.00
Replace doors	4,000.00
	26,500.00

*****Vehicle Repair/Maint**

Vehicle Maintenance	3,000.00	
Tires for Sludge Truck	5,000.00	X
	8,000.00	

***Maintenance & Repair**

Auto Dialer Yrly Software Fee	500.00	X
Effluent Testing for Permit Renewal	1,500.00	
Normal Maintenance	8,000.00	
UV Spare Parts	8,000.00	X
Rock for Road	2,000.00	
Strip and refinish tile in Admin Bldg	1,000.00	
Paint RAS room/pipe gallery & valve pits at	7,000.00	X
	28,000.00	

2016 Budget

#1 Aeration Basin grit removal	**107,249.88**	X

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OPERATING FUND INCOME AND EXPENSE SUMMARY
12/31/2017

Beginning Balance	273,903.59
Income - Osage Beach	39,888.83
Income - Lake Ozark	5,944.50
Income - Other	-
Income - Waste Haulers' Fees	700.00
Interest - Checking	61.64
Income - CD Interest	-
Transfers From E/R Fund	-
Transfers to E/R Fund	(3,467.00)
Expenses	(39,134.15)
Ending Fund Balance	**277,897.41**
Central Bank - NOW Acct.	126,898.96
First Bank of the Lake - Money Mkt.	100,734.77
CD St. Elizabeth, 3/18 #400886	50,263.68
Outstanding Checks:	-
Deposit in Transit:	-
	277,897.41

EQUIPMENT REPLACEMENT FUND INCOME AND EXPENSE SUMMARY
12/31/2017

Beginning Balance	520,223.39
Interest - Checking	84.31
Income - CD Interest	-
Transfers From E/R Fund	3,467.00
Transfers to E/R Fund	-
Income - Miscellaneous	-
Expenses	(1,014.97)
Ending Fund Balance	**522,759.73**
First Bank of the Lake - Money Mkt.	168,826.14
CD Providence Bank, 7/18 #1268880	202,070.98
CD First Bank of the Lake, 01/18 #101318429	101,598.93
CD St. Elizabeth, 3/18 #485431	50,263.68
Deposit in Transit	-
Outstanding Checks:	-
	522,759.73

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CHECK REGISTER - JOINT SEWER BOARD OPERATION FUND

	reconciled balance 8/31/17				**97,145.31**
3613	Ameren MO	X	9,666.03	-	87,479.28
3614	Equipment Replacement Fund	X	3,467.00		84,012.28
3615	Alliance Water Resources, Inc.	X	25,935.82		58,076.46
3616	Alliance Water Resources, Inc.	X	962.21		57,114.25
3617	Mission Communications LLC	X	407.40		56,706.85
3618	JCI Industries	X	1,995.00		54,711.85
	Deposit LO	X	-	5,499.54	60,211.39
	Deposit OB	X		40,333.80	100,545.19
	Deposit	X		4,880.00	105,425.19
	Interest	X		8.54	105,433.73
	reconciled balance 9/30/17				**105,433.73**
3619	Ameren MO	X	5,246.28	-	100,187.45
3620	Equipment Replacement Fund	X	3,467.00		96,720.45
3621	Alliance Water Resources, Inc.	X	25,935.82		70,784.63
3622	Alliance Water Resources, Inc.	X	161.32		70,623.31
3623	John Henry Foster	X	1,171.19		69,452.12
	Deposit LO	X	-	5,863.04	75,315.16
	Deposit OB	X		39,970.29	115,285.45
	Deposit	X		940.00	116,225.45
	Interest	X		9.68	116,235.13
	reconciled balance 10/31/17				**116,235.13**
3624	Ameren MO	X	4,874.43	-	111,360.70
3625	Equipment Replacement Fund	X	3,467.00		107,893.70
3626	Alliance Water Resources, Inc.	X	25,935.82		81,957.88
3627	Alliance Water Resources, Inc.	X	1,028.14		80,929.74
3628	UV Doctor Lamps LLC		2,199.73		78,730.01
3629	Roemer's Heavy Equip & Truck	X	2,293.40	-	76,436.61
	Bank charage - checks	X	24.35	-	76,412.26
	Deposit LO	X	-	5,831.73	82,243.99
	Deposit OB	X		40,001.61	122,245.60
	Deposit	X		700.00	122,945.60
	Interest	X		10.59	122,956.19
	reconciled balance 11/30/17				**122,956.19**
3630	Ameren MO	X	3,738.46	-	119,217.73
3631	Equipment Replacement Fund	X	3,467.00		115,750.73
3632	Alliance Water Resources, Inc.	X	25,935.82		89,814.91
3633	Alliance Water Resources, Inc.	X	347.95		89,466.96
3634	Roemer's Heavy Equip & Truck	X	2,436.92	-	87,030.04
3635	Scott's Handyman Services	X	6,675.00	-	80,355.04
	Deposit LO	X	-	5,944.50	86,299.54
	Deposit OB	X		39,888.83	126,188.37
	Deposit	X		700.00	126,888.37
	Interest	X		10.59	126,898.96
	reconciled balance 12/31/17				**126,898.96**

E/N

Central Bank
of Lake of the Ozarks
MEMBER FDIC
P.O. Box 4500, Jefferson City, MO 65102
(573) 348-2761

RETURN SERVICE REQUESTED

LAKE OZARK OSAGE BEACH JOINT SEWER
TREATMENT PLANT BOARD
1000 CITY PKWY
OSAGE BEACH MO 65065-3058

Period	Page
12/01/2017 - 12/29/2017	1 of 2

Web Address
www.centralbank.net

M
0000

Your Financial Summary on December 29, 2017

	Bank Deposits	Totals
Bank Deposit Accounts:		
Checking	$ 126,898.96	
Bank Deposit Total		$ 126,898.96
Total Assets:	$ 126,898.96	$ 126,898.96

Detailed Explanation of Account Balances and Other Assets

Basic Plus Interest Checking

No. 000007297 — Beginning Balance November 30, 2017 — $ 125,155.92

Deposits

Dec. 22	Deposit	700.00
Dec. 22	Deposit	5,944.50
Dec. 22	Deposit	39,888.83
Dec. 29	Interest Earned	10.59
	Total	+$ 46,543.92

Checks

Check No.	Date Paid	Amount	Check No.	Date Paid	Amount
3628	Dec. 04	2,199.73	3633	Dec. 22	347.95
3630	Dec. 29	3,738.46	3634	Dec. 20	2,436.92
3631	Dec. 26	3,457.00	3635	Dec. 18	6,675.00
3632	Dec. 22	25,935.82			

Total -$ 44,800.88

Ending Balance December 29, 2017 $ 126,898.96

Number of days since last statement/interest cycle	31
Beginning and ending dates for calculation of statement/interest cycle are 12/01/2017 through 12/31/2017	
Average collected balance	124,658.00
Interest rate	0.10%
Annual percentage yield earned	0.10%
Interest earned year to date	92.88

End of Bank Deposits

E/N

Central Bank
of Lake of the Ozarks
P.O. Box 4500, Jefferson City, MO 65102
(573) 348-2761

RETURN SERVICE REQUESTED

LAKE OZARK OSAGE BEACH JOINT SEWER
TREATMENT PLANT BOARD
1000 CITY PKWY
OSAGE BEACH MO 65065-3058

Period	Page
11/01/2017 - 11/30/2017	1 of 3

Web Address
www.centralbank.net

M
000007

Your Financial Summary on November 30, 2017

	Bank Deposits	Totals
Bank Deposit Accounts:		
Checking	$ 125,155.92	
Bank Deposit Total		$ 125,155.92
Total Assets:	$ 125,155.92	$ 125,155.92

Detailed Explanation of Account Balances and Other Assets

Basic Plus Interest Checking

No. 000007297 Beginning Balance October 31, 2017 $ 116,235.13

Deposits

Nov. 21	Deposit	5,831.73
Nov. 21	Deposit	40,001.61
Nov. 27	Deposit	700.00
Nov. 30	Interest Earned	10.59
	Total	+$ 46,543.93

Checks

Check No.	Date Paid	Amount	Check No.	Date Paid	Amount
3624	Nov. 28	4,874.43	3627	Nov. 29	1,028.14
3625	Nov. 28	3,467.00	3629	Nov. 30	2,293.40
3626	Nov. 29	25,935.82			

Total -$ 37,598.79

Withdrawals and other charges

Date	Type	Transaction Description	
Nov. 01	HARLAND CLARKE	CHK ORDERS	24.35
		Total	-$ 24.35

Ending Balance November 30, 2017 $ 125,155.92

CHECK REGISTER - JOINT SEWER BOARD EQUIPMENT REPLACEMENT FUND

	reconciled balance 8/31/17				**258,614.51**
	Interest	X		103.12	258,717.63
	Deposit	X		3,467.00	262,184.63
	reconciled balance 9/30/17				**262,184.63**
1022	National Vacuum Equip/OB	X	2,368.69		259,815.94
	Interest	X		115.24	259,931.18
	Deposit	X		3,467.00	263,398.18
	reconciled balance 10/31/17				**263,398.18**
	Interest	X		108.34	263,506.52
	Deposit	X		3,467.00	266,973.52
	reconciled balance 11/30/17				**266,973.52**
1023	Alliance Water Resources		1,014.97		265,958.55
	Interest	X		135.36	266,093.91
	Deposit	X		3,467.00	269,560.91
	reconciled balance 12/31/17				**269,560.91**

FIRST BANK
OF THE LAKE
4558 Osage Beach Pkwy, Suite 100
Osage Beach, MO 65065
(573) 348-2265

536 00010 01
ACCOUNT: 1(
DOCUMENTS: 2

00120 2818360 1OZ ATM 606.70.1.5

LAKE OZARK-OSAGE BEACH JOINT SEWER TREAT
SEWER BD.-TREATMENT PLANT BD.
1000 CITY PKWY
OSAGE BEACH MO 65065-3058

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BUSINESS MONEY MARKET ACCOUNT 101318411 (BUSINESS MONEY MARKET)

LAST STATEMENT 11/30/17	266,973.52
2 CREDITS	3,602.36
1 DEBITS	1,014.97
THIS STATEMENT 12/29/17	269,560.91

- - - - - - - - - - DEPOSITS - - - - - - - - - -

REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT
12/22 3,467.00		

- - - - - - - - OTHER CREDITS - - - - - - - -

DESCRIPTION	DATE	AMOUNT
INTEREST	12/29	135.36

- - - - - - - - - - CHECKS - - - - - - - - - -

CHECK #..DATE.....AMOUNT	CHECK #..DATE.....AMOUNT	CHECK #..DATE.....AMOUNT
1023 12/22 1,014.97		

- - - - - - - - - - I N T E R E S T - - - - - - - - - -

AVERAGE LEDGER BALANCE:	267,649.94	INTEREST EARNED:	135.36
AVERAGE AVAILABLE BALANCE:	267,052.18	DAYS IN PERIOD:	29
INTEREST PAID THIS PERIOD:	135.36	ANNUAL PERCENTAGE YIELD EARNED:	.64%
INTEREST PAID 2017:	1,286.11		

* * * C O N T I N U E D * * *

FIRST BANK
OF THE LAKE

4558 Osage Beach Pkwy, Suite 100
Osage Beach, MO 65065
(573) 348-2265

536 00010 01
ACCOUNT:
DOCUMENTS: 1

11/30/2017

00124 2791085 1OZ ATM 608.65.1.5

LAKE OZARK-OSAGE BEACH JOINT SEWER TREAT
SEWER BD.-TREATMENT PLANT BD.
1000 CITY PKWY
OSAGE BEACH MO 65065-3058

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BUSINESS MONEY MARKET ACCOUNT 101318411 (BUSINESS MONEY MARKET)

LAST STATEMENT 10/31/17	263,398.18
2 CREDITS	3,575.34
DEBITS	.00
THIS STATEMENT 11/30/17	266,973.52

- - - - - - - - - - DEPOSITS - - - - - - - - - -

REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT
11/27 3,467.00		

- - - - - - - - OTHER CREDITS - - - - - - - - -

DESCRIPTION	DATE	AMOUNT
INTEREST	11/30	108.34

- - - - - - - - - - I N T E R E S T - - - - - - - - - -

AVERAGE LEDGER BALANCE:	263,860.44	INTEREST EARNED:	108.34
AVERAGE AVAILABLE BALANCE:	263,629.31	DAYS IN PERIOD:	30
INTEREST PAID THIS PERIOD:	108.34	ANNUAL PERCENTAGE YIELD EARNED:	.50%
INTEREST PAID 2017:	1,150.75		

* * * C O N T I N U E D * * *

OUR MISSION

We partner with communities to deliver the finest water and wastewater services available at a competitive price. We are committed to keeping water safe and clean while serving people and taking care of communities with improved technical operations, careful management and financial oversight, and ensured regulatory compliance.

Alliance Water Resources, Inc.

206 S. Keene St.
Columbia, MO 65201

(573)874-8080

WATER RESOURCES®
Alliance
Professional Water and Wastewater Operations

REPORT OF OPERATIONS

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

Month of November 2017

Submitted by Alliance Water Resources, Inc. for the

January 2018

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 Coliform Colonies/100 ml	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/L
Monthly Average	1.7	1.7	N/A	0	0.06	< 5.0	< 1.0
Peak Day	1.8	2.3	8.1	0	0.10	< 5.0	< 1.0
Percent Removal	99.3	99.5	N/A	N/A	N/A	N/A	N/A

NPDES EFFLUENT LIMITATIONS

	BOD mg/l	TSS mg/l	pH	E.coli Coliform Colonies/100 ml	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/ L
Monthly Average	30	30	6-9	N/A	2.7	10	4.0
Weekly Average	45	45		N/A			
Daily Max					11.5	15	8.1

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 1.265 MGD or 42% of Permitted flow with Lake Ozark contributing 11% of the total flow and Osage Beach contributing 89%. 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 77774 pounds of BOD.

BIOSOLIDS APPLICATION AND INVENTORY

Plant personnel land applied 20 tanker loads of bio-solids during the month equivalent to a total of 74,000 gallons and 21,292 pounds dry weight solids.

505,794 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 360,000 gallons with a level of 4.5 feet in Tank 1 and 3.5 feet in Tank 2.

WASTEHAULERS

The plant received 10 loads of septage during the month totaling 17,500 gallons.

WWTP OPERATIONS

- Decanting digesters and wasting weekly.
- Normal operations.
- We shut down the UV system on the 1st of November.

WWTP MAINTENANCE AND REPAIR

- Performed routine maintenance throughout the month as per Antero Maintenance Data Management schedule. (New version of Operator 10 Software)
- The newly rebuilt RAS pump had to go back to JCI on the 7th of November due to the mechanical seal leaking and upon them checking it out further they said the seal housing was wore out allowing the seal to spin in the casing. JCI said that the seal housing wasn't covered under warranty but the labor would be. It will cost another $1,800 for the housing so I contacted the Joint Sewer Board via/email on the 1st of December for approval and everyone that responded back gave me their yes vote/approval.
- We had a float switch in the lift station at the digesters go bad on us on the 15th of November and we replaced it with a spare that we had in inventory that same day.
- The paint contractor got started on the pipe gallery paint project on the 20th of November and is expecting to be complete sometime during the week of December 11th or before.
- We got the UV banks pulled, cleaned and stored in the UV room on the 21st of November.
- The sludge trucks brakes started locking up on us on the 22nd of November and we called Larry Roemer and ask him to go out to the field where the truck was to see if he could get them to unlock and get it to his shop. After getting it to the shop he found that the air pods on each axle was leaking and the brakes were in desperate need of replacement. After getting a quote from Larry for $2,500 to $3,000 to make it road worthy I contacted the Joint Sewer Board members via/email on 1st of December and ask for approval and everyone that replied gave me their yes/approval.

SAFETY

- We conducted our monthly routine Safety Meeting on Chlorine Safety on the 14th of November.

REGULATORY AGENCY, INSPECTION AND REPORTS

- We filled out the EDMR on MDNR's website on the 8th of December.

MISCELLANEOUS AND RECOMMENDATIONS

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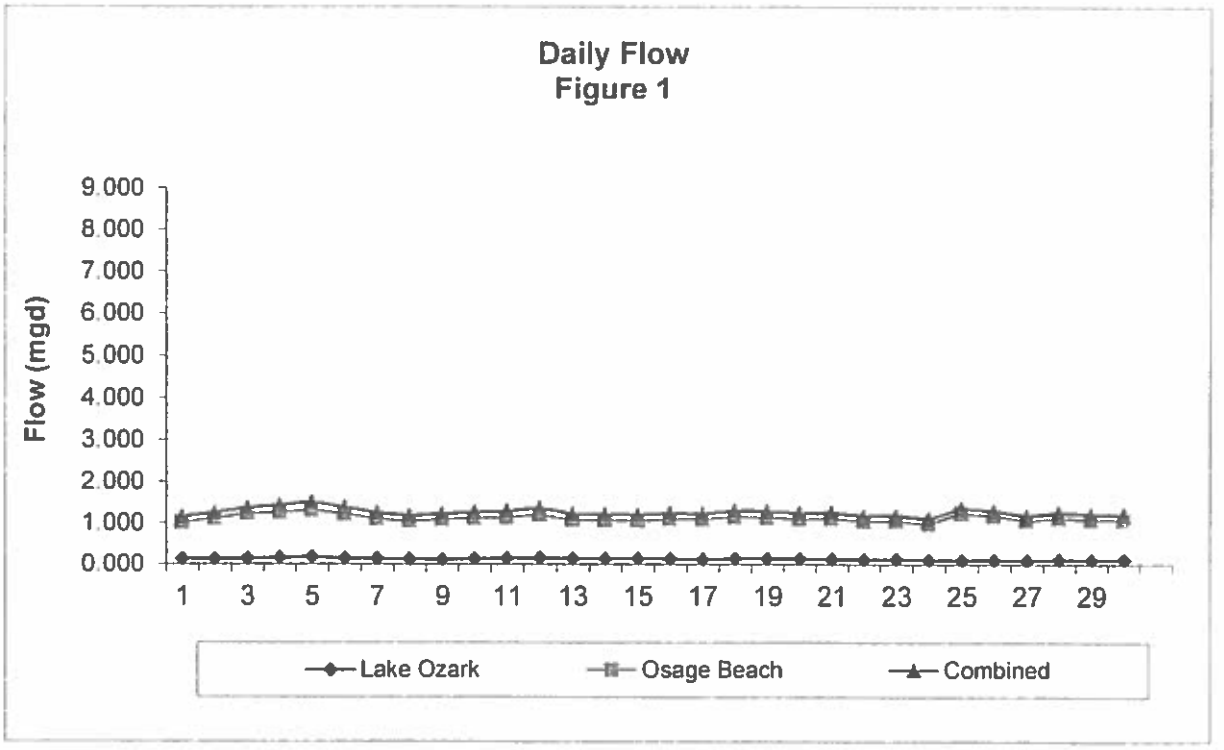
TABLE A
LAKE OZARK/OSAGE BEACH WWTP

MONTH OF November 2017

DATE		FLOW					BOD 5 MG/L			TSS MG/L		
	RAIN FALL IN.	LO mgd	OB mgd	COMB mgd	% LO	% OB	LO mg/l	OB mg/l	COMB mg/l	LO mg/l	OB mg/l	COMB mg/l
1-Nov	0	0.136	1.017	1.153	11.8	88.2						
2-Nov	0	0.140	1.109	1.249	11.2	88.8						
3-Nov	0	0.142	1.223	1.365	10.4	89.6	160	280	305	98	182	472
4-Nov	**0**	**0.167**	**1.262**	**1.429**	**11.7**	**88.3**						
5-Nov	**0**	**0.190**	**1.315**	**1.505**	**12.6**	**87.4**						
6-Nov	0	0.155	1.226	1.381	11.2	88.8						
7-Nov	0	0.149	1.103	1.252	11.9	88.1						
8-Nov	0	0.134	1.048	1.182	11.3	88.7						
9-Nov	0	0.126	1.092	1.218	10.3	89.7						
10-Nov	0	0.145	1.121	1.266	11.5	88.5	233	220	265	246	148	424
11-Nov	**0**	**0.161**	**1.138**	**1.299**	**12.4**	**87.6**						
12-Nov	**0**	**0.165**	**1.208**	**1.373**	**12.0**	**88.0**						
13-Nov	0	0.153	1.076	1.229	12.4	87.6						
14-Nov	0.1	0.143	1.074	1.217	11.8	88.2						
15-Nov	0.1	0.153	1.054	1.207	12.7	87.3						
16-Nov	0	0.144	1.103	1.247	11.5	88.5						
17-Nov	0	0.131	1.098	1.229	10.7	89.3	185	200	230	166	152	248
18-Nov	**0**	**0.151**	**1.160**	**1.311**	**11.5**	**88.5**						
19-Nov	**0.3**	**0.154**	**1.140**	**1.294**	**11.9**	**88.1**						
20-Nov	0	0.148	1.101	1.249	11.8	88.2						
21-Nov	0	0.135	1.124	1.259	10.7	89.3						
22-Nov	0	0.133	1.049	1.182	11.3	88.7	140	218	183	102	194	160
23-Nov	0	0.134	1.054	1.188	11.3	88.7						
24-Nov	0	0.119	0.992	1.111	10.7	89.3						
25-Nov	**0**	**0.117**	**1.250**	**1.367**	**8.6**	**91.4**						
26-Nov	**0**	**0.122**	**1.182**	**1.304**	**9.4**	**90.6**						
27-Nov	0	0.108	1.074	1.182	9.1	90.9						
28-Nov	0	0.133	1.127	1.260	10.6	89.4						
29-Nov	0	0.123	1.095	1.218	10.1	89.9						
30-Nov	0	0.133	1.088	1.221	10.9	89.1						
SUM	0.5	4.244	33.703	37.947								
AVG		0.141	1.123	1.265	11	89	180	230	246	153	169	326
NOTE: BOLD PRINT INDICATES WEEKEND DAYS												


Daily Flow
Figure 1
Flow (mgd)
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
Lake Ozark
Osage Beach
Combined

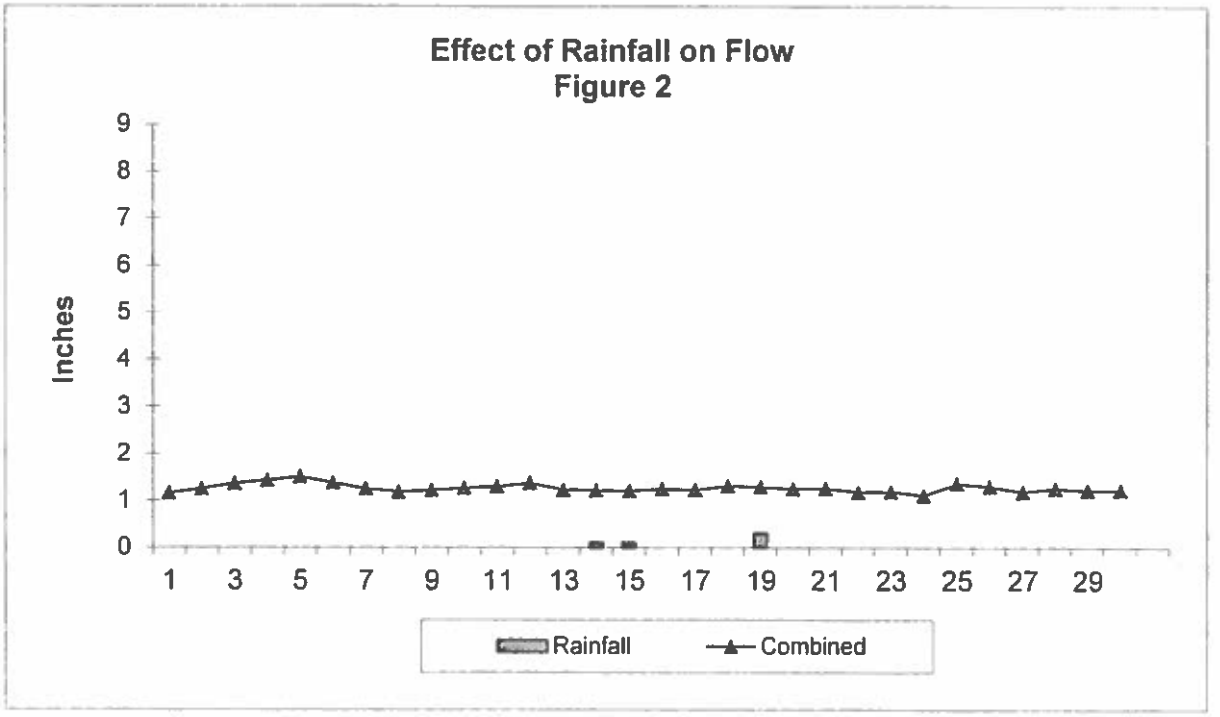

Effect of Rainfall on Flow
Figure 2
Inches
9
8
7
6
5
4
3
2
1
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
Rainfall
Combined

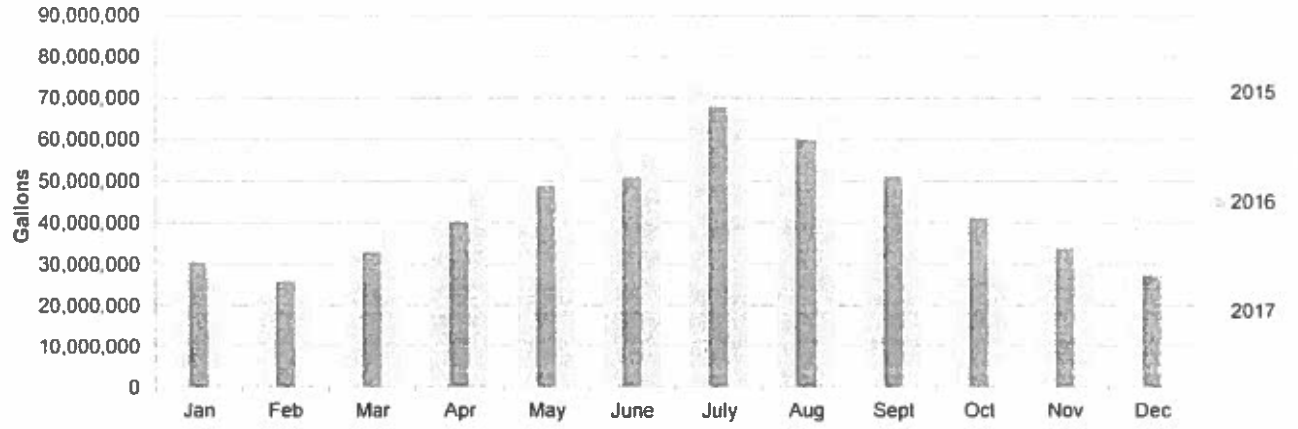
TABLE B
JOINT SEWER BOARD
Monthly Flows

2015	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	0.9	26,319,000	87%	4,085,000	13%	30,404,000	100%
February	1.4	21,892,000	86%	3,465,000	14%	25,357,000	100%
March	4.5	32,996,000	87%	4,920,000	13%	37,916,000	100%
April	4.0	37,220,000	86%	5,945,000	14%	43,165,000	100%
May	7.2	44,456,000	86%	7,209,000	14%	51,665,000	100%
June	7.1	54,745,000	86%	8,769,000	14%	63,514,000	100%
July	9.7	66,474,000	86%	10,871,000	14%	77,345,000	100%
August	3.5	51,695,000	88%	7,327,000	12%	59,022,000	100%
September	3.1	43,144,000	87%	6,531,000	13%	49,675,000	100%
October	1.8	36,230,000	87%	5,216,000	13%	41,446,000	100%
November	10.8	37,047,000	86%	6,247,000	14%	43,294,000	100%
December	11.7	44,392,000	84%	8,603,000	16%	52,995,000	100%
	65.7	496,610,000	87%	79,188,000	13%	575,798,000	100%

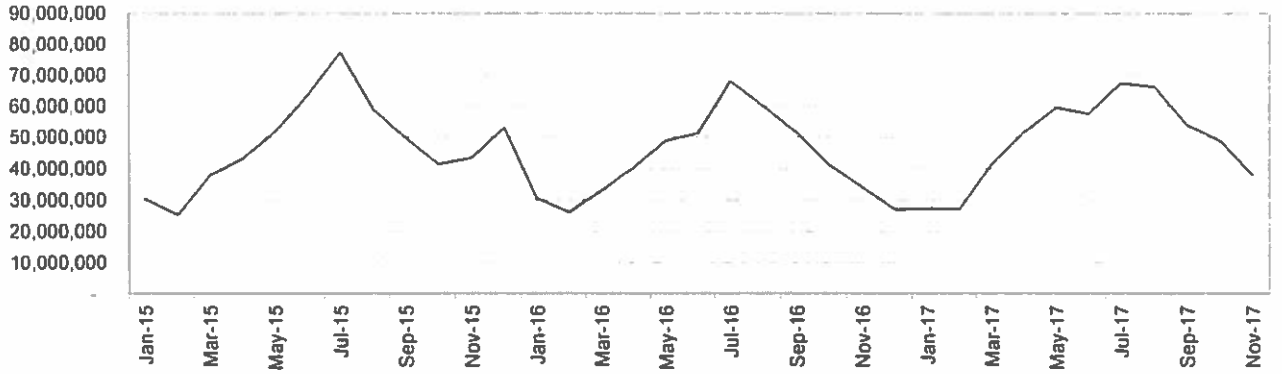
2016	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	0.8	26,604,000	87%	4,001,000	13%	30,605,000	100%
February	0.8	22,444,000	86%	3,661,000	14%	26,105,000	100%
March	3.1	28,785,000	87%	4,251,000	13%	33,036,000	100%
April	5.3	35,053,000	87%	5,231,000	13%	40,284,000	100%
May	7.0	42,126,000	86%	6,704,000	14%	48,830,000	100%
June	1.2	44,599,000	87%	6,545,000	13%	51,144,000	100%
July	8.7	59,190,000	87%	8,793,000	13%	67,983,000	100%
August	7.7	51,798,000	86%	8,171,000	14%	59,969,000	100%
September	6.0	44,634,000	87%	6,655,000	13%	51,289,000	100%
October	0.5	36,156,000	88%	5,029,000	12%	41,185,000	100%
November	1.2	29,750,000	87%	4,357,000	13%	34,107,000	100%
December	0.8	23,139,000	86%	3,914,000	14%	27,053,000	100%
	45.4	467,718,000	87%	71,221,000	13%	538,939,000	100%

2017	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	2.5	23,440,000	86%	3,909,000	14%	27,349,000	100%
February	0.7	23,345,000	86%	3,812,000	14%	27,157,000	100%
March	3.8	36,554,000	88%	4,844,000	12%	41,398,000	100%
April	9.8	44,665,000	87%	6,723,000	13%	51,388,000	100%
May	8.1	51,527,000	87%	7,979,000	13%	59,506,000	100%
June	2.9	50,926,000	88%	6,618,000	12%	57,544,000	100%
July	5.2	59,347,000	88%	8,092,000	12%	67,439,000	100%
August	12.4	57,736,000	87%	8,409,000	13%	66,145,000	100%
September	1.5	47,096,000	87%	6,866,000	13%	53,962,000	100%
October	7.4	42,489,000	87%	6,332,000	13%	48,821,000	100%
November	0.5	37,947,000	90%	4,244,000	10%	42,191,000	100%
December							
	54.8	475,072,000	88%	67,828,000	13%	542,900,000	100%

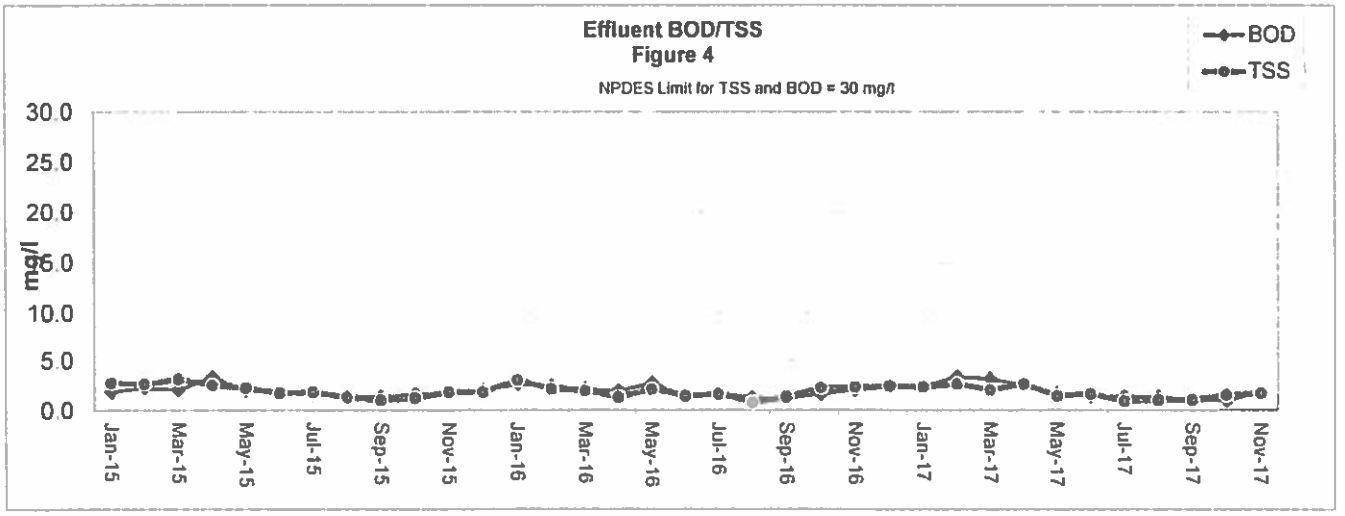
Monthly Influent Flow
Figure 3A



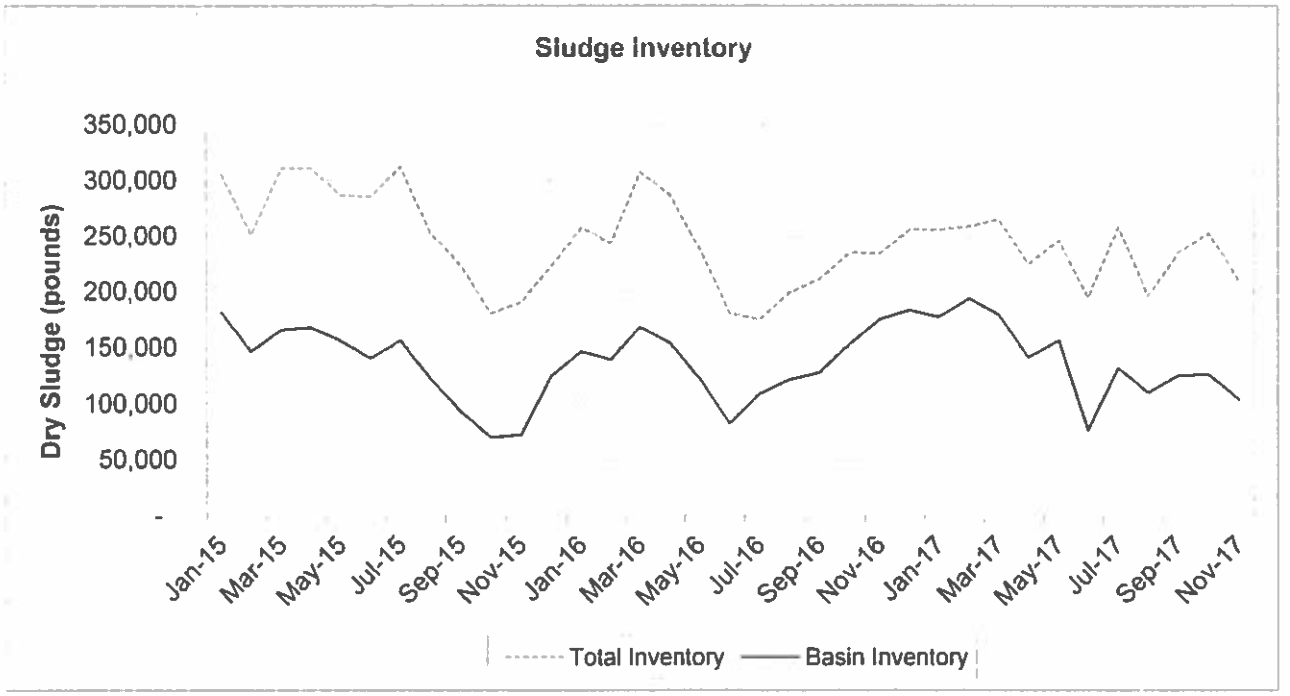
Monthly Influent Flow
Figure 3B

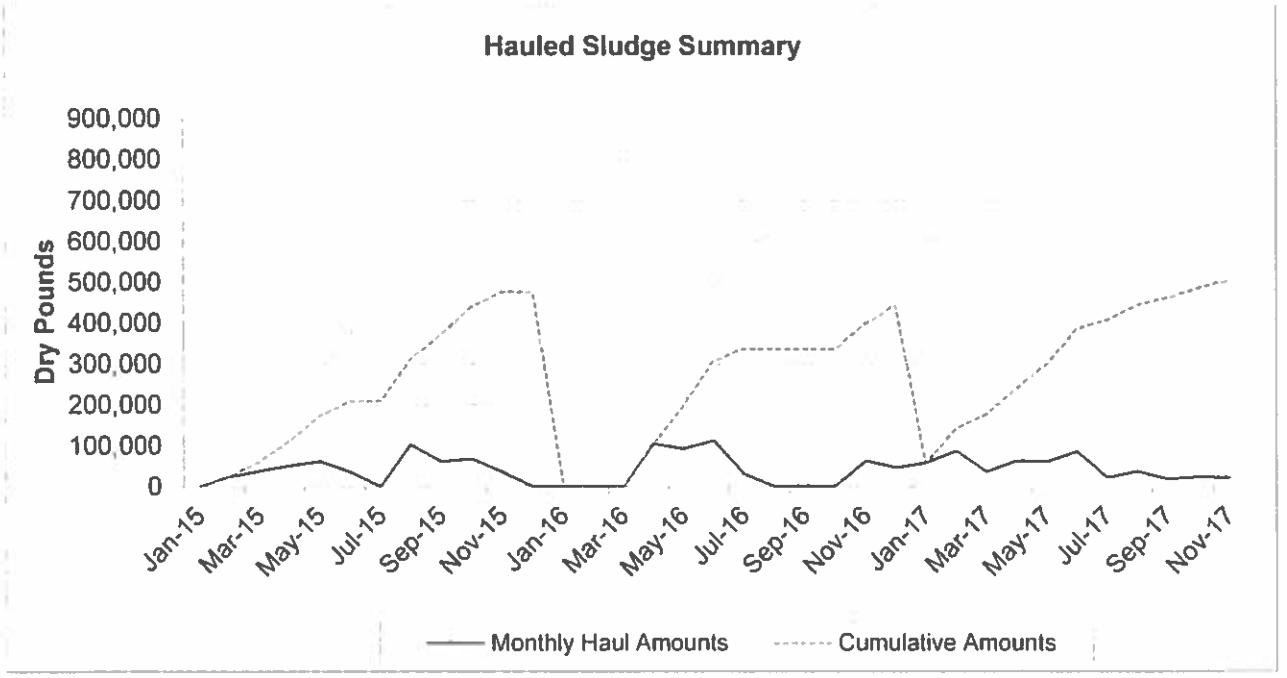


Effluent BOD/TSS
Figure 4



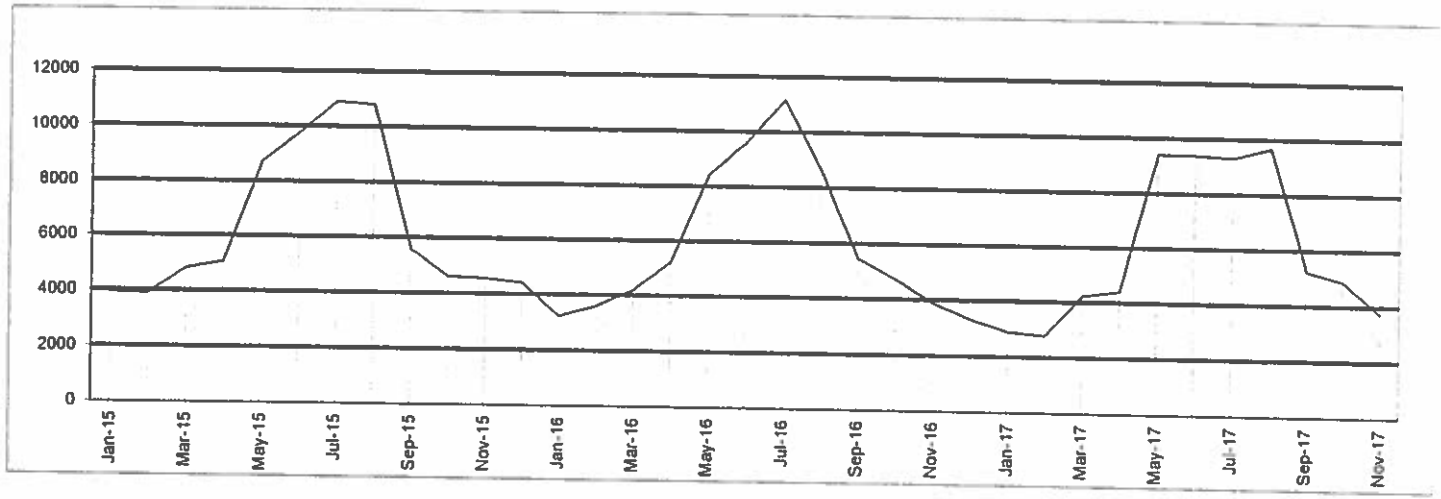
	Hauled Sludge					Basin Depths					Blanket Depths			MLSS Inventory		Blanket and MLSS Inventory		MLSS	Total Dry	Accepted Septage	
	Loads	Gallons	# Dry	% Solids	Annual Cumulative # Dry	Tank #1	Tank #2	AB #1	Basin Gallons	# Dry	Clarf #1	Clarf #2	Clarf #3	MLSS AB #1	MLSS AB #2	Gallons	# Dry	% Solids	Sludge Inventory	Loads	Gallons
Jan-15	0	-	0	4.4%	-	5.5	5.5	0.0	495,000	181,645	2.0	2.0	0.0	3,900	4,160	3,671,048	123,385	0.00403	305,030	22	55,000
Feb-15	20	74,000	24,069	3.9%	24,069	6.0	4.0	0.0	450,000	146,366	1.0	1.0	0.0	3,580	3,290	3,635,524	104,150	0.00344	250,516	21	52,500
Mar-15	34	125,800	38,603	3.7%	62,672	5.5	6.5	0.0	540,000	165,704	1.0	2.0	2.0	5,040	4,250	3,740,142	144,890	0.00465	310,595	11	27,500
Apr-15	44	162,800	50,607	3.7%	113,279	6.0	6.0	0.0	540,000	167,861	2.5	2.0	1.0	5,180	4,000	3,723,357	142,532	0.00459	310,393	23	57,500
May-15	55	203,500	61,284	3.6%	174,563	5.5	6.0	0.0	517,500	155,845	1.5	2.0	4.0	4,030	4,110	3,835,879	130,204	0.00407	286,049	26	65,000
Jun-15	35	129,500	35,024	3.2%	209,587	8.0	3.5	0.0	517,500	139,961	2.0	1.0	3.0	4,630	4,550	3,783,570	144,837	0.00459	284,798	37	92,500
Jul-15	0	-	0	3.2%	209,587	6.5	6.5	0.0	585,000	156,125	1.0	2.0	1.0	5,470	4,660	3,696,714	156,157	0.00507	312,282	42	104,000
Aug-15	107	395,900	102,356	3.1%	311,943	6.5	4.0	0.0	472,500	122,160	0.5	1.0	0.5	4,170	4,400	3,648,357	130,533	0.00429	252,693	44	110,000
Sep-15	55	203,500	60,420	3.6%	372,363	5.5	1.5	0.0	315,000	93,525	1.0	1.0	1.0	4,480	3,570	3,678,952	130,400	0.00425	223,925	32	80,000
Oct-15	59	218,300	67,949	3.7%	440,312	4.0	1.0	0.0	225,000	70,034	1.0	1.0	1.0	3,310	3,920	3,678,952	110,917	0.00362	180,952	22	55,000
Nov-15	30	111,000	35,734	3.9%	476,046	3.0	2.0	0.0	225,000	72,434	1.0	3.0	1.0	3,440	4,430	3,714,476	118,803	0.00384	191,237	19	47,500
Dec-15	0	-	0	3.9%	476,046	4.5	4.0	0.0	382,500	124,412	2.0	0.5	1.5	4,460	1,940	3,709,547	99,000	0.0032	223,412	21	52,500
Jan-16	0	-	0	3.9%	-	5.0	5.0	0.0	450,000	146,367	0.5	0.5	0.0	3,760	3,610	3,617,762	111,184	0.00369	257,551	22	55,000
Feb-16	0	-	0	3.9%	-	6.0	3.5	0.0	427,500	139,049	1.0	1.0	0.0	3,210	3,730	3,635,524	105,211	0.00347	244,260	6	15,000
Mar-16	0	-	0	3.9%	-	6.0	5.5	0.0	517,500	168,322	2.0	2.0	1.0	4,670	4,320	3,714,476	139,249	0.0045	307,571	44	110,000
Apr-16	86	318,200	103,652	3.9%	103,652	5.5	5.0	0.0	472,500	153,914	2.5	2.5	1.0	5,540	3,180	3,732,238	132,600	0.00426	286,515	6	15,000
May-16	77	284,900	91,185	3.8%	194,837	5.5	3.0	0.0	382,500	122,423	1.0	5.0	1.0	3,770	3,670	3,750,000	116,343	0.00372	238,766	40	100,000
Jun-16	99	366,300	111,706	3.7%	306,543	6.0	0.0	0.0	270,000	82,339	1.5	1.0	1.5	2,570	3,840	3,709,547	99,155	0.00321	181,494	30	75,000
Jul-16	28	103,600	29,408	3.4%	335,951	4.5	4.0	0.0	382,500	108,577	1.0	1.0	1.0	1,740	2,630	3,678,952	67,041	0.00219	175,618	46	111,000
Aug-16	0	-	0	3.4%	335,951	6.0	3.5	0.0	427,500	121,222	1.0	1.0	1.0	2,880	2,220	3,678,952	78,240	0.00255	199,462	43	96,000
Sep-16	0	-	0	3.4%	335,951	5.0	5.0	0.0	450,000	127,602	1.0	1.0	1.0	2,800	2,690	3,678,952	84,223	0.00275	211,825	42	94,500
Oct-16	0	-	0	3.4%	335,951	6.5	5.5	0.0	540,000	153,122	1.0	1.0	1.0	1,740	3,600	3,678,952	81,922	0.00267	235,045	35	75,500
Nov-16	52	192,400	62,457	3.9%	398,408	6.5	5.5	0.0	540,000	175,295	1.0	0.0	1.5	-	3,770	1,882,904	59,202	0.00377	234,497	11	20,000
Dec-16	36	133,200	45,237	4.1%	443,645	7.5	4.5	0.0	540,000	183,393	1.0	0.0	1.0	-	4,700	1,861,190	72,955	0.0047	256,348	26	54,500
Jan-17	47	173,000	56,748	3.9%	56,748	6.0	6.0	0.0	540,000	177,132	1.0	0.0	1.0	-	5,080	1,861,190	78,853	0.00508	255,986	15	37,500
Feb-17	68	251,600	86,649	4.1%	143,397	5.5	7.0	0.0	562,500	193,720	1.5	0.0	2.0	-	4,090	1,913,499	65,271	0.00409	258,991	5	12,500
Mar-17	33	122,100	34,808	3.4%	178,205	7.5	6.5	0.0	630,000	179,599	3.0	0.0	1.0	-	5,400	1,896,714	85,420	0.0054	265,019	41	102,500
Apr-17	59	218,300	61,994	3.4%	240,199	6.5	4.5	0.0	495,000	140,573	8.0	10.0	1.5	-	4,630	2,184,858	84,367	0.00463	224,939	8	20,000
May-17	51	188,700	59,556	3.8%	299,755	7.0	4.0	0.0	495,000	156,228	1.0	1.5	0.5	3,420	2,480	3,666,119	90,198	0.00295	246,426	45	116,000
Jun-17	75	277,500	85,724	3.7%	385,479	2.5	3.0	0.0	247,500	76,457	3.0	2.5	1.5	4,530	3,000	3,762,833	118,153	0.00377	194,610	33	82,500
Jul-17	20	74,000	21,631	3.5%	407,110	4.5	5.5	0.0	450,000	131,540	1.0	1.0	0.5	4,670	3,650	3,657,238	126,866	0.00416	258,426	43	107,500
Aug-17	39	144,300	37,030	3.1%	444,140	5.0	4.5	0.0	427,500	109,704	1.0	0.5	1.0	2,910	2,740	3,670,071	66,469	0.00283	196,173	41	103,500
Sep-17	16	59,200	17,311	3.5%	461,451	6.0	3.5	0.0	427,500	125,008	0.5	1.0	1.0	3,880	3,300	3,670,071	109,884	0.00359	234,892	48	122,000
Oct-17	20	74,000	23,051	3.7%	484,502	8.0	1.0	0.0	405,000	126,158	0.5	1.0	1.0	4,520	3,780	3,670,071	127,025	0.00415	253,182	10	23,500
Nov-17	20	74,000	21,292	3.4%	505,794	4.5	3.5	0.0	360,000	103,583	1.0	1.5	0.5	2,890	4,060	3,666,119	106,250	0.00348	209,832	7	17,500


Sludge Inventory
Dry Sludge (pounds)
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Total Inventory
Basin Inventory

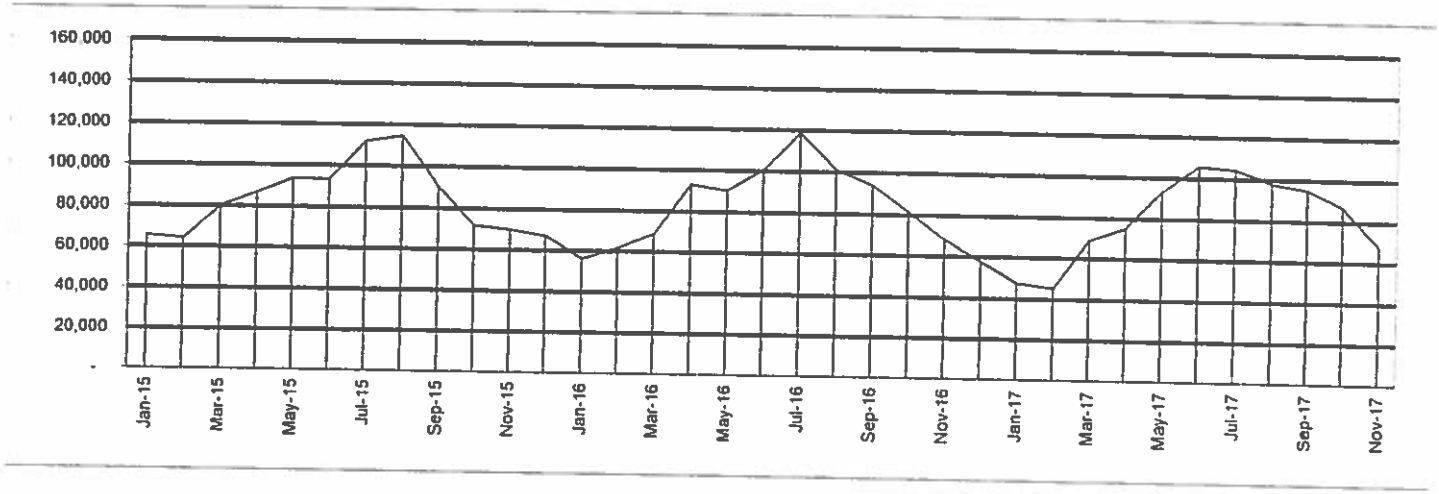

Hauled Sludge Summary
Dry Pounds
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Monthly Haul Amounts
Cumulative Amounts

	Electric Cost	Kilowatts Used
Jan-15	3947	65,860
Feb-15	3901	64,300
Mar-15	4821	80,190
Apr-15	5084	87,050
May-15	8707	93,810
Jun-15	9772	93,490
Jul-15	10912	112,040
Aug-15	10807	114,770
Sep-15	5585	90,520
Oct-15	4620	71,940
Nov-15	4556	70,170
Dec-15	4413	67,300
Jan-16	3223	56,290
Feb-16	3613	61,740
Mar-16	4195	69,020
Apr-16	5235	93,310
May-16	8446	90,640
Jun-16	9618	100,670
Jul-16	11166	119,020
Aug-16	8627	101,260
Sep-16	5460	94,280
Oct-16	4737	81,500
Nov-16	3903	68,360
Dec-16	3324	57,810
Jan-17	2904	47,480
Feb-17	2796	45,240
Mar-17	4233	69,210
Apr-17	4411	75,480
May-17	9413	93,494
Jun-17	9388	106,070
Jul-17	9310	104,700
Aug-17	9666	98,220
Sep-17	5246	95,470
Oct-17	4874	87,240
Nov-17	3738	68,100

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							
Nov-17		MO-0103241			#001		Oxidation Ditch/UV/Sludge Holding-sludge is land applied							
INFLUENT					EFFLUENT								% Removal	
DATE	pH UNITS	BOD mg/L	TSS 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	7.4			18	1.367	7.9				7.2		13.9		
2	7.3			18.5	1.437	7.9			0.02	6.6		15.4		
3	7.4	305	472	17.9	1.495	7.9	1.8	2.3		5.9		15.4	99.4	99.5
4	7.4			17.8	1.585	7.9				5.7		16.5		
5	7.4			16.9	1.623	7.9				5.9		15.1		
6	7.5			17.7	1.498	8.1				5.7		16.0		
7	7.3			17.9	1.490	7.9				5.4		15.6		
8	7.2			17.8	1.483	7.9				5.7		14.8		
9	7.4			16.2	1.270	8.0			0.04	6.7		14.1		
10	7.5	265	424	15.1	1.506	8.0	1.7	1.6		6.7		12.7	99.4	99.6
11	7.3			16.6	1.580	8.0				7.0		13.0		
12	7.6			16.7	1.582	7.9				6.2		13.9		
13	7.5			16.4	1.414	8.1				6.3		13.9		
14	7.5			17	1.365	8.0				6.1		14.4		
15	7.4			18.1	1.351	7.8				6.4		15.3		
16	7.6			16	1.458	8.0			0.07	5.9		14.2		
17	7.5	230	248	17	1.472	8.0	1.6	1.6		5.4		14.6	99.3	99.4
18	7.4			17.9	1.465	7.9				5.9		16.1		
19	7.5			15.5	1.537	7.9				6.0		13.4		
20	7.6			16.2	1.503	8.0				6.2		12.9		
21	7.5			16.3	1.429	8.0			0.05	6.3		13.6		
22	7.5	183	160	14.7	1.428	8.0	1.7	1.3		6.2		12.3	99.1	99.2
23	7.5			14.3	1.417	8.0				6.4		13.2		
24	7.5			13.9	1.335	8.0				6.4		13.9		
25	7.6			15.2	1.523	8.0				6.1		12.8		
26	7.7			14.6	1.532	8.1				7.0		12.4		
27	7.5			15.2	1.366	7.9				6.9		13.3		
28	7.4			16.3	1.409	7.8				6.5		13.4		
29	7.4			15.9	1.262	7.9				6.8		13.7		
30	7.4			16.1	1.359	7.9			0.10	6.8		14.0		
Total					43.541									
Avg		246	326	16	1.451		1.7	1.7	0.06	6.3	0.0	14.1	99.3	99.4
Min	7.2	183	160	14	1.262	7.8	1.6	1.3	0.02	5.4	0.0	12.3	99.1	99.2
Max	7.7	305	472	19	1.623	8.1	1.8	2.3	0.10	7.2	0.0	16.5	99.4	99.6

MONTHLY MONITORING					QUARTERLY MONITORING					
DATE	Oil & Grease mg/L	Selenium µg/L	SM1 Hardness mg/L	SM2 Hardness mg/L	Phosphorus mg/L	SM1 Phosphorus mg/L	T. Nitrogen mg/L	SM1 T. Nitrogen mg/L	TR. Cadmium ug/L	TR. Copper µg/L
1										
2										
3										
4										
5										
6										
7	< 5.0	< 1.0	324	340						
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
Total	< 5.0	< 1.0	324	340						
Avg	< 5.0	< 1.0	324	340						
Min	< 5.0	< 1.0	324	340						
Max	< 5.0	< 1.0	324	340						

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

DATE	SLUDGE DISP. LBS. DRY WEIGHT	#1 Aeration Basin, O-Ditch, Etc. MIXED LIQUOR				#2 Aeration Basin, O-Ditch, Etc. MIXED LIQUOR				*Weather Conditions		
		* DO	** MLSS	*Settleability		* DO	** MLSS	*Settleability		Outside * Ambient Temp	*RAIN	Time
				*30 min	Temp			*30 min	Temp			
		mg/l	mg/l	ml	° C	mg/l	mg/l	ml	° C	° F	inches	
1		3.3	3,210	370	14.0	4.9	3,460	470	13.8	36	0	7:30
2		3.5	3,150	320	15.6	3.6	4,180	530	15.4	51	0	7:30
3		1.4	3,860	470	15.7	4.0	3,110	340	15.5	50	0	7:30
4		1.9	3,260	440	16.7	3.4	3,320	340	16.7	61	0	7:30
5		2.1	3,450	440	15.7	3.8	3,260	360	15.6	60	0	7:30
6		1.4	4,390	460	15.8	2.0	3,180	380	15.9	44	0	7:30
7		1.1	3,540	450	15.3	2.9	3,730	450	15.0	43	0	7:30
8	3,333	1.8	3,880	510	14.7	3.7	3,200	360	14.5	35	0	7:30
9		3.5	3,530	430	13.7	4.6	3,820	420	13.8	36	0	7:30
10		3.6	3,600	460	13.1	4.0	3,320	360	13.0	32	0	7:30
11		3.7	4,120	550	13.2	5.2	3,450	400	13.2	35	0	7:30
12		2.5	3,990	490	14.7	3.5	3,920	480	14.8	52	0	7:30
13	7,344	2.2	4,100	500	14.2	2.9	3,840	450	14.3	47	0	7:30
14		2.4	4,000	410	14.5	2.4	4,650	580	14.5	48	0.1	7:30
15		2.9	4,190	480	15.3	2.6	3,620	360	15.3	55	0.1	7:30
16	3,055	2.3	4,250	540	13.6	3.5	2,530	340	14.0	35	0	7:30
17	7,560	2.1	3,980	420	14.9	3.6	3,880	430	14.6	52	0	7:30
18		1.6	4,030	440	16.2	2.2	4,160	430	16.0	70	0	7:30
19		2.7	3,950	450	13.4	3.7	3,830	500	13.3	35	0.3	7:30
20		2.9	3,840	460	12.9	2.9	4,120	500	12.9	34	0	7:30
21		2.6	4,640	470	13.5	2.1	4,370	500	13.5	43	0	7:30
22		2.8	3,450	460	11.9	4.2	4,160	430	12.2	27	0	7:30
23		2.7	3,250	420	13.1	4.4	3,500	430	13.2	34	0	7:30
24		2.6	3,270	440	13.8	4.6	3,490	430	13.8	40	0	7:30
25		1.7	4,980	720	13.2	3.7	3,100	300	13.5	43	0	7:30
26		1.4	4,740	600	12.9	4.9	3,490	350	13.0	35	0	7:30
27		1.1	4,400	450	13.1	2.6	4,120	400	13.4	37	0	7:30
28		1.5	4,090	460	13.9	1.9	4,240	440	13.7	50	0	7:30
29		2.0	4,220	450	14.6	3.8	3,800	350	14.4	53	0	7:30
30		1.2	2,890	350	14.3	3.6	4,060	500	14.0	50	0	7:30

COMMENTS

TESTS PERFORMED BY (PRINT)	SIGNATURE	PHONE #	DATE
John Hornback	John Hornback	(573)365-0455	12/8/2017
REPORT APPROVED BY (PRINT)	SIGNATURE	PHONE #	DATE
Gary Hutchcraft	Gary Hutchcraft	(573)365-0455	12/8/2017

*Required Daily (Monday -/Friday)

**Required 1/week

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
417-891-4300
417-891-4399 (fax)

PERMITTEE NAME/ADDRESS

NAME: Lake of the Ozarks Regional WWTP 1
ADDRESS: #3 Anderson Road
LAKE OZARK MO 65049

MO0103241	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2017	11	01	TO	2017	11	30

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
BOD, 5-day, 20 deg. C (00310)	REPORTD	*****	*****		*****	1.8	1.7	mg/L	Weekly	24 Hour Composite	
Stage Type: End of Pipe	REQRMNT	*****	*****		*****	Weekly Average 45	Monthly Average 30		Weekly	24 Hour Composite	
BOD, 5-day, percent removal (81010)	REPORTD	*****	*****		*****	*****	99.3	%	Monthly	Calculated	
Stage Type: End of Pipe	REQRMNT	*****	*****		*****	*****	Monthly Average Minimum 85		Monthly	Calculated	
Flow, in conduit or thru treatment plant (50050)	REPORTD	1.623	1.451	Mgal/d	*****	*****	*****		Daily	Total Measured	
Stage Type: End of Pipe	REQRMNT	Daily Maximum Monitoring Required	Monthly Average Monitoring Required		*****	*****	*****		Daily	Total Measured	
Nitrogen, ammonia total (as N) (00610)	REPORTD	*****	*****		0.10	*****	0.06	mg/L	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum 11.5	*****	Monthly Average 2.7		Weekly	Grab	
Oil and grease (soxhlet extr.) tot (00550)	REPORTD	*****	*****		<5.0	*****	<5.0	mg/L	Monthly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum 15	*****	Monthly Average 10		Monthly	Grab	
pH (00400)	REPORTD	*****	*****		7.8	*****	8.1	SU	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Minimum 6.5	*****	Maximum 9.0		Weekly	Grab	
Selenium (Se), total recoverable (01081)	REPORTD	*****	*****		<1.0	*****	<1.0	ug/L	Monthly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum 9.1	*****	Monthly Average 4.0		Monthly	Grab	

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR FACILITY-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

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.

OPERATOR IN RESPONSIBLE CHARGE	
Gary Hutchcraft	7305
TYPED OR PRINTED NAME	CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE: 573-365-0455
Gary F Hutchcraft / Gary F Hutchcraft	2017-12-08 09:24:39
TYPED OR PRINTED NAME / SIGNATURE	Date

Page 1

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
417-891-4300
417-891-4399 (fax)

PERMITTEE NAME/ADDRESS

NAME: Lake of the Ozarks Regional WWTP 1
ADDRESS: #3 Anderson Road
LAKE OZARK, MO 65049

MO0103241 | 001 A
PERMIT NUMBER | DISCHARGE NUMBER

MONITORING PERIOD
FROM 2017 11 01 TO 2017 11 30

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Suspended Solids, percent removal (81011)	REPORTD	*****	*****		*****	*****	99.4	%	Monthly	Calculated	
Stage Type: End of Pipe	REQRMNT	*****	*****		*****	*****	Monthly Average Minimum 85		Monthly	Calculated	
Total Suspended Solids (TSS) (00530)	REPORTD	*****	*****		*****	2.3	1.7	mg/L	Weekly	24 Hour Composite	
Stage Type: End of Pipe	REQRMNT	*****	*****		*****	Weekly Average 45	Monthly Average 30		Weekly	24 Hour Composite	

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR FACILITY-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

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OPERATOR IN RESPONSIBLE CHARGE
Gary Hutchcraft | 7305
TYPED OR PRINTED NAME | CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | TELEPHONE: 573-365-0455
Gary F Hutchcraft / Gary F Hutchcraft | 2017-12-08 09:24:39
TYPED OR PRINTED NAME / SIGNATURE | Date

Page 2

PERMITTEE NAME/ADDRESS

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912

4178914300
4178914399 (fax)

NAME Lake of the Ozarks Regional WWTP 1
ADDRESS #3 Anderson Road
LAKE OZARK MO 65049

MO0103241	SM2 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2017	11	01	TO	2017	11	30

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Hardness, total (as CaCO3) (00900)	REPORTD	*****	*****		340	*****	340	mg/L	Monthly	Grab	
Outfall Type Instream Monitoring	REQRMNT	*****	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required		Monthly	Grab	

1) OTHER PERMIT REQUIREMENTS OR CONDITIONS
2) FACILITY SPECIFIC CONDITIONS
3) OTHER SPECIFIC CONDITIONS

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.

OPERATOR IN RESPONSIBLE CHARGE			
Gary Hutchcraft		7305	
TYPED OR PRINTED NAME		CERTIFICATE NUMBER	
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	573-365-0434
Gary F Hutchcraft	Gary F Hutchcraft	2017-12-08 09:24:59	
TYPED OR PRINTED NAME	SIGNATURE	Date	

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LAKE OZARK/OSAGE BEACH WWTP
Operation Report

NOVEMBER 2017

DATE	OPERATOR	PLANT INFLUENT												ENVIRONMENTAL CONDITIONS		
1	BP	0.136	1.017	1.153								7.41	18.0	PC	0	36
2	BP	0.140	1.109	1.249							28.7	7.34	18.5	C	0	51
3	BP	0.142	1.223	1.365	160	280	305	98	182	472		7.37	17.9	C	0	50
4	BP	0.162	1.262	1.429								7.40	17.8	C	0	61
5	BP	0.190	1.315	1.505								7.41	16.9	C	0	60
6	JH	0.155	1.226	1.381								7.54	17.7	PC	0	43
7	BP	0.149	1.103	1.252								7.34	17.9	C	0	43
8	BP	0.134	1.048	1.182								7.21	17.8	C	0	35
9	JH	0.126	1.092	1.218							36.1	7.43	16.2	C	0	36
10	JH	0.145	1.121	1.266	233	220	265	246	148	474		7.52	15.1	C	0	37
11	GH	0.161	1.138	1.299								7.31	16.6	O	0	35
12	GH	0.165	1.208	1.373								7.56	16.7	PC	0	52
13	GH	0.153	1.076	1.229								7.45	16.4	C	0	47
14	JH	0.143	1.074	1.217								7.49	17.0	R	0.1	48
15	BP	0.153	1.054	1.207								7.18	18.1	O	0.1	55
16	JH	0.144	1.103	1.247							34.4	7.59	16.0	PC	0	35
17	JH	0.131	1.098	1.229	184	200	230	166	152	248		7.50	17.0	PC	0	32
18	JH	0.151	1.160	1.311								7.39	17.9	O	0	70
19	JH	0.154	1.140	1.294								7.49	15.5	C	0.1	35
20	JH	0.148	1.101	1.249								7.55	16.2	C	0	34
21	BP	0.135	1.124	1.259							35.8	7.46	16.3	C	0	43
22	JH	0.133	1.049	1.182	140	218	183	102	194	160		7.54	14.7	C	0	27
23	BP	0.134	1.054	1.188								7.54	14.3	C	0	34
24	BP	0.119	0.992	1.111								7.51	13.9	C	0	40
25	GH	0.117	1.250	1.367								7.61	15.2	C	0	43
26	GH	0.122	1.182	1.304								7.68	14.6	C	0	35
27	GH	0.108	1.074	1.182								7.49	15.2	C	0	32
28	JH	0.133	1.127	1.260								7.37	16.3	C	0	50
29	JH	0.123	1.095	1.218								7.44	15.9	PC	0	51
30	JH	0.133	1.088	1.221							37.2	7.35	16.1	PC	0	50
TOTAL		4.244	33.703	37.947	718	918	983	612	676	1304	172	224	494		0.30	1323
MAX		0.190	1.315	1.505	233	280	305	246	194	472	37.2	7.68	18.5		0.30	70
MIN		0.108	0.992	1.100	140	200	183	98	148	160	28.7	7.21	13.9		0.00	27
AVG		0.141	1.123	1.265	180	230	246	153	169	326	34.5	7.46	16.5		0.02	44

DATE	AERATION BASIN NO. 1 MIXED LIQUOR					AERATION BASIN NO. 2 MIXED LIQUOR					CLARIFIER NO 1	CLARIFIER NO 2	CLARIFIER NO 3
1	3,210	370	115	7.66	3.3	3,460	470	136	7.81	4.9	0.5	0.5	0.5
2	3,150	320	102	7.74	3.5	4,180	530	127	7.75	3.6	0.5	0.5	0.5
3	3,840	470	122	7.49	1.4	3,110	340	109	7.74	4.0	0.5	0.5	0.5
4	3,260	440	133	7.48	1.9	3,120	340	102	7.71	3.7	0.5	0.5	1.0
5	3,450	440	128	7.46	2.1	3,260	360	110	7.72	3.6	0.5	0.5	0.5
6	4,390	460	105	7.77	1.4	3,180	380	120	7.79	2.0	0.5	0.5	0.5
7	3,540	450	127	7.63	1.1	3,790	450	121	7.74	2.9	0.5	0.5	1.0
8	3,880	510	131	7.71	1.8	3,200	360	111	7.69	3.7	0.5	1.0	0.5
9	3,530	430	122	7.74	3.5	3,820	420	110	7.79	4.6	1.0	1.0	1.0
10	3,600	460	128	7.74	3.6	3,320	360	108	7.73	4.0	1.0	1.0	1.0
11	4,120	550	134	7.72	3.7	3,450	400	116	7.81	5.2	1.5	0.5	0.5
12	3,990	490	123	7.65	2.5	3,920	480	122	7.70	1.5	1.5	1.0	0.5
13	4,100	500	122	7.75	2.2	3,840	450	117	7.75	2.9	0.5	0.5	1.0
14	4,000	410	101	7.73	2.4	4,650	580	125	7.70	2.4	1.0	1.0	1.0
15	4,190	480	115	7.65	2.9	3,620	340	99	7.70	2.6	0.5	0.5	1.0
16	4,250	540	127	7.75	2.3	2,530	340	134	7.79	3.5	0.5	1.0	0.5
17	3,980	420	106	7.75	2.1	3,880	430	111	7.84	3.6	0.5	0.5	1.0
18	4,030	440	109	7.71	1.6	4,160	430	103	7.70	2.2	1.0	1.0	1.0
19	3,950	450	114	7.71	2.7	3,830	500	131	7.74	3.7	1.0	1.0	1.0
20	3,840	460	120	7.86	2.9	4,120	500	121	7.83	2.9	0.5	0.5	0.5
21	4,640	470	101	7.69	2.6	4,370	500	114	7.69	2.1	1.0	1.0	1.0
22	3,450	460	131	7.77	2.8	4,160	430	101	7.82	4.2	0.5	0.5	1.0
23	3,250	420	129	7.71	2.7	3,500	430	122	7.80	4.4	1.0	0.5	0.5
24	3,270	440	135	7.68	2.6	3,490	430	123	7.79	4.6	1.0	0.5	0.5
25	4,980	720	145	7.67	1.7	3,100	300	97	7.82	3.7	1.0	1.0	1.0
26	4,740	600	127	7.71	1.4	3,490	350	100	7.87	4.9	1.5	1.0	0.5
27	4,400	450	102	7.36	1.1	4,120	400	97	7.61	2.6	1.5	1.5	0.5
28	4,090	460	112	7.62	1.5	4,240	440	104	7.61	1.9	0.5	0.5	1.0
29	4,220	430	107	7.63	2.0	3,800	350	92	7.67	3.8	1.0	3.0	1.0
30	2,890	350	121	7.62	1.2	4,060	500	123	7.66	3.6	1.0	1.5	0.5
TOTAL	116,250	13910	3600	230	69	110,910	12610	3410	232	106	24.5	25.0	22.5
MAX	4,980	720	145	7.86	3.7	4,650	580	136	7.87	5.2	1.5	3.0	1.0
MIN	2,890	320	101	7.46	1.1	2,530	300	92	7.61	1.9	0.5	0.5	0.5
AVG	3,875	464	120	7.68	2.1	3,697	420	114	7.75	3.5	0.8	0.8	0.8

DATE	PLANT EFFLUENT																		SLUDGE		WASTE SLUDGE	
1	1.367	7.94			7.2		13.9												0.514	6.315		
2	1.437	7.88			6.6	0.02	15.4												0.835	6.075		
3	1.495	7.90	1.8	2.3	5.9		15.4												0.976	4.615		
4	1.585	7.92			5.7		16.5												1.156	5.553		
5	1.623	7.94			5.9		15.1												1.030	6.120		
6	1.498	8.05			5.7		16.0												0.984	7.995		
7	1.490	7.92			5.4		15.6		5.0	1.0	324	340							0.856	7.950	45,000	2.984
8	1.483	7.88			5.3		14.8												0.595	7.570		
9	1.270	7.96			6.7	0.04	14.1												1.022	6.840		
10	1.506	7.99	1.7	1.6	6.7		12.7												0.925	7.555		
11	1.580	8.00			7.0		13.0												0.833	4.725		
12	1.582	7.93			6.2		13.9												0.930	6.914		
13	1.114	8.05			6.3		13.9												1.034	9.565		
14	1.365	8.00			6.1		14.4												0.517	7.630	45,000	2.864
15	1.331	7.81			6.4		15.1												1.264	7.360		
16	1.458	7.95			5.9	0.07	14.2												1.028	6.250		
17	1.472	8.01	1.6	1.6	5.4		14.6												0.928	6.415		
18	1.465	7.91			5.9		16.1												1.084	5.590		
19	1.537	7.91			6.0		13.4												0.964	5.063		
20	1.503	8.00			6.2		12.9												0.813	8.395		
21	1.429	7.99			6.3	0.05	11.6												0.764	7.990		
22	1.428	7.96	1.7	1.3	6.2		12.3												0.682	8.415	45,000	3.158
23	1.417	7.99			6.4		13.2												0.621	8.070		
24	1.335	8.01			6.4		11.9												1.041	8.085		
25	1.523	7.97			6.1		12.8												1.324	6.505		
26	1.532	8.07			7.0		12.4												0.560	6.400		
27	1.366	7.90			6.9		11.3												0.475	7.291		
28	1.409	7.83			6.5		13.4												0.573	8.955	45,000	3.361
29	1.262	7.85			6.8		11.7												0.430	4.270		
30	1.359	7.87			6.8	0.1	14.0												1.077	6.070		
TOTAL	43.241	218	6.8	6.8	188	0.3	424	0.0	5.0	1.0	324	340	0.0	0.0	0.0	0.0	0.0	0.0	25.860	206.349	180,000	12.367
MAX	1.623	8.07	1.8	2.3	7.20	0.1	16.5	0.0	5.0	1.0	324	340	0.0	0.0	0.0	0.0	0.0	0.0	1.324	9.565	45,000	3.361
MIN	1.114	7.83	1.6	1.3	5.40	0.0	12.3	0.0	5.0	1.0	324	340	0.0	0.0	0.0	0.0	0.0	0.0	0.430	4.270	45,000	2.864
AVG	1.441	7.95	1.7	1.7	6.28	0.06	14.1	0.0	5.0	1.0	324	340	0.0	0.0	0.0	0.0	0.0	0.0	0.862	6.885	45,000	3.092

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

Prepared by GH, JH, BP Approved by GH Date 12/8/2017

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OUR MISSION

We partner with communities to deliver the finest water and wastewater services available at a competitive price. We are committed to keeping water safe and clean while serving people and taking care of communities with improved technical operations, careful management and financial oversight, and ensured regulatory compliance.

Alliance Water Resources, Inc.

206 S. Keene St.
Columbia, MO 65201

(573)874-8080

WATER RESOURCES®
Alliance
Professional Water and Wastewater Operations

REPORT OF OPERATIONS

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

Month of December 2017

Submitted by Alliance Water Resources, Inc. for the

January 2018

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 Coliform Colonies/100 ml	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/L
Monthly Average	2.6	3.1	N/A	0	0.06	< 5.0	< 1.0
Peak Day	3.5	5.9	8.0	0	0.09	< 5.0	< 1.0
Percent Removal	98.8	98.4	N/A	N/A	N/A	N/A	N/A

NPDES EFFLUENT LIMITATIONS

	BOD mg/l	TSS mg/l	pH	E.coli Coliform Colonies/100 ml	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/ L
Monthly Average	30	30	6-9	N/A	2.7	10	4.0
Weekly Average	45	45		N/A			
Daily Max					11.5	15	8.1

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 1.105 MGD or 37% of Permitted flow with Lake Ozark contributing 11% of the total flow and Osage Beach contributing 89%. 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 59844 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.

505,794 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 405,000 gallons with a level of 6.0 feet in Tank 1 and 3.0 feet in Tank 2.

WASTEHAULERS

The plant received 7 loads of septage during the month totaling 17,500 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)

SAFETY

- We conducted our monthly routine Safety Meeting on Hazardous Communication on the 12th of December.

REGULATORY AGENCY, INSPECTION AND REPORTS

- We filled out the EDMR on MDNR's website on the 4th of January.
- We took and shipped the first round of three permit required expanded effluent testing for our next permit renewal on the 11th of December.

MISCELLANEOUS AND RECOMMENDATIONS

- Scott's Handyman Services finished the pipe gallery/RAS basement paint project on the 11th of December.

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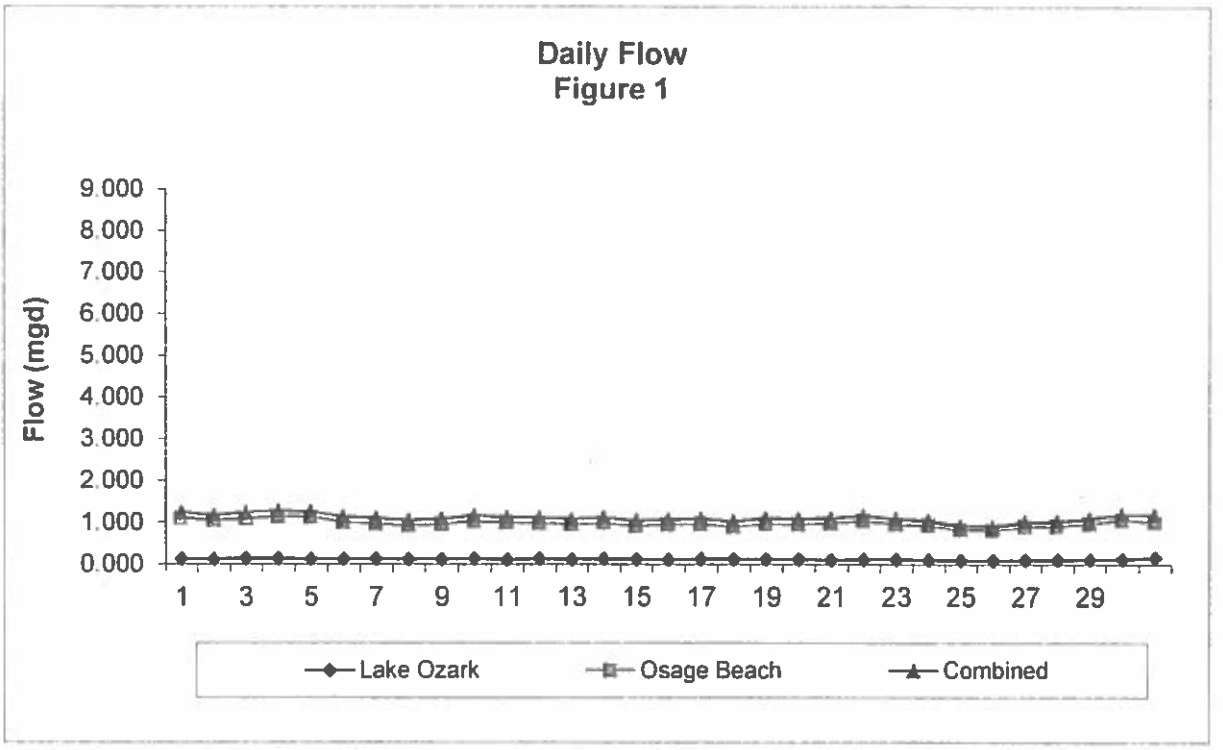
TABLE A
LAKE OZARK/OSAGE BEACH WWTP

MONTH OF December 2017

DATE		FLOW					BOD 5 MG/L			TSS MG/L		
	RAIN FALL IN.	LO mgd	OB mgd	COMB mgd	% LO	% OB	LO mg/l	OB mg/l	COMB mg/l	LO mg/l	OB mg/l	COMB mg/l
1-Dec	0	0.133	1.100	1.233	10.8	89.2	200	248	188	138	208	186
2-Dec	**0**	**0.121**	**1.047**	**1.168**	**10.4**	**89.6**						
3-Dec	**0**	**0.143**	**1.089**	**1.232**	**11.6**	**88.4**						
4-Dec	0	0.136	1.137	1.273	10.7	89.3						
5-Dec	0.25	0.123	1.124	1.247	9.9	90.1						
6-Dec	0	0.122	1.007	1.129	10.8	89.2						
7-Dec	0	0.132	0.970	1.102	12.0	88.0						
8-Dec	0	0.120	0.928	1.048	11.5	88.5	195	215	210	160	182	188
9-Dec	**0**	**0.122**	**0.964**	**1.086**	**11.2**	**88.8**						
10-Dec	**0**	**0.136**	**1.025**	**1.161**	**11.7**	**88.3**						
11-Dec	0	0.114	0.999	1.113	10.3	89.7						
12-Dec	0	0.129	0.988	1.117	11.5	88.5						
13-Dec	0	0.119	0.956	1.075	11.1	88.9						
14-Dec	0	0.127	0.991	1.118	11.4	88.6						
15-Dec	0	0.121	0.922	1.043	11.6	88.4	168	255	223	116	152	214
16-Dec	**0**	**0.117**	**0.955**	**1.072**	**10.9**	**89.1**						
17-Dec	**0**	**0.127**	**0.968**	**1.095**	**11.6**	**88.4**						
18-Dec	0.1	0.127	0.904	1.031	12.3	87.7						
19-Dec	0	0.123	0.975	1.098	11.2	88.8						
20-Dec	0	0.122	0.961	1.083	11.3	88.7						
21-Dec	0	0.111	0.987	1.098	10.1	89.9	180	203	198	92	156	188
22-Dec	0	0.122	1.040	1.162	10.5	89.5						
23-Dec	**0.5**	**0.125**	**0.963**	**1.088**	**11.5**	**88.5**						
24-Dec	**0**	**0.111**	**0.932**	**1.043**	**10.6**	**89.4**						
25-Dec	0	0.098	0.828	0.926	10.6	89.4						
26-Dec	0	0.093	0.819	0.912	10.2	89.8						
27-Dec	0	0.107	0.911	1.018	10.5	89.5						
28-Dec	0	0.109	0.918	1.027	10.6	89.4	158	275	228	116	194	202
29-Dec	0	0.119	0.976	1.095	10.9	89.1						
30-Dec	**0**	**0.132**	**1.063**	**1.195**	**11.0**	**89.0**						
31-Dec	**0**	**0.167**	**1.012**	**1.179**	**14.2**	**85.8**						
SUM	0.9	3.808	30.459	34.267								
AVG		0.123	0.983	1.105	11	89	180	239	209	124	178	196
NOTE: BOLD PRINT INDICATES WEEKEND DAYS												


Daily Flow
Figure 1
Flow (mgd)
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
Lake Ozark
Osage Beach
Combined

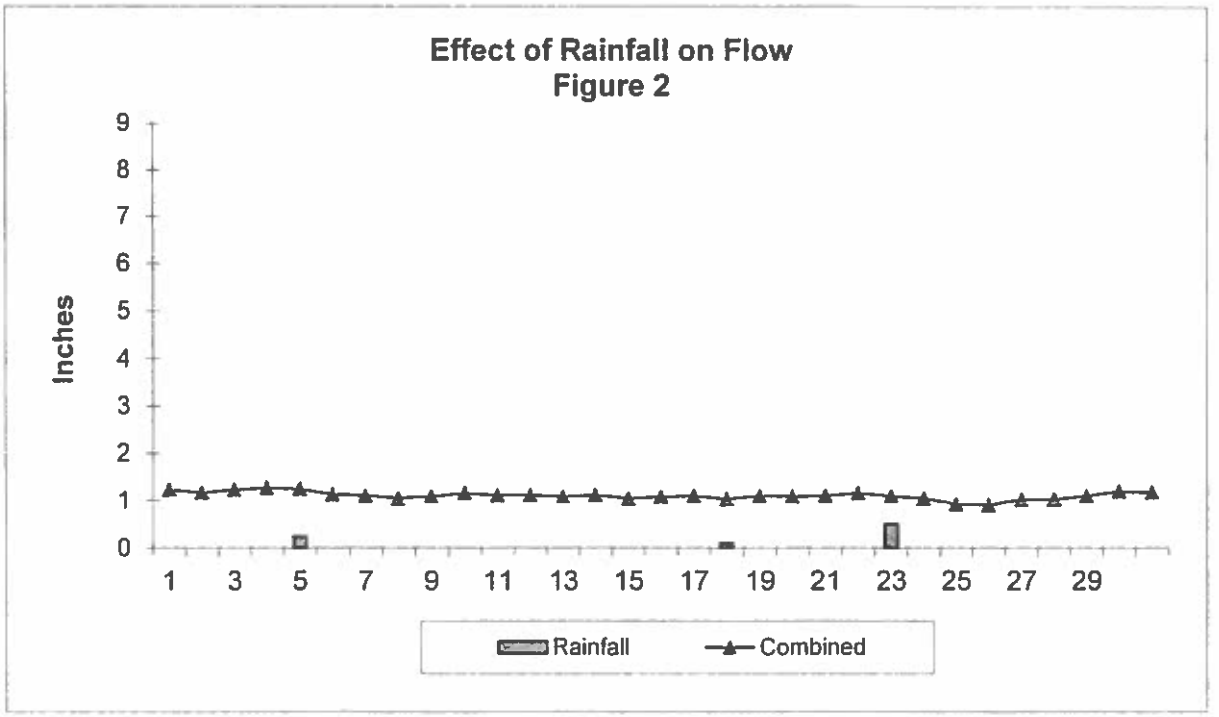

Effect of Rainfall on Flow
Figure 2
Inches
9
8
7
6
5
4
3
2
1
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
Rainfall
Combined

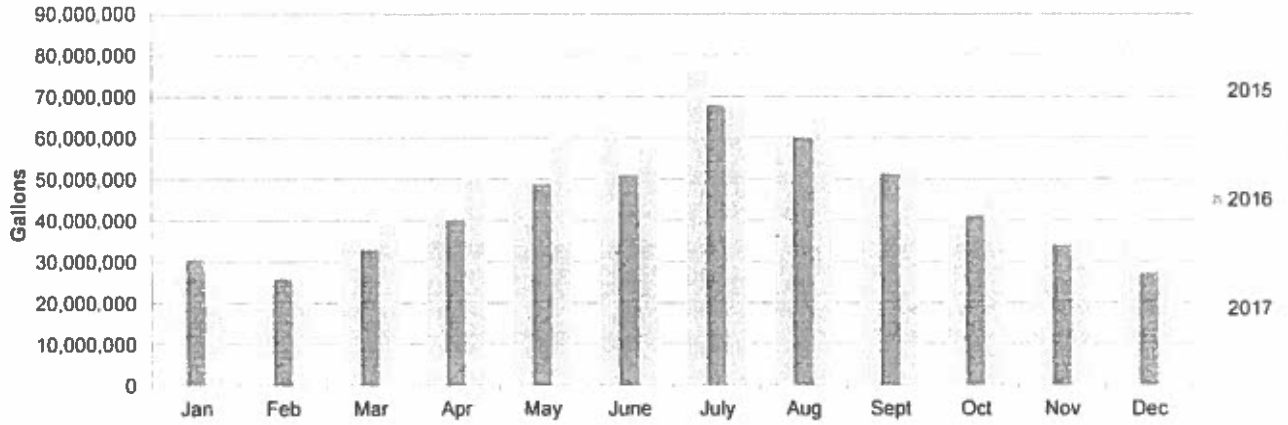
TABLE B
JOINT SEWER BOARD
Monthly Flows

2015	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	0.9	26,319,000	87%	4,085,000	13%	30,404,000	100%
February	1.4	21,892,000	86%	3,465,000	14%	25,357,000	100%
March	4.5	32,996,000	87%	4,920,000	13%	37,916,000	100%
April	4.0	37,220,000	86%	5,945,000	14%	43,165,000	100%
May	7.2	44,456,000	86%	7,209,000	14%	51,665,000	100%
June	7.1	54,745,000	86%	8,769,000	14%	63,514,000	100%
July	9.7	66,474,000	86%	10,871,000	14%	77,345,000	100%
August	3.5	51,695,000	88%	7,327,000	12%	59,022,000	100%
September	3.1	43,144,000	87%	6,531,000	13%	49,675,000	100%
October	1.8	36,230,000	87%	5,216,000	13%	41,446,000	100%
November	10.8	37,047,000	86%	6,247,000	14%	43,294,000	100%
December	11.7	44,392,000	84%	8,603,000	16%	52,995,000	100%
	65.7	496,610,000	87%	79,188,000	13%	575,798,000	100%

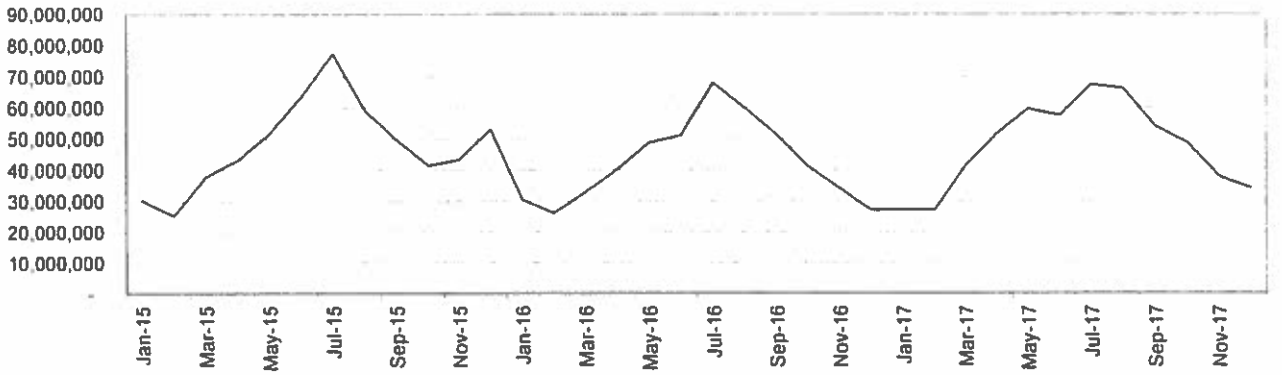
2016	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	0.8	26,604,000	87%	4,001,000	13%	30,605,000	100%
February	0.8	22,444,000	86%	3,661,000	14%	26,105,000	100%
March	3.1	28,785,000	87%	4,251,000	13%	33,036,000	100%
April	5.3	35,053,000	87%	5,231,000	13%	40,284,000	100%
May	7.0	42,126,000	86%	6,704,000	14%	48,830,000	100%
June	1.2	44,599,000	87%	6,545,000	13%	51,144,000	100%
July	8.7	59,190,000	87%	8,793,000	13%	67,983,000	100%
August	7.7	51,798,000	86%	8,171,000	14%	59,969,000	100%
September	6.0	44,634,000	87%	6,655,000	13%	51,289,000	100%
October	0.5	36,156,000	88%	5,029,000	12%	41,185,000	100%
November	1.2	29,750,000	87%	4,357,000	13%	34,107,000	100%
December	0.8	23,139,000	86%	3,914,000	14%	27,053,000	100%
	45.4	467,718,000	87%	71,221,000	13%	538,939,000	100%

2017	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	2.5	23,440,000	86%	3,909,000	14%	27,349,000	100%
February	0.7	23,345,000	86%	3,812,000	14%	27,157,000	100%
March	3.8	36,554,000	88%	4,844,000	12%	41,398,000	100%
April	9.8	44,665,000	87%	6,723,000	13%	51,388,000	100%
May	8.1	51,527,000	87%	7,979,000	13%	59,506,000	100%
June	2.9	50,926,000	88%	6,618,000	12%	57,544,000	100%
July	5.2	59,347,000	88%	8,092,000	12%	67,439,000	100%
August	12.4	57,736,000	87%	8,409,000	13%	66,145,000	100%
September	1.5	47,096,000	87%	6,866,000	13%	53,962,000	100%
October	7.4	42,489,000	87%	6,332,000	13%	48,821,000	100%
November	0.5	37,947,000	90%	4,244,000	10%	42,191,000	100%
December	0.9	30,459,000	89%	3,808,000	11%	34,267,000	100%
	55.6	505,531,000	88%	71,636,000	12%	577,167,000	100%

Monthly Influent Flow
Figure 3A

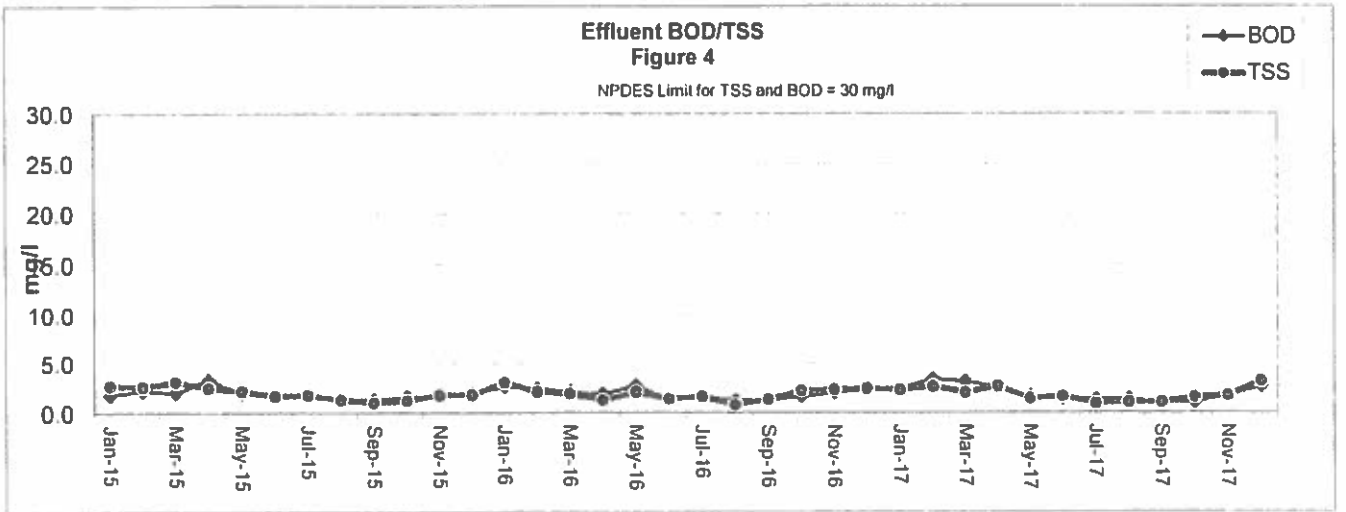


Monthly Influent Flow
Figure 3B

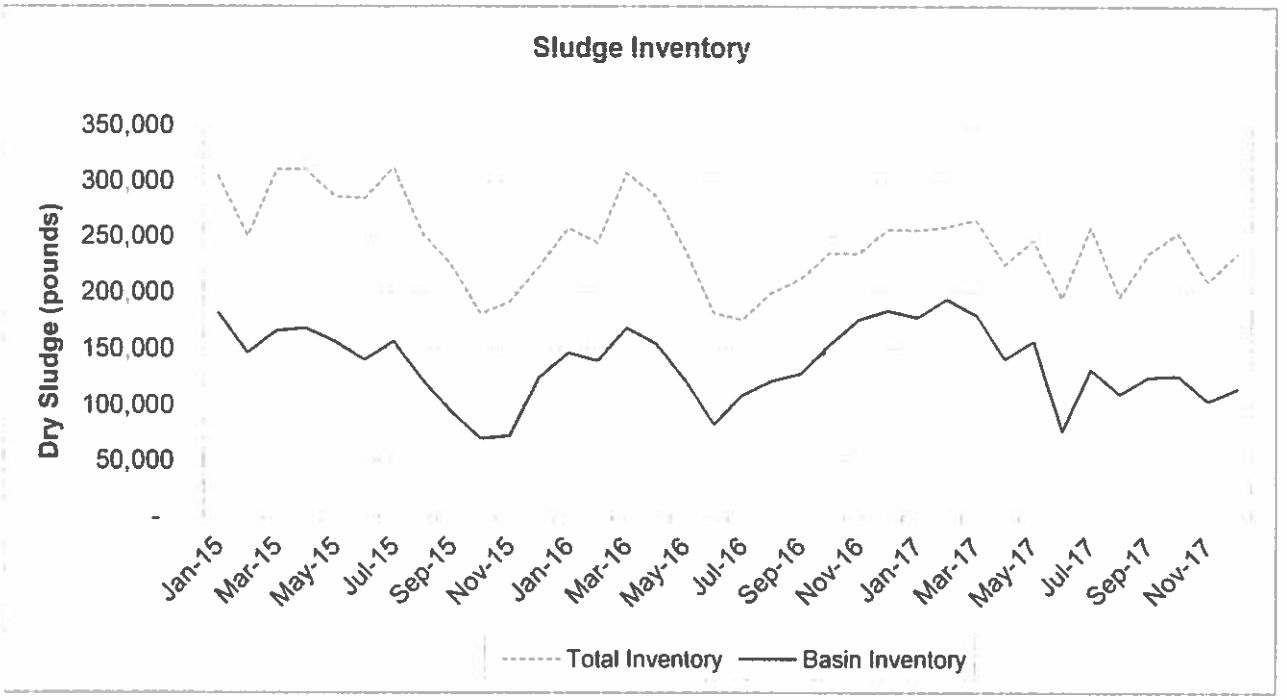


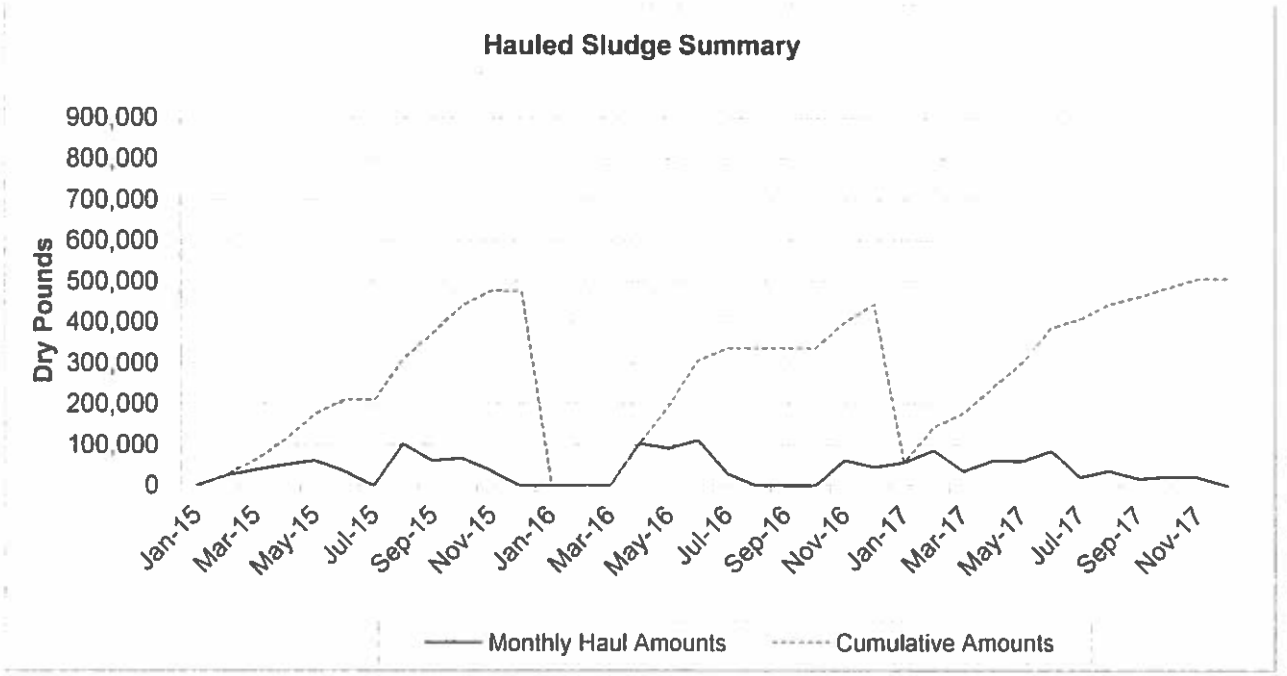
Effluent BOD/TSS
Figure 4

NPDES Limit for TSS and BOD = 30 mg/l

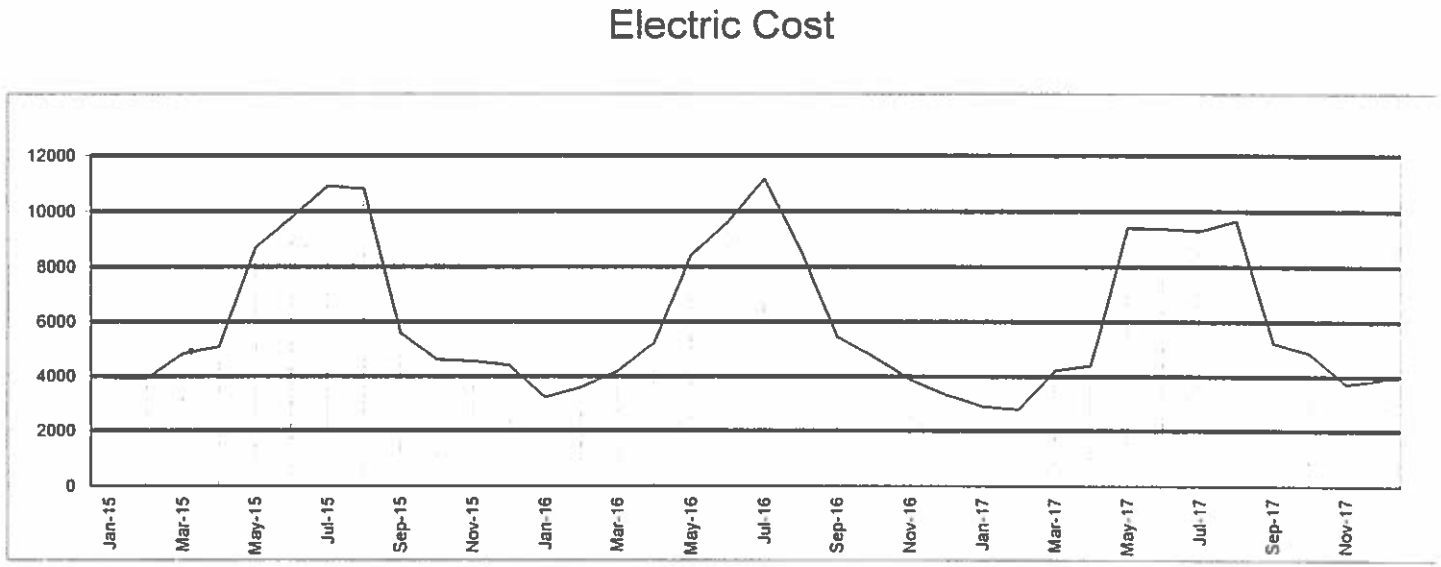


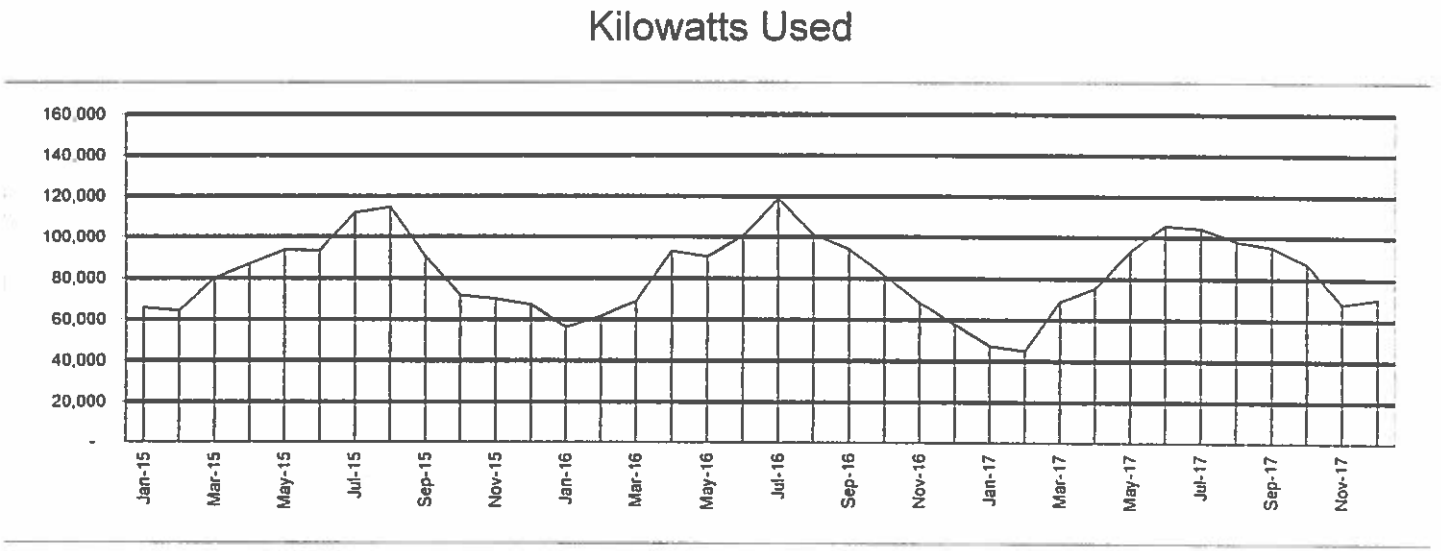
	Hauled Sludge					Basin Depths					Blanket Depths			MLSS Inventory		Blanket and MLSS Inventory		MLSS	Total Dry	Accepted Septage	
	Loads	Gallons	# Dry	% Solids	Annual Cumulative # Dry	Tank #1	Tank #2	AB #1	Basin Gallons	# Dry	Clarf #1	Clarf #2	Clarf #3	MLSS AB #1	MLSS AB #2	Gallons	# Dry	% Solids	Sludge Inventory	Loads	Gallons
Jan-15	0	-	0	4.4%	-	5.5	5.5	0.0	495,000	181,645	2.0	2.0	0.0	3,900	4,160	3,671,048	123,385	0.00403	305,030	22	55,000
Feb-15	20	74,000	24,069	3.9%	24,069	6.0	4.0	0.0	450,000	146,366	1.0	1.0	0.0	3,580	3,290	3,635,524	104,150	0.00344	250,516	21	52,500
Mar-15	34	125,800	38,603	3.7%	62,672	5.5	6.5	0.0	540,000	165,704	1.0	2.0	2.0	5,040	4,250	3,740,142	144,890	0.00465	310,595	11	27,500
Apr-15	44	162,800	50,607	3.7%	113,279	6.0	6.0	0.0	540,000	167,861	2.5	2.0	1.0	5,180	4,000	3,723,357	142,532	0.00459	310,393	23	57,500
May-15	55	203,500	61,284	3.6%	174,563	5.5	6.0	0.0	517,500	155,845	1.5	2.0	4.0	4,030	4,110	3,835,879	130,204	0.00407	286,049	26	65,000
Jun-15	35	129,500	35,024	3.2%	209,587	8.0	3.5	0.0	517,500	139,961	2.0	1.0	3.0	4,630	4,550	3,783,570	144,837	0.00459	284,798	37	92,500
Jul-15	0	-	0	3.2%	209,587	6.5	6.5	0.0	585,000	156,125	1.0	2.0	1.0	5,470	4,660	3,696,714	156,157	0.00507	312,282	42	104,000
Aug-15	107	395,900	102,356	3.1%	311,943	6.5	4.0	0.0	472,500	122,160	0.5	1.0	0.5	4,170	4,400	3,648,357	130,533	0.00429	252,693	44	110,000
Sep-15	55	203,500	60,420	3.6%	372,363	5.5	1.5	0.0	315,000	93,525	1.0	1.0	1.0	4,480	3,570	3,678,952	130,400	0.00425	223,925	32	80,000
Oct-15	59	218,300	67,949	3.7%	440,312	4.0	1.0	0.0	225,000	70,034	1.0	1.0	1.0	3,310	3,920	3,678,952	110,917	0.00362	180,952	22	55,000
Nov-15	30	111,000	35,734	3.9%	476,046	3.0	2.0	0.0	225,000	72,434	1.0	3.0	1.0	3,440	4,430	3,714,476	118,803	0.00384	191,237	19	47,500
Dec-15	0	-	0	3.9%	476,046	4.5	4.0	0.0	382,500	124,412	2.0	0.5	1.5	4,460	1,940	3,709,547	99,000	0.0032	223,412	21	52,500
Jan-16	0	-	0	3.9%	-	5.0	5.0	0.0	450,000	146,367	0.5	0.5	0.0	3,760	3,610	3,617,762	111,184	0.00369	257,551	22	55,000
Feb-16	0	-	0	3.9%	-	6.0	3.5	0.0	427,500	139,049	1.0	1.0	0.0	3,210	3,730	3,635,524	105,211	0.00347	244,260	6	15,000
Mar-16	0	-	0	3.9%	-	6.0	5.5	0.0	517,500	168,322	2.0	2.0	1.0	4,670	4,320	3,714,476	139,249	0.0045	307,571	44	110,000
Apr-16	86	318,200	103,652	3.9%	103,652	5.5	5.0	0.0	472,500	153,914	2.5	2.5	1.0	5,540	3,180	3,732,238	132,600	0.00426	286,515	6	15,000
May-16	77	284,900	91,185	3.8%	194,837	5.5	3.0	0.0	382,500	122,423	1.0	5.0	1.0	3,770	3,670	3,750,000	116,343	0.00372	238,766	40	100,000
Jun-16	99	366,300	111,706	3.7%	306,543	6.0	0.0	0.0	270,000	82,339	1.5	1.0	1.5	2,570	3,840	3,709,547	99,155	0.00321	181,494	30	75,000
Jul-16	28	103,600	29,408	3.4%	335,951	4.5	4.0	0.0	382,500	108,577	1.0	1.0	1.0	1,740	2,630	3,678,952	67,041	0.00219	175,618	46	111,000
Aug-16	0	-	0	3.4%	335,951	6.0	3.5	0.0	427,500	121,222	1.0	1.0	1.0	2,880	2,220	3,678,952	78,240	0.00255	199,462	43	96,000
Sep-16	0	-	0	3.4%	335,951	5.0	5.0	0.0	450,000	127,602	1.0	1.0	1.0	2,800	2,690	3,678,952	84,223	0.00275	211,825	42	94,500
Oct-16	0	-	0	3.4%	335,951	6.5	5.5	0.0	540,000	153,122	1.0	1.0	1.0	1,740	3,600	3,678,952	81,922	0.00267	235,045	35	75,500
Nov-16	52	192,400	62,457	3.9%	398,408	6.5	5.5	0.0	540,000	175,295	1.0	0.0	1.5	-	3,770	1,882,904	59,202	0.00377	234,497	11	20,000
Dec-16	36	133,200	45,237	4.1%	443,645	7.5	4.5	0.0	540,000	183,393	1.0	0.0	1.0	-	4,700	1,861,190	72,955	0.0047	256,348	26	54,500
Jan-17	47	173,000	56,748	3.9%	56,748	6.0	6.0	0.0	540,000	177,132	1.0	0.0	1.0	-	5,080	1,861,190	78,853	0.00508	255,988	15	37,500
Feb-17	68	251,600	86,649	4.1%	143,397	5.5	7.0	0.0	562,500	193,720	1.5	0.0	2.0	-	4,090	1,913,499	65,271	0.00409	258,991	5	12,500
Mar-17	33	122,100	34,808	3.4%	178,205	7.5	6.5	0.0	630,000	179,599	3.0	0.0	1.0	-	5,400	1,896,714	85,420	0.0054	265,019	41	102,500
Apr-17	59	218,300	61,994	3.4%	240,199	6.5	4.5	0.0	495,000	140,573	8.0	10.0	1.5	-	4,630	2,184,858	84,367	0.00463	224,939	8	20,000
May-17	51	188,700	59,556	3.8%	299,755	7.0	4.0	0.0	495,000	156,228	1.0	1.5	0.5	3,420	2,480	3,666,119	90,198	0.00295	246,426	45	116,000
Jun-17	75	277,500	85,724	3.7%	385,479	2.5	3.0	0.0	247,500	76,457	3.0	2.5	1.5	4,530	3,000	3,762,833	118,153	0.00377	194,610	33	82,500
Jul-17	20	74,000	21,631	3.5%	407,110	4.5	5.5	0.0	450,000	131,540	1.0	1.0	0.5	4,670	3,650	3,657,238	126,886	0.00416	258,426	43	107,500
Aug-17	39	144,300	37,030	3.1%	444,140	5.0	4.5	0.0	427,500	109,704	1.0	0.5	1.0	2,910	2,740	3,670,071	86,469	0.00283	196,173	41	103,500
Sep-17	16	59,200	17,311	3.5%	461,451	6.0	3.5	0.0	427,500	125,008	0.5	1.0	1.0	3,880	3,300	3,670,071	109,884	0.00359	234,892	48	122,000
Oct-17	20	74,000	23,051	3.7%	484,502	8.0	1.0	0.0	405,000	126,158	0.5	1.0	1.0	4,520	3,780	3,670,071	127,025	0.00415	253,182	10	23,500
Nov-17	20	74,000	21,292	3.4%	505,794	4.5	3.5	0.0	360,000	103,583	1.0	1.5	0.5	2,890	4,060	3,666,119	106,250	0.00348	209,832	7	17,500
Dec-17	0	-	0	3.4%	505,794	6.0	3.0	0.0	405,000	114,842	1.0	1.5	1.0	3,680	4,120	3,687,833	119,950	0.0039	234,792	7	17,500


Sludge Inventory
Dry Sludge (pounds)
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Total Inventory
Basin Inventory


Hauled Sludge Summary
Dry Pounds
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Monthly Haul Amounts
Cumulative Amounts

	Electric Cost	Kilowatts Used
Jan-15	3947	65,860
Feb-15	3901	64,300
Mar-15	4821	80,190
Apr-15	5084	87,050
May-15	8707	93,810
Jun-15	9772	93,490
Jul-15	10912	112,040
Aug-15	10807	114,770
Sep-15	5585	90,520
Oct-15	4620	71,940
Nov-15	4556	70,170
Dec-15	4413	67,300
Jan-16	3223	56,290
Feb-16	3613	61,740
Mar-16	4195	69,020
Apr-16	5235	93,310
May-16	8446	90,640
Jun-16	9618	100,670
Jul-16	11166	119,020
Aug-16	8627	101,260
Sep-16	5460	94,280
Oct-16	4737	81,500
Nov-16	3903	68,360
Dec-16	3324	57,810
Jan-17	2904	47,480
Feb-17	2796	45,240
Mar-17	4233	69,210
Apr-17	4411	75,480
May-17	9413	93,494
Jun-17	9388	106,070
Jul-17	9310	104,700
Aug-17	9666	98,220
Sep-17	5246	95,470
Oct-17	4874	87,240
Nov-17	3738	68,100
Dec-17	3909	70,820





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								
Dec-17		MO-0103241			#001	Oxidation Ditch/UV/Sludge Holding-sludge is land applied								
INFLUENT					EFFLUENT								% Removal	
DATE	pH UNITS	BOD mg/L	TSS 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	7.3	188	186	16.0	1.448	7.8	1.8	1.3		6.8		13.2	99.0	99.3
2	7.4			15.9	1.289	7.8				6.9		13.3		
3	7.4			15.7	1.400	7.9				6.7		13.2		
4	7.4			16.3	1.403	7.8				6.2		14.7		
5	7.4			15.6	1.429	7.8				6.4		13.5		
6	7.4			15.4	1.366	7.9				6.5		12.8		
7	7.5			14.3	1.319	7.7			0.09	6.6		11.5		
8	7.4	210	188	14.0	1.384	7.9	2.2	2.2		7.1		10.9	99.0	98.8
9	7.4			12.7	1.418	7.9				7.9		9.5		
10	7.5			14.0	1.484	7.9				7.8		9.8		
11	7.6			13.0	1.373	7.9				7.4		9.9		
12	7.4			11.9	1.384	7.8				7.8		9.1		
13	7.5			13.6	1.377	7.9				7.5		10.0		
14	7.5			12.9	1.312	7.8			0.09	7.4		9.9		
15	7.2	223	214	13.7	1.373	7.8	2.9	3.0		7.3		10	98.7	98.6
16	7.3			14.0	1.390	7.8				8.2		9.7		
17	7.3			14.0	1.315	7.8				7.8		10.6		
18	7.6			13.9	1.269	8.0				7.2		11.2		
19	7.5			15.0	1.359	7.7				6.7		12.1		
20	7.5			13.3	1.253	7.8				6.7		11.5		
21	7.4	198	188	14.9	1.357	7.8	2.4	3.2	0.02	7.2		12.5	98.8	98.3
22	7.4			13.3	1.337	7.8				7.0		11.9		
23	7.5			12.4	1.398	7.8				6.4		10.1		
24	7.3			12.7	1.328	7.6				6.2		9.8		
25	7.4			11.4	1.209	7.9				8.4		8.7		
26	7.5			10.0	1.156	7.9				8.1		6.9		
27	7.5			9.1	1.399	7.8				7.8		6.2		
28	7.4	228	202	11.2	1.517	7.8	3.5	5.9	0.02	9.2		6.6	98.5	97.1
29	7.5			11.3	1.449	7.8				9.0		6.5		
30	7.5			10.9	1.579	7.7				8.8		6.5		
31	7.2			11.1	1.587	7.7				7.9		5.6		
Total					42.661									
Avg		209	196	13.3	1.376		2.6	3.1	0.06	7.4	0.0	10.2	98.8	98.4
Min	7.2	188	186	9.1	1.156	7.6	1.8	1.3	0.02	6.2	0.0	5.6	98.5	97.1
Max	7.6	228	214	16.3	1.587	8.0	3.5	5.9	0.09	9.2	0.0	14.7	99.0	99.3

MONTHLY MONITORING					QUARTERLY MONITORING					
DATE	Oil & Grease mg/L	Selenium µg/L	SM1 Hardness mg/L	SM2 Hardness mg/L	Phosphorus mg/L	SM1 Phosphorus mg/L	T. Nitrogen mg/L	SM1 T. Nitrogen mg/L	TR. Cadmium ug/L	TR. Copper µg/L
1										
2										
3										
4	< 5.0	< 1.0	347	359						
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Total	< 5.0	< 1.0	347	359						
Avg	< 5.0	< 1.0	347	359						
Min	< 5.0	< 1.0	347	359						
Max	< 5.0	< 1.0	347	359						

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

DATE	SLUDGE DISP. LBS. DRY WEIGHT	#1 Aeration Basin, O-Ditch, Etc. MIXED LIQUOR				#2 Aeration Basin, O-Ditch, Etc. MIXED LIQUOR				*Weather Conditions		
		* DO	** MLSS	*Settleability		* DO	** MLSS	*Settleability		Outside * Ambient Temp	*RAIN	Time
				*30 min	Temp			*30 min	Temp			
		mg/l	mg/l	ml	° C	mg/l	mg/l	ml	° C	° F	inches	
1		3.2	3,980	410	13.3	2.9	3,960	400	13.1	31	0	7:30
2		3.1	3,800	400	13.5	3.2	3,340	320	13.4	47	0	7:30
3		2.1	3,810	450	13.1	3.6	2,650	290	13.5	41	0	7:30
4		1.3	4,220	430	15.0	1.8	3,460	300	15.0	60	0	7:30
5		1.5	4,070	420	13.2	3.3	3,510	310	13.4	35	0.25	7:30
6		2.6	3,590	360	12.7	3.2	3,670	350	13.0	35	0	7:30
7		4.0	3,320	310	10.6	3.6	4,230	380	11.1	27	0	7:30
8		3.2	3,010	330	10.2	4.1	4,520	400	10.3	16	0	7:30
9		4.8	4,050	350	9.9	5.2	4,120	350	10.0	32	0	7:30
10		5.6	3,940	350	10.4	4.0	4,280	380	10.6	36	0	7:30
11		4.0	4,090	350	10.5	3.6	4,280	360	10.9	30	0	7:30
12		4.4	4,610	420	9.5	3.6	3,830	320	9.8	28	0	7:30
13		3.4	4,630	400	10.0	4.7	3,910	330	10.5	38	0	7:30
14		3.2	5,000	540	9.8	4.1	3,390	280	10.1	37	0	7:30
15		3.2	4,670	400	10.2	4.5	3,570	290	10.2	34	0	7:30
16		4.3	4,210	340	10.0	5.4	4,390	370	10.1	41	0	7:30
17		4.2	3,510	320	10.9	4.4	4,530	370	11.0	45	0	7:30
18		2.9	4,320	360	12.0	3.1	4,300	360	12.2	47	0.1	7:30
19		2.4	4,800	400	12.0	3.8	3,990	300	11.9	46	0	7:30
20		2.5	3,620	360	11.9	3.5	4,090	340	11.8	45	0	7:30
21		2.3	3,880	400	12.6	2.5	4,150	330	12.6	51	0	7:30
22		2.1	5,110	420	12.0	3.4	3,890	300	12.2	43	0	7:30
23		2.7	4,030	360	10.8	3.3	4,290	420	10.4	31	0.5	7:30
24		4.0	4,100	370	10.2	4.3	4,100	380	10.3	30	0	7:30
25		5.0	4,600	400	8.7	6.0	3,510	370	8.8	26	0	7:30
26		4.8	4,370	410	7.8	6.3	4,390	400	8.0	24	0	7:30
27		6.6	4,450	400	5.1	5.7	4,480	430	6.6	11	0	7:30
28		6.8	4,390	370	6.6	5.8	4,840	410	6.8	19	0	7:30
29		5.4	4,390	380	7.0	5.3	4,540	400	7.0	22	0	7:30
30		4.1	4,590	410	7.0	5.5	4,400	410	7.4	19	0	7:30
31		1.5	3,680	440	5.6	5.0	4,120	400	6.1	13	0	7:30

COMMENTS

TESTS PERFORMED BY (PRINT)	SIGNATURE	PHONE #	DATE
John Hornback	John Hornback	(573)365-0455	1/2/2017
REPORT APPROVED BY (PRINT)	SIGNATURE	PHONE #	DATE
Gary Hutchcraft	Gary Hutchcraft	(573)365-0455	1/2/2017

*Required Daily (Monday - Friday)

**Required 1/week

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W Woodland
Springfield MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS #3 Anderson Road
LAKE OZARK MO 65049

MO0103241	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2017	12	01	TO	2017	12	31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
BOD 5-day 20 deg C (00310)	REPORTD	*****	*****		*****	3.5	2.6	mg/L	Weekly	24 Hour Composite	
Stage Type End of Pipe	REQRMNT	*****	*****		*****	Weekly Average 45	Monthly Average 30		Weekly	24 Hour Composite	
BOD 5-day percent removal (81010)	REPORTD	*****	*****		*****	*****	98.8	%	Monthly	Calculated	
Stage Type End of Pipe	REQRMNT	*****	*****		*****	*****	Monthly Average Minimum 85		Monthly	Calculated	
Flow in conduit or thru treatment plant (50050)	REPORTD	1.587	1.376	Mgal/d	*****	*****	*****		Daily	Total Measured	
Stage Type End of Pipe	REQRMNT	Daily Maximum Monitoring Required	Monthly Average Monitoring Required		*****	*****	*****		Daily	Total Measured	
Nitrogen, ammonia total (as N) (00610)	REPORTD	*****	*****		0.09	*****	0.06	mg/L	Weekly	Grab	
Stage Type End of Pipe	REQRMNT	*****	*****		Daily Maximum 11.5	*****	Monthly Average 2.7		Weekly	Grab	
Oil and grease (soxhlet extr.) tot (00550)	REPORTD	*****	*****		<5.0	*****	<5.0	mg/L	Monthly	Grab	
Stage Type End of Pipe	REQRMNT	*****	*****		Daily Maximum 15	*****	Monthly Average 10		Monthly	Grab	
pH (00400)	REPORTD	*****	*****		7.6	*****	8.0	SU	Weekly	Grab	
Stage Type End of Pipe	REQRMNT	*****	*****		Minimum 6.5	*****	Maximum 9.0		Weekly	Grab	
Selenium (Se), total recoverable (01081)	REPORTD	*****	*****		<1.0	*****	<1.0	ug/L	Monthly	Grab	
Stage Type End of Pipe	REQRMNT	*****	*****		Daily Maximum 9.1	*****	Monthly Average 4.0		Monthly	Grab	

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR FACILITY-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

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.

OPERATOR IN RESPONSIBLE CHARGE

Gary Hutcheraft		7305
TYPED OR PRINTED NAME		CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE 573-365-0455
Gary F Hutcheraft	Gary F Hutcheraft	2018-01-04 07:51:20
TYPED OR PRINTED NAME	SIGNATURE	Date

Page 1

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W Woodland
Springfield MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS #3 Anderson Road
LAKE OZARK MO 65049

MO0103241 | 001 A
PERMIT NUMBER | DISCHARGE NUMBER

MONITORING PERIOD
FROM 2017 12 01 TO 2017 12 31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Suspended Solids, percent removal (81011)	REPORTD	*****	*****		*****	*****	98.4	%	Monthly	Calculated	
Stage Type End of Pipe	REQRMNT	*****	*****		*****	*****	Monthly Average Minimum 85		Monthly	Calculated	
Total Suspended Solids (TSS) (00530)	REPORTD	*****	*****		*****	5.9	3.1	mg/L	Weekly	24 Hour Composite	
Stage Type End of Pipe	REQRMNT	*****	*****		*****	Weekly Average 45	Monthly Average 30		Weekly	24 Hour Composite	

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR FACILITY-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

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OPERATOR IN RESPONSIBLE CHARGE

Gary Hutcheraft		7305
TYPED OR PRINTED NAME		CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE 573-365-0455
Gary F Hutcheraft	Gary F Hutcheraft	2018-01-04 07:51:20
TYPED OR PRINTED NAME	SIGNATURE	Date

Page 2

PERMITTEE NAME/ADDRESS

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W Woodland
Springfield MO 65807-5912

4178914500
4178914399 (fax)

NAME Lake of the Ozarks Regional WWTP I
ADDRESS #8 Anderson Road
LAKE OZARK MO 65049

MO0103241	SM2 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2017	12	01	TO	2017	12	31

NOTE: READ BACK AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Hardness, total (as CaCO3) (00900)	REPORTD	*****	*****		359	*****	359	mg/L	Monthly	Grab	
Stage Type: Instream Monitoring	REQRMNT	*****	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required		Monthly	Grab	

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR FACILITY SPECIFIC COMMENTS
FOR SUBMITTED DMR COMMENTS

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.

OPERATOR IN RESPONSIBLE CHARGE		
Gary Hutcheraft		7304
TYPED OR PRINTED NAME		CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE 573-365-0455
Gary F Hutcheraft	Gary F Hutcheraft	2018-01-04 07:51:20
TYPED OR PRINTED NAME	SIGNATURE	Date

Page 3

LAKE OZARK/OSAGE BEACH WWTP
Operation Report

DECEMBER 2017

1	JH	0.113	1.100	1.231	200	248	188	138	208	186		7.12	16.0	C	0	31	3,980	410	101	7.63	3.2	3,960	400	101	7.60	2.9	1.0	1.0	0.5	1.448	7.79	1.8	1.1	6.8		13.2												0.850	9.815	45.000	3.684
2	JH	0.121	1.047	1.168								7.40	15.9	PC	0	47	3,800	400	103	7.61	3.1	3,340	320	96	7.63	3.2	1.0	1.0	1.0	1.289	7.82			6.9		13.3												0.604	6.710		
3	JH	0.143	1.089	1.232								7.46	15.7	PC	0	41	3,810	450	118	7.59	2.1	2,650	290	109	7.66	3.6	0.5	0.5	0.5	1.400	7.86			6.7		11.2												0.891	6.410		
4	JH	0.136	1.137	1.271								7.41	16.3	O	0	60	4,220	410	102	7.60	1.3	3,460	300	87	7.63	3.8	1.0	1.0	1.0	1.403	7.83			6.2		14.7		5.0	1.0	347	359							1.056	9.505		
5	JH	0.123	1.124	1.247								7.36	13.6	O	0.25	35	4,070	420	103	7.37	1.5	3,510	310	88	7.61	1.3	1.0	1.0	1.0	1.429	7.80			6.4		13.5												0.880	7.040		
6	JH	0.122	1.007	1.129								7.42	13.4	C	0	35	3,590	360	100	7.68	2.6	3,670	350	95	7.70	1.2	1.0	1.0	0.5	1.366	7.85			6.5		12.8												0.771	7.840		
7	JH	0.112	0.970	1.102							26.4	7.45	14.3	PC	0	27	3,320	310	93	7.71	4.0	4,230	380	90	7.65	3.6	1.0	1.6	1.0	1.319	7.67			6.6	0.09	11.5												0.794	7.790		
8	JH	0.120	0.928	1.048	195	215	210	160	182	188		7.43	14.0	C	0	16	3,010	330	110	7.66	4.1	4,520	400	88	7.66	4.1	1.0	1.0	1.0	1.184	7.91	2.2	2.2	7.1		10.9												0.684	8.725		
9	GH	0.122	0.964	1.086								7.43	12.7	C	0	32	4,050	350	86	7.64	4.8	4,120	350	85	7.70	5.2	1.0	1.0	1.0	1.418	7.90			7.9		9.5												0.761	5.840		
10	GH	0.136	1.025	1.161								7.46	14.0	C	0	36	3,940	350	89	7.67	5.8	4,280	380	89	7.62	4.0	1.5	1.0	1.5	1.484	7.85			7.8		9.8												0.936	7.755		
11	GH	0.114	0.999	1.113								7.58	13.0	C	0	30	4,090	350	86	7.67	4.0	4,280	360	84	7.67	3.6	1.0	0.5	0.5	1.371	7.91			7.4		9.9												0.878	9.043		
12	GH	0.129	0.988	1.117								7.40	11.9	C	0	28	4,610	420	91	7.67	4.4	3,830	320	84	7.61	3.6	1.5	1.5	1.0	1.384	7.80			7.8		9.1												0.981	7.745		
13	GH	0.119	0.956	1.075								7.47	13.6	C	0	38	4,630	400	86	7.69	3.4	3,910	330	84	7.69	4.7	1.5	1.5	1.0	1.377	7.85			7.5		10.0												0.660	7.525	45.000	2.824
14	JH	0.127	0.991	1.118							34	7.32	12.9	PC	0	37	5,000	540	108	7.59	3.2	3,390	280	83	7.62	4.1	1.0	1.0	1.0	1.312	7.78			7.4	0.09	9.9												0.536	8.200		
15	JH	0.121	0.922	1.043	168	255	223	116	152	214		7.22	11.7	PC	0	34	4,670	400	86	7.58	1.2	3,570	290	81	7.65	4.5	1.0	1.0	1.0	1.173	7.83	2.9	3.0	7.1		[illegible]												0.628	11.910		
16	JH	0.117	0.955	1.072								7.30	14.0	PC	0	41	4,210	340	81	7.58	4.3	4,390	370	84	7.63	5.4	1.0	1.0	1.0	1.390	7.78			8.2		9.7												0.438	6.695		
17	JH	0.127	0.968	1.095								7.29	14.0	R	0	45	3,510	320	91	7.59	4.2	4,530	370	82	7.61	4.4	1.0	1.0	1.0	1.315	7.78			7.8		10.6												0.385	6.665		
18	GH	0.127	0.904	1.031								7.56	13.9	O	0.1	47	4,320	360	83	7.66	2.9	4,300	360	84	7.67	3.1	1.0	1.0	0.5	1.269	7.93			7.2		11.2												0.910	8.785		
19	JH	0.123	0.975	1.098								7.46	13.0	O	0	46	4,800	400	83	7.55	2.4	3,990	300	75	7.61	3.8	1.0	1.0	1.0	1.359	7.69			6.7		12.1												0.852	10.465	45.000	3.928
20	JH	0.122	0.961	1.083								7.49	11.1	PC	0	45	3,620	360	99	7.58	2.5	4,090	340	83	7.63	3.5	1.0	1.0	1.0	1.253	7.73			6.7		11.5												0.591	9.970		
21	JH	0.111	0.987	1.098	180	203	198	92	156	185	28.1	7.40	14.9	O	0	31	3,880	400	103	7.63	2.3	4,150	330	80	7.64	2.5	1.0	1.0	0.5	1.357	7.80	2.4	1.2	7.2	0.02	12.3												0.688	9.180		
22	JH	0.122	1.040	1.162								7.44	11.3	O	0	43	3,110	420	82	7.60	2.1	3,890	300	77	7.63	1.4	1.0	1.0	1.0	1.337	7.78			7.0		11.9												0.496	6.515		
23	JH	0.125	0.963	1.088								7.46	12.4	C	0.5	31	4,030	360	89	7.57	2.7	4,290	420	98	7.58	3.3	1.0	1.0	1.0	1.398	7.78			6.4		10.1												0.371	9.610		
24	JH	0.111	0.932	1.043								7.13	12.7	S	0	30	4,100	370	90	7.54	4.0	4,100	380	93	7.59	4.1	1.0	1.0	1.0	1.328	7.64			6.2		9.8												0.436	7.300		
25	JH	0.098	0.828	0.926								7.43	11.4	O	0	26	4,600	400	87	7.69	5.0	3,510	370	105	7.72	6.0	1.0	1.0	1.0	1.209	7.93			8.4		8.7												0.480	6.715		
26	GH	0.093	0.819	0.912								7.45	10.0	O	0	24	4,370	410	94	7.66	4.8	4,390	400	91	7.69	6.3	1.5	1.5	1.0	1.156	7.91			8.1		6.9												0.491	8.015		
27	JH	0.107	0.911	1.018								7.46	9.1	C	0	11	4,450	400	90	7.71	6.6	4,480	430	96	7.69	5.7	1.0	1.0	1.0	1.399	7.80			7.8		6.2												0.657	6.265		
28	JH	0.109	0.918	1.027	158	275	228	116	193	202	31.7	7.40	11.2	PC	0	19	4,390	370	84	7.68	6.8	4,840	410	85	7.66	5.8	1.0	1.0	1.0	1.517	7.84	3.5	5.9	9.2	0.02	6.6												0.734	6.665	45.000	2.501
29	JH	0.119	0.976	1.095								7.45	11.3	C	0	22	4,390	380	87	7.69	5.4	4,540	400	88	7.68	5.1	1.0	1.0	1.0	1.449	7.82			9.0		6.5												0.616	6.135		
30	JH	0.132	1.061	1.195								7.46	10.9	PC	0	19	4,590	410	89	7.62	4.1	4,400	410	93	7.67	5.5	1.0	1.0	1.0	1.579	7.73			8.8		6.5												0.616	6.325		
31	JH	0.167	1.012	1.179								7.21	11.1	PC	0	13	3,680	440	120	7.55	1.5	4,120	400	97	7.60	5.0	1.0	1.5	1.0	1.587	7.71			7.9		5.6												0.523	8.660		
TOTAL		3.808	30.459	34.267	901	1196	1047	622	892	978	122.2	229.85	411.5		0.85	1040	128,840	12,060	2,918	237	112.1	124,730	11,050	2,755	237	128.7	32.5	32.0	28.5	42.661	242	12.8	15.6	229	0.22	318	0	5.0	1.0	347	359	0	0	0	0	0	0	21.940	245.820	180.000	12.937
MAX		0.167	1.137	1.304	200	275	228	160	208	214	34	7.58	16.3		0.5	60	5,110	540	120	7.71	6.8	4,840	430	109	7.72	6.3	1.5	1.5	1.5	1.587	7.95	3.5	5.9	9.2	0.09	14.7	0	5.0	1.0	347	359	0	0	0	0	0	0	1.056	11.910	45.000	3.928
MIN		0.093	0.819	0.912	158	203	188	92	152	185	26.4	7.22	9.1		0	11	3,010	310	81	7.54	1.3	2,650	280	75	7.58	1.8	0.5	0.5	0.5	1.156	7.64	1.8	1.1	6.2	0.02	5.6	0	5.0	1.0	347	359	0	0	0	0	0	0	0.371	5.840	45.000	2.501
AVG		0.123	0.983	1.105	180	239	209	124	178	196	30.6	7.41	13.3		0.03	34	4,156	389	94	7.63	3.6	4,024	356	89	7.63	4.2	1.0	1.0	0.9	1.376	7.81	2.6	3.1	7.4	0.06	10.2	0.0	5.0	1.0	347	359	0.0	0.0	0.0	0.0	0.0	0.0	0.708	7.930	45.000	3.234

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

Prepared by GH JH   Approved by GH   Date 1/2/2017

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Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

TOOLS

* & X = New 2017

Item No.	Quantity & Item
1	1 - Craftsman 3 drawer tool box
2	1 - Craftsman 5 drawer tool box
3	1 - Assortment SAE Allen wrenches
4	1 - Assortment Metric Allen wrenches
5	1 - 3/8 SAE T Allen wrench
6	1 - Set 3/8 Allen wrench sockets 1/8 - 1/2
7	1 - Set SAE & Metric nutdrivers in tool bag
8	7 - SAE nutdrivers 3/16 - 1/2
9	7 - Metric nutdrivers 5mm - 11mm
10	5 - Torx screwdriver assorted sizes
11	1 - Assortment of straight & Philips screwdrivers
12	1 - 1/2"staight screwdriver socket
13	1 - 1/4"deep socket set 4mm -14mm
14	1 - 1/4" deep socket set 3/16 - 1/2
15	1 - 1/4" shallow socket set 4mm - 13mm
16	1 - 1/4" shallow socket set 5/32 -1/2 w/ 2 & 3" extensions
17	1 - 1/4"Ratchet
18	1 - 40 piece 1/4 & 3/8 socket set, in RAS basement
19	1 - 3/8" X 1/4" socket adapter
20	1 - 3/8" deep & shallow socket set 3/8 - 3/4
21	1 - 3/8"deep socket set 9mm - 19mm
22	1 - 3/8" Craftsman socket set 3/8 - 13/16
23	2 - 3/8" 1 1/2" extensions & 1 - 6" ext.
24	1 - 3/8" Ratchet
25	4 - 3/8" 6 point sockets 1/4 - 7/16
26	2 - 3/8" spark plug sockets 5/8 & 13/16
27	2 - 1/2" Ratchets & 1 set 1/2" extensions 2, 3 & 6"
28	1 - 1/2" deep socket set 3/8 - 13/16
29	1 - 1/2" socket shallow socket set 9mm - 21mm
30	1 - 1/2" socket shallow socket set 7/16 - 1 1/4
31	6 - KD brand 3/4" sockets, 1 3/8, 1 7/16, 1 1/2, 1 5/8, 1 13/16 & 2 3/4"
32	1 - 3/4" Breaker bar & 16" extension, True craft
33	1 - 10 piece ignition wrench set 4mm - 13mm
34	1 - 10 piece ignition wrench set 5/32 - 7/16
35	2 - Boxed end wrench's 1/2-9/16 & 5/8-11/16
36	3 - 3/8, 4 - 7/16, 2 - 11/16, 2 - 3/4, 2 - 13/16, 2 - 7/8 combination wrenches
37	4 - 15/16, 4 - 1", 3 - 1 1/16, 5 - 1 1/4 & 4 - 1 1/18 comb. wrenches
38	3 - open end wrenches 7/16-17/32, 5/8-11/16, & 3/4-7/8
39	1 - Set pm comb. Wrench's 1/4 thru 7/8 in pouch
40	3 - snap ring pliers
41	2 - pair channel lock pliers, 1 blue handle & 1 black
42	2 - pair electrical channel lock pliers, 6 & 10"
43	1 - set of left handed drill bits

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

TOOLS

Item No.	Quantity & Item	* & X = New 2017
44	6 - electrical screwdrivers, 3 straight & 3 philips head	
45	2 - wire stripers	
46	1 - pair lineman pliers	
47	1 - pair needle nose pliers	
48	1 - pair side cutters, 6"	
49	3 - 10" Vise grip pliers, 2 curved jaw & 1 straight	
50	2 - 6" Vise grip pliers, 1curved & 1 needle jaw	
51	1 - yellow handle tin snips	
52	1 - 12" crescent wrench, Craftsman	
53	3 - pipe wrenches, 18", 24", & 36"	
54	1 - 10" Stanley level	
55	1 - 24" Craftsman level	
56	2 - 25' Task Force tape measures	
57	2 - 6" pocket metal rules	
58	1 - points file	
59	1 - file assortment	
60	1 - rasp file	
61	2 - Concrete trowel	
62	1 - feeler gauge	
63	1 - tool bag	
64	1 - ice pick	
65	1 - punch & chisel set	
66	1 - 2" C clamp & 2 - 4" C clamps	
67	2 - putty knives	
68	1 - parts brush	
69	1 - ball peen hammer	
70	1 - 4lb shop hammer	
71	1 - claw hammer	
72	1 - 10 lb sledge hammer	
73	1 - rubber mallet	
74	1 - hacksaw	
75	3 - wire brushes	
76	1 - tire gauge	
77	1 - 6" square	
78	2 - rag pullers	
79	1 - crow bar	
80	1 - garden rake	
81	1 - round point shovel	
82	1 - flat shovel	
83	1 - 10lb straight bar	
84	1 - pick	
85	1 - anti freeze tester	
86	1 - flat bar	

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

TOOLS

Item No.	Quantity & Item	* & X = New 2017
87	1 - Craftsman 28 pc. tap & die set	
88	1 - Black & Decker drill & driver set	
89	1 - 7" carbide masonry drill bit set 3/16 - 3/4	
90	3 - masonry bits, 1/4, 5/16 & 3/8	
91	1 - Black & Decker metal drill bit set, 1/16 to 1/2 & HS bits assorted sizes	
92	2 - gear pullers, 1 large & 1 small	
93	1 - Black & Decker 3/8 variable speed drill	
94	1 - mini copper tubing cutter	
95	1 - PVC cutter	
97	1 - 1/2" Electric Impact Wrench	
98	1 - Sandblaster w/ 24ft of hose & 2 bags of blasting material	

SLUDGE TRUCK TOOLS

99	1 - grease gun
100	1 - 20 piece Stanley SAE Comb. end wrenches 1/4 - 7/8
101	1 - Set Comb. End wrenches 8mm - 18mm
102	1 - Rubber maid tool bag
103	4 - Stanley flathead screwdrivers
104	2 - Stanley phillips screwdrivers
105	AC Delco T20x4" star screwdriver
106	AC Delco 2x1 1/2" phillips screwdriver
107	AC Delco 1/4"x1 1/2" slotted screwdriver
108	13 oz. Wood handle claw hammer
109	RayOVac industrial flashlight
110	25' task force tape measure
111	7 WR vise grip
112	10 WR vise grip
113	Stanley lineman pliers 84-113
114	Stanley wire cutters 84-060
115	Stanley crescent wrench 85-763
116	1 - Set of wheel chocks
117	1 - log chain
118	1 - air hose
119	1 - assortment Buse fuses & 1157 bulbs

MISCELLANEOUS EQUIPMENT

120	1 - Ryobi 18 volt Drill, Circular Saw, Recip saw, Flashlight, Vacuum Combo Kit w/2 batteries
121	1 - Millermatic Wire feed welder w/helmet & gloves
122	1 - 10-3 50ft & 1 - 10-3 100ft Extension cord
123	4 - metal lockers in men's restroom
124	2 - metal lockers in women's restroom
125	1 - plastic mop bucket w/wringer
126	2 - Sigma samplers for parts

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

MISCELLANEOUS EQUIPMENT

Item No.	Quantity & Item	* & X = New 2017
127	1 - 4' step ladder, fiberglass	
128	1 - 6' step ladder, fiberglass	
129	10' stepladder, wood	
130	24' 300 lb rated extension ladder, aluminum	
131	24' 300 lb. rated extension ladder, fiberglass	
132	2 - set of plastic saw horses	
133	1 - 6"x 10' suction hoses	
134	2 - 6" x 25' suction hose	
135	1 - 4" x 60' suction hose	
136	1 - 4" x 15' discharge hose @ septic unloading station	
137	2 - Schumacher battery chargers, 1 model SE-82-6 & 1 model XC103-CA	
138	1 - 100' extension cord	
139	1 - 50' extension cord	
140	1 - 1 gallon plastic gas cans	
141	2 - 5 gallon steel safety gas cans	
142	1 - misc. log chains, headwork's tool room	
143	5 - 50'x1 1/2" fire hoses with 2 nozzles*	
144	5 - Garden hoses	
145	1 - mechanic creeper	
146	2 - Craftsman gas leaf blowers, older one not running	
147	1 - Craftsman 4 cycle weed eater	
148	1 - Stihl weed eater	
149	1 - Kawasaki weed eater	
150	1 - cherry picker (engine hoist)	
151	1 - 9 gallon portable air tank	
152	1 - Campbell Hausfield 26 gallon air compressor	
153	1 - CH air drill	
154	1 - CH air ratchet	
155	1 - CH air grinder	
156	1 - CH air impact wrench	
157	1 - CH air chisel w/4 chisels	
158	1 - air tire inflator	
159	1 - Pro-Arc oxy-acc torch kit & tanks	
160	1 - Pro-Force 33 paint sprayer	
161	1 - 15 gal 12 volt portable sprayer	
162	1 - 60gal Ingersoll Rand in UV building	
163	1 - 3 ea. grease gun	
164	1 - Cowhbian 5" multi bench vise	
165	3 - shop vac's	
166	2 - drum dollies	
167	1 - Commercial Elec. Amp meter, HDSA 500	
168	1 - Commercial Elec. Multi meter, HDM 4100	
169	2 - insulated fuse pullers, 1 large & 1 small	

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

MISCELLANEOUS EQUIPMENT

* & X = New 2017

Item No.	Quantity & Item
170	1 - GB circuit tester
171	1 - 3/8 hammer drill
172	1 - Skil 14.4 drill kit, w/ battery & charger
173	1 - Black & Decker bench grinder
174	1 - Black & Decker hand grinder, 4 1/2"
175	1 - 115V 3/8 VSR Drill/ Driver
176	1 - propane torch, elec. Start
177	1 - strap 1 ton come along
178	2 - chain come alongs, 1 ton & 3 ton
179	1 - cable come along, 1 ton
180	1 - 2 ton floor jack
181	1 - 12 ton high lift jack
182	2 - yellow air hoses
183	1 - 100gal. Portable Diesel fuel tank
184	1 - Fluke T5-1000 Volt/Amp meter*
185	1 - wheel barrow
186	1 - garden cart
187	1 - Coleman power washer (doesn't run, will sell on ebay in 2018)
188	1 - portable hand work light
189	1 - portable work light stand w/ dual mounted lights
190	4 - Strong Arm electric winches - 3 for clarifier scum baskets & 1 for pulling lift station pumps
191	1 - AMT 3" trash pump w/wheel kit
192	1 - 3" 50ft & 1 - 30ft suction/discharge hose w/couplings
193	1 - North Star 3000 PSI Steam and Hot Water Pressure Washer
194	1 - Warn 120 volt Winch/Hoist for pulling UV channel basket

OFFICE INVENTORY

195	1 - wooden desk
196	1 - metal desk
197	4 - Office chairs
198	3 - file cabinets, 1 - 4 drawer & 2 - 2 drawer
199	1 - 3 shelf bookshelf
200	1 - PC , w, speaker in monitor, keyboard, and surge arrest---DELL
201	1 - MFC-7360N Brother copier / printer
202	1 - conference table
203	27 - folding steel chairs
204	3 - Phones (cradle style)
205	1 - Fellowes paper shredder
206	1 - Bissell vacuum cleaner
207	1 - Emerson TV / VCR Combo (for training)
208	1 - Emerson microwave
209	1 - Magic chef refrigerator
210	1 - Culligan water cooler

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

CONSUMABLE MATERIALS

* & X = New 2017

211 2 - 500 Gallon propane tanks, w/ 405 gallons as of 1/4/18

VEHICLE'S

212 1 - 2001 Dodge Dakota vin# 1B7FL26X015269588
213 1 - 1994 Volvo White GMC Sludge Truck vin# 4V2JCBE75R833094
214 1 - 1985 GMC 4 Wheel Drive Field Truck vin# 1GDL7D1YDV529996
215 1 - John Deere Rider (no deck) w/ snow blade (not running wore out, will sell on ebay 2018)
216 1 - Kabota ZG123S 48" Zero-Turn Mower

LABORATORY EQUIPMENT

Item No.	Quantity & Item
217	1 - OHAUS adventurer analytical balance
218	1 - Orion & 1 no name brand bench top electrode arms
219	1 - USA Bluebook electric stirrer
220	3 - Isco Auto samplers, 1 - NI-CAD batteries, 1 small & 1 larger charger
221	1 - Isco Auto sampler pump
222	1 - Hach Sension 2 ammonia/ph meter and probes
223	1 - Hach HQ10 DO meter & probe, not in use, obsolete
224	1 - Hach HQ411D pH/mv meter & probe with stand
225	1 - Allied stirrer and hot plate
226	1 - Vector spotlight, for discharging Isco batteries
227	2 - VWR ASTM certified / calibrated thermometers
228	2 - Nalgene desiccators
229	1 - muffle furnace-Therolyne
230	1 - vacuum pump-Fisher
231	1 - sterilizer-Electric Steno Clave
232	1 - centrifuge-IEC centrifuge, not in use
233	1 - Incubator-Fisher ISO temp
234	1 - drying oven-Fisher ISO temp oven
235	1 - portable D.O. meter-YSI 550-A
236	1 - BOD meter & probe--YSI 5905, not in use, obsolete
237	1 - BOD Incubator- Fisher low temp model 307
238	1 - microscope-Micromaster
239	1 - water still-Corning Mega-Pure System MP1, not in use
240	1 - Cartridge for still- Corning high cap (used), not in use
241	1 - Lab refrigerator-Marvel Division
242	2 - timers-West Bend
243	1 - Hanna portable pH meter
244	2 - Hach HQ40D meters, one with LBOD probe & 1 w/ Rugged LDO probe
245	1 - Hach Distillation Glassware set for Ammonia
246	1 - Thermo Hot plate for distillation
247	2 - Igloo Ice Maker for Samplers * X Purchashed 1

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2018

SAFETY EQUIPMENT

Item No.	Quantity & Item	* & X = New 2017
248	15 - Safety Glasses / Goggles	
249	2 - Face Shield	
250	2 - UV Face shields	
251	4 - Rubber Gloves	
252	25 - Disposable Gloves	
253	6 - Dust Mask/Respirators	
254	2 - Ear Protection muffs & 14 pair disposable ear plugs	
255	1 - Eye Wash Stations	
256	2 - Back Supports	
257	1 - Gas Detector / Monitor, portable	
258	1 - Lock Out/Tagout Station	
259	2 - Full Body Harness	
260	2 - Lanyards	
261	1 - Tripod and Winch	
262	3 - First Aid Kits	
263	6 - Fire Extinguishers, Plant	
264	1 - Fire Extinguishers, Office	
265	3 - Fire Extinguishers, Vehicles	

SPARE EQUIPMENT & PARTS

266	1 - 10hp Rebuilt Flyght lift station pump	
267	3 - electrical contact relay for pista grit	
268	1 - 3 phase monitors for lift stations	
269	3 - Allen Bradley PLC I/O Boards for UV control panel	
270	77 - UV bulbs	
271	49 - UV quartz sleeve	
272	3 - UV ballast	
273	2 - UV air cylinder rebuild kit & 2 outer bands	
274	4 - New UV air cylinder *	**X Purchased 1**
275	1 - UV air cylinder hose, approx. 20 ft.	
276	16 - Wiper Rings *	**X Purchased 144**
277	1 - UV bulb cord w/1 bulb sockets	
278	1 - blower for digesters	
279	4 - UV sensor brushes *	**X Purchashed 8**
280	1 - Vac pump rebuild kit for Field Gymmy sludge truck	
281	1 - Carboy for BOD water	
282	1 - electric cylinder valve for back of sludge truck	
283	1 - Fluorescent bulb ballast & 28 T-8 bulbs	
284	1 - quantity of assorted ¾, & 1" PVC pipe fittings	
285	1 - quantity of assorted nuts & bolts	
286	2 - Transtector ACP-100 surge suppressor	
287	1 - Transtector PDS 1 tube surge protector	
288	1 - Alternating relay for lift stations	
289	1 - Rebuild kit for the compressor pump in the Pista Grit panel	

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The Lake of the Ozark Regional Wastewater Treatment Plant #1

Emergency Response Plan, Emergency Operations Plan, Emergency Action Plan, and Fire Protection Plan

January 2018

Purpose

The purpose of the Emergency Response Plan (ERP) is to provide for an organized response to an emergency situation at the Lake of the Ozarks Regional Wastewater Treatment Plant #1 (WWTP). The primary emphasis in the ERP is to minimize risk to public health, and to minimize damage to private and public property. The secondary emphasis in the ERP is to provide the best possible wastewater treatment in the event of an emergency situation.

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Preliminary Damage Assessment Checklist

- ☐ Call key plant personnel, starting with Contact Order on page 3 of this ERP. Determine need for additional personnel.
- ☐ Notify fire department if appropriate.
- ☐ Identify person in charge at the site.
- ☐ Make preliminary site evaluation, determine extent of physical and operating damage. (Check piping, pumps, basins, structures, look for seepage, leaks, cracks, landslides, broken pipes and drains).
- ☐ Check for downed power lines and propane gas odors and notify Ameren UE if necessary.
- ☐ If damage appears intentional, notify police (site may be a crime scene).
- ☐ Take steps to keep public safe, use barricades, etc. Remove obstacles that will prevent emergency vehicle access.
- ☐ Person in charge should contact key City and Board members to inform of situation and discuss further anticipated notifications.
- ☐ If environmental damage is likely, notify MDNR.
- ☐ If public health is at risk, notify local health department.
- ☐ Develop mitigation and recovery plan.

Section I

A. Personnel Inventory, Contact Order & Training

1: Personnel Inventory

Name	Title	Office Phone	Home Phone	Mobile Phone
Gary Hutchcraft	Local Manager II	573-365-0455		573-216-8398
John Hornback	Supervisor	573-365-0455	573-369-2761	573-480-4065
Gary Johnson	Division Manager	573-874-8080	573-234-7946	314-581-6024
Tim Geraghty	VP/Director of Operations	636-561-3737	Ext. 101	314-575-4738
Dale Wagner	AWR President	573-874-8080	573-445-7302	573-864-1164

2: Contact Order

Contact Order	Corporate Office Contact	Division Contact	Outside Support Contact
1		Gary Hutchcraft	
2		John Hornback	
3			
4			Lonnie Madole
5			Kevin Klein
6			Josh Thompson
7	Gary Johnson		
8	Tim Geraghty		
9	Dale Wagner		

Client Contact:	Nick Edleman Matt Michalik

3: Annual Staff Training Goals

* CPR – First Aid
* Confined Space Entry
* Vehicle Safety – Defensive Driving
* Hazard Communication
* Work Area Protection – Traffic Around Job Sites
* Lockout – Tagout
* Back Safety/Lifting Methods
* Respiratory Protection
* Emergency Action and Fire Prevention

4: Emergency Response Plan shall be reviewed and updated on an annual basis

B. Facility Emergency Equipment Inventory

1. Communications

a. Cell Phones

The following Cell numbers have been assigned to staff:

Gary Hutchcraft	573-216-8398
John Hornback	573-216-3878 (duty phone)
	573-216-3878 (duty phone)

b. Telephones

WWTP Plant Voice	573-365-0455
WWTP Plant Dialer	573-365-0455
WWTP Duty Cell	573-216-3878

2. Safety Equipment

a. Full body harness (2) - (Admin. Bldg.)
b. Lanyard & spreader bar – (Admin. Bldg.)
c. Tripod and hoist - (Admin. Bldg.)
d. 4-gas Drager X-am 2000 gas detector - (Admin. Bldg.-office)

3. Other Equipment

a. Ford 6" trash pump, City owned (Lake Ozark)
b. 60' of 6" suction hose, City owned (Lake Ozark). 60' of 4" suction hose w/ 4 to 6" adapter.
c. AMT 3" trash pump, w/ 30' and 50' hoses w/ quick couplers.
d. Dodge Dakota, 2WD pickup truck w/ tire chains.
e. Volvo White GMC Sludge pump truck w/ 3700 gallon tank.
f. GMC 4 Wheel drive Field pump truck with 1600 gallon tank w/ 20' of 6" suction hose.
g. Wire feed Welder (1)
h. Oxygen and Acetylene torch set w/ 50' hose.

C. Command Post Designation

- The command post for the WWTP shall be in the Administration building-office at the WWTP. If conditions make this impossible, then the command post shall be located at a designated site provided for by the Joint Sewer Board.
- All communications shall be coordinated through the City.

D. Communications Policy

1-Report all emergency situations (if possible), to Gary Hutchcraft

If Gary cannot be contacted, then call the people on the following list until someone is notified of the emergency situation.

	Work	Mobile	Home
• Lonnie Madole	573-378-5737	573-789-5242	
• Kevin Klein	573-378-5737	573-378-8510	
• Josh Thompson	573-364-8790	573-308-6229	573-762-9941
• Gary Johnson	573-874-8080x275	314-581-6024	573-234-7946
• Tim Geraghty	636-561-3737x101	314-575-4738	
• Dale Wagner	573-874-8080x232	573-864-1164	573-445-7302

What qualifies as an emergency situation?

Generally speaking, an emergency situation can be anything that has the potential to cause danger to human health, and or damage to property. We can easily extend the meaning of an emergency situation to be anything that has the potential to cause damage to the environment. The practical application thus being: an emergency situation is any situation that has the potential to cause a violation of the NPDES permit.

The NPDES permit is a combination of both numeric and narrative standards that are developed to protect the designated uses of the stream that the Lake of the Ozarks Regional WWTP #1 discharges into. The permit also contains standards that cover wastewater discharges from the collection system.

The following outline lists some (not all) of the situations that qualify as an emergency situation that should trigger notification.

Surcharge
- Wet Weather
- Dry Weather

Loss of treatment
- Power Fail
- Equipment damage
- Toxic Shock
- Short Circuit

Sabotage

2 - In an emergency situation the following information shall be communicated:
- What has been damaged,
- If no damage, why is there an emergency,
- Is there a threat to public health,
- Is there damage to public and/or private property,
- Has treatment been affected,
- Are NPDES permit violations occurring,
- Will NPDES permit violations result from the emergency,
- Are there any safety issues due to the emergency,
- Are help and/or equipment needed to eliminate the emergency?

3-The MODNR will have to be contacted when Section B, 2A-B, (noncompliance notification standards, published in the 'Standard Conditions for NPDES Permits'), have been reached. A copy of these standards is included in the text of this plan on page 24. Follow the directions listed in the 'notification standards'.
MODNR Southwest Regional Office
Phone: 1-417-891-4300 or Environmental Emergency Response 1-573-634-2436
2040 W. Woodland
Springfield, MO 65807

Always notify the Joint Sewer Board and Corporate before MODNR notification. When notifying the MODNR always record the name of who you are talking to, and the time and date of the notification. Give the following information: what the violation is per notification standards, and what our actions are to eliminate the violation. Be factual; do not assume anything. Finally, find out if the DNR requires written notification concerning the violation.

In the 2 drawer file cabinet by the copier, the file that is marked "DNR Bypass forms" there are two report forms that need to be filled out in any bypass situation, and/or any operations - treatment emergency that reaches notification standards. One report form (Wastewater Bypass Report Form) is for the MODNR, and the other report form (Deviation Notification Form) is for AWR corporate. These forms are also included in Appendix 8 of this manual.

E. Emergency Action Plan

- Procedures for reporting a fire or other emergency situations.

    1. Call 911 and report the situation
    2. If the land line phones don't work, try cells and direct connects
    3. Determine if a response is safe and or necessary
    4. Determine whether or not evacuation is necessary

- Procedures for emergency evacuation including type of evacuation and exit route assignments.

    1. If an emergency evacuation is necessary follow the exit routes posted in the buildings.
    2. All evacuees shall meet at the main entrance gate, and determine what action needs to be taken, and if support can be given to emergency response personnel.

- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate.

    1. If employees need to stay behind to operate critical plant operations, they shall establish communications with an employee who has already evacuated. Communications shall be on a routine basis with information conveyed relating to the safety of the remaining employee, current operation conditions, safety related conditions, etc.
    2. The employee who stayed behind shall evacuate if life threatening conditions present themselves, or if there is evidence that a condition may become life threatening.

- Procedures to account for all employees after evacuation.

    1. As specified above, all employees who evacuate shall meet just outside the entrance gate. An accounting of all employees shall be determined.

- Assignments

    1. The on call operator shall be designated as the employee who stays behind.
    2. The local manager shall ensure that communications are being carried out with the employee who stayed behind
    3. The local manager is responsible for making an accounting of all employees.

F. Fire Protection Plan

- Assure that hazardous accumulations of combustible waste material are controlled.
    1. Place used rags in the metal used rag container.
    2. Keep trash picked up and trash cans empty on a regular basis.
    3. Complete and turn in the required hot work permit for all welding or grinding activities.
    4. Keep a 30 minute fire watch after any welding operation has ended.
    5. Keep combustible liquids in the storage cabinets. Keep the cabinet doors closed.

- Identify high risk areas and develop plans to minimize potential fire hazards.
    1. The highest risk area for fires is in the shop. Plans to minimize the risk of a fire include: use of storage cabinets for gasoline, paints, etc. Use of metal trash cans with lids for the storage of used shop rags. And the control of trash accumulation on the floor and in the trash cans.

Alliance WATER RESOURCES

HOT WORK PERMIT/ CHECKLIST

Location:	Date:	Supervisor:
Work to be done:		
Special Precautions:		
Time Started:	Time Completed:	
Signed:	Date:	

(Individual responsible for Hot Work authorization)

ATTENTION

Before approval of the Hot Work Permit, the Supervisor or appointee shall inspect the work area and confirm that all precautions have been taken to prevent fire.

Yes	No	N/A	Precautions
			Is all cutting and welding equipment in good repair condition?
			Has pre-task Tool Box Talk been administered?

Yes	No	N/A	Within 25 Feet of Work
			Floor/ ground clear of combustibles if possible?
			Combustible floors wet down, covered, or shielded?
			No combustible material or flammable liquids?
			Combustibles and flammable liquids covered or shielded?

Yes	No	N/A	Work on Enclosed Equipment
			Equipment cleaned of all combustibles?
			Containers/ drums purged of flammable vapors/ materials?

Yes	No	N/A	Fire Watch
x			To be provided during and 30 minutes after work completion?
x			Supplied with fire extinguisher and or small charged fire hose?
x			Trained in the use of equipment and emergency procedures?

Yes	No	N/A	Final Check-Up
			Completed 30 minutes after work completion?

Supervisor Signature: Date:

(To be signed by individual responsible for Final Check Up after its completion)

G. Emergency Identification and Analysis

Emergency	Analysis
Severe storms, high wind, lightning, floods.	• Damage can range from low to medium depending on severity of storm. • Electrical supply, electrical pathways, exposed equipment and equipment located in underground vaults (when flooding is a concern), are most susceptible to damage.
Severe cold, ice storms, blizzards.	• Damage can range from low to medium depending on severity of conditions. • Temperatures below -15° F are cause for emergency response with outside equipment and with buildings that require additional heat to protect equipment with exposed moving parts. In these conditions always make sure the lift stations lids are closed. • Ice storms and blizzards can cause damage to the electrical supply and also hinder access to the Wastewater Treatment Plant.
Earthquakes.	• Damage can range from low to high. • A major earthquake has the potential to cause extensive damage to all phases of wastewater collection and wastewater treatment since a lot of equipment is located underground. • Damage can also occur in weak links of a collection system or weak areas of concrete basins, which may not be apparent by visual observation.
Sabotage, civil unrest, riots, terrorist attacks.	• Damage can range from low to high on electrical supply, and any equipment that is exposed and can be easily damaged (i.e. bar screen, electrical control panels, lift stations, lab-office building equipment, etc.). • Measures to prevent damage from terrorist attacks are detailed in the following section on facilities security.
Air borne chemicals, water borne chemicals, toxic chemical spills, weapons of mass destruction.	• Damage to bacteria mass in the treatment process, and can also affect health of treatment personnel. • Caution should always be taken when confronting a chemical - biological emergency. • If weapons of mass destruction are suspected to have caused the emergency, then treat the affected area as a crime scene and call local authorities.

H. Facilities Security:

The following topics should be analyzed and developed to increase security to its highest Level at the WWTP:

1. Detection (the ability to detect a security threat),

2. Access (deter access to the WWTP),

3. Delay (provide a layered barrier system to delay access to the WWTP)

4. Respond (develop an organized response to a breach in security)

I. Priority Equipment and Processes.
The following list is a list of equipment and/or processes in the order of relative importance to the wastewater treatment process. The list shall be used as a guide when determining what equipment and/or processes need to be placed into service first, second, and so on, when there is a widespread emergency. The list is organized into two categories: WWTP mechanical (piping and valves), and equipment (which includes structures).

Mechanical	Treatment Equipment
1. Raw sewage force mains to WWTP.	1. Oxidation Ditches (at least one aerator per unit that WW is entering)
2. Gravity thru Oxidation Ditches.	2. Final Clarifiers (1,2 & 3).
3. Gravity mains from oxidation ditches to final clarifiers splitter boxes.	3. Adjustable weir gate valves at basins
4. Gravity to Clarifiers.	4. Adjustable weir gate valves at splitter box for Clarifiers
5. Sluice gates in Oxidation Ditches and UV channels for draining purposes	5. Lift Station between aeration basins
6. RAS force main back to Ditches	6. RAS electric pinch valves in middle room of headwork's bldg.
7. RAS waste from clarifiers	7. Waste valves
8. Sludge waste force mains to sludge storage cells.	8. Waste valve pit and waste manhole on top of hill and at bottom by Digesters

J. Emergency Response Guidelines.

1. General Guidelines.

- **Analysis and Planning.** If time permits conduct an initial meeting with staff to assess an expected emergency situation. Outline potential damage to specific equipment, processes, or structures. Plan a strategy to prevent potential damage and/or minimize its effects on public health, property, and wastewater treatment.

- **Inspect.** After the onset of an emergency, inspect WWTP for damage. Follow all applicable safety regulations and lock out and secure any unsafe areas.

- **Communicate.** Document damaged units, and unsafe areas. If damage creates immediate threats to public health, properties, and/or wastewater treatment, contact Joint Sewer Board, AWR, and State; to advise of situation. Consult communications policy on page 4.

- **React.** Execute activities to eliminate threats to public health, property, and/or wastewater treatment. Refer to 'Damage and Response' section of this plan to help direct the activities. Collect necessary samples, as NPDES permit requires. Develop best treatment plan in the event of an emergency that disables one or several process units. Contact City's for emergency purchasing authority. Contact vendors for needed supplies.

- **Communicate.** Update the Joint Sewer Board, AWR, and State as needed. Log important observations and actions.

- **Repair.** Make necessary repairs to bring damaged units back up to full operations.

- **Review.** Review emergency response with staff and make adjustments in the ERP if necessary.

In a widespread emergency, AWR staff will be required to assist the Joint Sewer Board. In this situation, one staff member (two staff if there are safety concerns), will be responsible for implementing the initial steps of the above guidelines.

Section II

Damage and Response

Damage to the WWTP can result in threats to public health and/or damage to private or public property. Damage can also result in an interruption of wastewater treatment in various degrees. The WWTP are constructed of several process units that are linked together to convey and treat the wastewater. This section looks at the possible effects of damage to these process units, and what type of responses can be made to limit the threat to public health, property damage, and the continuation of wastewater treatment.

Process Unit:
Main Power Supply

Key Components:
3 phase power lines from sub, pole and pad mounted transformers feeding MCC1 which feeds MCC2.

Effects of Damage
Power lines-

- In severe cases one or all of the power lines can be severed which will result in power loss to the WWTP.
- If power lines are severed upstream from the pole or pad mounted transformers then power loss will affect MCC1 & MCC2
- Power loss of more than 8 hours has the potential to cause the ditches to go septic and the sludge in the clarifiers to surface and bulk and/or cause a violation of permit limits.

Transformers-

- Loss of one or more of the pole or pad mounted transformers will cause power loss to MCC1.

Response
Power lines-

- Call Ameren UE and find out how soon they can make it out. Once you have a response then call the Local Manager and inform, then let him make the decision on what to do next.
- At the least the employee on emergency Duty must stay until Ameren UE restores power or a relief operator shows up to relieve him and once power is restored bring one piece of equipment back on line at a time.

Transformers-

- Checks to see if fuses have blown or flipped down on the pole mounted transformer by the main power control room at the Headwork's Bldg. and inform Ameren UE of it. If that is what it is then, it will be an easy fix for them. **Never try to attempt to flip fuses back up on your own, Let Ameren UE do it.**

Process Unit:
Head Works

Key Components:
MCC1 and MCC2 control power and control equipment (unit specific), mechanical bar screens, grit chamber, grit solids pump, RAS pumps, non-pot and potable pumps.

Effects of Damage
In general-

- In any case, if damage is severe enough to disrupt either the mechanical bar screen, and/or the grit chamber/grit solids pump; both units can be bypassed. This condition is acceptable for a few days.

Response
In general-

- If units must be bypassed, do so immediately by placing a stop gate in its appropriate positions; this job requires two people.
- Install the manual bar screen as needed.
- Do not allow flow into the grit chamber if the paddle drives, grit solids pump, are not working, for more than couple of days.
- If damage results in the loss of the heater then emergency heating needs to be set up in sub-freezing weather.
- Pump out the grit chamber if it will be out of service during sub-freezing weather and are experiencing icing conditions.
- If necessary, also pull the Auto bar screen up and install manual bar screen; this will require getting in influent channel and hooking come-along to eyelets on bottom of bar screen and lifting it up out of the way so you can install the manual screen. This job requires at least 2 people.
- When bringing units back into service the mechanical bar screen shall receive top priority over the grit chamber, grit solids pump.

Process Unit:
Secondary Treatment

Key Components:
MCC1 and MCC2, aerator control box, control power and control equipment, oxidation ditch 1, and oxidation ditch 2.

Effects of Damage

In general-

- MCC1 power center is utilized to operate the aeration equipment.
- The most critical aeration equipment are the motors and gear boxes that drive the Carrousels. At least one should be in operation at all times.
- Loss of the oxidation ditches will result in at least a 60% reduction in treatment.
- Loss of air to the bacteria in the oxidation ditches for more than: 4 hours in the summer, and 24 hours in the winter, will create anoxic conditions and could possibly kill the bacterial population.

Response

In general-

- The oxidation ditches can, (one at a time), be isolated from the WW treatment process.
- If all aeration equipment is down make arrangements to get a minimum of one carrousel per ditch in operation ASAP.
- Note: If there has been a toxic spill in the collection system, one of the oxidation ditches can be made ready to accept the toxic waste, and then taken out of the process to further treat the toxic waste.

- If bacterial population is killed, plan to get seed from Camdenton or other surrounding communities.

Process Unit:
Clarification

Key Components:
Clarifier splitter box
MCC1 feeds MCC2.
Final clarifiers 1, 2, 3
Control power and control equipment.
Clarifier drive units, skimming mechanism, scraper mechanism, sludge withdrawal, RAS pumps, RAS force main, WAS force main, and clarifier gravity drain

Effects of Damage

In general-
- Severe cold is the most likely threat to damage the clarifiers.
- Earthquakes could cause considerable damage to underground piping.
- There is one inlet line and one drain line on clarifiers #1 and #2, with no drain on #3, so it is appropriate to state that any damage to underground piping could result in total disruption to the function of the clarifiers.
- Damage to sludge withdrawal equipment will disrupt the return of sludge to the oxidation ditches and thus stockpile the sludge in the affected clarifiers.

Response

In general-
- In severe cold, the skimming mechanisms should be modified to minimize potential damage to the skimmer arm/rake mechanism.
- A means of maintaining surface water disturbance (i.e. water sprays) is necessary to keep the surface from forming thick ice.
- Constant attention shall be given to the clarifiers during extreme cold conditions.
- Emergency pumping may be required to remove sludge from the clarifiers. This can be accomplished with the sludge pump truck on a routine interval. Clarifiers 1, and 2, should be placed back into service first.
- Note: Clarifier 3 cannot be drained dry by means gravity drain mains; it has to be pumped dry by RAS pumps.

Process Unit:
RAS Pump Building (basement)

Key Components:
MCC1 feeds MCC2, control power and control equipment, discharge piping, and check valves, discharge valves, force main, pumps/motors.

Effects of Damage

Main power-
- Will disable pumps and may lead to the stockpiling of sludge in the clarifiers. If left unchecked sludge can be discharged into the receiving stream.

Control power, control equipment-

- Will disable pumps in the automatic mode. Pumps can be operated manually (unless control transformer is damaged).

Piping and valves-
- Damage will inhibit operation of pumps.

Pumps and motors-
- Can disable one or all pumps.
- There are five pumps in the RAS pump building, which should greatly minimize the chance of losing total pumping capacity.

Response

Main power-
- If there is a power loss feeding the pump building then check to see if you have lost a leg of your 3 phase power in MCC2?
- If there is an interruption of main power within the control panel then isolate the problem (motor starter contacts, thermal overloads, fuses, etc.) and correct.
- Be aware that high amps indicate a motor overload (shorted windings, bad bearings, pump obstructions, etc.), and should be corrected before placing any motor back into service.

Control power, control equipment-
- If pumps operate on hand but not on auto then there is a problem with either the control power and/or the control equipment.
- Check control voltages.

Piping and valves-
- If there is damage to suction piping and/or check valves, then the damage shall be repaired, (ASAP if all pumps are affected; emergency pumping may have to be provided in this situation).
- If damage to piping and valves occurs downstream from the check valve, the damage should be repaired as required to allow RAS to be conveyed under pressure.

Pumps and motors-
- If all pumps are disabled then isolate the problem with each pump and plan corrective action based on which pump can be repaired the fastest. Make repairs to that pump then proceed to the next, etc.

Process Unit:
Sludge Digestion and Sludge Storage

Key Components:
Motor control center at digesters, positive displacement blowers air suction and discharge piping, air distribution piping and diffusers, sludge loading station, force main(s), valves.

Effects of Damage

In general-
- Damage will most likely have a minimal effect except in a situation where the sludge basins are discharging sludge.
- Loss of aeration will turn the sludge basins into facultative storage.
- Long-term loss of air may damage the diffusers.

Response

In general-

- If the sludge basins are discharging sludge then action should be taken immediately to contain the sludge and prevent it from reaching the receiving stream.
- If flood conditions exist, let water recede and then evaluate the situation. If sludge spill takes place fill out MODNR SSO/Bypass and AWR Deviation Notification forms, found in (Appendix 7). Make needed repairs and get back on line ASAP.
- Loss of air should be addressed as time permits.

Section III

Contingency Plans

Contingency Plan for Total Loss of Electrical Power

Goal: Develop strategies and to assign specific duties to plant staff: to provide for continuance of pumping at critical points of Plant; and to provide for at least primary treatment at the wastewater plant.

Response:

1. Contact generator supplier or vendor. Find out how soon they can get a portable generator to our location. Get into service one aerator in each ditch and at the minimum 2 clarifiers depending on flow conditions.
2. Get into service the head works building equipment.
3. In below freezing weather check to make sure heaters in all buildings are operating properly.
4. Check to make sure that lift stations are operating properly.
5. Check status of wastewater plant.
6. Check all lift stations, secure by taking one of the two pumps off line, and providing emergency pumping if needed.
7. Conduct a meeting to evaluate the situation and make necessary decisions as the need arises.

Contingency Plan for High Flows

Goal: Minimize solids wash out and provide for best treatment of all influent flow.

Note: During a high flow event both oxidation ditches will be needed to prevent solids wash out.

Response: Response depends on whether one ditch is in service or if both ditches are in service. Great care must be used when, at the onset of high flows, that sludge blanket depths are monitored. If sludge blankets are rising then several options present themselves, first, more clarifiers can be placed into service, if any is out, second, #1 and #4 carrousel aerators can be shut off reduce mixing in the ditch (es), third, #3 and #6 can be taken out of service to further reduce mixing in the ditch (es), fourth, all aerators can be taken out of service (for short periods of time, i.e. up to 8 hours) to eliminate mixing in the ditch (es). Or a combination of the above measures can be used. The overall goal is to save the mixed liquor suspended solids (mlss) in the ditch from being discharged in the receiving stream. Past high flow events have demonstrated that proper management of flow through the plant can achieve good treatment (within NPDES permit standards). It is also important to note that effluent sampling should be done during high flow events to assure that NPDES permit standards are being met, and that proper documentation in the plant daily bench sheet must be maintained on all process changes to manage high flows. Whenever all the carrousel aerators are shut off to prevent solids wash out the event must be reported as a bypass at the WWTP. Always leave 1 aerator in each ditch

going if at all possible, even if it means moving the oxidation ditch inlet gates to aerators #3 and #6 and running only those aerators. This will give the mixed liquor suspended solids (mlss) time to settle in the ditch before entering the clarifiers.

Bulking Sludge

Response:

If a clarifier is bulking sludge and flows are normal for dry weather, first raise splitter box gate to the clarifier or clarifiers that are bulking, then go over to the RAS pinch valve and open them up all the way and if that doesn't calm things down then go down in the RAS basement and clean pumps.

If the pumps are not clogged but is flowing clear water then there is probably a short circuit in the clarifier caused by structural damage of the rake mechanism. Shut flow off to the clarifier and drain it and check for damage. Put other clarifiers (if one is down) on line as appropriate.

If the pump is not clogged and the discharge is dirty, then check the other clarifier to see if it is bulking as well. There could be a toxic shock. First try shutting the aerators off closest to the outlet weir gates and if that doesn't work try moving the basin inlet gates to, (#3 and #6) and running only those aerators, will minimize solid loss, and may be an appropriate response.

Contingency Plan for Toxic Chemical Release

Toxic chemical release to the wastewater treatment plant will most likely take place in one of two forms, regardless of the toxic agent.

The first likely scenario would be the discovery, containment and cleanup of a fuel leak. This would involve participation of Lake Ozark Fire Department, Lake Ozark Emergency Response personnel and a HAZMAT unit. In order to accept this type of waste a few conditions must be met: first, the BTEX test result (if available) should be less than 2.13 mg/l; and second, the plant is operating under dry weather flow conditions. If both conditions are met then the waste can be placed into one of the basins that has been determined to be used for that purpose. The waste can then be diluted and intermittently fed into the treatment process to minimize shock on the biological community in the treatment process. Bench testing of the waste can also be performed to demonstrate if there will be problems to the bacterial community.

The second most likely scenario would be notification of a toxic release into the sewer system. This has never happened (at least the notification part) but if this condition should arise then the most likely first response would be to divert all flow to the designated basin. The second step would be to ascertain what type of toxic chemical it is (ask for MSDS information) and how much of the toxic chemical is in the system. The third step would be notification of City or Cities, Corporate and MODNR. With data available try to estimate when the chemical will arrive at the treatment plant and how long it will take to flush the chemical from the sewer system. This information will determine the length of time all flow will need to be diverted before it is safe to resume normal flow. Again, the availability of taking one basin off line will allow temporary containment (provided dry weather flows) and the ability to further treat the chemical and either release the chemical into the treatment process or allow for its removal and disposal at another location.

Contingency Plan for SSO's

SSO's can occur in both wet and dry weather.

Wet weather SSO's are usually caused by inflow and infiltration (I&I) of storm water into the wastewater collection system. A high rate of I&I can cause hydraulic overloading in the collection pipes and thus create an overflow in a manhole or a lift station.

Dry weather SSO's can occur due to collection pipe blockages, long term power fails, and /or lift station pump malfunction.

Whenever an SSO is observed use the Missouri Department of Natural Resources Wastewater Bypass Report Form (Appendix 7), along with the Deviation Notification Form (Appendix 7) to record the SSO event. Copies of these reports must be kept on file along with daily and monthly reports file. Wet weather bypasses at the WWTP are reported on the monthly monitoring report, and filed accordingly.

When bypasses occur at the treatment plant (flow discharged from the WWTP without proper treatment, and/or all aerators are shut off), then document the bypass in the plant daily bench sheet and start the effluent composite sampler. Bypasses from WWTP shall be noted on the monthly DMR, Daily bench sheet and Plant log book; until further notice.

Contingency Plan for Sludge Spills

Whenever sludge spills occur, documentation and cleanup services must begin immediately.

Documentation –

- Describe in the log book the location, cause and amount of the sludge spill.
- If the spill is greater than 25 gallons then treat the spill as a bypass and fill out the necessary documents (Appendix 7) and report the incident to the control authorities.

Clean Up –

- Treat spill area with lime
- Remove spilled material and dispose at the WWTP.
- If spill occurs on a public road way then use appropriate traffic control and warning signals as necessary

Appendix 1

Local Radio Stations

Call Letters	Frequency	Location	Phone#	Fax#
KRMS	AM 1150	Osage Beach, Mo	573-302-7000	
KRMS	FM 93.5	" " "	573-348-2779	
KLOZ	FM 92.7	" " "	573-302-1993	
KTKS	FM 95	Versailles, MO	573-378-5669	573-378-6640

Local Television Stations

Call Letters	Channel	Location	Phone#	Fax#
KMOS	PBS 7	Warrensburg, MO	573-543-4155	
KRCG	CBS 13	Jefferson City, MO	573-896-5144	

Local Newspapers

Name of Paper	Address	Contact Person	Phone#	Fax#
Lake News Focus	5107 Hwy. 54 Osg Bch		573-348-6050	
Lake Sun Leader	450 N. Hwy. 5 Camdenton	Justin	573-346-2132	
Eldon Advertiser	415 S, Maple St., Eldon		573-392-5658	
Leader-Statesman	104 W. Jasper, Versailles		573-378-5441	
Westside Star	400 N. Main St., Grvs Mls		573-374-3100	

Systems Personnel

Name	Position	Work Phone#	Mobile Phone#	Home Phone#
Gary Hutchcraft	Local Manager II	573-365-0455	573-216-8398	
John Hornback	Supervisor	573-365-0455	573-480-4065	573-369-2761
			573-216-3878	
Gary Johnson	Division Manager	573-874-8080	314-581-6024	573-234-7946
Tim Geraghty	VP/Operations Director	636-561-3737 x101	314-575-4738	
Sandy Neal	AWR President	573-874-8080	573-808-5946	573-449-6887

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Lake News Focus	5107 Hwy. 54 Osg Bch		573-348-6050	
Lake Sun Leader	450 N. Hwy. 5 Camdenton	Justin	573-346-2132	
Eldon Advertiser	415 S, Maple St., Eldon		573-392-5658	
Leader-Statesman	104 W. Jasper, Versailles		573-378-5441	
Westside Star	400 N. Main St., Grvs Mls		573-374-3100	

Systems Personnel

Name	Position	Work Phone#	Mobile Phone#	Home Phone#
Gary Hutchcraft	Local Manager II	573-365-0455	573-216-8398	
John Hornback	Supervisor	573-365-0455	573-480-4065	573-369-2761
			573-216-3878	
Gary Johnson	Division Manager	573-874-8080	314-581-6024	573-234-7946
Tim Geraghty	VP/Operations Director	636-561-3737 x101	314-575-4738	
Dale Wagner	AWR President	573-874-8080 x232	573-864-1164	573-445-7302

System Maps/Drawings

Name	Position	Work Phone#	Mobile Phone#	Home Phone#
Gary Hutchcraft	Local Manager	573-365-0455	573-216-8398	
Nick Edelman	Dir. P/W Osage Beach	573-302-2020	573-216-9856	
Matt Michalik	Dir. P/W Lake Ozark	573-365-5378	573-216-6063	

Local Utilities/Services/Suppliers

Service	Contact	Company	Phone#	Mobile Phone
Phone	Bruce	AT&T	800-286-8313	573-286-0954
Electric	Brent	Ameren UE	800-552-7583	573-694-5914
Propane		Ferrell Gas	573-392-5400	573-280-7184
UV System	Walt Williams	ITT Wedeco	704-409-9818	
UV System	Shawn	Vandevanter Engineering	636-343-8880	314-724-1269
Laboratory	Colleen	Pace Labs	913-563-1406	
Electrician	Steve Durban	Aesthetix Electric	573-348-1429	573-219-0043
Electrician	Leroy	Midwest Electric	573-348-2727	
Truck Repair	Larry	Roemer Equipment Repair	573-348-3733	
Truck Repair	Monte	Rapid Mobile Repair Ser.	573-346-3217	
Heat A/C	Herb	Controlled Heating & Air	573-348-5455	
Heat A/C & KVAR		Comfort Heating & Cooling	573-348-9999	
Auto Mechanic		Precision Auto	573-348-2233	
Auto Mechanic		Beyer Auto Repair	573-365-1111	
Instrumentation	Mike Ross	Vandevanter Engineering	636-225-8133	314-422-2872
Instrumentation	Scott Keith	ECCO Electric	573-348-1798	573-524-3399
Electric Motors	Jim	Bowling Electric	573-346-4355	
Pumps / Motors	B.J. Hedrick	Evans Enterprises	417-886-8886	417-844-3607
Pumps / Motors	Ben	JCI / MEMC	573-636-7061	573-694-9555
Clarifiers	Field Service	Eimco	801-526-2000	
Pumps / Motors, Aerator Gear Boxes	Bruce	S & S Electric	573-581-7667	
Backhoe / Dirt Work	Steve Butler	Drain Masters, LLC		573-216-1169
Building Repair	Todd	Ellerman Const.	573-348-3553	573-746-1012
Building Repair	John	Missouri Builders	573-636-7733	
Chemical Supplier	Larry Startin	Brenntag	417-887-3663	417-593-0108
Digester Aerators	Patrick	EDI	573-474-9456	
Truck Tires	Delbert	Purcell Tire	573-348-4010	573-836-0038
Truck Tires	Kevin	McKnight Tire	573-635-0101	573-338-3350
Truck Tires		Bruns Service Center	573-392-4816	
Piping Supplies	Justin	HD Waterworks Supply	573-348-1273	
Welding Service	Gary Koerber	GL Welding		573-680-3957

Waste Haulers

Source	Address	Phone#
Amos Septic	Linn Creek, MO	573-346-5992
Lake Region Water & Sewer	Lake Ozark, MO	573-374-5850
Bullock Septic	Laurie, MO	573-374-6688
A & A Septic	Camdenton, MO	573-346-5123

Emergency Rental Equipment

Company	Equipment	Location	Contact Person	Phone#
Midway Rental	All Types	Eldon, MO	Jim or Tom Dial	573-392-1611
Lake Lifestyle Rentals	All Types	Osage Beach, MO		573-348-3250
A-B Rental	All Types	Camdenton, MO		573-346-7700

MODNR Contacts

Names	Office	Phone #	Fax #
Troy Potteiger	Osage Beach	573-348-4103	573-348-2568
E.C. West	Springfield	417-891-4300	417-891-4399
Sieu T. Dang	Springfield	417-891-4300	417-891-4399
Emergency Response	After Hours Call	573-634-2436	

Appendix 2

Chemical List / Facility Map

Chemicals:

Lab Office Building
- Hydrochloric acid
- Sulfuric acid
- Sodium Hydroxide
- Denatured Alcohol
- Weed Killer

Maintenance Room/Shop (located in old Chlorine Tank room) or UV building
- Chevron Gear Lube
- Transmission fluid
- Motor oil, various grades
- Anti-Freeze
- WD-40
- Dry Film Silicone
- Chain Lubricant

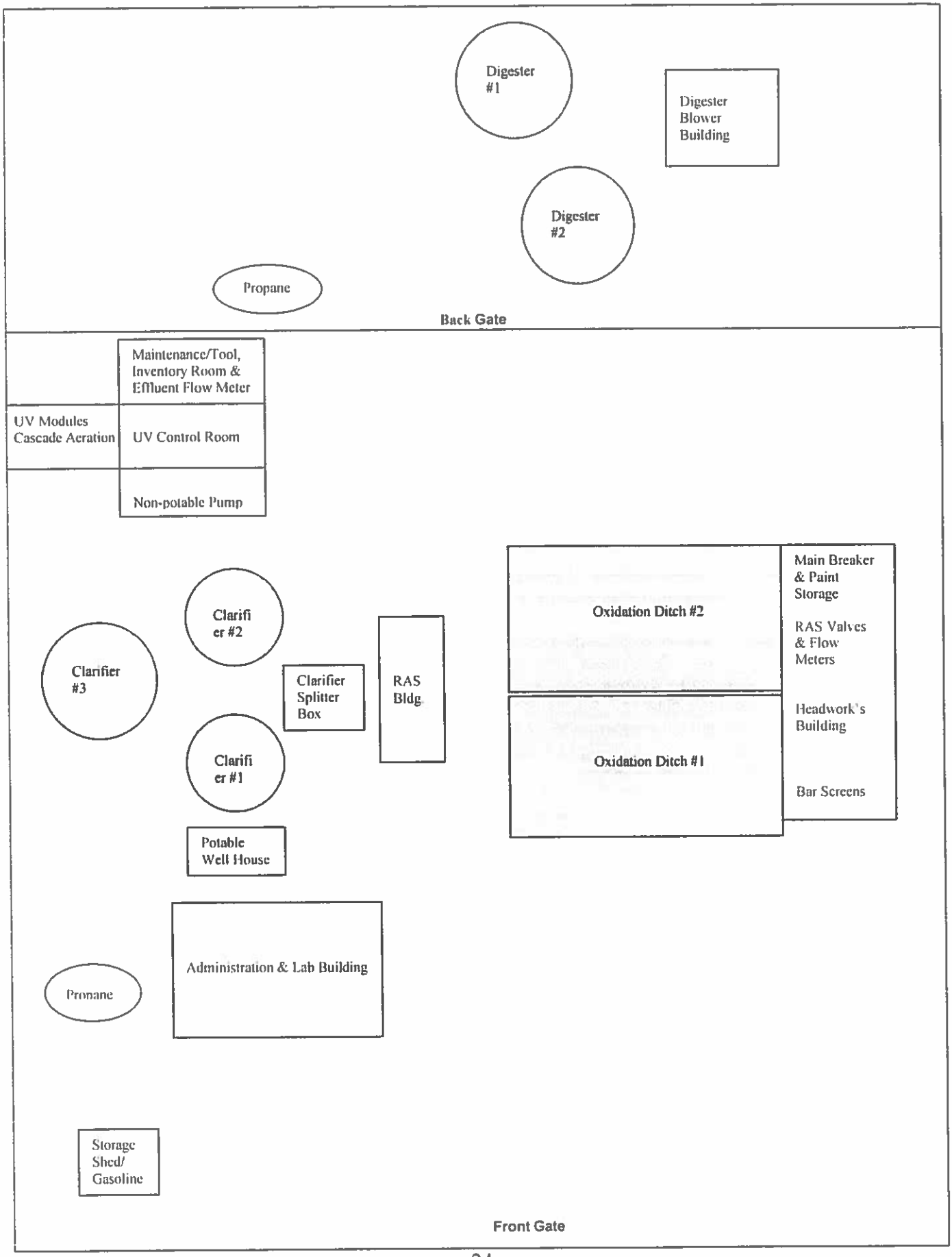
Sludge Digester Blower Building
- Hydrated bag Lime, 50lb bags

Headwork's Bldg. Storage Room
- Chevron Tube Grease
- Mystic tube Grease
- Hydraulic fluid
- Assorted cans spray paint
- Assorted cans building and grounds paint
- Paint thinner / solvents

Storage Shed by Admin. Bldg.
- Gasoline
- Weed eater oil

There are two 500-gallon liquid propane tanks located on the property; one is north of UV building and one west of Admin. Bldg. There is a 100-gallon portable diesel tank located normally in the back of the Dodge pickup and stored at the sludge digester building over the hill.

Facility Map



Appendix 3

Standard Conditions for NPDES Permits

Part 1 – General Conditions, Section B – Management Requirements, Part 2. Noncompliance Notification.

A. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such condition: A description of the discharge and cause of noncompliance, and the
period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the non-complying discharge.

B. Twenty-four hour reporting. The permittee shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

Appendix 4

Instructions for Daily Readings & Maintenance / Daily Rounds

Sludge Decant Lift Station (at digesters)
Turn both pumps to off position. Turn pump 1 to hand, walk over and observe operation of pump, pump vibration, pump noise, and visually check and watch water level to see if water level is dropping. Turn pump 1 back to auto. Repeat above procedure for pump 2.

Decant / Dewater Lift Station (at aeration basins)
Check operation of pumps by turning both pumps to off position. Turn pump 1 to hand, walk over and observe operation of pump by looking at the discharge going into aeration basin. Listen for pump vibration, pump noise. Record pump hours daily in Admin. Bldg.

RAS Pump Building
One way to check operation of pumps by going over to the headwork's building and look at the RAS flumes and use the RAS pinch valves to adjust flow according to which ditch is the heaviest or lightest. If you can't adjust with valve then your next step is to clean the pumps. Clean RAS pumps as needed or before each waste. Record pump hours daily in Admin. Bldg. office on the Honeywell data recorder.

Final Clarifiers
Check operation of clarifiers for rotation, motor vibration, noise, and heat. Check quality of effluent discharging over the weirs. Record sludge depth, wash scum collection troughs if necessary. Exercise #1 & #2 scum troughs down if they look like they haven't been working on auto. Go to control panel on clarifier and turn scum trough switch to manual, after exercising turn back to auto. Weekly checks on the clarifiers include checking oil levels in all gear reduction units, and checking condensation drains.

Oxidation Ditch 1 and 2
Check operation of rotors, aerators, and discharge weir. Run down rotors on Monday, Wednesday, and Friday. Weekly checks consist of, checking the oil levels in the gear reduction units and checking the oil breathers on them also.

Head Works Building
Check operation of grit paddle, start grit solids pump, and observe for proper operation. To check automatic bar screen, turn bar screen switch to hand and observe for proper operation, and wash bar screen debris as needed. Check and see if the high flow floats in bar screen channels for grease or debris buildup and clean a necessary. Check operation of influent sampler/refrigerator, and record temperature. Weekly checks includes checking the grit chamber and bar screen gearboxes for proper oil levels, checking both the Vac. & Compressor pumps for proper operation and checking the suction globe on the grit solids pump for any excess buildup in the globe and/or air lines. The suction globe needs to be cleaned on a monthly basis. Check what day PM is performed.

Blower Building
Check oil levels and position of valves before turning on blowers then check operation of blowers. Weekly PM consist of checking of oil levels and deflection of belts.

Outfall / UV Structure & Building
Go into UV control room and touch the screen on the front of the panel to check and see if all UV bulbs in the bank or banks that are on line at the time are working. If all are working and if there is no failures, then go out to outfall structure and visually inspect channels for any excess algae or debris buildup. Remove all banks on a monthly basis to clean and inspect bulbs, wipers, brushes and listen for any air leaks or any other types of odd noises. Also clean any algae buildup on the weir system at the end of the UV system.

Appendix 5

Permit Required Confined Spaces

The following list of confined spaces requires a permit to enter.

- Lake Ozark Influent Wet Well (right before flow meter)
- Osage Beach Influent Wet Well (right before flow meter)
- All Manholes
- Both Lift Station Wet Wells
- Both UV channel drain / valve pits

The safety protocol outlined In the company safety rules specifies that a confined space hazard assessment and rescue plan and a confined space entry permit both be completed and submitted to the safety coordinator whenever a permitted confined space is entered. The entry permit is included on the following pages for review; copies of the confined space hazard assessment form and the entry permit can be obtained from the safety coordinator.

Alliance WATER RESOURCES

Post Confined Space Permit at Job Site

CONFINED SPACE ENTRY PERMIT

Date: _____ **Start Time:** _____ **Time Valid to:** _____ **(End of Shift)**

Space to be Entered: _____ **Exact Location:** _____
Purpose of Entry: _____
Customer Name & Location: _____
Recognized Hazards of Space: ☐Sewer Gas ☐O_2 deficiency ☐Other_____

GENERAL PREPARATIONS CHECKLIST: (Check All Items That Apply)

REQUIRED	VERIFIED COMPLETE	INITIAL
☐ Permanent Lines/Hoses Isolated	☐	_____
☐ Temporary Lines/Hoses Removed	☐	_____
☐ Space Cleaned & Purged	☐	_____
☐ GFCI for All Electrical Equipment	☐	_____
☐ Energy Sources Locked/Tagged/Tried	☐	_____
☐ Air Mover/Ventilation Provided	☐	_____
☐ Other Applicable Permits (Hot Work, etc.)	☐	_____
☐ Attendant Has Radio or Phone	☐	_____
☐ Safety Lighting	☐	_____
☐ Rescue Equipment Set Up at Site	☐	_____
☐ Safety Harness with Retrieval Line	☐	_____
☐ Respiratory Protection	☐	_____
☐ Additional PPE Required	☐	_____
☐ Continuous Air Monitor	☐	_____
☐ Confined Space Sign Visible	☐	_____
☐ Rescue Team On-Site	☐	_____
☐ Special Requirements (List in Comments)		

Comments: _____
Entrant-Attendant Communication (check applicable) ☐Verbal ☐Visual Signal ☐ Radio

ATMOSPHERIC TESTING RECORD **Meter Make/Model/Serial #:** _____

Initials	Time	Acceptable Levels →	Oxygen 19.5-23.5%	Combustible Gases <10% LEL	Carbon Monoxide <25 ppm	Hydrogen Sulfide <10 ppm

ENTRY AUTHORIZATION: _____ _____
Entry Supervisor Signature — Customer Health & Safety Representative (If Applicable)

Rescue Team Status: ☐ Rescue Team Notified ☐ Team Needed at Space

PERMIT CANCELLATION (Check Only One)

☐ Work Complete, All Entrants/Tools Out, Ready For Re-Activation ☐ Work NOT Complete, Entrants Out

_____

Entry Supervisor **Date** **Time**

Rescue & Emergency Services:

Plant Emergency #: _____
Nearest Phone: _____
Other Means of Summoning Help: _____

AUTHORIZED ENTRANTS:

Name (Print)	Signature	Y/N? witness air test (optional)	Entry Time	Exit Time

AUTHORIZED ATTENDANT:

Name	Signature	Department	Time

ENTRY SUPERVISOR:

Name	Signature	Department	Time

Return Expired Permit to Office

Appendix 6

Lockout-Tag out Instructions are found in site specific locations of each building inside the Facility.

There are hanging file holders with 3 ring binders in them found in each building with site specific instructions and pictures, for each piece of equipment that is located within that approximate location.

The main LOTO procedures manual is found in the Administration building as you walk in the main door. This manual has everything in the plant, that LOTO is required.

The Headwork's building LOTO binder is found in the Main Breaker room to the left of the door.

The UV building LOTO binder is found in the UV control room to the right.

The blower building LOTO binder is found to the left of the walk-in door beside electric panel.

After a piece of equipment has been determined in need of Lockout-Tag out devices you must fill out the Lockout / Tag out Permit before doing anything else. It must be approved by Supervisor or Plant Manager before doing any work. All required steps must be checked then verified complete, then the work can be started and completed.

All copies of LOTO permits must be kept and recorded on the annual log in the main LOTO manual in the Administration Building.

Alliance WATER RESOURCES

LOCKOUT/ TAGOUT PERMIT

Date: _____ **Start Time:** _____ **Time Valid to:** _____ **(End of Shift)**

Equipment to be Isolated: _____ **Exact Location:** _____
Purpose of Isolation: _____
LOTO procedure used: _____

GENERAL PREPARATIONS CHECKLIST: (Check All Items That Apply)

REQUIRED	VERIFIED COMPLETE	INITIAL
☐ Alliance Lockout/ Tagout Devices Applied	☐	_____
☐ Temporary Lines/Hoses Removed/ Isolated	☐	_____
☐ Energy Sources Locked/Tagged/Tried	☐	_____
☐ Notification of Affected Employees	☐	_____
☐ Other Applicable Permits (Hot Work, etc.)	☐	_____
☐ Additional PPE Required	☐	_____
☐ Lockout/ Tagout Devices Visible	☐	_____
☐ Special Requirements (List in Comments)	☐	_____

Comments: _____

ISOLATION AUTHORIZATION: _____ _____
Supervisor Signature **Customer Health & Safety Representative (If Applicable)**

AUTHORIZED EMPLOYEES:

Name (Print)	Signature

Return Expired Permit to Safety Coordinator

VERSION 1.0
APRIL 2007

ReCAP

DEVIATION NOTIFICATION FORM

Date of Incident: _____ **Time:** _____ **Division:** _____

Location of deviation: _____

Type of deviation: ☐W. Treatment ☐Distribution ☐W.W. Treatment ☐Collections

Note: Double-click on checkbox and select 'Checked' under Default Value.

Description of deviation: ☐SSO ☐Bypass ☐Pressure Loss ☐Sample Analysis

SAMPLE TYPE & LIMIT	SAMPLE RESULT

How did we become aware of the issue:

Possible reason(s) for or event(s) leading to deviation:

Immediate corrective actions taken:

Further action planned to eliminate or reduce future incidents:

Other information or attachments:

Completed by: _____ **Title:** _____ **Date Reported:** _____

Who was notified?

Name	Title	Date	Time	Comments

Completed form is to be filled out electronically and e-mailed with any other documentation through the Deviation Notification ReCAP mailbox no later than the next business day of the incident.

REPORT OF
SANITARY SEWER OVERFLOW (SSO) OR
WASTEWATER TREATMENT PLANT BYPASS

FACILITY INFORMATION	
PERMITTEE(MUNICIPALITY/DISTRICT & PLANT):	PERMIT NUMBER:
COUNTY:	PHONE NUMBER:

SSO OR BYPASS DETAILS	
a. Street Address/Landmark/Cross Street:	
b. Complaint Name & Telephone #:	
c. Start Date & Time	End Date & Time:
d. Total Time:	Volume (Gallons):

e. Categories of SSO

☐ Vandalism ☐ Power Outage ☐ Broken Sewer
☐ Inflow & Infiltration ☐ Plugged Sewer ☐ Equipment Failure
Rain Inches_____ Manhole location #_____ ☐ Widespread Flooding
☐ Other_____

f. Categories of STP Bypass

☐ Head Works ☐ Aeration/Biological Treatment ☐ Digester
☐ Primary Basins ☐ Clarifiers ☐ Solids Handling/Drying Beds
☐ Other_____

g. Strength of SSO/Bypass: ☐ Raw (Dry weather SSO or Influent)
☐ Partially Treated Bypass or Wet weather SSO) Was sampling performed? ☐ yes ☐ no

Type of Samples Taken: ☐ BOD ☐ TSS ☐ Fecal ☐ Ammonia ☐ DO ☐ Other_____

WATERCOURSE INFORMATION	
a. Name of Receiving Stream:	Length Affected:

b. Discharge Course

☐ Runs on ground and absorbs into the soil.
☐ Ditch. Name of surface water it drains to:_____
☐ Storm sewer. Name of surface water it drains to: _____
☐ Surface water direct discharge: _____
☐ Other, describe: _____

CORRECTIVE ACTIONS/CLEAN UP

a. ☐ Flushing ☐ Removing ☐ Chemical Application ☐ Other: _____

b. Describe detailed actions taken to correct & clean up the SSO/Bypass and any follow up actions:

CLEAN UP PREFORMED BY:_____

REPORT PREPARED/SUBMITTED BY	
NAME (PRINTED):	TITLE:
SIGNATURE:	DATE:

NOTE: Any SSO, bypass or shutdown of a wastewater treatment facility and/or tributary sewer system, is prohibited unless necessary to prevent loss of life, personal injury or property damages. **The Continuing Authority is required to notify the Department of Natural Resources by TELEPHONE or FAX by the next business day of any SSO or bypass, and to follow with a written report within 5 business days.**

Appendix 6

Lockout-Tag out Instructions are found in site specific locations of each building inside the Facility.

There are hanging file holders with 3 ring binders in them found in each building with site specific instructions and pictures, for each piece of equipment that is located within that approximate location.

The main LOTO procedures manual is found in the Administration building as you walk in the main door. This manual has everything in the plant, that LOTO is required.

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The UV building LOTO binder is found in the UV control room to the right.

The blower building LOTO binder is found to the left of the walk-in door beside electric panel.

After a piece of equipment has been determined in need of Lockout-Tag out devices you must fill out the Lockout / Tag out Permit before doing anything else. It must be approved by Supervisor or Plant Manager before doing any work. All required steps must be checked then verified complete, then the work can be started and completed.

All copies of LOTO permits must be kept and recorded on the annual log in the main LOTO manual in the Administration Building.

Alliance WATER RESOURCES

LOCKOUT/ TAGOUT PERMIT

Date: _____ **Start Time:** _____ **Time Valid to:** _____ **(End of Shift)**

Equipment to be Isolated: _____ **Exact Location:** _____
Purpose of Isolation: _____
LOTO procedure used: _____

GENERAL PREPARATIONS CHECKLIST: (Check All Items That Apply)

REQUIRED	VERIFIED COMPLETE	INITIAL
☐ Alliance Lockout/ Tagout Devices Applied	☐	_____
☐ Temporary Lines/Hoses Removed/ Isolated	☐	_____
☐ Energy Sources Locked/Tagged/Tried	☐	_____
☐ Notification of Affected Employees	☐	_____
☐ Other Applicable Permits (Hot Work, etc.)	☐	_____
☐ Additional PPE Required	☐	_____
☐ Lockout/ Tagout Devices Visible	☐	_____
☐ Special Requirements (List in Comments)	☐	_____

Comments: _____

ISOLATION AUTHORIZATION: _____ **Supervisor Signature**

_____ **Customer Health & Safety Representative (If Applicable)**

AUTHORIZED EMPLOYEES:

Name (Print)	Signature

Return Expired Permit to Safety Coordinator

VERSION 1.0
APRIL 2007

ReCAP

DEVIATION NOTIFICATION FORM

Date of Incident: _____ **Time:** _____ **Division:** _____

Location of deviation: _____

Type of deviation: ☐W. Treatment ☐Distribution ☐W.W. Treatment ☐Collections

Note: Double-click on checkbox and select 'Checked' under Default Value.

Description of deviation: ☐SSO ☐Bypass ☐Pressure Loss ☐Sample Analysis

SAMPLE TYPE & LIMIT	SAMPLE RESULT

How did we become aware of the issue:

Possible reason(s) for or event(s) leading to deviation:

Immediate corrective actions taken:

Further action planned to eliminate or reduce future incidents:

Other information or attachments:

Completed by: _____ **Title:** _____ **Date Reported:** _____

Who was notified?

Name	Title	Date	Time	Comments

Completed form is to be filled out electronically and e-mailed with any other documentation through the Deviation Notification ReCAP mailbox no later than the next business day of the incident.

REPORT OF
SANITARY SEWER OVERFLOW (SSO) OR
WASTEWATER TREATMENT PLANT BYPASS

FACILITY INFORMATION	
PERMITTEE(MUNICIPALITY/DISTRICT & PLANT):	PERMIT NUMBER:
COUNTY:	PHONE NUMBER:

SSO OR BYPASS DETAILS

a. Street Address/Landmark/Cross Street:

b. Complaint Name & Telephone #:

c. Start Date & Time	End Date & Time:
d. Total Time:	Volume (Gallons):

e. Categories of SSO

☐ Vandalism ☐ Power Outage ☐ Broken Sewer
☐ Inflow & Infiltration ☐ Plugged Sewer ☐ Equipment Failure
Rain Inches_____ Manhole location #_____ ☐ Widespread Flooding
☐ Other_____

f. Categories of STP Bypass

☐ Head Works ☐ Aeration/Biological Treatment ☐ Digester
☐ Primary Basins ☐ Clarifiers ☐ Solids Handling/Drying Beds
☐ Other_____

g. Strength of SSO/Bypass: ☐ Raw (Dry weather SSO or Influent)
☐ Partially Treated Bypass or Wet weather SSO) Was sampling performed? ☐ yes ☐ no

Type of Samples Taken: ☐ BOD ☐ TSS ☐ Fecal ☐ Ammonia ☐ DO ☐ Other_____

WATERCOURSE INFORMATION

a. Name of Receiving Stream: Length Affected:

b. Discharge Course

☐ Runs on ground and absorbs into the soil.
☐ Ditch. Name of surface water it drains to:_____
☐ Storm sewer. Name of surface water it drains to:_____
☐ Surface water direct discharge:_____
☐ Other, describe:_____

CORRECTIVE ACTIONS/CLEAN UP

a. ☐ Flushing ☐ Removing ☐ Chemical Application ☐ Other:_____

b. Describe detailed actions taken to correct & clean up the SSO/Bypass and any follow up actions:

CLEAN UP PREFORMED BY:_____

REPORT PREPARED/SUBMITTED BY	
NAME (PRINTED):	TITLE:
SIGNATURE:	DATE:

NOTE: Any SSO, bypass or shutdown of a wastewater treatment facility and/or tributary sewer system, is prohibited unless necessary to prevent loss of life, personal injury or property damages. **The Continuing Authority is required to notify the Department of Natural Resources by TELEPHONE or FAX by the next business day of any SSO or bypass, and to follow with a written report within 5 business days.**

Alliance Water Resources, Inc

To: Joint Sewer Board

From: Gary Hutchcraft

CC: Gary Johnson

Date: 1/16/2018

Re: Emergency Back-up Generator & Pickup quotes

Comments: As requested at the November 2017 Joint Sewer Board meeting the Board requested that we (Alliance Water Resources) look into companies that do design build generator projects and I have found four companies that are very interested in working with us and providing a complete turnkey emergency generator system.
The board also requested us to see if we could get some bids on a new vs used pickup for the treatment plant and below you will find a list of both, generator companies and car dealers. The car dealers said they may be a little late getting the bids to us before the Board meeting due to new incentives coming out shortly after the first of the year.

Generator companies;
Michael Massolini w/ Martin Energy Group, Tipton, MO.
Chuck Wentzel w/ Gateway Indutrial Power Inc., Collinsville, IL.
Jeff Moss w/ Cummins Sales & Service, Fenton, MO.
Tyler Stephenson w/ Foley Equipment, Kansas City, MO

Car Dealers;
Sakelaris Ford, Camdenton, MO
Hulett Chevrolet , Camdenton, MO
Riley Chevrolet, Jefferson City, MO