OSAGE BEACH / LAKE OZARK
JOINT SEWER BOARD MEETING
AGENDA
JANUARY 19, 2016 @ 4:00 p.m.
LAKE OZARK CITY HALL

1. **CALL TO ORDER**

2. **ROLL CALL**

Mayor, Osage Beach, Penny Lyons
Mayor, Lake Ozark, Johnnie Franzeskos
City Administrator, Osage Beach, Jeana Woods
City Administrator, Lake Ozark, Dave Van Dee
Alderman, Lake Ozark, Gerry Murawski
Alderman, Osage Beach, Jeff Bethurem
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 17, 2015	3- 4

4. **REPORTS**

Bill List	5-25
Revenue Budget Analysis	27
Expenditure Budget Analysis	29
Income & Expense Summary	31
Check Registers & Bank Statements	33-41
November, 2015 Alliance Report of Operations	43-57
December, 2015 Alliance Report of Operations	59-73

5. **OLD BUSINESS**

A. Magruder litigation

6. **NEW BUSINESS:**

A.	Discussion & Approval of the Emergency Response Plan	75-106
B.	Discussion & Approval of the Plant Inventory	107-113

7. **ADDITIONAL DISCUSSION ITEMS**

8. **ADJOURNMENT**

THE NEXT MEETING WILL BE FEBRUARY 16, 2016, 4:00 PM @ LAKE OZARK CITY HALL

LAKE OZARK - OSAGE BEACH
JOINT SEWER BOARD
Meeting Minutes – November 17, 2015

Call to Order:

Mayor Johnnie Franzeskos called the meeting to order at 4:00 p.m. on Tuesday, November 17, 2015 at Lake Ozark City Hall.

Roll Call:

Penny Lyons, Mayor
Johnnie Franzeskos, Mayor
Dave Van Dee, City Administrator
Jeana Woods, City Administrator
Jeff Bethurem, Alderman
Gerry Murawski, Alderman
Gary Hamner, Resident
Nick Edelman, Public Works Director
Matt Michalik, Public Works Director

Others Present:

Gary Hutchcraft, Plant Manager
Gary Johnson, Alliance Water Resources
Ed Rucker, Osage Beach City Attorney
Kari Bell, Osage Beach Treasurer

Minutes of Past Meeting:

Mayor Lyons requested a motion to approve the October 20, 2015 meeting minutes. Mr. Hamner motioned to approve the minutes as written. Second by Mayor Franzeskos with unanimous approval of the remaining Board members.

Public Comment: None at this time.

Bills List: *Mayor Lyons requested a motion to approve the Bills List. Jeff Bethurem motioned approval of the bills list. Second by Mr. Murawski with unanimous approval of the remaining Board members.*

Reports:

REVENUE BUDGET ANALYSIS
EXPENDITURE BUDGET ANALYSIS
INCOME & EXPENSE SUMMARY
CASH FLOW ANALYSIS
BALANCE SHEET
CHECK REGISTERS & BANK STATEMENTS

Alliance Report & Flow Charts:

Mr. Hutchcraft reviewed the October 2015 Alliance Reports and Flow Charts and presented his monthly summary report of operations. Copies of the reports and charts were included in the meeting packet.

Mayor Lyons requested a motion to approve the October 2015 Flow Chart. Gary Hamner motioned approval. Second by Mayor Franzeskos with unanimous approval.

Old Business: None at this time.

New Business:

A. Review and Approval of the 2016 Budget

Mayor Lyons requested a motion to approve the 2016 Budget. Gary Hamner motioned approval. Second by Gerry Murawski with unanimous approval.

B. Review and Approval of the December Bills –Included in budget sheets.

Mayor Lyons requested a motion to approve the December Bills. Dave Van Dee motioned approval. Second by Gerry Murawski with unanimous approval.

C. Review and Approve changing paper statement to e-statement for the Operating account with CBOLO.

Mayor Lyons requested a motion to approve the December Bills. Mayor Franzeskos motioned approval. Second by Jeff Bethurem with unanimous approval.

Other Discussion: None at this time.

Adjournment:

With nothing further to discuss, Mayor Lyons declared the meeting adjourned at 4:15 pm. The next scheduled meeting is Tuesday, January 19, 2016, 4:00 pm. At Lake Ozark City Hall.

Penny Lyons
Osage Beach Mayor

Norma M. Thompson
Lake Ozark Joint Sewer Clerk

JOINT SEWER BOARD
BILL LIST
JANUARY 19, 2016

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:	$ 38,741.67
OPERATING FUND BILLS TO BE PAID:	$ 33,774.33
EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:	$ -
EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:	$ -
TOTAL	$ 72,516.00

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:	Amount:
4220	3486	Zerger & Mauer LLP	August & September Legal Fees	$ 1,778.49
4175	3487	Ameren MO	Nov 2015 Electric	$ 4,555.96
4000	3488	Equipment Replacement Fund	Payment into ER Fund	$ 3,467.17
4170	3489	Alliance Water Resources, Inc.	Management Fee	$ 24,686.09
4020	3490	Evans Enterprises Inc	Repair Smith & Loveless Motor	$ 2,532.01
4020	3491	Alliance Water Resources, Inc.	Impeller for Motor	$ 1,721.95
			TOTAL	$ 38,741.67

OPERATING FUND BILLS TO BE PAID:

Account	Check	Paid To:	Description:	Amount:
4175	3492	Ameren MO	Dec 2015 Electric	$ 4,412.83
4000	3493	Equipment Replacement Fund	Payment into ER Fund	$ 3,467.17
4170	3494	Alliance Water Resources, Inc.	Management Fee	$ 25,303.24
4020	3495	Alliance Water Resources, Inc.	Sodium Hid Bulb, Aesthetix Electric Repairs	$ 489.45
4150	3495	Alliance Water Resources, Inc.	Filters	$ 101.64
				$ 33,774.33

EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:	Amount:
				$ -

EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:

Account	Check	Paid To:	Description:	Amount:
				$ -

ZERGER & MAUER LLP
1100 Main Street
Suite 2100
Kansas City, MO 64105 816/759-3300 Federal ID No. 27-5426971

INVOICE

PRIVILEGED & CONFIDENTIAL

City of Osage Beach
c/o Ed Rucker, Esq.
1000 City Parkway
Osage Beach, MO 65065

Invoice Date: 09/29/2015

Previous Balance	Fees	Expenses	Advances	Payments	
1014-0002 Magruder					
591.50	1,518.00	31.74	228.75	-591.50	$1,778.49

Ameren MISSOURI

Please Return This Portion With Your Payment.

$4,485.46	Dec 21, 2015
$4,552.74	45800-05832

Amount Enclosed $_____

ALLIANCE WATER RESOURCES INC
PO BOX 1995
LAKE OZARK, MO 65049

Ameren Missouri
P.O. Box 88068
Chicago, IL 60680-1068

RECEIVED
DEC 09 2015

20600000 0045800058302 000004485460 000004485460

Keep This Portion For Your Records

	45800-05832
	ALLIANCE WATER RESOURCES INC
Service	3 ANDERSON RD, - LAKE OZARK, MO 65049

	Dec 9, 2015
Dec 21, 2015	$4,485.46
Jan 4, 2016	$4,552.74

Payment Received on Nov 20, 2015 $4,506.72

Total kWh	11673321	11/04-12/07	33	31885.0000	32320.0000	435.0000	160.0000	69600.0000A
Peak kW	11673321	11/04-12/07	33	0.0000	0.9140	0.9140	160.0000	146.2400A

SUMMARY

	Service To			Service To	
Total kWh	12/07/2015	69600.0000	Peak kW	12/07/2015	146.2000
Total Billing Demand	12/07/2015	146.2000	October Winter Base kW	12/07/2015	145.1000
Winter Base Demand	12/07/2015	145.1000	Base kWh Ratio	12/07/2015	0.9924
Base kWh (HUD)	12/07/2015	69071.0000	Seasonal kWh (HUD)	12/07/2015	529.0000

METERED ELECTRIC SERVICE BILLING

Rate 3M Large General Service — Service From 11/04/2015 To 12/07/2015

Seasonal Energy Charge	529.00 kWh	@	$.03800000	$20.10
Demand Charge	146.20 kW	@	$1.79000000	$261.70
Base Energy Chg / Hours Used	21,765.00 kWh	@	$.06510000	$1,416.90
Base Energy Chg / Hours Used	29,020.00 kWh	@	$.04830000	$1,401.67
Base Energy Chg / Hours Used	18,286.00 kWh	@	$.03800000	$694.87
Customer Charge				$92.85
Fual Adjustment Charge	69,600.00 kWh	@	$.00462000	$321.55
Energy Efficiency Pgm Charge	69,600.00 kWh	@	$.00040000	$27.84
Energy Efficiency Invest Chg	69,600.00 kWh	@	$.00356300	$247.98
Total Service Amount				$4,485.46

Current Amount Due	$4,485.46
Prior Amount Due	$0.00
Total Amount Due	$4,485.46

The ActOnEnergy® BizSavers® program has CASH INCENTIVES available for your next energy efficiency project! Everything from lighting to controls to new construction. Visit ActOnEnergy.com/BizSavers to learn more.

A late payment charge of 1.5% will be added for any unpaid balance on all accounts after the delinquent date.

7/114

Ameren MISSOURI

Please Return This Portion With Your Payment.

Pure Power

$70.50	Dec 21, 2015
$71.56	55800-05920

Amount Enclosed $_____

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

Ameren Missouri
P.O. Box 88068
Chicago, IL 60680-1068

RECEIVED
DEC 09 2015

90633000 0055800059200 000000070500 000000070500

Keep This Portion For Your Records

	55800-05920
	ALLIANCE WATER RESOURCES INC
	3 ANDERSON RD LAKE OZARK, MO 65049

Dec 9, 2015

Dec 21, 2015	$70.50
Jan 4, 2016	$71.56

Payment Received on Nov 20, 2015 $113.56

Total kWh	98041275	11/04-12/07	33	9436.0000	9493.0000	57.0000	10.0000	570.0000A
Peak kW	98041275	11/04-12/07	33	0.0000	4.0320	4.0320	10.0000	40.3200A

SUMMARY

	Service To			Service To	
Total kWh	12/07/2015	570.0000	Winter Base kWh	12/07/2015	1810.0000
Current Base kWh	12/07/2015	570.0000	Seasonal kWh	12/07/2015	0.0000

METERED ELECTRIC SERVICE BILLING

Rate 2M Sm Gen Svc - 3 Ph w/Dmd
Threshold - Peak Demand
Service From 11/04/2015 To 12/07/2015

Base Energy Charge	570.00	kWh	@ $.08060000	$45.94	
Seasonal Energy Charge	0.00	kWh	@ $.04650000	$0.00	
Customer Charge				$20.43	
Fuel Adjustment Charge	570.00	kWh	@ $.00462000	$2.63	
Energy Efficiency Pga Charge	570.00	kWh	@ $.00020000	$0.11	
Energy Efficiency Invest Chg	570.00	kWh	@ $.00243500	$1.39	
Total Service Amount					$70.50

Current Amount Due	$70.50
Prior Amount Due	$0.00
Total Amount Due	$70.50

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Sign up for Pure Power to support clean renewable energy in Missouri and the Midwest. By checking the box, a 1 cent per kilowatt hour charge will apply. You may cancel at any time.

A late payment charge of 1.5% will be added for any unpaid balance on all accounts after the delinquent date.

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: 6700

1-Dec-15

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
c/o Karri 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-15	
	Base Fee		$24,686.09
		TOTAL DUE	$24,686.09

*** I N V O I C E ***

EVANS ENTERPRISES INC -TULSA
2002 Southwest Blvd
Tulsa OK 74107
Phone: (918) 587-1566
Fax: (918) 582-8042

Invoice Date: 11/24/2015
Invoice #: 1117799
Work Order #: 86489
Job #: 27386489
Department #: 273

SOLD TO:
Joint Sewer Board C/O Alliance
P.O. Box 1985
Lake Ozark MO 65049

Phone: (573) 365-0455

SHIP TO:
Alliance Water Resources
#3 Anderson Rd.
Lake Ozark MO 65049

*Fax: (573) 365-0455

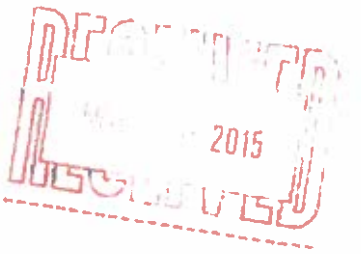
CUST #	SLS	P.O. NUMBER	SHIP VIA	SHIP DATE	TERMS
30005	274	LO/OB	OT	11/20/2015	Net 30 Days

Make: SMITH & LOVELESS
Model: 0075C-1HAN-0001
Serial: 8601620-1
HP: 7.5
RPM: 1800
Frame Size: 284U
Phase: 3
Cycles: 60
Mounting:
Enclosure: TEFC
Volts: 230/460
Amps: 19.2/9.6

Release #

TEST & DISASSEMBLE MOTOR, CHECK TOLERANCES, REINSULATE MOTOR WINDINGS & CHECK LEADS, CHECK AND BALANCE ROTOR. INSTALL NEW BEARINGS AND PARTS AS REQUIRED
ASSEMBLE, TEST & PAINT
INSTALL CUSTOMER PROVIDED IMPELLER.

LABOR AND MATERIAL $2532.01



4020

THANK YOU FOR YOUR BUSINESS
WE APPRECIATE YOUR TRUST

Total:	2532.01
S & H:	
Sales Tax:	.00
Total:	2532.01

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: 6701
Invoice Date: 1-Dec-15
Customer No: 20220
Terms: 30 days

SOLD TO:

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

REFERENCE	DESCRIPTION	AMOUNT
	Smith & Loveless, Inc - 1 invoice 100%	$1,664.45
	Sears - 1 invoice 50%	$57.50
	TOTAL DUE	$1,721.95

INVOICE 106698

Smith & Loveless, Inc.
14040 Santa Fe Trail Drive
Lenexa, KS 66215-1284, USA
Phn: 913.888.5201
Fax: 913.888.5520
www.smithandloveless.com

No material may be returned to Smith & Loveless for credit or replacement without a return goods authorization.
Contact Parts Dept., 913-888-5201 ext 243.

SALES ORDER NO.	PS82496
DATE INVOICED	11/03/15
PACKING SLIP NO.	PS82496*1
DATE SHIPPED	11/03/15
CUSTOMER PURCHASE ORDER NO.	VERABL
SALES REPRESENTATIVE	MUNICIPAL EQPT CO
CODE	CB
SHIPPED VIA	CUSTOMER PICK-UP
PPD	X
COL	
PAYMENT TERMS	NET 30
TAX	X
TAX CODE	A2

SOLD TO	10*13552 ALLIANCE WATER RESOURCES (see CM comments) #3 ANDERSON RD PO BOX 1985 LAKE OZARK MO 65049 USA
SHIP TO	10*13552 ALLIANCE WATER RESOURCES PICKUP CAMDENTON, MO 65049 USA

ITEM	PRODUCT/DESCRIPTION	QTY ORDERED	QTY SHIPPED	QTY B.O.	UNIT PRICE	TOTAL PRICE
001	87D103-71 IMPLR CW 7 1/8	1	1		1664.45000	1,664.45

VERBAL ORDER PER GARY 10/21/15
PHONE 573-365-0455 FAX 573-365-0455 (SAME)
SERIAL# 03-0506
POSSIBLE PICK UP IN CAMDENTON.... WILL CONFIRM DETAILS

GL Acct#: 1220-20 100% 4020
Signature: Kay Hutchison
Date: 11/9/15
LONE VENDOR

SUBTOTAL	1,664.45
DISCOUNT	0.00
TAX	0.00
Credit	0.00
US Dollars	1,664.45

REMIT TO:
Smith & Loveless, Inc.
P.O. BOX 2383
Shawnee Mission, Ks 66201

Form No. 04-04-630

ATTN: If we have charged State and local sales taxes, and you are tax exempt, please forward with your remittance a copy of your exemption certificate.

Customer

Sears

Sears
OSAGE BEACH - AUTH H 03762
3629 OSAGE BEACH PARKWAY
OSAGE BEACH, MO 65065-0000
573-348-8999

SALESCHECK # 037629025575

CUSTOMER:
ALLIANCE WATER RESOURCES

TRAN#	PG/STORE	REG#	ASSOC#
5575	10 03762	902	1099

SALE

4 29460	25CC GAS B SAL	99.99T
892071	PURCH PROTCT	15.00
	SUBTOTAL	114.99
	TAX 07.475%	7.47

CARD TYPE: COMMERCIAL 1
ACCT #: U0622/0
AUTH CODE: 010046/E
P.O. NUMBER: GARY
11/10/15 COMMERCIAL 1 TOTAL 122.46

RC: 5939-1173-2980-3919-0619

SPP CONTACT NUMBER: 1-800-573-1088
SPP WEB CLAIMS:
www.searspurchaseprotect.com

I AGREE TO THE TERMS OF
MY CARDHOLDER AGREEMENT.

Sear

GL Acct#: 6700-20 $64.96 1220-20 $57.50
Signature: Gary Kuhlman
Date: 11/10/15

Ameren MISSOURI

Please Return This Portion With Your Payment.

$4,299.27	Jan 25, 2016
$4,363.76	45800-05832

Amount Enclosed $_____

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

Ameren Missouri
P.O. Box 88068
Chicago, IL 60680-1068

RECEIVED
JAN 13 2016

00600000 0045800058302 000004299270 000004299270

Keep This Portion For Your Records

	45800-05832
	ALLIANCE WATER RESOURCES INC
	3 ANDERSON RD, - LAKE OZARK, MO 65049

	Jan 12, 2016
Jan 25, 2016	$4,299.27
Feb 3, 2016	$4,363.76

Payment Received on Dec 18, 2015 $4,485.46

Total kWh	11673321	12/07-01/10	34	32320.0000	32734.0000	414.0000	160.0000	66240.0000A
Peak kW	11673321	12/07-01/10	34	0.0000	0.8850	0.8850	160.0000	141.6000A

SUMMARY

	Service To			Service To	
Total kWh	01/10/2016	66240.0000	Peak kW	01/10/2016	141.6000
Total Billing Demand	01/10/2016	141.6000	October Winter Base kW	01/10/2016	145.1000
Winter Base Demand	01/10/2016	141.6000	Base kWh Ratio	01/10/2016	1.0000
Base kWh (HUD)	01/10/2016	66240.0000	Seasonal kWh (HUD)	01/10/2016	0.0000

METERED ELECTRIC SERVICE BILLING

Service From 12/07/2015 To 01/10/2016

Rate 3M Large General Service				
Seasonal Energy Charge	0.00 kWh	@ $.03800000	$0.00	
Demand Charge	141.60 kW	@ $1.79000000	$253.46	
Base Energy Chg / Hours Used	21,240.00 kWh	@ $.06510000	$1,382.72	
Base Energy Chg / Hours Used	28,320.00 kWh	@ $.04830000	$1,367.86	
Base Energy Chg / Hours Used	16,680.00 kWh	@ $.03800000	$633.84	
Customer Charge			$92.85	
Fuel Adjustment Charge	66,240.00 kWh	@ $.00462000	$306.03	
Energy Efficiency Pgm Charge	66,240.00 kWh	@ $.00040000	$26.50	
Energy Efficiency Invest Chg	66,240.00 kWh	@ $.00356300	$236.01	
Total Service Amount				$4,299.27

Current Amount Due	$4,299.27
Prior Amount Due	$0.00
Total Amount Due	$4,299.27

The ActOnEnergy® BizSavers® program has CASH INCENTIVES available for your next energy efficiency project! Everything from lighting to controls to new construction. Visit ActOnEnergy.com/BizSavers to learn more.

A late payment charge of 1.5% will be added for any unpaid balance on all accounts after the delinquent date.

Ameren MISSOURI

Please Return This Portion With Your Payment.

☐ Pure Power

$113.56	Jan 26, 2016
$115.26	55800-05920

Amount Enclosed $_____

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

Ameren Missouri
P.O. Box 88068
Chicago, IL 60680-1068

RECEIVED
JAN 13 2016

50633000 0055800059200 000000113560 000000113560

Keep This Portion For Your Records

	55800-05920
	ALLIANCE WATER RESOURCES INC
	3 ANDERSON RD
	LAKE OZARK, MO 65049

	Jan 13, 2016
Jan 26, 2016	$113.56
Feb 4, 2016	$115.26

Payment Received on Dec 18, 2015 $70.50

Total kWh	98041275	12/07-01/10	34	9493.0000	9599.0000	106.0000	10.0000	1060.0000A
Peak kW	98041275	12/07-01/10	34	0.0000	1.0590	1.0590	10.0000	10.5900A

SUMMARY

	Service To			Service To	
Total kWh	01/10/2016	1060.0000	Winter Base kWh	01/10/2016	1810.0000
Current Base kWh	01/10/2016	1060.0000	Seasonal kWh	01/10/2016	0.0000

METERED ELECTRIC SERVICE BILLING

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

Service From 12/07/2015 To 01/10/2016

Base Energy Charge	1,060.00 kWh	@	$.08060000	$85.44	
Seasonal Energy Charge	0.00 kWh	@	$.04650000	$0.00	
Customer Charge				$20.43	
Fuel Adjustment Charge	1,060.00 kWh	@	$.00462000	$4.90	
Energy Efficiency Pgm Charge	1,060.00 kWh	@	$.00020000	$0.21	
Energy Efficiency Invest Chg	1,060.00 kWh	@	$.00243500	$2.58	
Total Service Amount					$113.56

Current Amount Due	$113.56
Prior Amount Due	$0.00
Total Amount Due	$113.56

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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: 6739

1-Jan-16

SOLD TO

Lake Ozark/Osage Beach Joint Utility Board
c/o Karri 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	Jan-16	
	Base Fee		$25,303.24
		TOTAL DUE	$25,303.24

Alliance WATER RESOURCES
Professional Water and Wastewater Operations

December 15, 2015

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 2015 base contract fee was September 2015. Accordingly, the 2016 base contract fee will use the 12 month period from October 2014 through September 2015.

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

CPI	September 2015	222.183
CPI	October 2014	222.847

CPI Increase = (222.183 222.847) / 222.847
= + .3%

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 .7%, therefore the base rate is adjusted at + 2.5% beginning January 2016.

Adjusted O&M Fee:

Previous Monthly Fee= $24,686.09 x 1.025
New Monthly Fee = $25,303.24

The invoice for January 2016 will reflect the new base fee of $25,303.24 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
Dale Wagner

Databases, Tables & Calculators by Subject

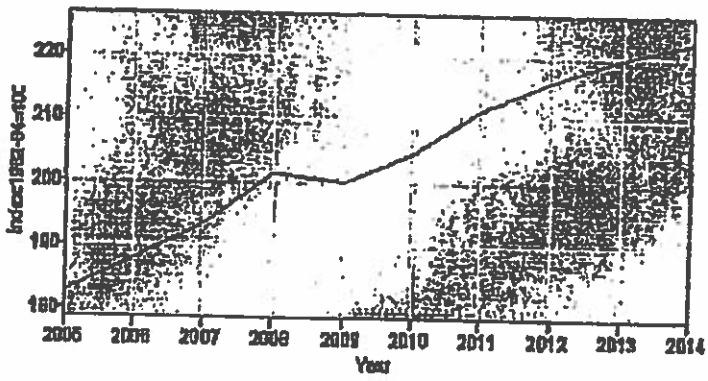
Change Output Options: From: 2005 To: 2015 GO

☑ Include graphs ☑ Include annual averages More Formatting Options

Data extracted on: November 18, 2015 (10:57:28 AM)

Consumer Price Index - All Urban Consumers

Series Id: CUURD200SA0
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
2005	178.2	179.2	179.9	181.7	181.6	182.3	182.9	184.6	187.2	186.8	185.0	184.4	182.8	180.5	185.2
2006	185.3	185.2	186.7	187.8	188.1	189.3	190.1	190.9	189.1	187.1	187.0	187.1	187.8	187.1	188.6
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	215.254	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				220.496	

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: 6740

Invoice Date: 1-Jan-16

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
	Home Depot - 2 invoices 50%		
	Trans # 77475	72.46	
	Trans # 42241	-6.49	$65.97
	Aesthetix Electric -1 Invoice - 50%		$332.50
	Lowe's 1 Invoice - 50%		$90.98
	Roemer's Heavy Equipment- 1 Invoice - 50%		$101.64
		TOTAL DUE	$591.09

THE HOME DEPOT

More saving. More doing.

4030 HWY 54
OSAGE BEACH, MO 65065 (573)348-0082

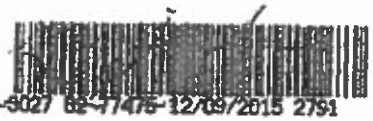
3027 00002 77475 12/09/15 01:14-PM
CASHIER ANDREA - ALC3478

0810770035?1 PHOTO CNTRL <A> 12.97
1800-WATT STEM MT SWIVEL ADJ LT CTRL
046677263912 400WHPS <A> 131.94
PLC 400W ED18 HP SODIUM HID BULB
6021.99

SUBTOTAL	144.91
SALES TAX	10.83
TOTAL	$155.74
XXXXXXXXXXXX5759 HOME DEPOT	155.74
AUTH CODE 009087/1024438	TA

ALLIANCE WATER RESOURCES
WATER RESOURCES ALLIANCE

P.O.#/JOB NAME: GARY



3027 02 77476 12/09/2015 2791

RETURN POLICY DEFINITIONS

	POLICY ID	DAYS	POLICY EXPIRES ON
A	1	90	03/08/2016

THE HOME DEPOT RESERVES THE RIGHT TO LIMIT / DENY RETURNS. PLEASE SEE THE RETURN POLICY SIGN IN STORES FOR DETAILS.

BUY ONLINE PICK-UP IN STORE
AVAILABLE NOW ON HOMEDEPOT.COM.
CONVENIENT, EASY AND MOST ORDERS
READY IN LESS THAN 2 HOURS!

RECEIVED
DEC 09 2015

GL Acct#: 6700-20 $83.28 1220-20 $72.46

Signature: Gary Hutchcraft

Date: 12/9/15

THE HOME DEPOT

More saving.
More doing.℠

4030 HWY 54
OSAGE BEACH, MO 65065 (573)348-0082

3027 00010 42241 12/10/15 01:37 PM
CASHIER ASHLEE - ADM5277
* ORIG REC: 3027 002 77475 12/09/15 TA *

081077003521 PHOTO CNTRL	-12.97
SUBTOTAL	-12.97
SALES TAX	-0.97
TOTAL	-$13.94
XXXXXXXXXXXX6759 HOME DEPOT	-13.94
INVOICE 0103925	TA

REFUND-CUSTOMER COPY

BUY ONLINE PICK-UP IN STORE
AVAILABLE NOW ON HOMEDEPOT.COM.
CONVENIENT, EASY AND MOST ORDERS
READY IN LESS THAN 2 HOURS!

RECEIVED
DEC 10 2015

CREDIT

GL Acct#: 6700-20 $7.45 1220-20 $6.49

Signature: [signature]

Date: 12/10/15

AESTHETIX ELECTRIC

December, 4 2015

RECEIVED
DEC 0 3 2015

Alliance Water Resources
Lake Ozark/Osage Beach
PO Box 1985
Lake Ozark Mo, 65049

Invoice #120415125
We Are Pleased to Offer the Fowling for Your Consideration:

A. Clarifier #2 Control Repairs:
- Repair Control Wiring Issues
- Replaced Phase Monitor
- Replaced Hand Off Auto Switch
- Reconnected Run Indication Light

B. Clarifier # 1 Control Repairs:
- Checked Timers
- Found Contacts Needed Cleaned in Actuator Control Box
- Found a Bad Push Button in Control Panel "Needs to be Replaced"
- Found a Wire Terminated in Wrong Location in Control Panel
- Reconnected Run Indication Light

GL Acct#: 6705-20 $332.50 1220-20 $332.50 **Invoice Total $665.00**

Signature: Larry Hutchcraft

Date: 12/8/15

- **Net 30 days with 1.5% added monthly**

Steve Durbin
Aesthetix Electric

THANK YOU FOR YOUR BUSINESS AND REFERRALS!

573.348.1429
aesthetixelectric.com | steve@aesthetixelectric.com
6181 Brook Hollow | Osage Beach MO, 65065

LOWE'S

LOWE'S HOME CENTERS, LLC
950 HIGHWAY 42
OSAGE BEACH, MO 65065 (573) 302-8808

- SALE -

SALES#: S1147FH1 1526894 TRANS#: 43120555 12-14-15

96650 SB 6-IN X 24-IN GUARD TRE		22.68
5.97	DISCOUNT EACH	-0.30
4 @	5.67	
592734 ALL PRO LED EXIT SIGN RED		142.44
49.98	DISCOUNT EACH	-2.50
3 @	47.48	
27300 2-IN X 5 YD OUTDOOR TREAD		9.48
9.98	DISCOUNT EACH	-0.50
96657 SB 3/4-IN X 12-IN BLCK SA		7.36
3.87	DISCOUNT EACH	-0.19
2 @	3.68	

RECEIVED
DEC 14 2015

SUBTOTAL:	181.96
TAX:	14.06
INVOICE 43449 TOTAL:	196.02
LCC:	196.02
TOTAL DISCOUNT:	9.58

LCC:XXXXXXXXXXX1300 AMOUNT:196.02 AUTHCD:000674
SWIPED REFID:960116 12/14/15 13:15:09
LBA/PO: GARY

STORE: 1147 TERMINAL: 43 12/14/15 13:16:32
OF ITEMS PURCHASED: 10
EXCLUDES FEES, SERVICES AND SPECIAL ORDER ITEMS

THANK YOU FOR SHOPPING LOWE'S.
SEE REVERSE SIDE FOR RETURN POLICY.
STORE MANAGER:

WE HAVE THE LOWEST PRICES, GUARANTEED!
IF YOU FIND A LOWER PRICE, WE WILL BEAT IT BY 10%.
SEE STORE FOR DETAILS.

GL Acct#: 1700-20 $105.04 1220-20 $90.98
Signature:
Date: 12/14/15

ROEMER'S HEAVY EQUIPMENT & TRUCK REPAIR

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

19357

QTY	PART NO. AND DESCRIPTION	PRICE			
1	33538 Fuel Filter			14	38
1	24021 Coolant Filter			13	66
1	B7700 Oil Filter			12	29

RECEIVED
DEC 07 2015
BELGUM CPAS

(MAY BE CONTINUED ON OTHER SIDE) TOTAL PARTS 40 33

ACCESSORIES

TOTAL ACCESSORIES

NAME: ALLIANCE WATER RESOURCES
ADDRESS: P.O. Box 1985
CITY, STATE, ZIP: LAKE OZARK MO. 65049
HOME PHONE:
BUSINESS PHONE: EXT.
YEAR, MAKE AND MODEL: 99 White GMC
SERIAL NUMBER: 1GB833094
MOTOR NUMBER:
CUSTOMER SERVICE NO.:
ORDER WRITTEN BY:
LICENSE NUMBER:
TERMS:
DATE: Nov-23-15
PROMISED: 1 A.M. P.M.
ODOMETER IN:
ODOMETER OUT:

DESCRIPTION OF WORK — AMOUNT

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

Change Engine oil, oil Filter, Fuel Filter and Coolant Filter, Check Air Filter,

GL Acct#: 6702-20 $11.55 1220-20 $101.64

Signature: Mary Ann Roemer

Date: 12/7/15

LITERS/GALS. OF GAS @ 5½ GALS 15u.40 — 15.99 — 87 95
LITERS/GALS. OF OIL @
kg/LBS OF GREASE @

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

87 95

TOTAL LABOR	75 00
TOTAL PARTS	40 33
ACCESSORIES	
GAS, OIL & GREASE	87 95
SUBLET REPAIRS	
ENV/WASTE DISPOSAL	
TAX	9 91
TOTAL	213 19

THANK YOU!

F11/24

MONTH-TO-DATE AND YEAR-TO-DATE
REVENUE/BUDGET ANALYSIS
12/30/2015

Account Number	Account Name	2013 Actual	2014 Actual	2015 Budget	2015 Actual as of 12/30/2015	2015 December Revenue	Percent YTD
3020	Osage Beach	452,145.77	464,343.06	467,500.00	477,172.03	40,065.19	102%
3010	Lake Ozark	92,854.22	85,716.93	82,500.00	72,827.98	5,768.15	88%
3100	Interest	34.50	31.18	30.00	54.79	5.67	183%
3060	Waste Haulers' Fee	41,460.00	34,340.00	38,000.00	32,400.00	3,300.00	85%
	Total Operating Fund	586,494.49	584,431.17	588,030.00	582,454.80	49,139.01	99%
	E/R Fund Income	1,320.11	1,025.06	1,200.00	884.81	62.74	74%
	TOTAL INCOME	587,814.60	585,456.23	589,230.00	583,339.61	49,201.75	99%

MONTH-TO-DATE AND YEAR-TO-DATE EXPENDITURE/BUDGET ANALYSIS 12/30/2015

Account Number	Account Name	2013 Actual	2014 Actual	2015 Budget	2015 Actual as of 12/30/2015	2015 December Expenses	Percent YTD
4000	Equipment Replace Fund	41,606.04	41,606.04	41,606.04	41,606.04	3,467.17	100%
4010	ERF Repayment	27,961.44	0.00	0.00	0.00	0.00	
4020	*Maintenance & Repair	19,273.37	58,873.44	88,800.00	31,014.36	4,253.96	35%
4140	Insurance	15,489.00	16,502.00	17,000.00	16,306.00	0.00	96%
4150	***Vehicle Repair/Maint	1,352.11	9,186.16	3,000.00	1,508.78	0.00	50%
4160	Haulers Fees to Contractor	8,000.00	8,000.00	8,000.00	8,000.00	0.00	100%
4170	Contract Management	281,409.84	288,445.08	295,657.05	296,233.08	24,686.09	100%
4185	Electric	71,923.84	70,366.40	75,000.00	76,751.19	4,555.96	102%
4200	Audit	1,750.00	1,900.00	2,000.00	2,000.00	0.00	100%
4220	Professional Service	119,683.73	43,038.41	30,000.00	2,369.99	0.00	8%
4240	Capital Purchases	5,748.00	0.00	30,000.00	0.00	0.00	0%
	Totals	594,197.37	537,917.53	591,063.09	475,789.44	36,963.18	80%
	**E/R Expenses	4,260.00	9,429.93	17,000.00	1,869.72	0.00	11%
	TOTAL EXPENSES	598,457.37	547,347.46	608,063.09	477,659.16	36,963.18	79%

__Equipment & Replacement__**

Normal E/R	10,000.00	
Rebuild Arm Support Clarifier #1 & 2	5,000.00	
Replace doors	2,000.00	2016
	17,000.00	

__Vehicle Repair/Maint__***

Vehicle Maintenance	3,000.00	
	3,000.00	

*__*Maintenance & Repair__*

Auto Dialer Yrly Software Fee	500.00
Expanded Effluent testing Renewal Fee	1,000.00
Normal Maintenance	8,000.00
UV Spare Parts	8,000.00
Backup Hach Do meter & probe	2,100.00
Parking Lot Sealing & Crack filling	1,200.00
Painting all 5 Buildings inside fence	10,000.00
Rock for Road	2,000.00
Strip and refinish tile in Admin Bldg	1,000.00
#1 Aeration Basin grit removal	55,000.00
	88,800.00

OPERATING FUND INCOME AND EXPENSE SUMMARY
12/30/2015

Beginning Balance	168,803.94
Income - Osage Beach	40,065.19
Income - Lake Ozark	5,768.15
Income - Other	0.00
Income - Waste Haulers' Fees	3,300.00
Interest - Checking	5.67
Income - CD Interest	0.00
Transfers From E/R Fund	0.00
Transfers to E/R fund	-3,467.17
Expenses	-35,274.50
Ending Fund Balance	**179,201.28**
NOW Account - Central Bank	179,201.28
Outstanding Checks:	0.00
Deposit in Transit:	0.00
	179,201.28

EQUIPMENT REPLACEMENT FUND INCOME AND EXPENSE SUMMARY
12/30/2015

Beginning Balance	446,947.04
Interest - Checking	62.74
Income - CD Interest	0.00
Transfers From E/R Fund	0.00
Transfers to E/R Fund	3,467.17
Income - Miscellaneous	0.00
Expenses	0.00
Ending Fund Balance	**450,476.95**
NOW Account - First Bank	149,716.85
CD Providence Bank, 10/16 #1268880	200,047.87
CD First Bank of the Lake, 01/16 #101318429	100,712.23
Deposit in Transit	0.00
Outstanding Checks:	0.00
	450,476.95

Central Bank
of Lake of the Ozarks
P.O. Box 4500, Jefferson City, MO 65102
(573) 348-2761
0011182

Return Service Requested

AS OF DECEMBER 1, 2015, THE FREE SMALL BUSINESS CHECKING ALLOWS FOR 200 PAPER AND ELECTRONIC ITEMS FOR FREE. A CHARGE OF $0.35 FOR ITEMS OVER 200 APPLIES. PAPER STATEMENT FEE IS $3.00.

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

Period	Page
11/01/2015-11/30/2015	1 of 2

Web Address
www.cbolobank.com

M

M 6

Your Financial Summary on November 30, 2015

Account Balances & Other Assets

Checking	$ 168,803.94
Total	$ 168,803.94

Detailed Explanation of Account Balances and Other Assets

Basic Plus Interest Checking

No. [illegible]

Beginning Balance October 30, 2015	$	166,815.89
Deposits		
Nov. 16 Deposit		6,025.92
Nov. 16 Deposit		39,807.41
Nov. 18 Deposit		700.00
Nov. 30 Interest Earned		5.77
Total	+$	46,539.10

Checks

Check No.	Date Paid	Amount	Check No.	Date Paid	Amount
3479	Nov. 12	347.40	3483	Nov. 20	24,686.09
3481	Nov. 23	4,620.28	3484	Nov. 20	663.11
3482	Nov. 19	3,467.17	3485	Nov. 24	10,747.00

Total	-$	44,551.05
Ending Balance November 30, 2015	$	168,803.94

Number of days since last statement/interest cycle	30
Beginning and ending dates for calculation of statement/interest cycle are 11/01/2015 through 11/30/2015	
Average collected balance	175,363.00
Interest rate	0.04%
Annual percentage yield earned	0.04%

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

AS OF DECEMBER 1, 2015, THE FREE SMALL BUSINESS CHECKING ALLOWS FOR 200 PAPER AND ELECTRONIC ITEMS FOR FREE. A CHARGE OF $0.35 FOR ITEMS OVER 200 APPLIES. PAPER STATEMENT FEE IS $3.00.

RETURN SERVICE REQUESTED

AV 01 016857 62611B 46 A**5DGT

LAKE OZARK OSAGE BEACH JOINT SEWER
TREATMENT PLANT BOARD
1000 CITY PKWY
OSAGE BEACH MO 65065-3958

Period	Page
12/01/2015 - 12/31/2015	1 of 2

Web Address
www.cbolobank.com

M

016857 1/2

Your Financial Summary on December 31, 2015

	Bank Deposits	Totals
Bank Deposit Accounts:		
Checking	$ 179,201.28	
Bank Deposit Total		$ 179,201.28
Total Assets:	$ 179,201.28	$ 179,201.28

Detailed Explanation of Account Balances and Other Assets

Basic Plus Interest Checking

	Beginning Balance November 30, 2015	$	168,803.94
Deposits			
Dec. 01	Deposit		1,200.00
Dec. 22	Deposit		2,100.00
Dec. 22	Deposit		5,768.15
Dec. 22	Deposit		40,065.19
Dec. 31	Interest Earned		5.67
	Total	+$	49,139.01

Checks

Check No.	Date Paid	Amount	Check No.	Date Paid	Amount
3486	Dec. 08	1,778.49	3489	Dec. 17	24,686.09
3487	Dec. 21	4,555.96	3490	Dec. 21	2,532.01
3488	Dec. 17	3,467.17	3491	Dec. 17	1,721.95

Total -$ 38,741.67

Ending Balance December 31, 2015 $ 179,201.28

Number of days since last statement/interest cycle	31
Beginning and ending dates for calculation of statement/interest cycle are 12/01/2015 through 12/31/2015	
Average collected balance	167,015.00
Interest rate	0.04%
Annual percentage yield earned	0.04%
Interest earned year to date	54.79

End of Bank Deposits

Operating Fund

CHECK REGISTER - JOINT SEWER BOARD OPERATION FUND

	reconciled balance 8/31/15				**145,118.13**
3469	Equipment Replacement Fund	X	3,467.17		141,650.96
3470	Alliance Water Resources, Inc.	X	24,686.09		116,964.87
3471	Alliance Water Resources, Inc.	X	323.35		116,641.52
3473	Lake Sun Leader	X	236.25		116,405.27
3474	Ameren MO	X	10,806.53	-	105,598.74
	Deposit	X		100.00	105,698.74
	Deposit LO	X	-	6,442.00	112,140.74
	Deposit OB	X		39,391.33	151,532.07
	Deposit	X		3,100.00	154,632.07
	Interest	X		5.10	154,637.17
	reconciled balance 9/30/15				**154,637.17**
3472	Zerger & Mauer LLP	X	591.50		154,045.67
3475	Ameren MO	X	5,584.64		148,461.03
3476	Equipment Replacement Fund	X	3,467.17		144,993.86
3477	Alliance Water Resources, Inc.	X	24,686.09		120,307.77
3478	Alliance Water Resources, Inc.	X	360.70	-	119,947.07
3480	Road Runners LLC	X	1,170.00	-	118,777.07
	Deposit LO	X	-	5,689.76	124,466.83
	Deposit OB	X		40,143.58	164,610.41
	Deposit	X		2,200.00	166,810.41
	Interest	X		5.48	166,815.89
	reconciled balance 10/31/15				**166,815.89**
3479	Mission Communications LLC	X	347.40		166,468.49
3481	Ameren MO	X	4,620.28		161,848.21
3482	Equipment Replacement Fund	X	3,467.17		158,381.04
3483	Alliance Water Resources, Inc.	X	24,686.09		133,694.95
3484	Alliance Water Resources, Inc.	X	683.11	-	133,011.84
3485	CCIMW	X	10,747.00	-	122,264.84
	Deposit LO	X	-	6,025.92	128,290.76
	Deposit OB	X		39,807.41	168,098.17
	Deposit	X		700.00	168,798.17
	Interest	X		5.77	168,803.94
	reconciled balance 11/30/15				**168,803.94**
3486	Zerger & Mauer LLP	X	1,778.49		167,025.45
3487	Ameren MO	X	4,555.96		162,469.49
3488	Equipment Replacement Fund	X	3,467.17		159,002.32
3489	Alliance Water Resources, Inc.	X	24,686.09		134,316.23
3490	Evans Enterprises, Inc	X	2,532.01	-	131,784.22
3491	Alliance Water Resources, Inc.	X	1,721.95	-	130,062.27
	Deposit LO	X	-	5,768.15	135,830.42
	Deposit OB	X		40,065.19	175,895.61
	Deposit	X		1,200.00	177,095.61
	Deposit	X		2,100.00	179,195.61
	Interest	X		5.67	179,201.28
	reconciled balance 12/31/15				**179,201.28**

FIRST BANK
OF THE LAKES

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

536 00010 26
ACCOUNT:
DOCUMENTS: 1

68

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

BUSINESS MMDA ACCOUNT

LAST STATEMENT 10/30/15	142,658.67
2 CREDITS	3,528.27
DEBITS	.00
THIS STATEMENT 11/30/15	146,186.94

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

REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT
11/18 3,467.17		

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

DESCRIPTION	DATE	AMOUNT
INTEREST	11/30	61.10

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

AVERAGE LEDGER BALANCE:	144,112.64	INTEREST EARNED:	61.10
AVERAGE AVAILABLE BALANCE:	143,888.95	DAYS IN PERIOD:	31
INTEREST PAID THIS PERIOD:	61.10	ANNUAL PERCENTAGE YIELD EARNED:	.50%
INTEREST PAID 2015:	550.89		

* * * 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 26
ACCOUNT:
DOCUMENTS: 1

66

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

The following service charge increases will be effective February 1, 2016 Money Market monthly fee & excessive withdrawal fee increases to $10 ea., Savings monthly fee increases to $2ea and excessive withdrawals to $1 ea. and Foreign ATM fee increases to $2.

BUSINESS MMDA ACCOUNT

LAST STATEMENT 11/30/15	146,186.94
2 CREDITS	3,529.91
DEBITS	.00
THIS STATEMENT 12/31/15	149,716.85

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

REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT	REF #.....DATE.....AMOUNT
12/16 3,467.17		

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

DESCRIPTION	DATE	AMOUNT
INTEREST	12/31	62.74

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

AVERAGE LEDGER BALANCE:	147,976.44	INTEREST EARNED:	62.74
AVERAGE AVAILABLE BALANCE:	147,752.75	DAYS IN PERIOD:	31
INTEREST PAID THIS PERIOD:	62.74	ANNUAL PERCENTAGE YIELD EARNED:	.50%
INTEREST PAID 2015:	613.63		

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

CHECK REGISTER - JOINT SEWER BOARD EQUIPMENT REPLACEMENT FUND

	reconciled balance 12/31/14				**116,977.98**
	Deposit	X		101,711.25	218,689.23
	Deposit	X		3,467.17	222,156.40
	CD	X	100,000.00		122,156.40
	Interest	X		19.88	122,176.28
	reconciled balance 1/31/15				**122,176.28**
	Deposit	X		3,467.17	125,643.45
	Interest	X		18.78	125,662.23
	reconciled balance 2/28/15				**125,662.23**
	Deposit	X		3,467.17	129,129.40
	Interest	X		53.45	129,182.85
	reconciled balance 3/31/15				**129,182.85**
	Deposit	X		3,467.17	132,650.02
	Interest	X		53.23	132,703.25
	reconciled balance 4/30/15				**132,703.25**
	Deposit	X		3,467.17	136,170.42
	Interest	X		52.91	136,223.33
	reconciled balance 5/31/15				**136,223.33**
	Deposit	X		3,467.17	139,690.50
	Interest	X		60.28	139,750.78
	reconciled balance 6/30/15				**139,750.78**
	Interest	X		59.19	139,809.97
1009	Check	X	221.10		139,588.87
1010	Check	X	9,322.33		130,266.54
	Deposit	X		3,467.17	133,733.71
	reconciled balance 7/31/15				**133,733.71**
	Interest	X		57.16	133,790.87
1011	Check	X	2,850.00		130,940.87
	Deposit	X		2,850.00	133,790.87
	Deposit	X		3,467.17	137,258.04
	reconciled balance 8/31/15				**137,258.04**
	Interest	X		57.02	137,315.06
	Deposit	X		3,467.17	140,782.23
	reconciled balance 9/30/15				**140,782.23**
	Interest	X		57.89	140,840.12
1012	Check	X	1,648.62		139,191.50
	Deposit	X		3,467.17	142,658.67
	reconciled balance 10/31/15				**142,658.67**
	Interest	X		61.10	142,719.77
	Deposit	X		3,467.17	146,186.94
	reconciled balance 11/30/15				**146,186.94**
	Interest	X		62.74	146,249.68
	Deposit	X		3,467.17	149,716.85
	reconciled balance 12/31/15				**149,716.85**

OPERATING DIVISIONS

MISSOURI

Atchison County
Bonne Terre
Boonville
Bowling Green
Buchanan County #1
Cameron
Cape Girardeau
Carroll County #1
Craig
East Central Missouri Water & Sewer Authority
Elsberry
Fayette
Franklin County #1
Franklin County #3
Henry County Water Company
Henry County #3
Lake Ozark/ Osage Beach
Lincoln County #1
Necsho
Nevada
Parkville
Phelps County #2
Platte County #C-1
Proctor & Gamble
Ralls County #1
Russellville
Sedalia
St Charles County #2
St Genevieve
Versailles

IOWA

Maquoketa
Tipton

TENNESSEE

South Fulton

WATER RESOURCES®
Alliance
Professional Water and Wastewater Operations

REPORT OF OPERATIONS

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

Month of November 2015

Submitted by Alliance Water Resources, Inc. for the

January 2016

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-01013241. 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	1.8	NA	0	0.25	<5.0	NA
Peak Day	2.3	2.4	8.0	0	0.70	<5.0	NA
Percent Removal	99.1	99.2	NA	NA	NA	NA	NA

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	126	2.7	10	4.0
Weekly Average	45	45		630			
Daily Max					10.6	15	8.1

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 1.443 MGD or 48% of Permitted flow with Lake Ozark contributing 14% of the total flow and Osage Beach contributing 86%. 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 65715 pounds of BOD.

BIOSOLIDS APPLICATION AND INVENTORY

Plant personnel land applied 30 tanker loads of bio-solids during the month equivalent to a total of 111,000 gallons and 35,734 pounds dry weight solids.

476,046 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 256,250 gallons with a level of 3.0 feet in Tank 1 and 2.0 feet in Tank 2.

WASTEHAULERS

The plant received 19 loads of septage during the month totaling 47,500 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
- We took the sludge truck up to Roemer's Truck Repair on the 13th to have a couple oil leaks checked out and we had him go ahead and service it while he had it.
- We pulled and cleaned all the UV banks/bulbs and stored them for the off season in the UV control room on the 18th of November.

SAFETY

- We conducted our monthly routine Safety Meeting on Chlorine Safety on the 11th of November.

REGULATORY AGENCY, INSPECTION AND REPORTS

- We filled out the EDMR on MDNR website on the 2nd of December.

MISCELLANEOUS AND RECOMMENDATIONS

- We would like to Thank Matt and the City of Lake Ozark for sending out their service truck and crew to assist us with the removal and resetting of the newly rebuilt pista grit pump. Many Thanks!

TABLE A
LAKE OZARK/OSAGE BEACH WWTP

MONTH OF November 2015

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	0.162	0.988	1.150	14.1	85.9						
2-Nov	0	0.155	1.029	1.184	13.1	86.9						
3-Nov	0	0.153	0.972	1.125	13.6	86.4						
4-Nov	0	0.145	1.007	1.152	12.6	87.4						
5-Nov	0	0.146	1.002	1.148	12.7	87.3						
6-Nov	1.1	0.177	1.288	1.465	12.1	87.9	138	213	210	120	204	324
7-Nov	**0**	**0.154**	**1.118**	**1.272**	**12.1**	**87.9**						
8-Nov	**0**	**0.137**	**1.205**	**1.342**	**10.2**	**89.8**						
9-Nov	0	0.193	0.979	1.172	16.5	83.5						
10-Nov	0	0.143	0.991	1.134	12.6	87.4						
11-Nov	0	0.124	0.938	1.062	11.7	88.3						
12-Nov	0	0.129	0.904	1.033	12.5	87.5						
13-Nov	0	0.137	0.964	1.101	12.4	87.6	228	208	200	184	134	174
14-Nov	**0**	**0.138**	**0.970**	**1.108**	**12.5**	**87.5**						
15-Nov	**0**	**0.137**	**0.969**	**1.106**	**12.4**	**87.6**						
16-Nov	0.6	0.137	0.992	1.129	12.1	87.9						
17-Nov	2.1	0.322	2.039	2.361	13.6	86.4						
18-Nov	3.7	1.064	4.154	5.218	20.4	79.6						
19-Nov	0	0.203	1.151	1.354	15.0	85.0						
20-Nov	0	0.150	0.919	1.069	14.0	86.0	78	185	130	60	198	162
21-Nov	**0.5**	**0.151**	**1.010**	**1.161**	**13.0**	**87.0**						
22-Nov	**0**	**0.159**	**1.035**	**1.194**	**13.3**	**86.7**						
23-Nov	0	0.138	0.907	1.045	13.2	86.8						
24-Nov	0	0.131	0.877	1.008	13.0	87.0						
25-Nov	0	0.125	0.881	1.006	12.4	87.6	150	168	188	98	264	188
26-Nov	0	0.130	0.970	1.100	11.8	88.2						
27-Nov	1.75	0.305	1.766	2.071	14.7	85.3						
28-Nov	**0.6**	**0.586**	**2.647**	**3.233**	**18.1**	**81.9**						
29-Nov	**0**	**0.227**	**1.270**	**1.497**	**15.2**	**84.8**						
30-Nov	0.4	0.189	1.105	1.294	14.6	85.4						
SUM	10.8	6.247	37.047	43.294								
AVG		0.208	1.235	1.443	14	86	149	194	182	116	200	212
NOTE: BOLD PRINT INDICATES WEEKEND DAYS												

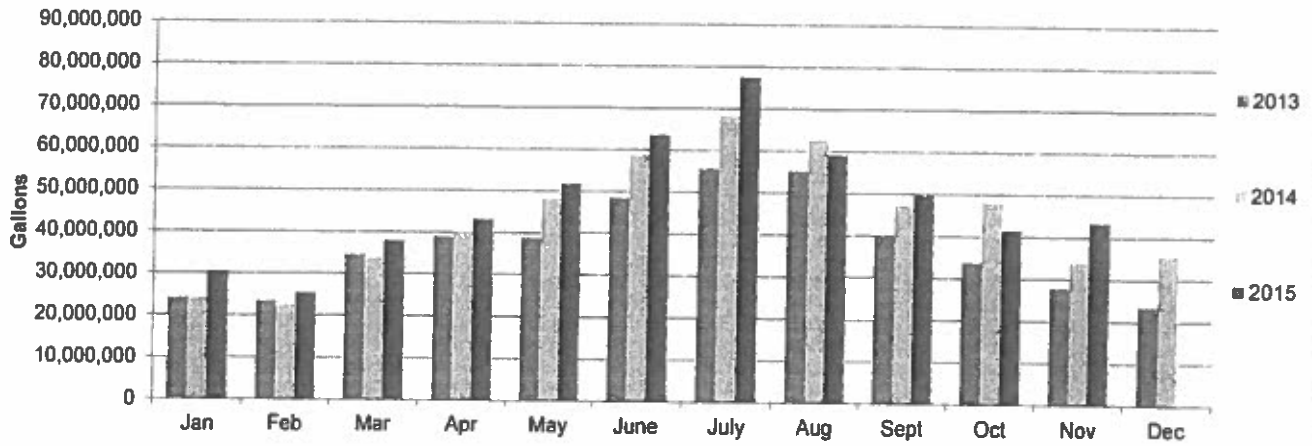
TABLE B
JOINT SEWER BOARD
Monthly Flows

2013	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	2.8	19,923,000	83%	4,104,000	17%	24,027,000	100%
February	4.2	19,290,000	83%	3,979,000	17%	23,269,000	100%
March	5.3	28,232,000	82%	6,308,000	18%	34,540,000	100%
April	8.7	31,410,000	81%	7,507,000	19%	38,917,000	100%
May	2.9	32,247,000	83%	6,560,000	17%	38,807,000	100%
June	4.6	40,205,000	83%	8,185,000	17%	48,390,000	100%
July	2.2	46,803,000	84%	8,794,000	16%	55,597,000	100%
August	15.0	45,742,000	83%	9,351,000	17%	55,093,000	100%
September	2.3	33,128,000	83%	6,869,000	17%	39,997,000	100%
October	3.6	27,722,000	82%	5,996,000	18%	33,718,000	100%
November	2.5	22,915,000	83%	4,775,000	17%	27,690,000	100%
December	2.5	19,507,000	83%	4,038,000	17%	23,545,000	100%
	56.6	367,124,000	83%	76,466,000	17%	443,590,000	100%

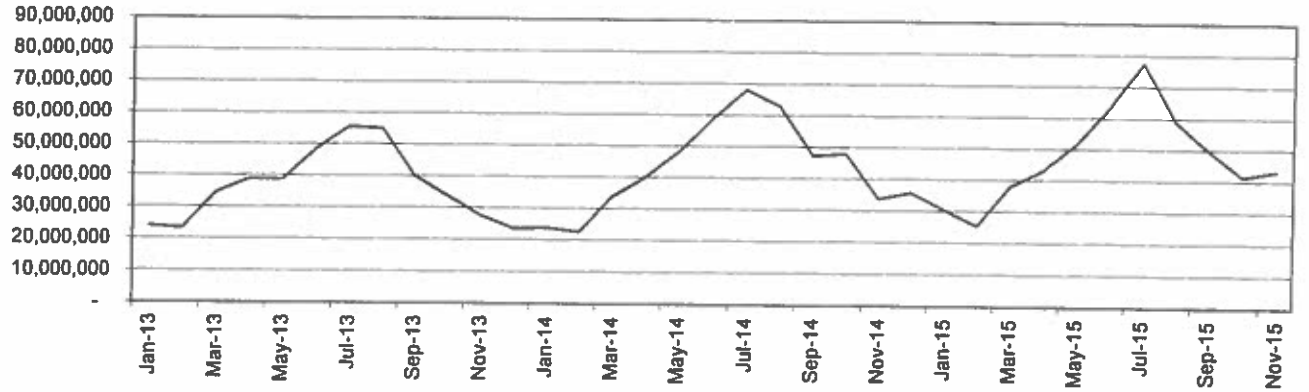
2014	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	3.0	19,229,000	81%	4,634,000	19%	23,863,000	100%
February	1.3	18,444,000	82%	4,114,000	18%	22,558,000	100%
March	1.2	28,731,000	85%	5,061,000	15%	33,792,000	100%
April	5.1	33,479,000	84%	6,515,000	16%	39,994,000	100%
May	4.7	41,054,000	85%	7,129,000	15%	48,183,000	100%
June	5.1	50,416,000	86%	8,342,000	14%	58,758,000	100%
July	3.1	59,089,000	87%	9,059,000	13%	68,148,000	100%
August	2.9	54,624,000	87%	8,228,000	13%	62,852,000	100%
September	3.4	40,316,000	86%	6,735,000	14%	47,051,000	100%
October	7.9	41,322,000	86%	6,659,000	14%	47,981,000	100%
November	1.6	29,315,000	87%	4,506,000	13%	33,821,000	100%
December	2.6	31,534,000	88%	4,204,000	12%	35,738,000	100%
	41.7	447,553,000	85%	75,186,000	15%	522,739,000	100%

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							
	54.0	452,218,000	87%	70,585,000	13%	522,803,000	100%

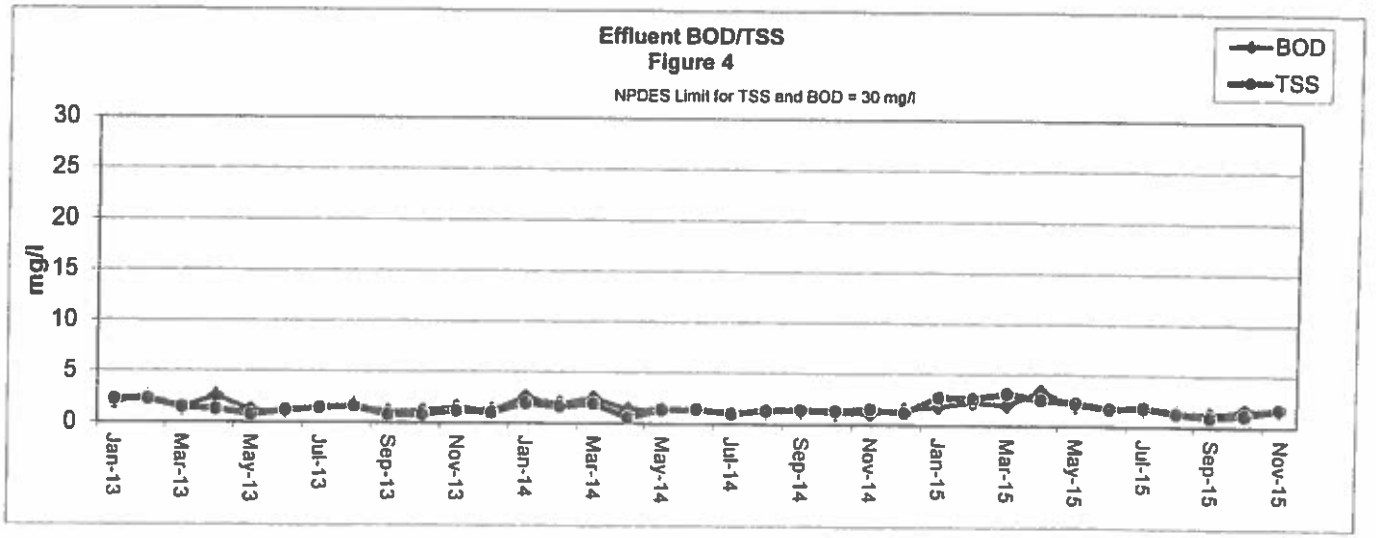
Monthly Influent Flow
Figure 3A



Monthly Influent Flow
Figure 3B

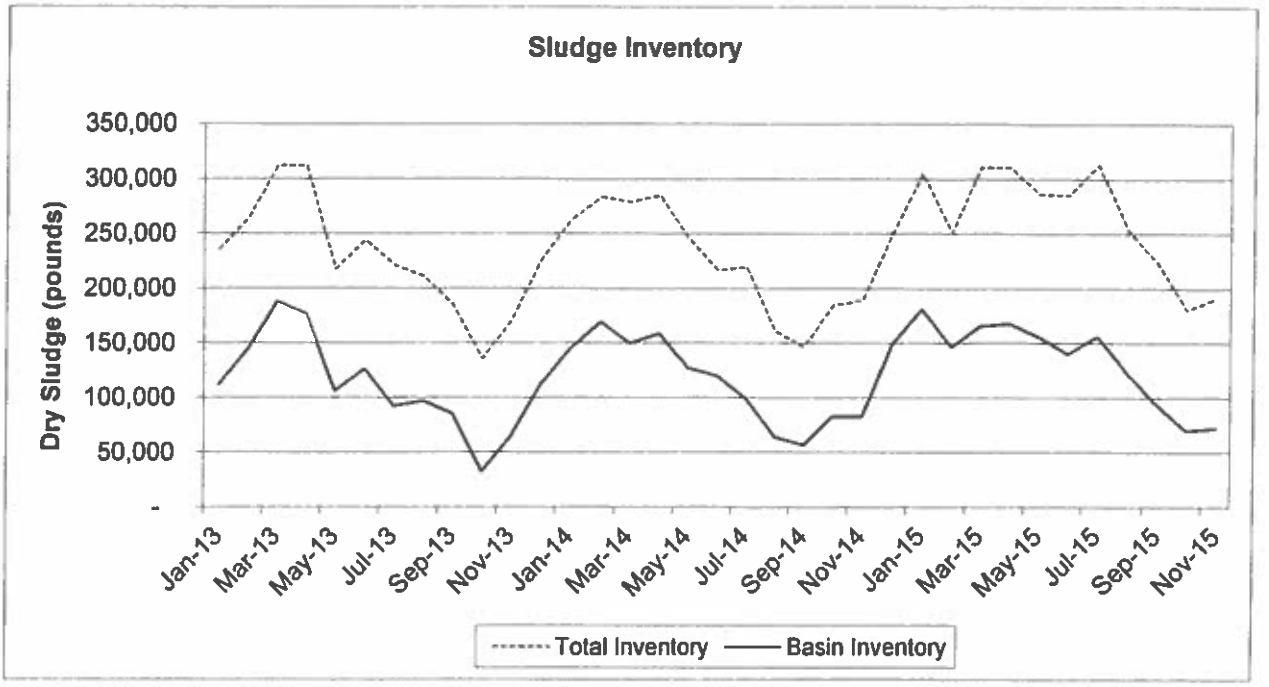


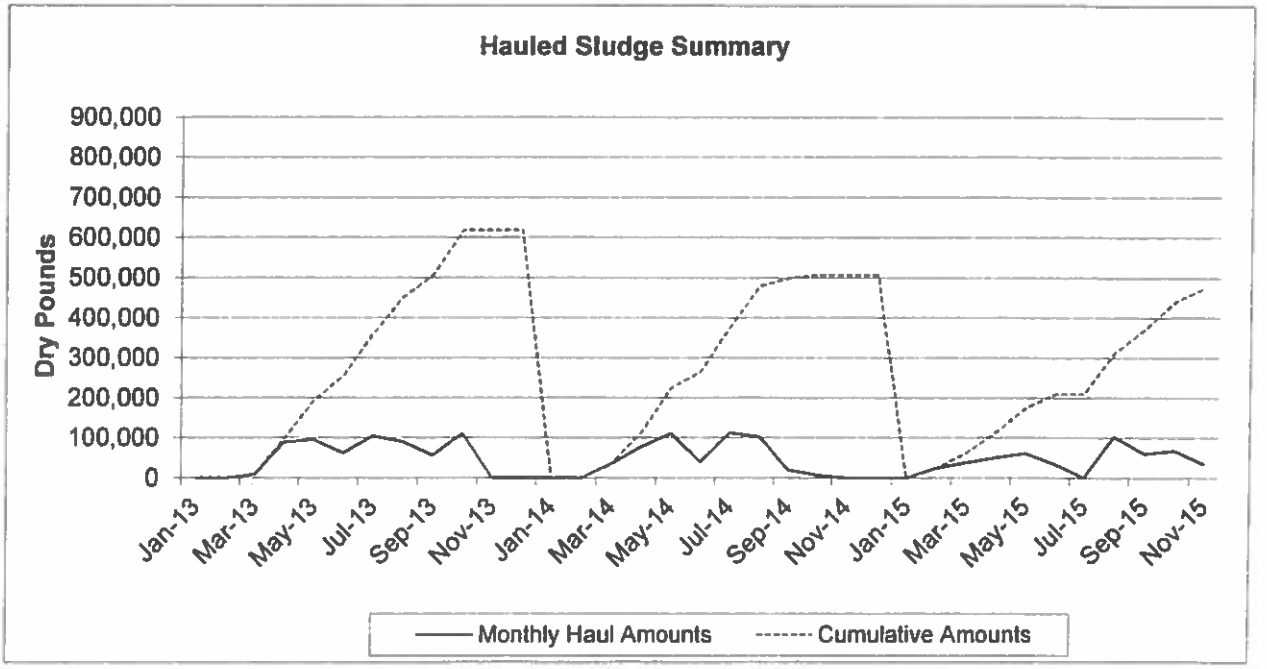
Effluent BOD/TSS
Figure 4



	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-13	0	-	0	3.5%	-	6.0	2.5	0.0	382,500	111,652	1.5	2.0	0.0	4,120	4,010	3,662,167	124,155	0.00407	235,807	26	65,000
Feb-13	0	-	0	3.5%	-	6.0	5.0	0.0	495,000	144,491	1.0	2.0	1.0	4,000	3,740	3,696,714	119,314	0.00387	263,805	56	110,000
Mar-13	8	29,600	8,517	3.5%	8,517	8.0	6.5	0.0	652,500	187,748	2.0	2.0	1.0	4,030	4,050	3,714,476	123,915	0.004	311,663	21	52,500
Apr-13	74	273,800	89,488	3.9%	98,005	6.0	6.0	0.0	540,000	176,492	2.5	2.0	2.0	4,620	4,130	3,766,785	135,084	0.0043	311,576	24	60,000
May-13	82	303,400	95,228	3.8%	193,233	3.5	4.0	0.0	337,500	105,931	3.0	5.0	2.0	3,970	3,040	3,828,952	111,767	0.0035	217,698	36	85,500
Jun-13	54	199,800	62,210	3.7%	255,443	6.0	3.0	0.0	405,000	126,101	1.0	7.0	2.0	3,850	3,540	3,828,952	117,994	0.0037	244,095	47	117,500
Jul-13	97	358,900	105,164	3.5%	360,607	6.0	1.0	0.0	315,000	92,301	1.5	2.0	1.0	3,950	4,410	3,705,595	129,181	0.00418	221,482	58	137,500
Aug-13	74	273,800	90,969	4.0%	451,576	6.5	0.0	0.0	292,500	97,182	2.0	2.5	2.0	3,580	3,680	3,766,785	114,036	0.00363	211,218	57	142,500
Sep-13	48	177,600	56,069	3.8%	507,645	5.0	1.0	0.0	270,000	85,240	2.0	1.5	1.5	3,150	3,300	3,727,309	100,252	0.00323	185,492	39	97,500
Oct-13	83	307,100	110,472	4.3%	618,117	2.0	0.0	0.0	90,000	32,375	2.0	2.0	2.0	2,950	3,680	3,757,904	103,895	0.00332	136,271	32	80,000
Nov-13	0	-	0	4.3%	618,117	4.0	0.0	0.0	180,000	64,552	1.0	0.0	1.0	3,220	3,740	3,661,190	106,259	0.00348	170,811	15	37,500
Dec-13	0	-	0	4.3%	618,117	5.0	2.0	0.0	315,000	112,965	0.0	0.5	1.0	3,600	3,880	3,652,309	113,921	0.00374	226,887	19	47,500
Jan-14	0	-	0	4.3%	-	4.0	5.0	0.0	405,000	145,241	2.0	2.5	0.0	3,690	3,960	3,679,929	117,392	0.00383	262,633	22	54,500
Feb-14	0	-	0	4.3%	-	5.0	5.5	0.0	472,500	169,448	1.5	2.5	0.0	3,410	4,030	3,671,048	113,894	0.00372	283,341	6	15,000
Mar-14	29	107,300	35,703	4.0%	35,703	5.0	5.0	0.0	450,000	149,733	0.5	0.5	0.5	4,270	4,230	3,639,476	129,001	0.00425	278,734	35	90,500
Apr-14	65	240,500	77,176	3.8%	112,879	7.5	3.5	0.0	495,000	158,845	1.5	1.0	1.5	4,420	3,710	3,709,547	125,761	0.00407	284,606	30	75,000
May-14	96	355,200	111,613	3.8%	224,492	5.5	3.5	0.0	405,000	127,261	1.0	2.0	2.0	3,550	4,040	3,740,142	118,377	0.0038	245,638	24	60,000
Jun-14	41	151,700	40,455	3.2%	264,947	4.5	5.5	0.0	450,000	120,005	3.0	2.0	2.0	3,530	2,630	3,775,666	96,986	0.00308	216,991	26	61,000
Jul-14	117	432,900	112,292	3.1%	377,239	6.5	2.0	0.0	382,500	99,219	5.0	1.5	1.5	4,030	3,610	3,780,595	120,445	0.00382	219,664	44	111,500
Aug-14	107	395,900	102,973	3.1%	480,212	5.5	0.0	0.0	247,500	64,374	1.0	1.0	1.0	3,690	2,640	3,678,952	97,110	0.00317	161,484	55	129,000
Sep-14	17	62,900	19,811	3.8%	500,023	2.5	1.5	0.0	180,000	56,693	0.0	1.5	1.0	2,670	3,210	3,670,071	89,989	0.00294	146,682	37	92,500
Oct-14	5	18,500	6,789	4.4%	506,812	4.0	1.0	0.0	225,000	82,569	0.0	1.5	2.0	2,990	3,620	3,713,499	102,358	0.00331	184,927	33	79,500
Nov-14	0	-	0	4.4%	506,812	4.0	1.0	0.0	225,000	82,566	0.0	2.0	1.0	3,630	3,330	3,678,952	106,775	0.00348	189,341	20	50,000
Dec-14	0	-	0	4.4%	506,812	5.0	4.0	0.0	405,000	148,619	0.0	2.0	2.0	3,480	3,060	3,722,380	101,516	0.00327	250,135	18	40,000
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	139,981	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

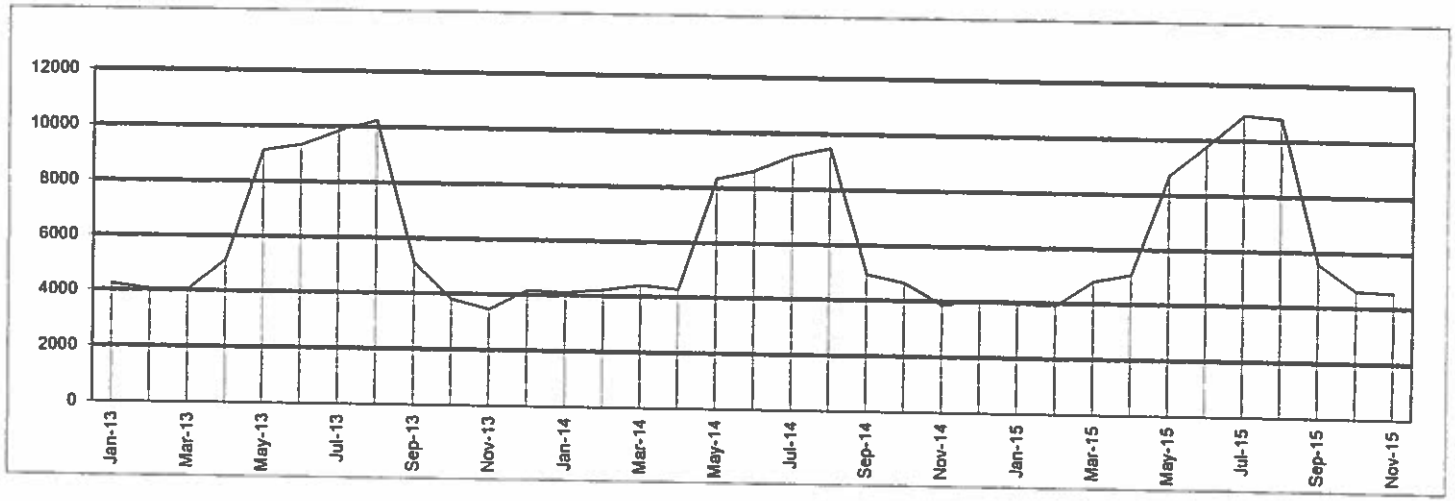
F11/DF


Sludge Inventory
Dry Sludge (pounds)
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Total Inventory
Basin Inventory

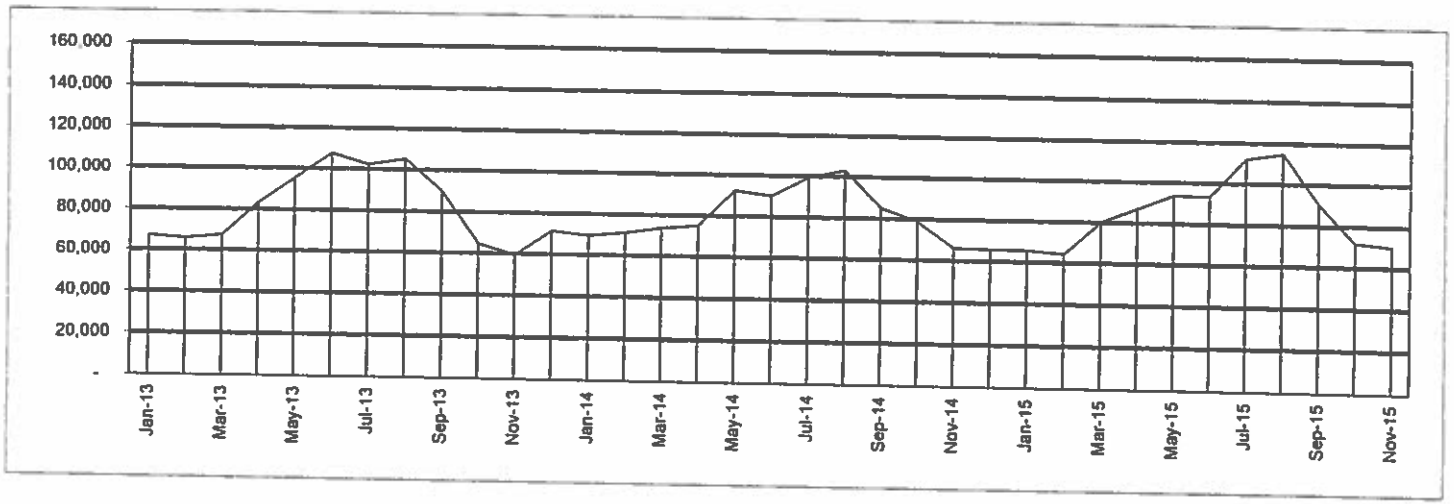

Hauled Sludge Summary
Dry Pounds
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Monthly Haul Amounts
Cumulative Amounts

-	Electric Cost	Kilowatts Used
Jan-13	4240	66,990
Feb-13	4069	65,810
Mar-13	4056	67,500
Apr-13	5132	83,390
May-13	9135	95,360
Jun-13	9331	107,780
Jul-13	9861	102,490
Aug-13	10255	105,350
Sep-13	5108	89,830
Oct-13	3806	64,870
Nov-13	3459	59,610
Dec-13	4171	71,660
Jan-14	4116	69,690
Feb-14	4226	71,330
Mar-14	4427	73,840
Apr-14	4297	75,240
May-14	8325	92,580
Jun-14	8643	90,400
Jul-14	9200	99,540
Aug-14	9483	103,070
Sep-14	4953	85,380
Oct-14	4663	78,920
Nov-14	3864	66,400
Dec-14	4009	66,040
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

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-15		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	7.5			17.6	1.558	7.9				6.9		15.5		
2	7.5			16.7	1.523	7.9				7.1		16.3		
3	7.4			19.0	1.430	7.9				6.8		16.3		
4	7.3			19.0	1.394	7.9				6.2		16.9		
5	7.3			19.4	1.462	7.9			0.18	6.1		17.2		
6	7.5	210	324	18.4	1.824	7.8	1.7	2.4		5.7		17.2	99.2	99.3
7	7.4			17.7	1.562	7.9				6.4		16.0		
8	7.4			19.0	1.736	7.9				6.5		16.3		
9	7.3			17.0	1.527	7.9				7.3		13.5		
10	7.4			15.7	1.579	7.9				6.6		13.6		
11	7.5			17.7	1.349	7.9				6.4		15.5		
12	7.3			17.1	1.363	7.9			0.07	6.8		14.8		
13	7.4	200	174	17.4	1.497	7.9	1.5	2.2		6.7		14.1	99.3	98.7
14	7.4			17.0	1.445	7.9				6.6		14.4		
15	7.4			16.7	1.469	8.0				6.8		13.7		
16	7.4			16.7	1.466	7.9				6.4		14.3		
17	7.5			18.0	2.853	7.8				4.3		16.0		
18	7.4			16.3	5.781	7.8				5.1		15.7		
19	7.3			16.7	1.866	7.9			0.70	6.4		14.7		
20	7.5	130	162	15.4	1.599	7.7	2.3	1.6		6.3		13.3	98.2	99.0
21	7.5			15.0	1.541	7.8				7.3		12.1		
22	7.5			14.0	1.746	7.9				7.3		11.3		
23	7.5			14.8	1.571	7.9				7.4		12.1		
24	7.4			15.1	1.518	7.8			0.03	7.5		11.5		
25	7.4	188	188	15.0	1.463	7.8	1.3	1.0		7.3		12.7	99.3	99.5
26	7.4			16.5	1.376	7.9				7.1		15.0		
27	7.6			12.9	2.529	7.9				7.4		12.0		
28	7.5			12.4	3.907	7.8				7.7		12.9		
29	7.6			13.1	2.132	7.8				7.4		12.2		
30	7.5			14.4	1.939	7.8				6.7		12.6		
Total					56.005									
Avg		182	212	16.4	1.867		1.7	1.8	0.25	6.7	0.0	14.3	99.0	99.1
Min	7.3	130	162	12.4	1.349	7.7	1.3	1.0	0.03	4.3	0.0	11.3	98.2	98.7
Max	7.6	210	324	19.4	5.781	8.0	2.3	2.4	0.70	7.7	0.0	17.2	99.3	99.5

MONTHLY EFFLUENT MONITORING		QUARTERLY EFFLUENT MONITORING	
DATE	Oil & Grease mg/L	Selenium µg/L	Zinc µg/L
1			
2			
3			
4			
5			
6			
7			
8			
9	< 5.0		
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Total			
Avg	< 5.0	0.00	0.00
Min	< 5.0	0.00	0.00
Max	< 5.0	0.00	0.00

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		2.9	3,660	460	15.5	3.8	2,880	550	15.6	47	0	7:30
2		3.0	3,520	430	15.6	3.9	3,870	650	15.7	45	0	7:30
3	7,406	3.6	3,730	450	16.5	2.5	4,110	550	16.5	47	0	7:30
4	11,664	2.5	3,480	480	17	3.8	3,480	410	17.1	60	0	7:30
5		2.5	3,290	540	17.4	3.3	3,630	500	17.5	61	0	7:30
6		1.9	4,250	540	17.4	1.7	3,190	390	17.5	46	1.1	7:30
7		2.7	3,140	520	15.8	3.2	3,570	480	16	38	0	7:30
8		2.3	3,370	360	16.1	1.5	3,380	440	16.2	38	0	7:30
9	6,480	4.1	3,770	510	13.7	4.1	3,560	480	14.2	32	0	7:30
10	5,554	3.2	3,190	480	13.3	3.0	3,360	480	13.6	34	0	7:30
11	4,629	2.3	3,040	530	15.7	3.1	3,230	420	17.5	60	0	7:30
12		3.4	3,390	410	14.5	2.4	3,550	540	14.8	46	0	7:30
13		3.3	3,820	410	13.6	2.2	3,660	450	14.7	34	0	7:30
14		3.5	3,510	400	13.9	2.4	2,990	330	14	40	0	7:30
15		3.7	3,430	460	13.4	2.8	3,670	500	13.7	40	0	7:30
16		3.5	3,310	330	13.8	2.0	3,240	370	14.2	50	0.6	7:30
17		1.2	3,650	370	16.3	1.4	2,820	370	16.6	64	2.1	7:30
18		0.9	4,490	490	15.6	1.4	3,840	390	15.7	50	3.7	7:30
19		4.0	4,580	600	14.4	5.8	3,960	500	14.4	45	0	7:30
20		3.0	4,280	580	12.9	3.0	4,120	530	13.2	38	0	7:30
21		3.3	4,130	480	12.6	3.6	2,930	460	12.6	37	0.5	7:30
22		4.6	4,170	620	11	4.2	3,360	490	11.5	25	0	7:30
23		4.3	3,270	550	11.8	4.3	3,230	580	12.1	36	0	7:30
24		3.9	4,470	680	11.7	5.0	3,520	490	11.8	34	0	7:30
25		2.8	4,690	610	13	4.0	3,260	400	13	52	0	7:30
26		2.6	3,990	450	14.8	3.8	3,690	470	14.5	65	0	7:30
27		2.9	3,330	340	12.9	4.1	3,280	400	13.3	42	1.75	7:30
28		3.1	3,210	320	12	4.3	2,640	280	13.9	39	0.6	7:30
29		3.0	3,500	400	12.2	4.1	3,570	430	12.2	41	0	7:30
30		3.7	3,340	360	12.4	3.3	4,430	700	12.5	43	0.4	7:30

COMMENTS:

TESTS PERFORMED BY (PRINT)	SIGNATURE	PHONE #	DATE
Frank Hendricks	Frank Hendricks	(573)365-0455	12/2/2015
REPORT APPROVED BY (PRINT)	SIGNATURE	PHONE #	DATE
Gary Hutchcraft	Gary Hutchcraft	(573)365-0455	12/2/2015

*Required Daily (Monday - Friday)

**Required 1/week

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

PERMITTEE NAME/ADDRESS

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

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
4178914000
4178914399 (fax)

MO0103241	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2015	11	01	TO	2015	11	30

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	*****	*****		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	
Flow, in conduit or thru treatment plant (50050)	REPORTD	5.781	1.867	Mgal/d	*****	*****	*****		Daily	Record	
Stage Type: End of Pipe	REQRMNT	Daily Maximum : Monitoring Required	Monthly Average : Monitoring Required		*****	*****	*****		Daily	Record	
Nitrogen, ammonia total (as N) (00610)	REPORTD	*****	*****		8.7	.25	*****	mg/L	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : 10.6	Monthly Average : 2.7	*****		Weekly	Grab	
Oil and grease (sorblet 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	*****	*****		7.7	8.0	*****	SU	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Minimum : 6	Maximum : 9	*****		Weekly	Grab	
Temperature, water deg. centigrade (00010)	REPORTD	*****	*****		17.2	14.3	*****	deg C	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : Monitoring Required	Monthly Average : Monitoring Required	*****		Weekly	Grab	
Total Suspended Solids (TSS) (00530)	REPORTD	*****	*****		2.4	1.8	*****	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:
OUTFALL-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	2015-12-02 12:04:36
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)

PERMITTEE NAME/ADDRESS

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

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

MO0103241	001 B
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2015	10	01	TO	2015	12	31

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

Parameter		MASS		Unit	CONCENTRATION			Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Selenium (Se), total recoverable (00981)	REPORTD	*****	*****		<0.010	*****	<0.010	ug/L	Quarterly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : 8.1	*****	Monthly Average : 4.0		Quarterly	Grab	
Zinc (Zn), total recoverable (01094)	REPORTD	*****	*****		<0.003	<0.003	*****	ug/L	Quarterly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : Monitoring Required	Monthly Average : Monitoring Required	*****		Quarterly	Grab	

GENERAL PERMIT REQUIREMENTS OR COMMENTS:
OUTFALL-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	2015-12-11 09:00:03	
TYPED OR PRINTED NAME	SIGNATURE	Date	

Page 1

LAKE OZARK/OSAGE BEACH WWTP
Operation Report

FOR NOVEMBER (month) 2015 (year)

		PLANT INFLUENT											ENVIRONMENTAL CONDITIONS			OXIDATION DITCH NO. 1 MIXED LIQUOR					OXIDATION DITCH NO. 2 MIXED LIQUOR					CLARIFIER NO. 1	CLARIFIER NO. 2	CLARIFIER NO. 3	PLANT EFFLUENT											RETURN SLUDGE		WASTE SLUDGE TO STORAGE	
DATE	INITIAL	FLOW LD (mgd)	FLOW OT (mgd)	FLOW TOTAL (mgd)	BOD LD (mg/l)	BOD OT (mg/l)	BOD TOTAL (mg/l)	TSS LD (mg/l)	TSS OT (mg/l)	TSS TOTAL (mg/l)	AMMONIA as N	pH	TEMP C	WEATHER	PRECIPITATION (inches)	TEMPERATURE (degrees F)	SUSPENDED SOLIDS (mg/l)	SETTLEABILITY (ml/min)	DVI (ml/gm)	pH	DO (mg/l)	SUSPENDED SOLIDS (mg/l)	SETTLEABILITY (ml/min)	DVI (ml/gm)	pH	DO (mg/l)	DEPTH OF SLUDGE BLANKET (feet)	DEPTH OF SLUDGE BLANKET (feet)	DEPTH OF SLUDGE BLANKET (feet)	FLOW DVF (mgd)	pH	BOD (mg/l)	TOTAL SUSPENDED SOLIDS (mg/l)	DO (mg/l)	AMMONIA as N	TEMP C	E Coli	OIL & GREASE (lbs/day)	PHOSPHORUS (lbs/day)	ZINC (lbs/day)	FLOW (gallons)	SUSPENDED SOLIDS (mg/l)	FLOW (gallons)	WASTED OUT LBS
1	FH	0.162	0.988	1.150								7.48	17.6	O	0	47	3,660	460	126	7.7	2.9	2,880	550	191	7.72	3.8	1.0	1.0	0.5	1.558	7.91			6.9		15.5						0.793	4,695		
2	FH	0.155	1.029	1.184								7.31	16.7	C	0	45	3,520	430	122	7.69	3.0	3,870	650	168	7.67	3.9	1.0	1.0	1.0	1.523	7.89			7.8		16.3						0.656	7,475		
3	JH	0.153	0.972	1.125								7.36	19.0	C	0	47	3,730	450	121	7.69	3.6	4,110	550	134	7.64	2.5	1.0	1.0	1.0	1.43	7.90			6.8		16.3						0.905	6,535	45,000	2,453
4	JH	0.145	1.007	1.152								7.3	19.0	C	0	60	3,480	490	141	7.63	2.5	3,480	410	118	7.67	3.8	1.0	2.0	1.0	1.394	7.87			6.2		16.9						0.425	10,480		
5	JH	0.146	1.002	1.148							29.5	7.34	19.4	O	0	61	3,290	540	164	7.63	2.5	3,630	500	138	7.66	3.3	1.0	3.5	1.5	1.462	7.87			6.1	0.18	17.2						0.767	8,585		
6	JH	0.177	1.288	1.465	138	213	210	120	204	324		7.47	18.4	PC	1.1	46	4,250	540	127	7.64	1.9	3,190	390	122	7.62	1.7	1.0	1.5	1.5	1.824	7.83	1.7	2.4	5.7		17.2						1.319	10,405	45,000	3,905
7	JH	0.154	1.118	1.272								7.4	17.7	PC	0	38	3,140	520	166	7.63	2.7	3,570	480	134	7.63	3.2	1.0	1.0	1.0	1.562	7.88			6.4		16						0.553	4,200		
8	JH	0.137	1.205	1.342								7.42	19.0	C	0	38	3,370	360	107	7.62	2.3	3,380	440	130	7.58	1.5	3.0	4.0	1.0	1.736	7.86			6.5		16.3						1.070	6,670		
9	JH	0.193	0.979	1.172								7.33	17.0	C	0	32	3,770	510	135	7.72	4.1	3,560	480	135	7.71	4.1	1.5	3.5	1.5	1.527	7.94			7.3		13.5		< 5.0				1.207	4,030		
10	JH	0.143	0.991	1.134								7.42	15.7	C	0	34	3,190	480	150	7.68	3.2	3,360	480	143	7.64	3.0	1.5	3.0	1.5	1.579	7.88			6.6		13.6						1.024	10,955	45,000	4,111
11	JH	0.124	0.938	1.062								7.45	17.7	O	0	60	3,040	530	174	7.63	2.3	3,230	420	130	7.65	3.1	1.5	1.5	1.5	1.349	7.88			6.4		15.5						0.751	7,390		
12	JH	0.129	0.904	1.033							34.3	7.32	17.1	PC	0	46	3,390	410	121	7.67	3.4	3,550	540	152	7.62	2.4	1.5	1.0	1.0	1.363	7.89			6.8	0.07	14.8						0.715	8,820		
13	FH	0.137	0.964	1.101	228	208	200	184	134	174		7.42	16.7	C	0	34	3,820	430	113	7.69	3.3	3,660	450	123	7.68	2.2	2.0	3.0	2.0	1.101	7.89	1.5	2.2	6.7		14.1						0.394	5,415	45,000	2,032
14	FH	0.138	0.970	1.108								7.4	17	C	0	40	3,510	400	114	7.73	3.5	2,990	330	110	7.79	2.4	7.0	1.5	1.0	1.445	7.92			6.6		14.4						0.928	13,900		
15	FH	0.137	0.969	1.106								7.35	16.7	C	0	40	3,430	460	134	7.79	3.7	3,670	500	136	7.74	2.8	1.0	3.0	1.0	1.469	7.96			6.8		13.7						2.052	5,040		
16	FH	0.137	0.992	1.129								7.44	16.7	R	0.6	50	3,310	330	97	7.7	3.5	3,240	370	114	7.62	2.0	1.0	1.0	3.0	1.466	7.87			6.4		14.3						1.254	17,880		
17	JH	0.322	2.039	2.361								7.46	18	R	2.1	64	3,650	370	101	7.62	1.2	2,820	370	131	7.68	1.4	2.0	4.0	1.0	2.853	7.83			4.3		16						1.566	9,105	45,000	3,417
18	JH	1.064	4.154	5.218								7.39	16.3	O	3.7	50	4,490	490	109	7.51	0.9	3,840	390	102	7.51	1.4	1.0	2.0	1.0	5.781	7.80			5.1		15.7						1.264	6,705		
19	JH	0.203	1.151	1.354							15.7	7.26	16.7	PC	0	45	4,580	600	131	7.58	4	3,960	500	126	7.63	5.8	1.0	1.5	1.5	1.866	7.86			6.4	0.7	14.7						0.758	9,465		
20	JH	0.150	0.919	1.069	78	185	130	60	198	162		7.47	15.4	PC	0	38	4,280	580	136	7.31	3	4,120	530	127	7.51	3.0	1.0	1.0	1.0	1.599	7.72	2.3	1.6	6.3		13.3						0.571	9,790	45,000	3,674
21	JH	0.153	1.010	1.161								7.49	15	S	0.5	37	4,130	480	116	7.6	3.3	2,930	460	157	7.58	3.6	1.5	1.5	1.5	1.541	7.84			7.3		12.1						0.372	16,230		
22	JH	0.159	1.035	1.194								7.53	14	C	0	25	4,170	620	147	7.65	4.6	3,360	490	146	7.61	4.2	1.0	1.0	1.0	1.746	7.86			7.3		11.3						1.456	4,695		
23	JH	0.138	0.907	1.045								7.51	14.8	C	0	36	3,270	550	168	7.62	4.3	3,230	580	180	7.62	4.3	1.0	1.5	1.0	1.571	7.85			7.4		12.1						1.140	5,735		
24	JH	0.133	0.877	1.008							29.9	7.35	15.1	PC	0	34	4,470	680	152	7.59	3.9	3,520	490	139	7.63	5.0	3.0	1.5	1.0	1.518	7.82			7.5	0.03	11.5						0.857	7,905		
25	JH	0.125	0.881	1.006	150	168	188	98	264	188		7.4	15	PC	0	52	4,690	610	130	7.58	2.8	3,260	400	123	7.63	4.0	1.0	1.5	1.0	1.463	7.83	1.3	1.0	7.3		12.7						0.552	9,815	90,000	7,367
26	FH	0.130	0.970	1.100								7.43	16.5	O	0	64	3,990	450	113	7.62	2.6	3,690	470	127	7.7	3.8	1.0	1.0	1.0	1.376	7.93			7.1		15						0.738	5,680		
27	FH	0.305	1.766	2.071								7.61	12.9	R	1.75	42	3,330	340	102	7.57	2.9	3,280	400	122	7.59	4.1	7.0	7.0	2.0	2.529	7.87			7.4		12						0.845	14,080		
28	FH	0.586	2.647	3.233								7.53	12.4	O	0.6	39	3,210	320	97	7.54	3.1	2,640	280	106	7.57	4.3	1.0	1.0	1.0	3.907	7.77			7.7		12.9						1.660	1,950		
29	FH	0.227	1.270	1.497								7.55	13.1	O	0	41	3,500	400	114	7.65	3	3,570	430	120	7.65	4.1	3.0	1.0	1.0	2.132	7.84			7.4		12.2						1.162	4,960		
30	FH	0.189	1.105	1.294								7.46	14.4	R	0.4	43	3,340	360	108	7.6	3.7	4,430	700	158	7.52	3.3	1.0	3.0	1.0	1.939	7.80			6.7		12.6						1.124	9,890		
TOTAL		6.247	37.047	43.294	594	774	728	462	800	848	109.2	222.9	491		10.75	1328	113,000	14,190	3,836	228.9	91.7	104,020	14,030	4,042	229.1	98.0	48.5	57.0	37.0	55.609	236	6.8	7.2	200.5	0.98	429.7	0	< 5.0	0	0	28.876	248,480	360,000	26,959
MAX		1.064	4.154	5.218	228	213	210	184	264	324	34.1	7.61	19.4		3.7	64	4,690	680	174	7.79	4.6	4,430	700	191	7.79	5.8	7.0	7.0	3.0	5.781	7.96	2.3	2.4	7.7	0.7	17.2	0	< 5.0	0	0	2.052	17,880	90,000	7,367
MIN		0.124	0.877	1.001	78	168	130	60	134	162	15.7	7.26	12.4		0	25	3,040	320	97	7.31	0.9	2,640	280	102	7.51	1.4	1.0	1.0	0.5	1.101	7.72	1.3	1	4.3	0.03	11.3	0	< 5.0	0	0	0.372	1,950	45,000	2,032
AVG		0.208	1.235	1.443	149	194	182	116	200	212	27.3	7.43	16.4		0.36	44	3,700	473	128	7.63	3.1	3,467	468	135	7.64	3.3	1.6	1.9	1.2	1.854	7.86	1.7	1.8	6.7	0.23	14.3	0.0	< 5.0	0.0	0.0	0.963	8,283	51,429	3,851

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

Prepared by GH, FH, JH

Approved by GH

Date 12/7/2015

47114

WATER RESOURCES®
Alliance
Professional Water and Wastewater Operations

OPERATING DIVISIONS

MISSOURI
Atchison County
Bonne Terre
Boonville
Bowling Green
Buchanan County #1
Cameron
Cape Girardeau
Carroll County #1
Craig
East Central Missouri Water & Sewer Authority
Elsberry
Fayette
Franklin County #1
Franklin County #3
Henry County Water Company
Henry County #3
Lake Ozark/ Osage Beach
Lincoln County #1
Neosho
Nevada
Parkville
Phelps County #2
Platte County #C-1
Proctor & Gamble
Ralls County #1
Russellville
Sedalia
St Charles County #2
St Genevieve
Versailles

IOWA
Maquoketa
Tipton

TENNESSEE
South Fulton

REPORT OF OPERATIONS

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

Month of December 2015

Submitted by Alliance Water Resources, Inc. for the

January 2016

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-01013241. 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	1.9	1.8	NA	0	0.06	<5.0	NA
Peak Day	3.4	3.2	8.0	0	0.09	<5.0	NA
Percent Removal	98.8	98.9	NA	NA	NA	NA	NA

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	126	2.7	10	4.0
Weekly Average	45	45		630			
Daily Max					10.6	15	8.1

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 1.710 MGD or 57% of Permitted flow with Lake Ozark contributing 16% of the total flow and Osage Beach contributing 84%. 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 70098 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.

476,046 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 435,625 gallons with a level of 4.5 feet in Tank 1 and 4.0 feet in Tank 2.

WASTEHAULERS

The plant received 21 loads of septage during the month totaling 52,500 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)
- We had to call in an electrician on the 2nd of December to help us with a control panel problem with both clarifiers. Steve Durban w/ Aesthetix Electric was here all day; he replaced a phase monitor, hands off switch on clarifier 2 and on clarifier 1 he cleaned some contacts in the actuator control box, found that the push button for the manual part of the ducking skimmer arm needed replaced. We had all the spare parts needed except for the manual push button. We ordered the part and have since put it on and both clarifiers' controls are working great now.
- We changed out a few of the overhead street light bulbs on the 9th and noticed while changing them that a couple of the light fixtures and ballast are in need of replacement. When we can get the overhead bucket truck back and weather permitting we will replace what's needed.
- We had a short in one of the exit lights in the headworks building on the 15th of December, so we went and purchased three new LED style lights. We got two of them installed that day and finished on the 16th. We replaced all three so we wouldn't have the old bulb style anymore and so they would all look the same.

SAFETY

- We conducted our monthly routine Safety Meeting on Hazard Communication on the 9th of December.

REGULATORY AGENCY, INSPECTION AND REPORTS

- We filled out the EDMR on MDNR website on the 7th of January.

MISCELLANEOUS AND RECOMMENDATIONS

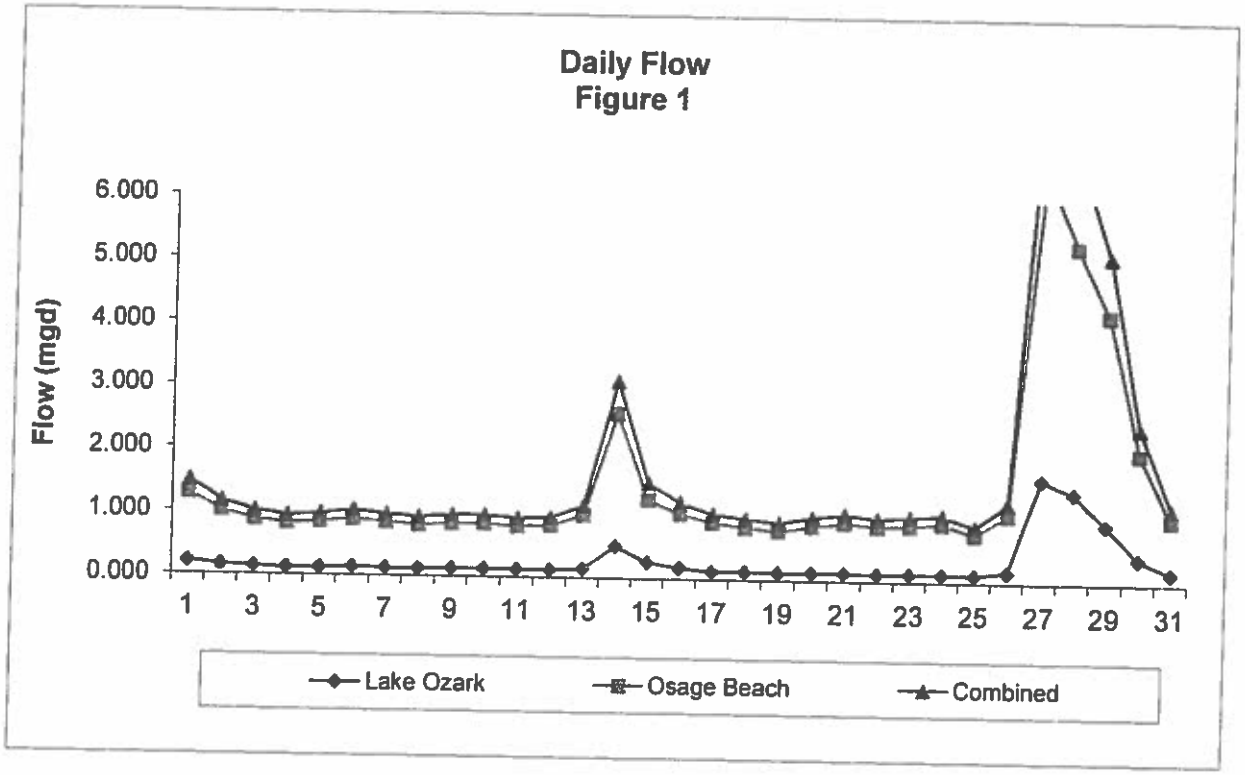
- We would like to Thank Matt and the City of Lake Ozark for letting us use their overhead bucket truck to replace a few of the parking lot lights, and also for sending out their backhoe and crew to help move some equipment out of the blower building at the digesters during the severe storms and flooding. Many Thanks!
- We have included updated copies of the plant 2016 ERP (Emergency Response Plan) and 2016 plant inventory. (See Attached)

TABLE A
LAKE OZARK/OSAGE BEACH WWTP

MONTH OF December 2015

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	0.3	0.204	1.280	1.484	13.7	86.3						
2-Dec	0	0.157	1.002	1.159	13.5	86.5						
3-Dec	0	0.134	0.876	1.010	13.3	86.7						
4-Dec	0	0.119	0.821	0.940	12.7	87.3	150	153	150	120	154	196
5-Dec	**0**	**0.123**	**0.849**	**0.972**	**12.7**	**87.3**						
6-Dec	**0**	**0.140**	**0.890**	**1.030**	**13.6**	**86.4**						
7-Dec	0	0.124	0.848	0.972	12.8	87.2						
8-Dec	0	0.119	0.809	0.928	12.8	87.2						
9-Dec	0	0.132	0.837	0.969	13.6	86.4						
10-Dec	0	0.129	0.842	0.971	13.3	86.7						
11-Dec	0	0.127	0.803	0.930	13.7	86.3	193	223	245	154	200	254
12-Dec	**0**	**0.124**	**0.821**	**0.945**	**13.1**	**86.9**						
13-Dec	**0.25**	**0.147**	**0.991**	**1.138**	**12.9**	**87.1**						
14-Dec	1.5	0.508	2.601	3.109	16.3	83.7						
15-Dec	0	0.260	1.241	1.501	17.3	82.7						
16-Dec	0	0.177	1.025	1.202	14.7	85.3						
17-Dec	0	0.132	0.900	1.032	12.8	87.2						
18-Dec	0	0.135	0.829	0.964	14.0	86.0	125	125	140	104	120	150
19-Dec	**0**	**0.127**	**0.777**	**0.904**	**14.0**	**86.0**						
20-Dec	**0**	**0.132**	**0.862**	**0.994**	**13.3**	**86.7**						
21-Dec	0.1	0.132	0.918	1.050	12.6	87.4						
22-Dec	0	0.122	0.869	0.991	12.3	87.7						
23-Dec	0.25	0.129	0.892	1.021	12.6	87.4	193	178	175	134	132	176
24-Dec	0	0.130	0.921	1.051	12.4	87.6						
25-Dec	0	0.122	0.754	0.876	13.9	86.1						
26-Dec	**1.75**	**0.175**	**1.068**	**1.243**	**14.1**	**85.9**						
27-Dec	**4.5**	**1.620**	**6.489**	**8.109**	**20.0**	**80.0**						
28-Dec	2.6	1.416	5.298	6.714	21.1	78.9						
29-Dec	0.4	0.926	4.227	5.153	18.0	82.0						
30-Dec	0	0.401	2.048	2.449	16.4	83.6						
31-Dec	0	0.180	1.004	1.184	15.2	84.8	80	83	83	52	72	78
SUM	11.7	8.603	44.392	52.995								
AVG		0.278	1.432	1.710	16	84	148	152	159	113	136	171

NOTE: BOLD PRINT INDICATES WEEKEND DAYS


Daily Flow
Figure 1
Flow (mgd)
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 31
Lake Ozark
Osage Beach
Combined

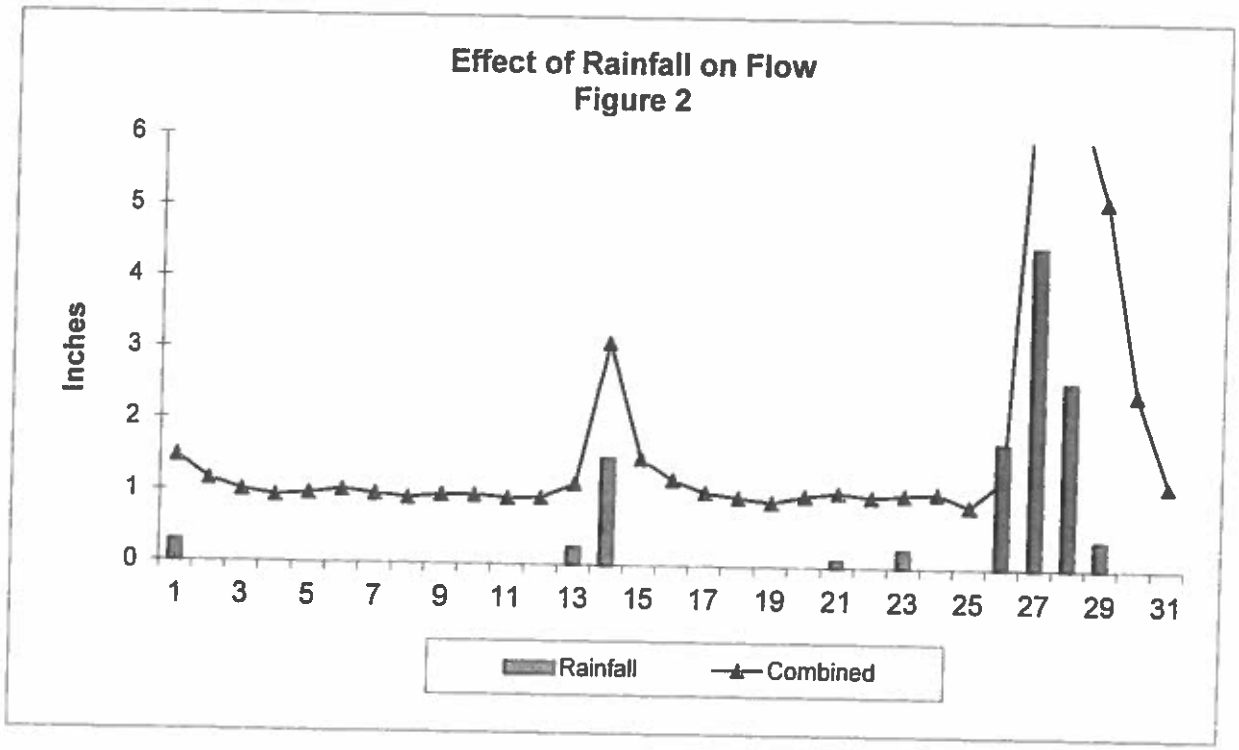

Effect of Rainfall on Flow
Figure 2
Inches
6
5
4
3
2
1
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
Rainfall
Combined

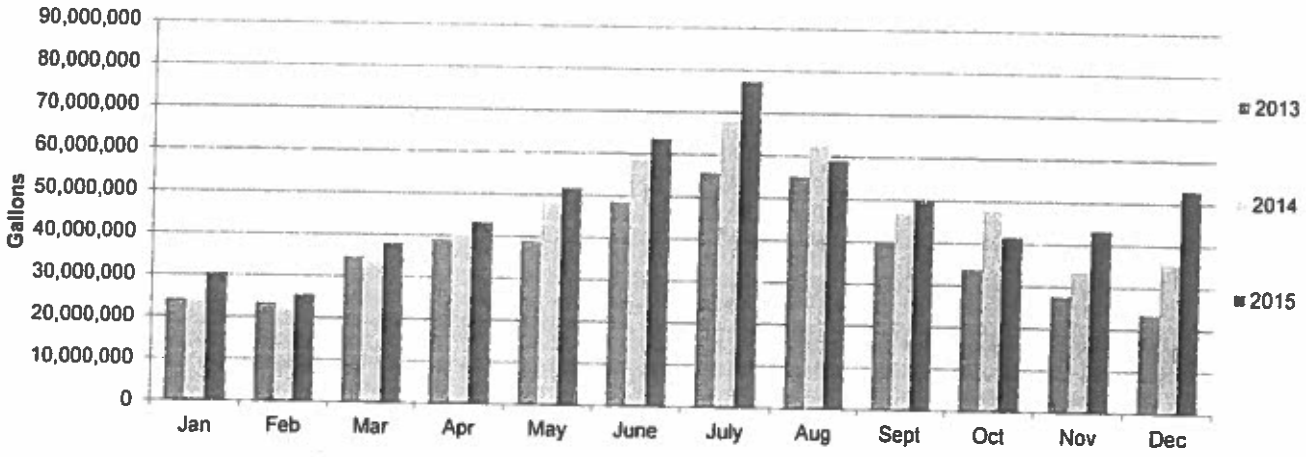
TABLE B
JOINT SEWER BOARD
Monthly Flows

2013	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	2.8	19,923,000	83%	4,104,000	17%	24,027,000	100%
February	4.2	19,290,000	83%	3,979,000	17%	23,269,000	100%
March	5.3	28,232,000	82%	6,308,000	18%	34,540,000	100%
April	8.7	31,410,000	81%	7,507,000	19%	38,917,000	100%
May	2.9	32,247,000	83%	6,560,000	17%	38,807,000	100%
June	4.6	40,205,000	83%	8,185,000	17%	48,390,000	100%
July	2.2	46,803,000	84%	8,794,000	16%	55,597,000	100%
August	15.0	45,742,000	83%	9,351,000	17%	55,093,000	100%
September	2.3	33,128,000	83%	6,869,000	17%	39,997,000	100%
October	3.6	27,722,000	82%	5,996,000	18%	33,718,000	100%
November	2.5	22,915,000	83%	4,775,000	17%	27,690,000	100%
December	2.5	19,507,000	83%	4,038,000	17%	23,545,000	100%
	56.6	367,124,000	83%	76,466,000	17%	443,590,000	100%

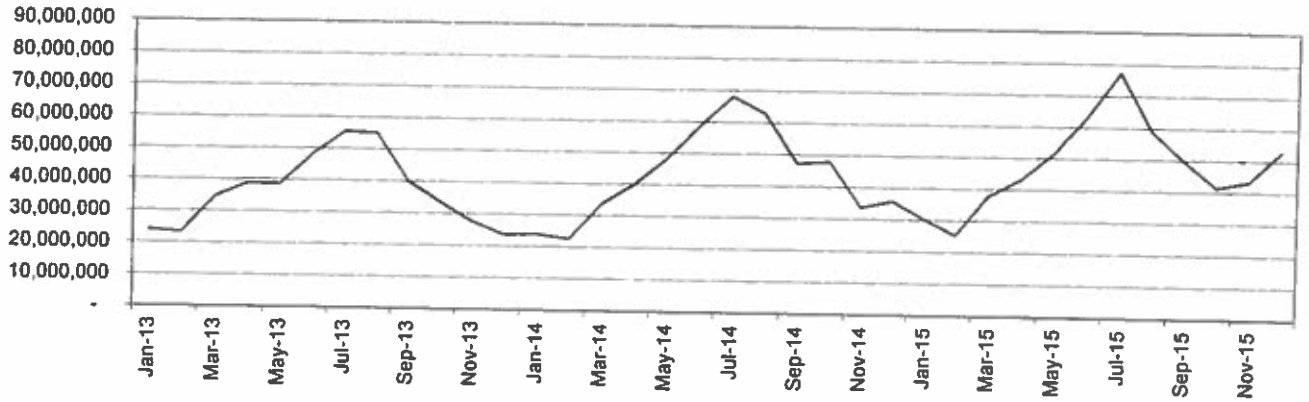
2014	RAINFALL	OSAGE BEACH		LAKE OZARK		TOTAL	%
January	3.0	19,229,000	81%	4,634,000	19%	23,863,000	100%
February	1.3	18,444,000	82%	4,114,000	18%	22,558,000	100%
March	1.2	28,731,000	85%	5,061,000	15%	33,792,000	100%
April	5.1	33,479,000	84%	6,515,000	16%	39,994,000	100%
May	4.7	41,054,000	85%	7,129,000	15%	48,183,000	100%
June	5.1	50,416,000	86%	8,342,000	14%	58,758,000	100%
July	3.1	59,089,000	87%	9,059,000	13%	68,148,000	100%
August	2.9	54,624,000	87%	8,228,000	13%	62,852,000	100%
September	3.4	40,316,000	86%	6,735,000	14%	47,051,000	100%
October	7.9	41,322,000	86%	6,659,000	14%	47,981,000	100%
November	1.6	29,315,000	87%	4,506,000	13%	33,821,000	100%
December	2.6	31,534,000	88%	4,204,000	12%	35,738,000	100%
	41.7	447,553,000	85%	75,186,000	15%	522,739,000	100%

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%

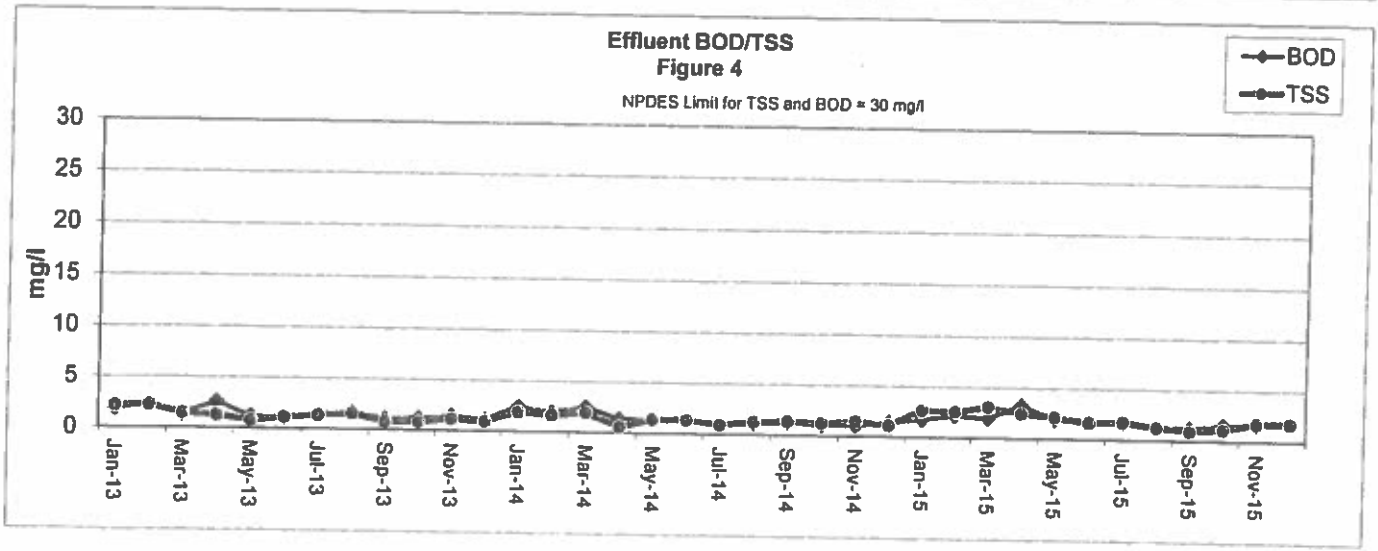
Monthly Influent Flow
Figure 3A



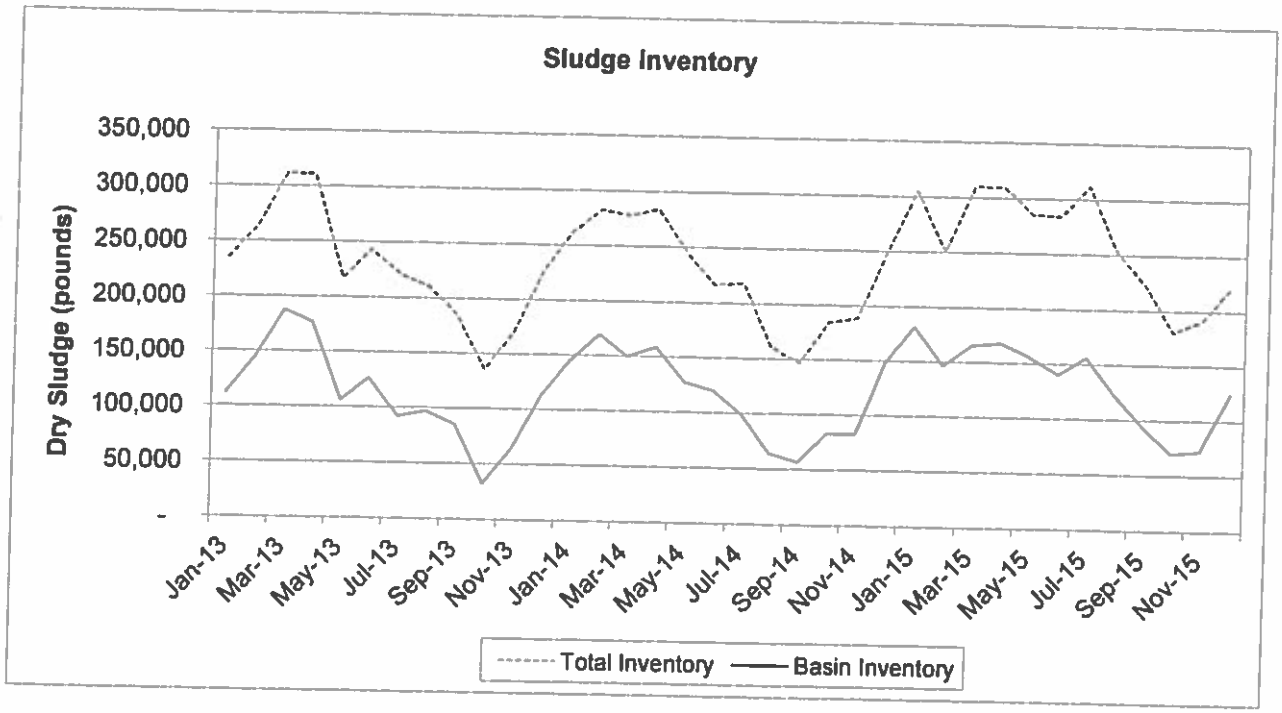
Monthly Influent Flow
Figure 3B

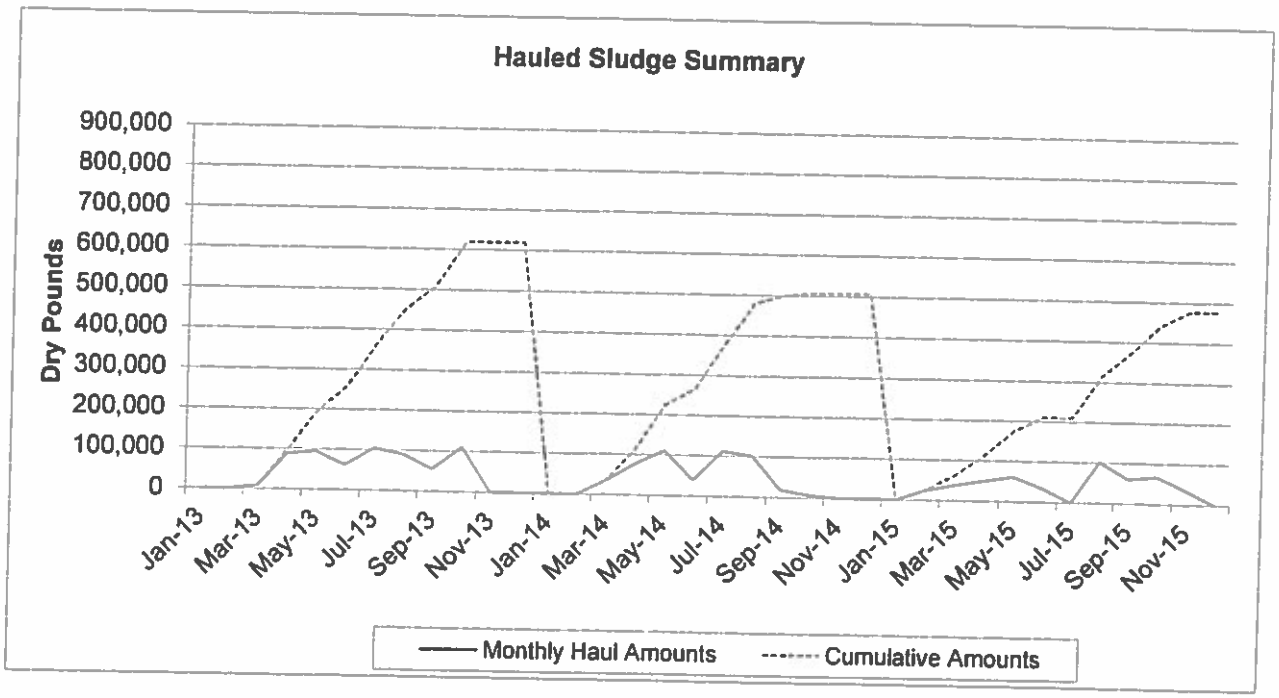


Effluent BOD/TSS
Figure 4



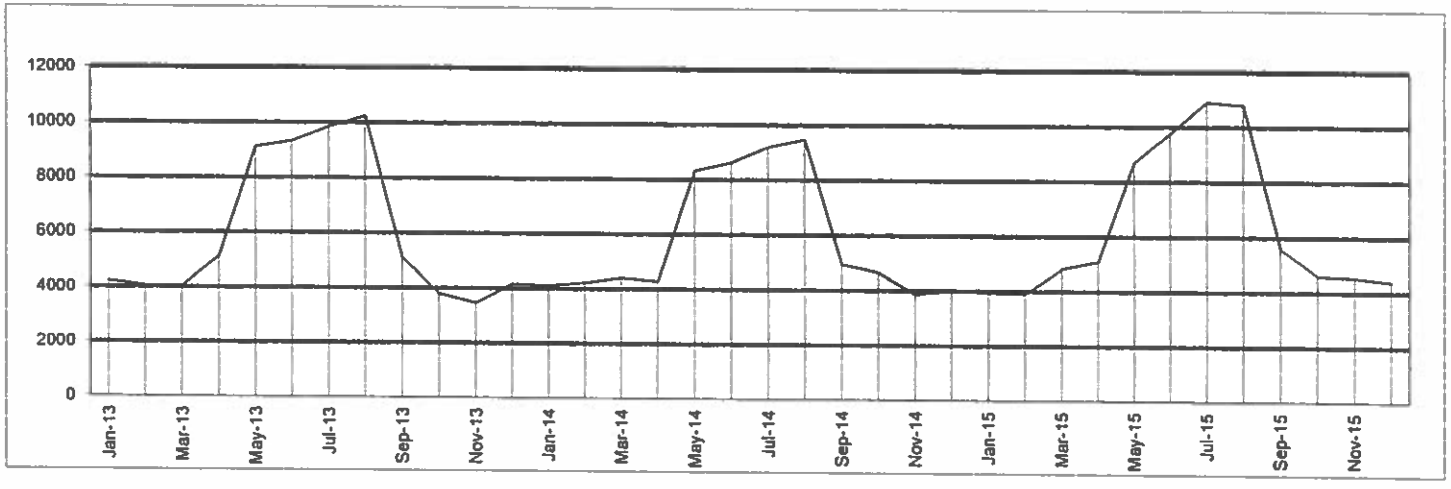
	Hauled Sludge					Basin Depths					Blanket Depths			MLSS Inventory		Blanket and MLSS Inventory		MLSS	Total Dry	Accepted Septage	
	Loads	Gallons	# Dry	% Solids	Annual Cumulative # Dry	Tank #1	Tank #2	AB #1	Basin Gallons	# Dry	Clarf #1	Clarf #2	Clarf #3	MLSS AB #1	MLSS AB #2	Gallons	# Dry	% Solids	Sludge Inventory	Loads	Gallons
Jan-13	0	-	0	3.5%	-	6.0	2.5	0.0	382,500	111,652	1.5	2.0	0.0	4,120	4,010	3,862,167	124,155	0.00407	235,807	26	65,000
Feb-13	0	-	0	3.5%	-	6.0	5.0	0.0	495,000	144,491	1.0	2.0	1.0	4,000	3,740	3,696,714	119,314	0.00387	263,805	56	110,000
Mar-13	8	29,600	8,517	3.5%	8,517	8.0	6.5	0.0	652,500	187,748	2.0	2.0	1.0	4,030	4,050	3,714,476	123,915	0.004	311,663	21	52,500
Apr-13	74	273,800	89,488	3.9%	98,005	6.0	6.0	0.0	540,000	176,492	2.5	2.0	2.0	4,620	4,130	3,766,785	135,084	0.0043	311,576	24	60,000
May-13	82	303,400	95,228	3.8%	193,233	3.5	4.0	0.0	337,500	105,931	3.0	5.0	2.0	3,970	3,040	3,828,952	111,767	0.0035	217,698	36	85,500
Jun-13	54	199,800	62,210	3.7%	255,443	6.0	3.0	0.0	405,000	126,101	1.0	7.0	2.0	3,850	3,540	3,828,952	117,994	0.0037	244,095	47	117,500
Jul-13	97	358,900	105,164	3.5%	360,607	6.0	1.0	0.0	315,000	92,301	1.5	2.0	1.0	3,950	4,410	3,705,595	129,181	0.00418	221,482	58	137,500
Aug-13	74	273,800	90,969	4.0%	451,576	6.5	0.0	0.0	292,500	97,182	2.0	2.5	2.0	3,580	3,680	3,766,785	114,036	0.00363	211,218	57	142,500
Sep-13	48	177,600	56,069	3.8%	507,645	5.0	1.0	0.0	270,000	85,240	2.0	1.5	1.5	3,150	3,300	3,727,309	100,252	0.00323	185,492	39	97,500
Oct-13	83	307,100	110,472	4.3%	618,117	2.0	0.0	0.0	90,000	32,375	2.0	2.0	2.0	2,950	3,680	3,757,904	103,895	0.00332	136,271	32	80,000
Nov-13	0	-	0	4.3%	618,117	4.0	0.0	0.0	180,000	64,552	1.0	0.0	1.0	3,220	3,740	3,661,190	106,259	0.00348	170,811	15	37,500
Dec-13	0	-	0	4.3%	618,117	5.0	2.0	0.0	315,000	112,965	0.0	0.5	1.0	3,600	3,880	3,652,309	113,921	0.00374	226,887	19	47,500
Jan-14	0	-	0	4.3%	-	4.0	5.0	0.0	405,000	145,241	2.0	2.5	0.0	3,690	3,960	3,679,929	117,392	0.00383	262,633	22	54,500
Feb-14	0	-	0	4.3%	-	5.0	5.5	0.0	472,500	169,448	1.5	2.5	0.0	3,410	4,030	3,671,048	113,894	0.00372	283,341	6	15,000
Mar-14	29	107,300	35,703	4.0%	35,703	5.0	5.0	0.0	450,000	149,733	0.5	0.5	0.5	4,270	4,230	3,639,476	129,001	0.00425	278,734	35	90,500
Apr-14	65	240,500	77,176	3.8%	112,879	7.5	3.5	0.0	495,000	158,845	1.5	1.0	1.5	4,420	3,710	3,709,547	125,761	0.00407	284,606	30	75,000
May-14	96	355,200	111,613	3.8%	224,492	5.5	3.5	0.0	405,000	127,261	1.0	2.0	2.0	3,550	4,040	3,740,142	118,377	0.0038	245,638	24	60,000
Jun-14	41	151,700	40,455	3.2%	264,947	4.5	5.5	0.0	450,000	120,005	3.0	2.0	2.0	3,530	2,630	3,775,666	98,986	0.00308	216,991	26	61,000
Jul-14	117	432,900	112,292	3.1%	377,239	6.5	2.0	0.0	382,500	99,219	5.0	1.5	1.5	4,030	3,610	3,780,595	120,445	0.00382	219,664	44	111,500
Aug-14	107	395,900	102,973	3.1%	480,212	5.5	0.0	0.0	247,500	64,374	1.0	1.0	1.0	3,690	2,640	3,678,952	97,110	0.00317	161,484	55	129,000
Sep-14	17	62,900	19,811	3.8%	500,023	2.5	1.5	0.0	180,000	56,893	0.0	1.5	1.0	2,670	3,210	3,670,071	89,989	0.00294	146,682	37	92,500
Oct-14	5	18,500	6,789	4.4%	506,812	4.0	1.0	0.0	225,000	82,569	0.0	1.5	2.0	2,990	3,620	3,713,499	102,358	0.00331	184,927	33	79,500
Nov-14	0	-	0	4.4%	506,812	4.0	1.0	0.0	225,000	82,566	0.0	2.0	1.0	3,630	3,330	3,678,952	106,775	0.00348	189,341	20	50,000
Dec-14	0	-	0	4.4%	506,812	5.0	4.0	0.0	405,000	148,619	0.0	2.0	2.0	3,460	3,060	3,722,380	101,516	0.00327	250,135	18	40,000
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	0.00485	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


Sludge Inventory
Dry Sludge (pounds)
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Total Inventory
Basin Inventory

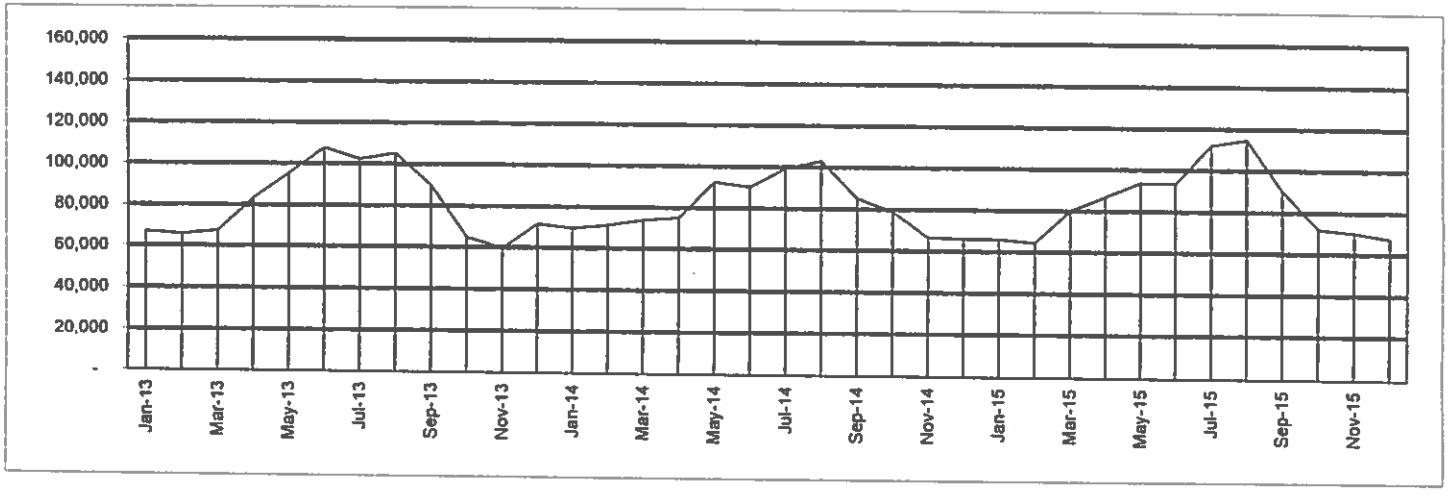

Hauled Sludge Summary
Dry Pounds
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
Nov-14
Jan-15
Mar-15
May-15
Jul-15
Sep-15
Nov-15
Monthly Haul Amounts
Cumulative Amounts

	Electric Cost	Kilowatts Used
Jan-13	4240	66,990
Feb-13	4069	65,810
Mar-13	4056	67,500
Apr-13	5132	83,390
May-13	9135	95,360
Jun-13	9331	107,780
Jul-13	9861	102,490
Aug-13	10255	105,350
Sep-13	5108	89,830
Oct-13	3806	64,870
Nov-13	3459	59,610
Dec-13	4171	71,660
Jan-14	4116	69,690
Feb-14	4226	71,330
Mar-14	4427	73,840
Apr-14	4297	75,240
May-14	8325	92,580
Jun-14	8643	90,400
Jul-14	9200	99,540
Aug-14	9483	103,070
Sep-14	4953	85,380
Oct-14	4663	78,920
Nov-14	3864	66,400
Dec-14	4009	66,040
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

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								
Dec-15	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	7.5			13.8	2.087	7.8				6.5		12.1		
2	7.4			14.3	1.613	7.8				7.1		12.3		
3	7.4			13.4	1.607	7.9			0.09	7.6		11.3		
4	7.5	150	196	13.2	1.534	7.9	1.9	2.6		7.8		10.6	98.7	98.7
5	7.4			13.4	1.497	7.9				7.5		10.1		
6	7.4			13.4	1.572	7.8				7.3		10.7		
7	7.5			12.5	1.502	7.8				7.4		10.4		
8	7.4			13.3	1.461	7.9				7.6		10.9		
9	7.5			13.7	1.394	7.8				7.0		11.3		
10	7.4			15.0	1.505	7.8			0.07	7.0		12.4		
11	7.4	245	254	13.7	1.454	7.8	1.6	1		7.2		11.2	99.3	99.6
12	7.3			14.8	1.229	7.8				7.4		11.4		
13	7.4			15.0	1.517	7.8				7.0		14.2		
14	7.5			13.2	3.638	7.8				5.2		14.0		
15	7.3			13.9	2.093	7.8				6.1		13.1		
16	7.3			14.0	1.625	7.8				6.6		12.8		
17	7.4			13.3	1.600	7.9			0.08	7.0		11.1		
18	7.3	140	150	13.5	1.586	7.8	1.6	1.2		7.2		10.5	98.9	99.2
19	7.4			12.7	1.449	7.8				7.7		9.6		
20	7.5			13.3	1.531	7.9				7.6		10.4		
21	7.4			14.4	1.539	8.0				6.7		13.2		
22	7.4			13.0	1.454	7.8				6.9		11.1		
23	7.4	175	176	14.4	1.548	7.8	1.2	1.2	0.02	6.4		12.7	99.3	99.3
24	7.2			13.9	1.513	7.8				6.8		11.5		
25	7.4			12.9	1.398	7.9				7.1		10.9		
26	7.6			13.1	1.687	7.7				5.0		11.9		
27	7.6			10.1	9.048	7.6				4.8		11.8		
28	7.6			10.9	7.512	7.5				5.3		11.2		
29	7.6			10.8	6.159	7.4			0.02	6.1		10.5		
30	7.5			11.0	3.264	7.8				8.9		9.8		
31	7.4	83	78	11.1	1.875	7.7	3.4	3.2		7.9		8.8	95.9	95.9
Total					70.491									
Avg		159	171	13.2	2.274		1.9	1.8	0.06	6.9	0.0	11.4	98.4	98.5
Min	7.2	83	78	10.1	1.229	7.4	1.2	1.0	0.02	4.8	0.0	8.8	95.9	95.9
Max	7.6	245	254	15.0	9.048	8.0	3.4	3.2	0.09	8.9	0.0	14.2	99.3	99.6

MONTHLY EFFLUENT MONITORING		QUARTERLY EFFLUENT MONITORING	
DATE	Oil & Grease mg/L	Selenium µg/L	Zinc µg/L
1			
2			
3			
4			
5			
6			
7	< 5.0		
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			
Avg	< 5.0	0.00	0.00
Min	< 5.0	0.00	0.00
Max	< 5.0	0.00	0.00

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	3,940	480	11.8	3.2	4,270	580	12.2	35	0.3	7:30
2		5.4	2,920	320	11.7	5.1	3,560	400	11.9	38	0	7:30
3		4.9	3,760	450	10.8	5.3	3,870	650	11.1	30	0	7:30
4		5.2	3,450	550	10.7	4.6	4,000	610	10.8	29	0	7:30
5		4.4	3,960	510	10.3	5.1	3,890	450	10.2	30	0	7:30
6		4.2	4,100	600	10.5	5.1	3,510	460	10.9	37	0	7:30
7		3.3	3,400	550	10.5	3.7	4,130	520	10.6	37	0	7:30
8		3.8	4,200	630	11.1	3.5	3,300	440	11.3	37	0	7:30
9		3.5	3,900	600	11.4	2.7	2,300	310	11.8	40	0	7:30
10		2.8	4,460	600	12.2	4.1	3,580	450	12.1	53	0	7:30
11		2.9	4,350	540	11.4	3.1	3,460	480	11.6	36	0	7:30
12		3.1	3,950	520	12.6	3.3	3,480	430	12.6	48	0	7:30
13		2.7	4,100	450	14.7	2.9	3,750	440	14.5	62	0.25	7:30
14		1.3	3,510	370	13.6	1.4	3,500	400	13.8	46	1.5	7:30
15		1.1	4,830	700	12.9	4.2	2,870	310	13	39	0	7:30
16		2.2	3,480	460	12.9	4.2	3,530	380	13	47	0	7:30
17		3.9	3,730	500	11.1	4.3	3,480	450	11.2	28	0	7:30
18		4.2	2,720	470	10.2	5.4	3,780	430	10.4	28	0	7:30
19		5.1	3,600	460	9.6	5.7	3,440	460	9.7	29	0	7:30
20		3.7	3,650	490	10.7	4.3	3,390	400	10.9	46	0	7:30
21		1.8	4,420	530	12.1	2.9	3,380	360	12.2	57	0.1	7:30
22		3.2	3,570	400	11.1	4.2	3,820	450	11.4	41	0	7:30
23		1.4	3,330	400	12.9	1.3	3,780	420	12.8	56	0.25	7:30
24		3.1	3,620	400	11.8	3.1	3,880	530	11.9	37	0	7:30
25		3.9	3,520	350	11	3.3	4,120	580	11.2	34	0	7:30
26		1.3	3,480	350	11.9	1.5	3,680	400	12.1	50	1.75	7:30
27		2.8	2,640	220	11	2.3	2,730	220	11.6	41	4.5	7:30
28		4.4	2,470	210	11.1	4.3	1,960	210	11.4	40	2.6	7:30
29		5.2	2,180	190	10.1	5.4	2,060	190	10.4	30	0.4	7:30
30		6.7	3,340	300	9.3	9.2	2,440	200	9.2	33	0	7:30
31		3.5	4,460	440	9	7.9	1,940	210	9.1	33	0	7:30

COMMENTS:

TESTS PERFORMED BY (PRINT)	SIGNATURE	PHONE #	DATE
John Hornback	John Hornback	(573)365-0455	1/6/2015
REPORT APPROVED BY (PRINT)	SIGNATURE	PHONE #	DATE
Gary Hutchcraft	Gary Hutchcraft	(573)365-0455	1/6/2015

*Required Daily (Monday - Friday)

**Required 1/week

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

PERMITTEE NAME/ADDRESS

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

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

MO0103241	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2015	12	01	TO	2015	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	*****	*****		3.4	1.9	*****	mg/L	Weekly	24 Hour Composite	
Stage Type: End of Pipe	REQRMNT	*****	*****		Weekly Average : 45	Monthly Average : 30	*****		Weekly	24 Hour Composite	
Flow, in conduit or thru treatment plant (50050)	REPORTD	9.848	2.274	Mgal/d	*****	*****	*****		Daily	Record	
Stage Type: End of Pipe	REQRMNT	Daily Maximum : Monitoring Required	Monthly Average : Monitoring Required		*****	*****	*****		Daily	Record	
Nitrogen, ammonia total (as N) (00610)	REPORTD	*****	*****		.09	.06	*****	mg/L	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : 10.6	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	*****	*****		7.4	8.0	*****	SU	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Minimum : 6	Maximum : 9	*****		Weekly	Grab	
Temperature, water deg. centigrade (00010)	REPORTD	*****	*****		14.2	11.4	*****	deg C	Weekly	Grab	
Stage Type: End of Pipe	REQRMNT	*****	*****		Daily Maximum : Monitoring Required	Monthly Average : Monitoring Required	*****		Weekly	Grab	
Total Suspended Solids (TSS) (00530)	REPORTD	*****	*****		3.2	1.8	*****	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:
OUTFALL-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
TYPED OR PRINTED NAME / SIGNATURE	Date

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LAKE OZARK/OSAGE BEACH WWTP
Operation Report

FOR DECEMBER (month) 2015 (year)

DATE	INITIAL	PLANT INFLUENT: FLOW LO (mgd)	FLOW OSB (mgd)	FLOW TOTAL (mgd)	BOD LO (mg/l)	BOD OB (mg/l)	BOD TOTAL (mg/l)	TSS LO (mg/l)	TSS OB (mg/l)	TSS TOTAL (mg/l)	AMMONIA as N	pH	TEMP C	ENVIRONMENTAL CONDITIONS: WEATHER	PRECIPITATION (inches)	TEMPERATURE (degrees F)	OXIDATION DITCH NO 1 MIXED LIQUOR: SUSPENDED SOLIDS (mg/l)	SETTLEOMETER (ml/liter)	SVI (ml/gm)	pH	DO (mg/l)	OXIDATION DITCH NO 2 MIXED LIQUOR: SUSPENDED SOLIDS (mg/l)	SETTLEOMETER (ml/liter)	SVI (ml/gm)	pH	DO (mg/l)	CLARIFIER NO 1: DEPTH OF SLUDGE BLANKET (feet)	CLARIFIER NO 2: DEPTH OF SLUDGE BLANKET (feet)	CLARIFIER NO 3: DEPTH OF SLUDGE BLANKET (feet)	PLANT EFFLUENT: FLOW (MG)	pH	BOD (mg/l)	TOTAL SUSPENDED SOLIDS (mg/l)	DO (mg/l)	AMMONIA as N	TEMP C	E COLI	OIL & GREASE (mg/l)	SELENIUM (Quarterly)	ZINC (Quarterly)	RETURN SLUDGE: FLOW (gallons)	SUSPENDED SOLIDS (mg/l)	WASTE SLUDGE TO STORAGE: FLOW (gallons)	SUSPENDED SOLIDS (mg/l)
1	JH	0.204	1.280	1.484								7.45	13.8	PC	0.3	35	3,940	480	122	7.54	3.2	4,270	580	136	7.54	3.2	1.5	1.0	1.0	2.087	7.77			6.5		12.1									
2	FH	0.157	1.002	1.159								7.41	14.3	O	0	38	2,920	320	110	7.69	5.4	3,560	400	112	7.66	5.1	2.0	4.0	2.5	1.613	7.79			7.1		12.3						0.459	10,405	45,000	3,905
3	JH	0.134	0.876	1.010							32.4	7.43	13.4	PC	0	30	3,760	450	120	7.66	4.9	3,870	650	168	7.67	5.3	1.0	1.0	1.0	1.607	7.87			7.6	0.09	11.3						0.216	23,650		
4	JH	0.119	0.821	0.940	150	153	150	120	154	196		7.49	13.2	C	0	29	3,450	550	159	7.71	5.2	4,000	610	153	7.65	4.6	1.0	1.0	1.0	1.534	7.86	1.9	2.6	7.8		10.6						0.984	7,365		
5	JH	0.123	0.849	0.972								7.44	13.4	C	0	30	3,960	510	129	7.67	4.4	3,890	450	116	7.71	5.1	1.0	1.0	1.0	1.497	7.87			7.5		10.1						0.963	5,240	45,000	1,967
6	JH	0.140	0.890	1.030								7.42	13.4	O	0	37	4,100	600	146	7.64	4.2	3,510	460	131	7.68	5.1	1.0	1.0	1.0	1.572	7.83			7.3		10.7						0.516	4,945		
7	JH	0.124	0.848	0.972								7.45	12.5	O	0	37	3,400	550	162	7.63	3.3	4,130	520	126	7.63	3.7	1.0	1.0	1.0	1.502	7.84			7.4		10.4		< 5.0				0.684	5,985		
8	JH	0.119	0.809	0.928								7.44	13.3	C	0	37	4,200	630	150	7.69	3.8	3,300	440	133	7.69	3.5	1.0	1.5	1.0	1.461	7.91			7.6		10.9						0.728	7,775		
9	JH	0.132	0.837	0.969								7.48	13.7	C	0	40	3,900	600	154	7.66	3.5	2,300	310	135	7.64	2.7	2.0	2.0	1.0	1.394	7.82			7.0		11.3						0.997	6,575	45,000	2,468
10	FH	0.129	0.842	0.971							29.5	7.4	15	PC	0	53	4,460	600	135	7.61	2.8	3,580	450	125	7.64	4.1	1.0	1.0	1.0	1.505	7.84			7.0	0.07	12.4						1.105	5,670		
11	JH	0.127	0.803	0.930	193	223	245	154	200	254		7.43	13.7	PC	0	36	4,350	540	124	7.58	2.9	3,460	480	139	7.59	3.1	1.0	2.0	1.0	1.454	7.79	1.6	1.0	7.2		11.2						0.806	7,850		
12	FH	0.124	0.821	0.945								7.3	14.8	PC	0	48	3,950	520	132	7.66	3.1	3,480	430	124	7.67	3.3	1.0	1.0	1.0	1.229	7.78			7.4		11.4						0.598	7,800	45,000	2,927
13	FH	0.147	0.991	1.138								7.42	15	R	0.25	62	4,100	450	110	7.57	2.7	3,750	440	117	7.59	2.9	1.5	1.5	1.0	1.517	7.77			7.0		14.2						0.833	6,770		
14	FH	0.508	2.601	3.109								7.52	13.2	O	1.5	46	3,510	370	105	7.57	1.3	3,500	400	114	7.58	1.4	2.0	4.5	0.0	3.688	7.82			5.2		14						0.961	6,805		
15	JH	0.260	1.241	1.501								7.32	13.9	PC	0	39	4,830	700	145	7.54	1.1	2,870	310	108	7.63	4.2	2.0	2.0	1.0	2.093	7.82			6.1		13.1						0.879	12,250		
16	JH	0.177	1.025	1.202								7.31	14	C	0	47	3,480	460	132	7.56	2.2	3,530	380	108	7.61	4.2	1.0	2.0	1.0	1.625	7.81			6.6		12.8						1.156	9,635	45,000	3,616
17	JH	0.132	0.900	1.032							16	7.39	13.3	PC	0	28	3,730	500	134	7.62	3.9	3,480	450	129	7.62	4.3	1.0	1.0	1.0	1.6	7.86			7.0	0.08	11.3						0.728	7,510		
18	JH	0.135	0.829	0.964	125	125	140	104	120	150		7.3	13.5	C	0	28	2,720	470	173	7.61	4.2	3,780	430	114	7.64	5.4	1.0	1.0	1.0	1.586	7.83	1.6	1.2	7.2		10.5						0.770	6,855		
19	JH	0.127	0.777	0.904								7.44	12.7	PC	0	29	3,600	460	128	7.66	5.1	3,440	460	134	7.67	5.7	1.0	1.0	1.0	1.449	7.84			7.7		9.6						0.731	5,600	45,000	2,102
20	JH	0.132	0.862	0.994								7.48	13.3	PC	0	46	3,650	490	134	7.65	3.7	3,390	400	118	7.66	4.3	1.0	1.0	1.0	1.531	7.86			7.6		10.4						0.623	5,375		
21	JH	0.132	0.918	1.050								7.41	14.4	O	0.1	57	4,420	530	120	7.55	1.8	3,380	360	107	7.56	2.9	1.0	1.0	1.0	1.539	8.02			6.7		13.2						0.771	7,190		
22	JH	0.122	0.869	0.991								7.43	13	O	0	41	3,570	400	112	7.6	3.2	3,820	450	118	7.63	4.2	1.0	1.0	1.0	1.454	7.82			6.9		11.1						0.672	9,080	45,000	3,408
23	JH	0.129	0.892	1.021	193	178	175	134	132	176	20.4	7.43	14.4	PC	0.25	56	3,330	400	120	7.58	1.4	3,780	420	131	7.56	1.3	1.0	1.0	1.0	1.548	7.83	1.2	1.2	6.4	0.02	12.7						0.634	6,805		
24	JH	0.130	0.921	1.051								7.23	13.9	PC	0	37	3,620	400	110	7.6	3.1	3,880	530	137	7.58	3.1	1.0	1.0	1.0	1.513	7.83			6.8		11.5						0.736	9,035		
25	GH	0.122	0.754	0.876								7.37	12.9	C	0	34	3,520	350	99	7.66	3.9	4,120	580	141	7.64	3.3	0.5	0.5	0.5	1.398	7.88			7.1		10.9						0.688	2,860		
26	GH	0.175	1.068	1.243								7.55	13.1	R	1.75	50	3,480	350	101	7.55	1.3	3,680	400	109	7.55	1.5	5.0	3.0	1.5	1.687	7.79			5.0		11.6						0.649	7,600		
27	JH	1.620	6.489	8.109								7.64	10.1	R	4.5	41	2,640	220	83	7.41	2.8	2,730	220	81	7.39	2.3	8.0	7.0	2.0	9.048	7.58			4.8		11.9						0.735	12,105	90,000	9,086
28	JH	1.416	5.298	6.714								7.63	10.9	R	2.6	40	2,470	210	85	7.41	4.4	1,960	280	107	7.41	4.3	8.0	7.0	2.0	7.512	7.50			5.3		11.2						1.852	10,355		
29	JH	0.926	4.227	5.153							1.3	7.57	10.8	O	0.4	30	2,180	190	87	7.37	5.2	2,060	190	92	7.37	5.4	1.0	1.5	1.0	6.159	7.42			6.1	0.02	10.5						1.676	11,700		
30	JH	0.401	2.048	2.449								7.45	11	O	0	33	3,340	300	90	7.55	6.7	2,440	200	82	7.68	9.2	7.5	2.5	1.5	3.264	7.78			8.9		9.8						1.586	3,430	90,000	2,575
31	JH	0.180	1.004	1.184	80	83	83	52	72	78		7.41	11.1	PC	0	33	4,460	440	99	7.71	3.5	1,940	210	108	7.58	7.9	2.0	0.5	1.5	1.875	7.66	3.4	3.2	7.9		8.8						0.745	17,220	45,000	6,463
TOTAL		8.603	44.392	52.995	741	762	793	564	678	854	98.3	230.4	409		11.65	1227	113,040	14,040	3,810	235.5	108.2	104,880	12,820	3,733	235.7	126.6	61.0	57.5	34.5	70.541	242	9.7	9.2	213.7	0.28	353.5	0	< 5.0	0	0				0.712	10,560		
MAX		1.620	6.489	8.109	193	223	245	154	200	254	32.4	7.64	15		4.5	62	4,830	700	173	7.71	6.7	4,270	650	168	7.71	9.2	8.0	7.0	2.5	9.048	8.02	3.4	3.2	8.9	0.09	14.2	0	< 5.0	0	0	26.193	262,000	540,000	38,517
MIN		0.119	0.754	0.871	80	83	83	52	72	78	1.3	7.23	10.1		0	28	2,180	190	83	7.37	1.1	1,940	190	81	7.37	1.3	0.5	0.5	0.0	1.229	7.42	1.2	1	4.8	0.02	8.8	0	< 5.0	0	0	1.852	23,650	90,000	9,086
AVG		0.278	1.432	1.710	148	152	159	113	136	171	24.6	7.43	13.2		0.38	40	3,646	453	123	7.60	3.5	3,383	414	120	7.60	4.1	2.0	1.9	1.1	2.276	7.79	1.9	1.8	6.9	0.06	11.4	0.0	< 5.0	0.0	0.0	0.845	8,452	54,000	3,852

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

Prepared by GH, FH, JH

Approved by GH

Date 1/6/2016

73/114

The Lake of the Ozark Regional Wastewater Treatment Plant #1

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

January 2016

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.

Table of Contents

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	573-365-0455		573-216-8398
Frank Hendricks	Operator / Maint. Mech.	573-365-0455		573-375-3792
John Hornback	Operator / Maint. Mech.	573-365-0455	573-369-2761	573-480-4065
Gary Johnson	Division Manager	573-874-8080	573-234-7946	314-581-6024
Tim Geraghty	Director of Operations	636-561-3737	Ext. 101	314-575-4738
Dale Wagner	AWR President	573-874-8080	573-446-1049	573-864-0487

2: Contact Order

Contact Order	Corporate Office Contact	Division Contact	Outside Support Contact
1		Gary Hutchcraft	
2		Frank Hendricks	
3		John Hornback	
4			Chad Shelby
5			Lonnie Madole
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
Frank Hendricks	573-216-3878 (duty phone)
John Hornback	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 - (potable well house)
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
• Chad Shelby	573-378-5737	573-789-5242	573-575-7318
• Lonnie Madole	573-782-3330	573-645-7308	
• 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 try to 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	573-365-0455	573-216-8398	
Frank Hendricks	Opr./Maint Mech	573-365-0455	573-375-3792	
John Hornback	Opr./Maint Mech	573-365-0455	573-480-4065	573-369-2761
Dale Wagner	AWR President	573-874-8080	573-864-1164	573-445-7302
Tim Geraghty	Operations Director	636-561-3737	314-575-4738	
Gary Johnson	Division Manager	573-874-8080	314-581-6024	573-234-7946

City Personnel

Name	Position	Work Phone#	Mobile Phone#
Jeana Woods	City Admin. Osage Beach	573-302-2000 ext. 290	573-280-1174
Nick Edelman	Dir. P/W Osage Beach	573-302-2020	573-216-9856
Dave VanDee	City Admin. Lake Ozark	573-365-5378	573-280-6992
Matt Michalik	Dir. P/W Lake Ozark	573-365-5378	573-216-6063
L.O. Police Dept.		573-365-5371	
O.B. Police Dept.		573-302-2010	

City Engineer

Name	Company	Work Phone#	Mobile Phone#	Fax#
Nick Edelman	City of Osage Beach	573-302-2020	573-216-9856	573-302-2043

Sewer Board

Name	Position/Department	Work Phone#
Penny Lyons	Mayor / Osage Beach	573-302-2000
Jeff Bethurem	Board Member / Osage Beach	573-302-2000
Gary Hamner	Board Member / Osage Beach	573-302-2000
Jonnie Franzeskos	Mayor / Lake Ozark	573-365-5378
Gerry Murawski	Board Member / Lake Ozark	573-365-5378

Local and County Authorities

Name	Position	Phone#	Fax#
Lake Ozark Fire Dept.		573-365-3380 or 911	573-365-3758
Osage Beach Fire Dept.		573-348-1221 or 911	
Miller Co. Sheriff Dept.		573-369-2341 or 911	
L.O. Police Dept.		573-365-5371 or 911	
O.B. Police Dept.		573-302-2010 or 911	
Miller County Health Dept.		573-369-2359	
Camden County Health Dept.		573-346-5479	

Local Ambulance Service

Name	Phone#	Emergency #
Osage Beach	573-302-2010	911
Miller County	573-369-2444	911

System Maps/Drawings

Name	Position	Work Phone#	Mobile Phone#	Home Phone#
Gary Hutchcraft	Local Manager	573-365-0455	573-216-8398	573-552-8147
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		EAS Labs	573-204-8817	
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	Rick	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
Fred Schlegel	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

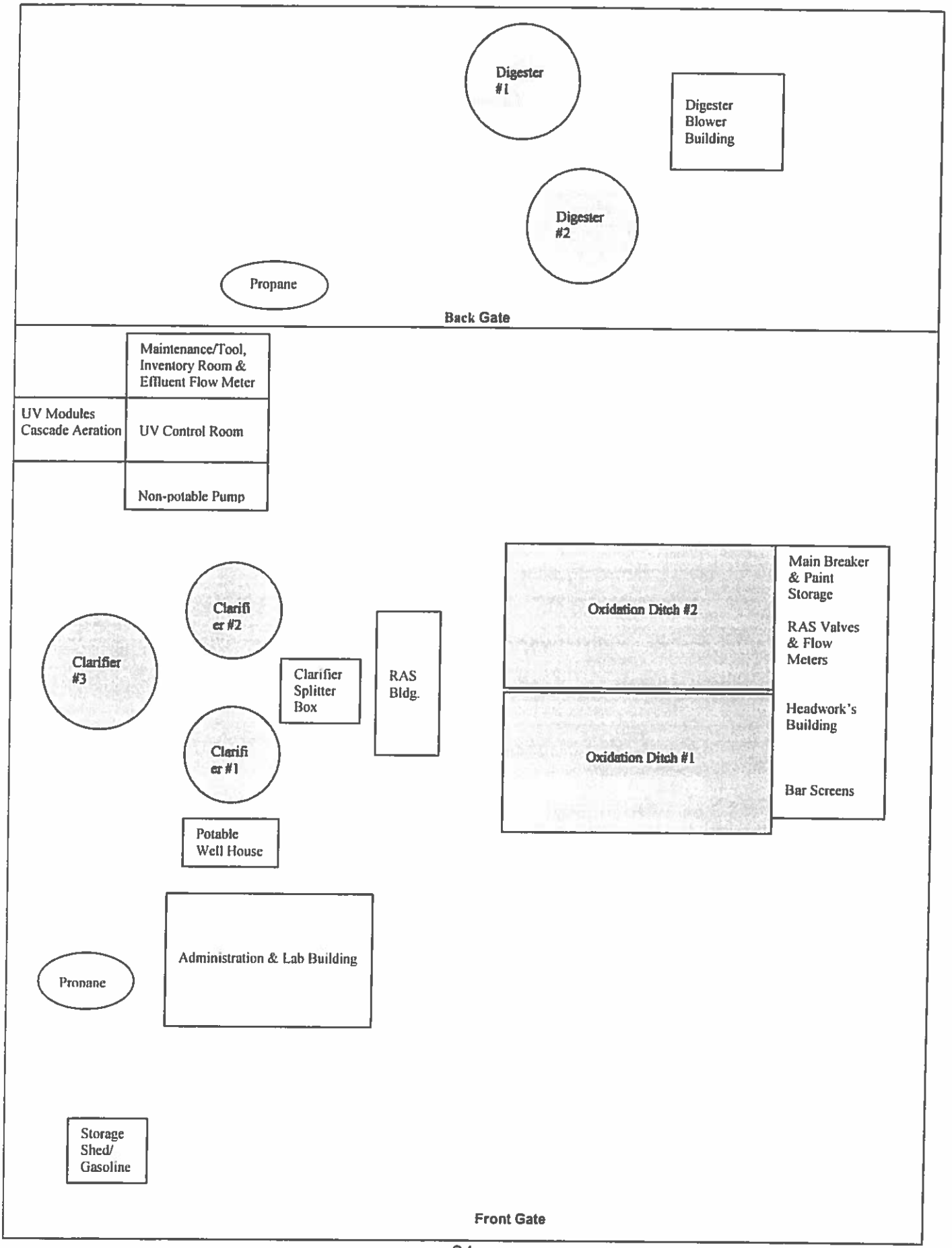
Sludge Digester Blower Building
- Hydrated bag Lime, 50lb bags

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

CONFINED SPACE ENTRY PERMIT

Post Confined Space Permit at Job Site

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

Appendix 7

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.**

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2016

TOOLS

X & * = New 2015

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 2016

TOOLS

X & * = New 2015

Item No.	Quantity & Item
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 2016

TOOLS

X & * = New 2015

Item No.	Quantity & Item
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 - 10-2wgr. 50ft 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 2016

MISCELLANEOUS EQUIPMENT

Item No.	Quantity & Item	X & * = New 2015
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	2 - 4" x 15' discharge hose @ septic unloading station	
137	2 - Schumacher battery chargers, 1 model SE-82-6 & 1 model XC103-CA*(Stanley replacement)	X
138	2 - 100' extension cord	
139	2 - 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	4 - 50'x1 1/2" fire hoses	
144	5 - Garden hoses	
145	1 - mechanic creeper	
146	2 - Craftsman gas leaf blowers, older one not running **Purchased 1**	X
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 2016

MISCELLANEOUS EQUIPMENT

X & * = New 2015

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, w/12V fuel pump
184	1 - portable concrete bucket mixer
185	1 - wheel barrow
186	1 - garden cart
187	1 - Coleman power washer
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 2016

CONSUMABLE MATERIALS — X & * = New 2015

211 2 - 500 Gallon propane tanks, w/ 260 gallons as of 1/4/16

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)
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 w/1 - NI-CAD battery, 1 small & 1 larger charger works inplace of battery* **X**
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 - Oakton pH meter & probe
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* **1 meter w/LDO probe X**
245	1 - Hach Distillation Glassware set for Ammonia
246	1 - Thermo Hot plate for distillation
247	1 - Igloo Ice Maker for Samplers

Lake Ozark / Osage Beach Joint Wastewater Plant
INVENTORY LIST
January 2016

SAFETY EQUIPMENT

Item No.	Quantity & Item	X & * = New 2015
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 & 73 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 Flyght lift station pump	
267	7 - 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	85 - UV bulbs *	**Purchased 20 X**
271	38 - UV quartz sleeve *	**Purchased 15 X**
272	3 - UV ballast	
273	2 - UV air cylinder rebuild kit & 2 outer bands	
274	1 - UV air cylinder, rebuilt in 2015	
275	1 - UV air cylinder hose, approx. 20 ft.	
276	12 - Wiper Rings	
277	1 - UV bulb cord w/1 bulb sockets	
278	1 - blower for digesters	
279	1 - Vac pump rebuild kit for GMC White sludge truck	
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	