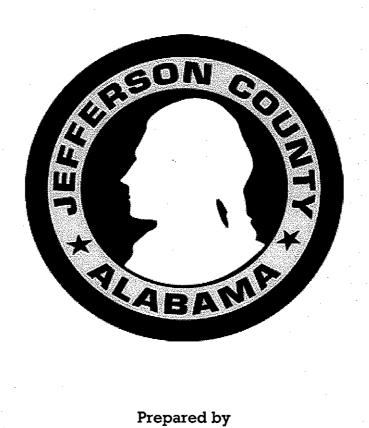
Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Jefferson County Wastewater Treatment Plants

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by
Jefferson County Commission
Environmental Services Department

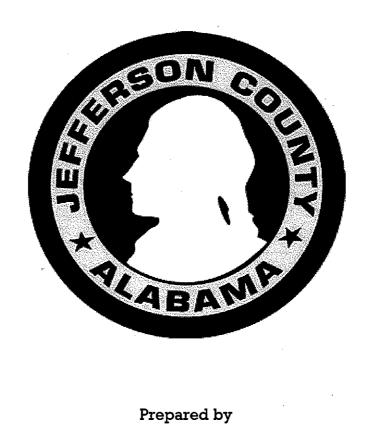
May 31, 2013

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Cahaba River WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Cahaba River WWTP

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Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON - PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN - PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway, Water Division Alabama Department of Environmental Management Water Division – Municipal Branch P.O. Box 301463 Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)
Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Cahaba River Wastewater Treatment Facility, NPDES Permit No. AL0023027. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Gary Nelson, Cahaba River WWTP

2013

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FAC	CILITY:	Cahaba River WWTP	NPDES #:AL0023027
MUNICIPALITY:_	Jeffers	on County	COUNTY:Jefferson
CONTACT PERSO			
	Municip	al Official	
	<u>Director</u> Title	r of Environmental Servi	ces
	Telephor	ne #: <u>(205) 325-5979</u>	Fax #: (205) 325-5981
	Email A	ddress: <u>denardd@jc</u>	cal.org
CHIEF OPERATO	R: Gary Nel	son	
	Name		
	Telephor	ne #: <u>(205) 987-0648</u>	_Fax #: <u>(205) 402-7427</u>
	Date:	May 9, 2013	
	Email A	ddress: <u>nelsong@jc</u>	cal.org
REVIEWED BY:	Daniel A.	White, P.E., ESD Engine	er
	Consulting		
	Telephone	#: (205) 214-8610 Fax #	: <u>(205) 325-5981</u>
	Date:	May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for 2011.
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year.
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year (2011) minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to this treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner what actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and resolution must be submitted by May 31, 2013 to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

List the average m facility during the	onthly volumetric last calendar year (flows and BOD ₅ (CBOD ₅) (2012).	loadings received at you
<u>Month</u>	Col. 1 Average Monthly Flowrate (MGD)	Col. 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Col. 3 Average Loading B0D ₅ (CBOD ₅) (lbs/day**)
January _	9.8	101.0	8213
February _	10.2	88.9	7432
March	10.5	84.0	7207
April _	9.2	131.7	9850
May _	11.0	145.4	13060
June _	10.7	159.0	14261
July _	9.9	157.9	12865
August _	12.3	99.8	9873
September _	11.5	103.8	9990
October _	10.6	109.5	9887
November _	8.4	150.8	10222
December _	10.2	121.4	9790
Annual Avg.	10.4	121.1	10221
As reported on NPDES NPDES Self-Monitorin	Discharge Monito g System, User Gu	oring Reports (DMR'S) and aide, March 1985.	as required by EPA's

	Avg. Design Flow	Avg. Design BOD ₅ Loading (lbs/day)
Design Criteria:	12.0	19912
90% of the Design Criteria:	10.8	17921

C .	How many times did the monthly flow (Col. 1) to the WWTP exceed 90% of design flow?
	0-4=0 points; 5 or more = 5 points
D.	How many times did the monthly flow (Col. 1) to the WWTP exceed the design flow?1 (Circle the appropriate number)
-	0 = 0 points; $1-2 = 5$ points; $3-4 = 10$ points; 5 or more = 15 points
E.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Col. 3) to the WWT exceed 90% of the design loading? <u>3</u> (Circle the appropriate number)
	0-1=0 points; $2-4=5$ points; 5 or more = 10 points
F.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day)(Col. 3) to the WWTP exceed the design loading?1_ (Circle the appropriate number)
	0 = 0 points; $1 = 10$ points; $2 = 20$ points; $3 = 30$ points; $4 = 40$ points; 5 or more $= 50$ points
G.	Add together each point value you circled for C through F and place this sum in the blank below.
	C points =0
	D points =5
	E points =5
	F points =10

TOTAL POINTS VALUE OR PART 1 ___20 Enter this value on Part 11: Summary Sheet.

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by your facility during the last calendar year (2011).

(1) NPDES Permit Concentration

		BOD_5			4
	<u>Months</u>	$\frac{\text{CBOD}_{5}}{\text{(or CBOD}_{5}) \text{ (mg/l)}}$	TSS(mg/l)	<u>NH₃-N (mg/l)</u>	TKN (mg/l)
Pen	mit Limit DecApril	10.0	30.0	2.0	4.0
	_May-Nov	4.0	30.0	1.0	2.0
(2)	DMR Concentration				
<u>Qt</u>	<u>Month</u>	BOD ₅ (CBOD ₅)(mg/l)	TSS (mg/l)	<u>NH₃-N (mg/l)</u>	TKN (mg/l)
1	January	0.7	0.1	0.0	0.4
·	February	0.5	0.0	0.0	0.3
	March	0.5	0.1	0.0	0.3
2	April	0.7	0.1	0.0	0.3
	May	0.6	0.1	0.0	0.3
	June	0.9	0.0	0.0	0.3
3	July	0.4	0.5	0.0	0.3
	August	0.3	0.1	0.0	0.2
	September	0.3	0.0	0.0	0.3
4	October	0.5	0.2	0.0	0.2
	November	0.5	0.4	0.0	0.4
	December	0.5	0.3	0.01	0.4
	Annual Average:	0.54	0.16	0.0	0.32

B. List the monthly average permit limit and DMR loadings below:

(1) NPDES Permit Loading

	BOD_5 ($CBOD_5$)			
<u>Months</u>	(lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day	TKN(lbs/day)
Permit Limit: May-Nov	400	3002	100	200
Dec-April	1000	3002	200	400_

(2) DMR Loading

<u>Qtr</u>	<u>Month</u>	BOD ₅ (or CBOD ₅)(lbs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)
1	January	55	11	0	32
	February	39		0	27
	March	40	4	0	23
2	April	55	7	0.3	26
	May	60	6	0	28
	June	82		0	_27
3	July	35	43	0	_24
	August	37	11	0	
	September	29		0	_32
4	October	42	19	0	22
•	November	37	28	0.1	29
	December	<u>45</u>	18	0.9	
A	nnual Average:	46.2	12.3	0.12	26.5

C.	During the past year did either the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters. (Circle the appropriate response.)
	No = 0 points; yes = 121 points
D.	During the past year did either the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters. (Circle the appropriate response.)
	No = 0 points; yes = 121 points
Е.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day), exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters. (Circle the appropriate response.)
	No = 0 points; yes = 121 points
F.	During the past year did either the TSS concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters. (Circle the appropriate response.)
£	No = 0 points; yes = 121 points
G.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters. (Circle the appropriate response.)
	No = 0 points; yes = 121 points
Н.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters. (Circle the appropriate response.)
٠	No = 0 points; yes = 121 points
I.	Enter each point value circled for C through H in the blanks below:

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) 0 (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

C Points = __ D Points = __ E Points = __

F Points =

H Points =

G Points = ___

0

0

0

Facility Name:_	Cahaba River WWTP

Part 3: Age of the Wastewater Treatment Facilities

A. What year was the wastewater treatment plant constructed or last reconstructed? 2005

Subtract the above answer from the report year to determine age:

Age
$$7 = (2012) - (2005)$$

Enter Age in Part C., below.

B. Check the type of treatment facility that is employed:

	Factor
X Mechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify	1.0

C. Multiply the factor listed next to the type of the facility your community employees by the age of your facility to determine the total point above value for Part 3:

TOTAL POINT =
$$2.0$$
 X 7 = 14 TOTAL POINT VALUE FOR PART 3 VALUE FOR (factor) (Age)

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

	4: Bypassing and Overflows
A.	How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain?0
B.	How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain?1
C.	How many of the bypass or overflow events listed in Parts A and B above have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated?1
D.	Add together Answers A and B and subtract Answer C from that total. A + B - C= (Circle the appropriate point total.)
	0 = 0 points; $1 = 5$ points; $2 = 10$ points; $3 = 15$ points; $4 = 20$ points; $5 = 25$ points; $6 = 30$ points; $7 = 35$ points; $8 = 40$ points; $9 = 45$ points; $10 = 50$ points; 11 or more 100 points.
E.	How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure (Note: This includes clogged/broken lines or manholes)?
F.	How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP. (Note: This includes clogged/broken lines or manholes)?11
G.	How many of the bypass or overflow events listed in Parts E and F above have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 11
H.	Add together Answers E and F and subtract Answer G from that total. E + F - G = 0 (Circle the appropriate point total.)
	$\boxed{0=0 \text{ points}}$; 1 = 5 points; 2 = 10 points; 3 = 15 points; 4 = 20 points; 5 = 25 points; 6 = 30 points; 7 = 35 points; 8 = 40 points; 9 = 45 points; 10 = 50 points; 11 or more = 100 points.
ſ.	Add point values circled in D and H and enter the total in the blank below:
	AL POINT VALUE FOR PART 40 this value on Part 11: Summary Sheet.
	All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

Part 5: Sludge Quantity and Storage		
A. Please provide information concerning your sludge q practices based on available data as requested on the MWPP S 419.	uantity, charac Sewage Sludge S	teristics and storage Survey, ADEM Form
B. How many months of sludge storage capacity does you available, either on-site or off-site? (i.e., How many mon land spreading or disposing of sludge?)	r wastewater treaths can your fac	eatment facility have cility operate without
4 months		
(Circle the appropriate point total.) Greater than or equal to 4 months	= 0 points	
Less than 4 months, but greater than or equal to 3 months	= 10 points	•
Less than 3 months, but greater than or equal to 2 months	= 20 points	
Less than 2 months, but greater than or equal to 1 month Less than one month	= 30 points	
Less than one month	= 50 points	•
TOTAL POINT VALUE FOR PART 5 0		÷ .
Enter this value on Part 11: Summary Sheet.		
Part 6: Sludge Disposal Practices and Sites		
Tart o. Stadge Disposar Fractices and Sites		

B. How many months or years does the facility have access to and approval for sufficient land disposal sites to provide proper land disposal? (Circle the appropriate point total.)

36 or more months
24-35 months
12-23 months
6-11 months
Less than 6 months = 0 points = 20 points = 30 points = 50 points

TOTAL POINT VALUE FOR PART 6 0 Enter this value on Part 11: Summary Sheet.

Are there any major n calendar year or anticip the sewerage system countries. Design Population: Equivalent (PE)	ated in the next 2-3 y	years, such ase? Estima	that either floate additional l	ow or BOD ₅ loading below	loadings to
Design Population:	ald significantly increased Design	ase? Estima	ate additional l	loading belov	loadings to v:
Design Population:	Design		Design		
Population:	_	MCD	_		
			DOD .	11/1-	
		MOD	BOD5	lbs/da	У
List Industry and/or resid	dential Developments	:			
No major new de	velopment planned				
<u> </u>					•
Will the additional loadi	no oxionload the alauti) (Cli1. 41			
Will the additional loads	ng overtoad the plant?	(Circle the	appropriate p	point total.)	
No = 0 points; $Yes = 12$	l points				
Place the point number i	n the hlank helow				
		-			
		ghest point	total = 121)	·	
Operator Certification					
ete the <i>Plant and Collect</i>	tion System Personnel	Inventory,	ADEM Form	441.	
Do both the plant operato	or and collection systemator Certification Property	m staffing ram? (Circ	comply with . le the appropr	ADEM Admi	nistrative
Code; Division 10, Opera	1106	•			4.,
Yes = 0 points	No = 121 point		11 1	*	
	No = 121 point	ts	int total = 121)		
	Will the additional loading No = 0 points; Yes = 12. Place the point number in L POINT VALUE FOR this value on Part 11: Sure the Plant and Collective the Plant and Collective No.	Will the additional loading overload the plant? No = 0 points; Yes = 121 points Place the point number in the blank below. L POINT VALUE FOR PART 7 0 (hi his value on Part 11: Summary Sheet. Operator Certification ete the Plant and Collection System Personnel	Will the additional loading overload the plant? (Circle the No = 0 points; Yes = 121 points Place the point number in the blank below. L POINT VALUE FOR PART 7 0 (highest point his value on Part 11: Summary Sheet. Operator Certification ete the Plant and Collection System Personnel Inventory,	Will the additional loading overload the plant? (Circle the appropriate plant) No = 0 points; Yes = 121 points Place the point number in the blank below. L POINT VALUE FOR PART 7 0 (highest point total = 121) his value on Part 11: Summary Sheet. Operator Certification ete the Plant and Collection System Personnel Inventory, ADEM Form	Will the additional loading overload the plant? (Circle the appropriate point total.) No = 0 points; Yes = 121 points Place the point number in the blank below. L POINT VALUE FOR PART 7 0 (highest point total = 121) his value on Part 11: Summary Sheet. Operator Certification ete the Plant and Collection System Personnel Inventory, ADEM Form 441.

Fa	acility Name: Cahaba River WWTP
Pa	art 9: Financial Status
A.	
	Yes. User charge rates are based on a uniform volume charge per 100 cubic feet of 85% of
	metered water consumption for single family residential. User Charge Rate ending
	December 31, 2010 was \$7.40/100ft ³
	Residential Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Industrial Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Monthly residential rate based on 6,000 gallons usage \$ (ending 12/31/2012)
*Pl ma	ease complete the above information based on your user charge rates for the report year. You attach a sample water and sewer bill for clarity.
B.	What financial resources are available to pay for the wastewater improvements and/or reconstruction needs?
	Approximately \$20,300,000 is currently available to fund capital improvements.
Part	10: Subjective Evaluation
Α.	Describe briefly the physical and structural conditions of the wastewater treatment facility:
	The current physical and structural conditions are good.
3.	Describe the general condition of the sewer system: (sewer lines, manholes, lift stations)
	The general condition of the sewer system is good.

· C.	What sewage system improvements does the community have planned for construction in the next 5 years?
	Sewer rehabilitation within Cahaba River collection system resulting from condition assessment work. Cahaba River WWTP Phase I and Phase II TMDL Improvements. Cahaba River WWTP to Valley Creek WWTP sludge transfer force main. Replacement of the current SCADA software with Citect. Pump and motor repairs at Al Seier pump station. Hydraulic gate repairs in the influent pump station, collection system pump station upgrades.
D.	What was the theoretical design life of the plant, and what is the estimated remaining useful life of the wastewater treatment facility?
	See attachment
E.	What problems, if any, over the last year have threatened treatment or conveyance within the system?
-	See attachment
F.	Is the community presently involved in formal planning for treatment facility upgrading?
	No
G.	How many days in the last year were there residential backups at any point in the collection system for any reason other than clogging of the lateral connection?5
H.	Does your plant have a written plan for preventative maintenance on major equipment items? If yes, describe.
	Yes – WWTP has O & M Manuals for all major equipment.
	Preventive Maintenance schedules are kept and followed for plant equipment
	INFOR Maintenance

Cahaba WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

Part 10.E

In calendar year 2012, one SSO in the Cahaba system (M04117, MH 4010-066B) was categorized as wetweather related with a reported volume of 421,500 gallons. The SSO was preceded the week prior by a grease blockage in the downstream sewer line. Only four homes connect to the sewer lines upstream of MH066B. In the course of reviewing the data for the MWPP report, it was discovered that the photos taken of the overflow are of 4010-066A. The overflowing manhole was inaccurately reported as 4010-066B when it should have been identified as 4010-066A which is immediately downstream and located along a ditch at the base of the hill. The sewer service request #1042831 also states that the manhole number was 4010-066A.

The manhole 4010-066A has a small contributing service area and could only have produced a sizable overflow if there was blockage in the downstream sewer and the sewer received an extreme amount of I/I during the storm event. From an engineering analysis, the sewer lines are adequately sized for the service area. There are only 57 homes (6,568' of sewer) contributing flow to 066A with an expected flow of 14,250 gallons per day.

The overflow was reported as 1,500 gpm and lasting for 281 minutes. The picture taken of the overflow showed the manhole cover in place and an estimated height of discharge of no more than 4 or 5 inches. Using the Tables for Estimated SSO Flow out of Manholes with Cover in Place for a 24" cover from the Sanitary Sewer Overflow Response and Reporting Plan adopted July 2012, the overflow rate was actually in the range of 100 to 166 gpm. Using the 166 gpm rate, the overflow volume calculates to 46,646 gallons.

Television inspection of the area was performed on the upstream and downstream segments. The downstream manhole 4010-066 was found to have a heavy amount of manhole rehabilitation product overspray restricting flow which was removed by the crew. A piece of broken pipe was found in the segment between 066 and 066A that was also restricting flow and was removed. The investigation upstream from 066A revealed 4 possible infiltration sources, 2 at manholes, and 2 at service connections. These infiltration defects will be addressed through the County's Asset Management program.

Based on the review of all the available information, it is believed that the structural pipe restriction likely contributed to the grease blockage and the wet-weather SSO. The removal of the flow restrictions is expected to prevent the recurrence of an overflow under similar conditions.

- I. Does this preventive maintenance program depict frequency of intervals, types of lubrication and other preventative maintenance tasks necessary for each piece of equipment? <u>Yes</u>
- J. Are these preventative maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? **Yes**
- K. Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.

UV Rebuild (2 Banks) \$115,000; Pump Station Programming \$13,000;

Al Seier #1 Check Valve Rebuild \$48,000; Al Seier Expansion Joint Replace \$9,000;

VFD #2 Pump Al Seier, \$1,153; Influent Pump #4 Rebuild, \$1,617;

Replace Gear Drive Assembly Dewatering Press \$2,333;

Al Seier Generator Repair, \$68,542

L. List any additional comments. (Attach additional sheets if necessary.)

The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a comprehensive Collection System Asset Management Program (Program). The goal of the Program is to develop and provide tools, technologies, and procedures that will empower and enable the County to better manage the sanitary sewer collection system. The developed Program will establish a comprehensive asset management system with processes and procedures to identify and prioritize future collection system capital and operating replacement and maintenance requirements. The Program is an extension and improvement to the current MOM. The Program's objectives are focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name:	Cahaba River WWTP

Part 11: Summary Sheet

1. Enter the values from Parts 1 through 8 in the left column below. Add the numbers in the left column to determine the MWPP Report point total that the wastewater system generated for the previous calendar year.

Actual Values	Maximum Possible
Part 120points	80 points
Part 20_points	121 points
Part 3 14 points	40 points
Part 40_points	200 points
Part 5 points	50 points
Part 6 points	50 points
Part 7 points	121 points
Part 8 points	121 points
Total 34 points	783 points

2. Circle the facility type that best describes your plant's treatment and disposal of wastewater.

Mechanical plant with surface water discharge

Aerated Lagoon or stabilization pond with surface water discharge

Mechanical plant using land disposal of liquid wastes

Aerated Lagoon or stabilization pond using land disposal of Liquid wastes

3. Circle the range that describes the action needed to address problems identified in the report.

0 - 70 pts.	Actions as Appropriate*
71 - 120 pts.	Departmental Recommendation Range*
121 - 783 pts.	Municipality Action Range*

^{*}Other actions may be required by NPDES outside the scope of this report.

-		n in the space below.	
	·		
)	

Cahaba River Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>







Summary of Unpermitted Discharges - Cahaba River

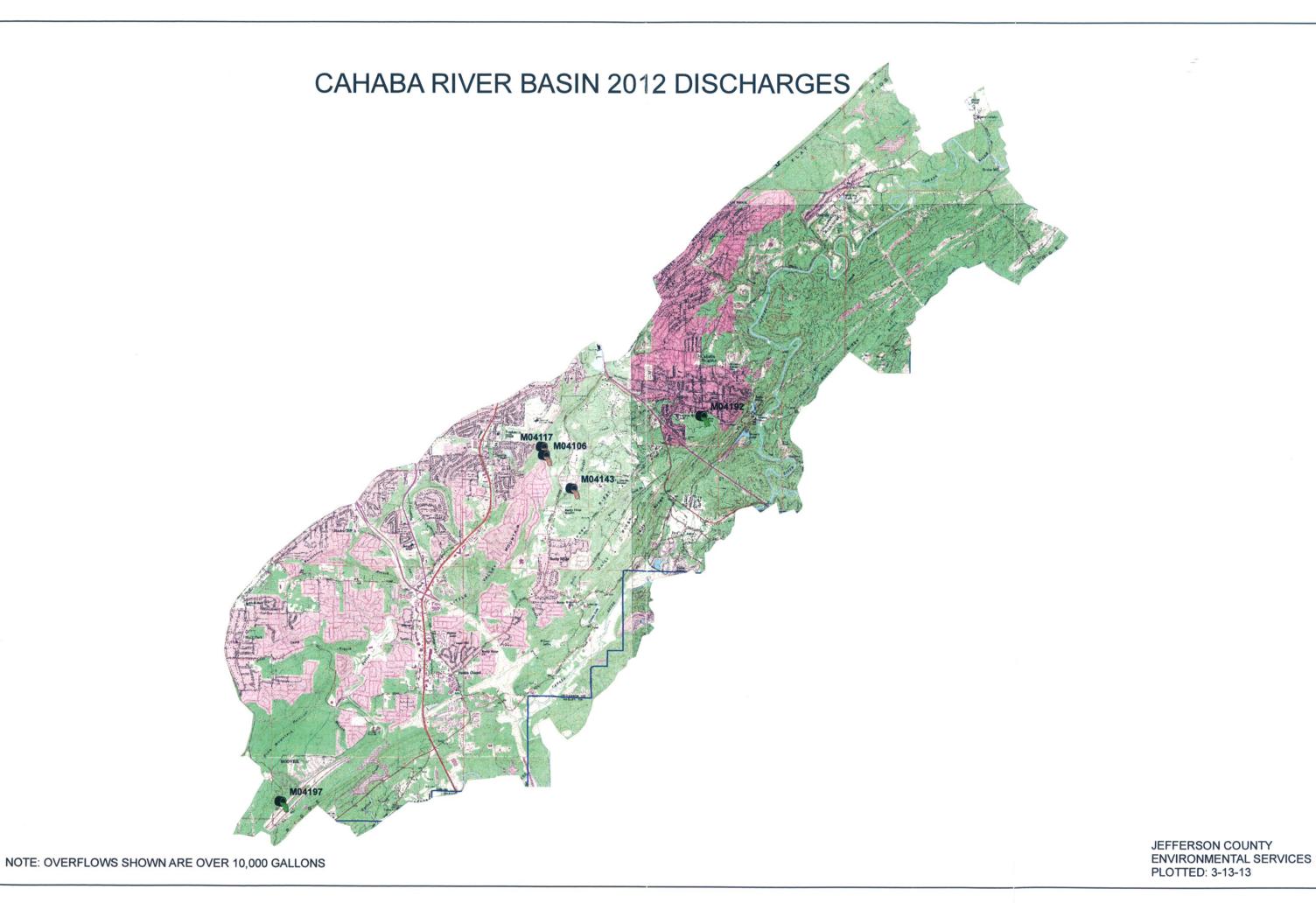
January 01, 2012 through December 31, 2012

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

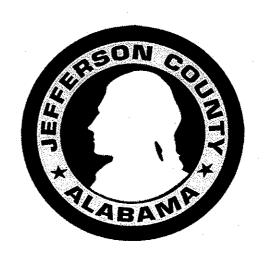
				·		•					
Event L No. Rep C01019 8/7	Date eported 8/22/12	Date Reported Location 8/22/12 1562 Pumphouse Court es:	Collection System Cahaba	Ultimate Destination Ground Absorbed/ Storm Drain	Est. Vol. (gal) 166	Source Air Release Valve	Cause Air Release Valve Bleed Off Malfunction	Weather No Rain	Action Taken Air Release Valve Repaired	Person Reporting Ken Bennett	Title WWTP Manager
M04097 1/11/12 Notes:	/11/12	700 Running Brook Rd	Cahaba	Ground Absorbed	6,974	Cleanout	Roots/ Debris	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04106 1/2	/20/12	M04106 1/20/12 409 Vesclub Lane Notes:	Cahaba	Drainage Ditch	34,800	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04117 1/2	1/26/12 ntes: Flooding	1/26/12 413 Vesclub Lane Notes: Flooding from rain in overflow area.	Cahaba	Little Shades	421,500	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04138 2/1	11/12	2/11/12 2111 Montreat Way	Cahaba	Patton Creek	4,050	Manhole	Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04143 2/1	2/19/12	2/19/12 2729 Countrywood Way Notes: Bypass pumps also setup.	Cahaba	Little Shades Creek	326,250	Manhole	Grease/Rags	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
				And the second s	The second second second second second	to be a company of the con-	CONTRACTOR OF THE PROPERTY OF				

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

John Hawkins Parkway & Panadise Calabha Storm Drain 7,000 Manhole Grease/Roots No Rain Blockage Removed Champion Supervisor 3428 Country Brook Lane Cahaba Storm Drain 150,000 Manhole Grease No Rain Blockage Removed Champion Mainteance Supervisor 4901 Sulphur Springs Road Cahaba Ground Absorbed 6,000 Manhole Roots Roots Rain Blockage Removed Champion Supervisor 1732 Sanders Road Cahaba Ground Absorbed 6,000 Manhole Roots Roots Rain Blockage Removed Champion Mainteance Supervisor Superviso	Date Reported Location 3/8/12 2414 Chapel Road tes:	Collection System Cahaba	Ultimate Destination Ground Absorbed	Est. Vol. (gal) 500	Source Manhole	Cause	Weather No Rain	Action Taken Blockage Removed	Person Reporting Brian Champion	Title Sewer Maintenance Supervisor
Cahaba Storm Drain 150,000 Mauhole Grease No Rain Blockage Removed Brian Cahaba Storm Drain 150,000 Mauhole Grease No Rain Blockage Removed Brian Cahaba Ground Absorbed 11,820 Pipe Grease No Rain Blockage Removed Brian Cahaba Ground Absorbed 6,000 Manhole Roots Light Blockage Removed Brian Cahaba Ground Absorbed Champion Brian	kway & Par	Cahaba		7,000	Manhole	Grease/Roots	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
Cahaba Storm Drain 150,000 Mamhole Grease No Rain Blockage Removed Brian Champion Cahaba Ground Absorbed 11,820 Pipe Grease No Rain Blockage Removed Brian Champion. Cahaba Ground Absorbed 6,000 Manhole Roots Light Blockage Removed Brian Champion	ne	Cahaba	· ·	6	Manhole	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
Cahaba Ground Absorbed 11,820 Pipe Grease No Rain Blockage Removed Brian Champion. Cahaba Ground Absorbed 6,000 Manhole Roots Light Blockage Removed Brian Rain Champion	Intersection of Summit PI & Summit,Blvd	1	Storm Drain	150,000	Manhole	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
Cahaba Ground Absorbed 6,000 Manhole Roots Light Blockage Removed Brian Rain Champion	5/11/12 4901 Sulphur Springs Road	i	Ground Absorbed	11,820	Pipe	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
	:	, ; ;	Ground Absorbed	900,9	Manhole	Roots	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor



Cahaba River Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



2013 MWPP SEWAGE SLUDGE SURVEY

Facility Background Information:	•		
1. Facility Information		Permit Number:	AL0023027
Name:	Cahaba River W	astewater Treatment Plant	, 1000LUUL1
Street Address:	3900 Veona Dan		
County:	Jefferson		
2. Facility Contact			
Name:	Gary Nelson		
Title:	Plant Manager		
Telephone:	(205) 987-0648		
Permittee Name:	Jefferson County	Commission	
Mailing Address:		Richard Arrington, Jr. Blvd. N	I
•	Birmingham, AL		
acility Flow Information		•	
. Facility Wastewater Treatment Cap	acity		
Avg. Daily Flow for 2012:		10.4 MGD	
Facility Design Capacity:		12.0 MGD	•
Estimated Sentens Overtited In all	40		
. Estimated Septage Quantity Handle	ed (Residuals Remo		•
Average Domestic Septa		N/A gallons pe	
Average Commercial Sep	nage:	N/A gallons pe	r month
. Method of Septage Processing Mixed with Influent W Mixed with Sewage S	Sludge	tment I/A	
Estimated Percentage Contributing	Master Clare		
Residential: 90	wasiewaier Flow		•
Industrial:	_ ⁷⁰	•	
Other: 10	_	naile a O a un un un l'el	
Other.	_% Desc	cribe: Commercial	
List type of wastewater treatment pro	ocess(es) utilized at	t this facility:	
		ess, Clarification, Sand Filtrati	ion.
UV Disinfection			
Estimated sewage sludge wasting ra	ite at this facility:		lb/day dry weight
		or 99,884	gallons per day
Estimated untreated sludge received	from off eite:	N1/A	lla falan sala
	nom on site.	N/A	lb/day dry weight
		01	gallons per day
Estimated percent solids of combined	d sewage sludge pr	rior to treatment:	1.0 %

				ludge Quan ted pounds	
Thickening		_			
Aerobic Digestic		-	•		
Mechanical Dewatering (Bel	t Filter Press)		·		
10. Estimate the total volume of sludge	generated:	-	(dry U	1,336 J.S. tons pe	r vear)
Sludge Disposal Methods	·		, ,		,
	augrant mathad of accom			6 NV	
 Which of the following describes the a. x Land Application, Bulk 	Current Method of sewa Current Approved by ADEM <u>Yes</u> <u>No</u>	Practices	ntity	Propose	d Practices d by ADEM <u>No</u>
Shipped X Agriculture	X	1,3	36		
Forest Public Contact			•		
Lawn/Home Garden					
b. Land Application, Bagged/Other Container Agriculture					•
Forest Public Contact					
Lawn/Home Garden					
c. Incineration					
d. Subtitle D Landfili (Disposal Only)					
e. Lined Treatment Lagoon or Stabilization Pond f. Unlined Lagoon or					
Stabilization Pond g Other (Please Describe)		<u>, </u>			
		<u></u>			
			4		
. If "f" was selected above and sludge is	s stored for 2 or more ye	ars, enter the	distance be	tween the	

ADEM FORM 419 8/02

1A. Enter the total concentrations of the following analytes using existing data. Do not enter TCLP results. Flat Top/Bessie Mines Land Reclamation Site

	Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Туре	Date	Analysis (PQL), mg/kg
Arsenic	<pql< td=""><td>GRAB</td><td>*</td><td>11.0</td></pql<>	GRAB	*	11.0
Cadmium	<pql< td=""><td>GRAB</td><td>*</td><td>8.0</td></pql<>	GRAB	*	8.0
Chromium	18.0	GRAB	*	8.0
Copper	483.0	GRAB	*	8.0
Lead	16.0	GRAB	*	15.0
Mercury	2.4	GRAB	*	0.6
Molybdenum	7.6	GRAB	*	5.0
Nickel	18.0	GRAB	*	6.0
Selenium	<pql< td=""><td>GRAB</td><td>*</td><td>15.0</td></pql<>	GRAB	*	15.0
Zinc	875.0	GRAB	*	18.0
Ammonium- Nitrogen	N/A	N/A	*	N/A
Nitrate-				
Nitrogen	N/A	N/A ·	*	N/A
Total Kjeldahl Nitrogen	45,000	GRAB	*	1.8

2. Enter the estimated or determined percent solids of the sewage sludge when sa	ampled for the above
analysis: 12 %	·
Treatment Provided for Sewage Sludge at the Facility 1. Which class of pathogen reduction does the sewage sludge meet at the facility? 40 CFR Part 503) Class A Alternative A1 - Time and Temperature Alternative A2 - Alkaline Treatment Alternative A3 - Analysis and Operation Alternative A4 - Analysis Only	? (As defined in
Alternative A5 - Processes to Further Reduce Pathogens (PFRP) Heat Drying Thermophilic Aerobic Digesti Pasteurization Gamma Ray Irradiation Composting Alternative A6 - PFRP Equivalent	on Heat Treatment Beta Ray Irradiation
x Class B x Alternative B1 - Fecal Coliform Count x Alternative B2 - Process to Significantly Reduce Pathogens (PSRP x Aerobic Digestion Air Drying Composting Lime Stabilization Alternative B3 - PSRP Equivalent) Anaerobic Digestion
Neither or Unknown	

Vector A	Attraction Control				
	Option 1 - Mi	nimum 38% Reduction in paerobic Processes, with	n Volatile Solids Bench-Scale Demor	netration of Volatile	Solids Poduction
	Option 3 - Ae	robic Processes, with Be	ench-Scale Demonst	ration of Volatile So	lids Reduction
	Option 4 - Sp	ecific Oxygen Uptake Ra	ate (SOUR) for Aerob	oically Digested Stud	dge
	Option 5 - Ae	robic Processes plus Ele	evated Temperature		
		ised pH to 12 and Retain			
		% Solids with no Unstab			
		% Solids with Unstabilize			,
		ection Below Land Surfa			
		corporation into Soil with			•
		vering Active Sewage S	ludge Unit Daily	•	
	∐None of the A	bove			• .
Ground	roton Monitorios				
Groundwa	vater Monitoring	•			
1. If dispo	oosal practice is su	rface disposal or land ap	pplication, is groundw	ater monitoring req	uired or performed a
	Yes x No	(If yes, please submit a survey. Also please progroundwater monitoring	vide the approximate	e depth to groundwa	orts along with this ater and the
Land App	olication of Sewage	Sludge			
Answer th	he following questi	ons if sewage sludge is	applied to land.		
1. If sewa	age sludge is land	applied in bulk form, wh	at type of crop or oth	er vegetation is gro	wn on this site?
	on Bermuda Grass		7 ,	· · · · · · · · · · · · · · · · · · ·	on this old.
	age sludge is land Ib/acre/year (Recl	applied in bulk form, wh	at is the nitrogen req	uirement for this cro	pp or vegetation?
3 If sowa	ane eludae je land	applied in hulk form, brie	fly describe the net.		. 61-17
neighbors	s?	applied in bulk form, brie	eny describe the natu	re or any complaints	s filed from
None					
					
	· •••·				<u> </u>

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

Cahaba River Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



FAC	LITY NAME:	Cahaba	River W\	N TP			PLANT (RADE:		IV
PERM	MIT NUMBER:	AL0023	027							
PLAN	NT SUPERINTEN	DENT:	Gary Ne	elson				TEL.#	(205) 9	87-0648
SYST	TEM MANAGER:		David D	enard				ŢEL.#	(205) 3	<u>25-5</u> 979
PLAN	IT OPERATORS			GR	ADE OR		•			
		AME		TRAIN	EE STATUS		OPERATOR NO.	EXP.	DATE	_
1. Gary	/ Nelson				IV	ļ	C003933	2/28	/2016	
2. <u>Jere</u>	my Creel				IV		C001691	11/30)/2015	
3. Derri	ick Brooks				IV	<u> </u>	C001433	8/31	/2013	
4. <u>Tom</u>	my Carney				IV	ļ	C004047	9/30/	/2013	_
5. <u>Zada</u>	Nygren				IV		C003372	6/30/	/2015	
6. <u>Bill N</u>	lorrow				IV	.	C003750	12/31	/2014	
7. Andr	ew Hudson				IV		C000779	11/30	/2015	_
8. <u>Joe V</u>	Villoughby				IV		C002615		2015	-
9. Tomi	mie Bradford				IV		C001269		2015	
10 Jona	than Gardner				IV		C007020		2015	-
COLLE	ECTION SYSTEM	/ OPERATO	RS:					1 0,0 11	2010	_
4				1		l		1		
										-
				<u> </u>						-
3.								ļ . 		_
4	·						,			_
			MAN H	RS./WK	NUMBER					
	GEMENT/SUPER	RVISOR		30 //////////	2					
OPER	ATOR(S):	GRADE I-C								
		GRADE I			† - 		AVERAGE NUMBER C	F EMPLOYE	ES PER SI	HIFT:
		GRADE II								
		GRADE III		· · · · · · · · · · · · · · · · · · ·			1ST 9	ST	ART TIME	700
DESIG	NATED TO AIRIE	GRADE IV	3	20	8		2ND 4			1500
	NATED TRAINEI RATORY	=(8)			<u> </u>		3RD4]		2300
	ENANCE			0	2					
	R PLANT WORKE	ERS		00	5					
		-								
OPERA	TOR SHIFTS NO				TUUDO					
1ST	SUN	MON X	TUES X	WED X	THURS	FRI	SAT			t.
2ND	X	x	×	X	X	X X	X			
3RD	x	x	x	×	X	x	X			
ADEM US	E ONLY					·			YES	NO

1. DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

FACILITY NAME:	Cahaba Ri	ver WWTP	 .	 		<u>. </u>	PLANT GRA	DE:		iV
PERMIT NUMBER:	AL0023027	·			!					1
PLANT SUPERINTEN	IDENT:	Gary Nels	on					TEL.#	(205) 98	7-0648
SYSTEM MANAGER:		David Den	ard					TEL.#	(205) 325	5-5979
PLANT OPERATORS	:		CP.	ADE OR						-
N	IAME			EE STATUS		OPERATOR N	o.	EXP.	DATE	
1. Eddie Crumley			TRAINE	E STATUS	3					•••
2. Rodney Franklin			TRAINE	E STATUS	,					<u> </u>
3. Richard Hall			TRAINE	E STATUS	3				·	_
4. Willie McClain				E STATUS						_
5. Ernest Minniefield				E STATUS						_
6. William Sanders				E STATUS	T	,				_
7. George Mendiola			1	E STATUS				·		- ,
8.			1103114	LUIAIUU						-
				<u> </u>						_
										_
			<u> </u>							<u>.</u>
COLLECTION SYSTEM	M OPERATOR	35 :		ı	•					
1.										
2										_
3					,					_
4								-		_
MANAGEMENT/SUPER	RVISOR GRADE I-C	MAN HI	RS./WK	NUMBER						-
	GRADE I					AVERAGE N	JMBER OF E	MPLOYE	S PER S	HIFT:
	GRADE III									
	GRADE IV					1ST 2ND		ST.	ART TIME	
DESIGNATED TRAINE	· ·					3RD				
LABORATORY	ļ.									
MAINTENANCE OTHER PLANT WORK	EBS -									
OTHER PART WORK			-	L						
OPERATOR SHIFTS NO	ORMALLY W	ORKED EA	CH DAY:					•		
SUN	MON	TUES	WED	THURS	FRI	SAT				
1ST 2ND			<u>.</u>							
3RD					,,					
ADEM USE ONLY										
									YES	NO
1. DOES PLANT OPERATO						TIVE CODE? M ADMINISTRAT				

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

PLANT SUPERINTENDENT: Bri	an Champion	· · · · · · · · · · · · · · · · · · ·	Transport
	vid Denard		
PLANT OPERATORS:	na Deliaiu		TEL.# <u>(205)</u> 325-5979
NAME	GRADE OR		
	TRAINEE STATUS	OPERATOR NO.	EXP. DATE
Brian Champion	l(c)	C002094	6/30/2015
Don Goodwin	l(c)	C005423	6/30/2015
Brian Rohling	- l(c)	C005418	6/30/2015
Lavon Evans	l(c)	C004631	12/31/2014
·			
			· · · · · · · · · · · · · · · · · · ·
	MAN HRS./WK NUMBER		
MANAGEMENT/SUPERVISOR	MAN HRS./WK NUMBER		
MANAGEMENT/SUPERVISOR OPERATOR(S):	MAN HRS./WK NUMBER		· · · · · · · · · · · · · · · · · · ·
MANAGEMENT/SUPERVISOR	MAN HRS./WK NUMBER	AVERAGE NUMBER OF	EMDI OVEES DED SUIET.
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C	MAN HRS./WK NUMBER	AVERAGE NUMBER OF	EMPLOYEES PER SHIFT:
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III	MAN HRS./WK NUMBER	AVERAGE NUMBER OF	EMPLOYEES PER SHIFT:
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV	MAN HRS./WK NUMBER	1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE III GRADE IV DESIGNATED TRAINEE(S)	MAN HRS./WK NUMBER	1ST	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV OESIGNATED TRAINEE(S) ABORATORY	MAN HRS./WK NUMBER	1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE III GRADE IV DESIGNATED TRAINEE(S)	MAN HRS./WK NUMBER	1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE III GRADE IV DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS		1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORK		1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORK SUN MON TU	ED EACH DAY:	1ST 2ND	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORK SUN MON TU	ED EACH DAY:	1ST 2ND 3RD	
MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORK SUN MON TU	ED EACH DAY:	1ST 2ND 3RD	

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

Five Mile Creek
WW/TP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Five Mile Creek WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway, Water Division
Alabama Department of Environmental Management
Water Division – Municipal Branch
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)
Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Five Mile Creek Wastewater Treatment Facility, NPDES Permit No. AL0026913. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director

Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Lynn Jones, Five Mile Creek WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FACI	LITY: Five Mile Creek WWTP	NPDES #:_AL0026913
MUNICIPALITY: Jet	fferson County Commission	COUNTY: Jefferson
CONTACT PERSON		·
	Municipal Official	
	Director of Environmental Services	
	Title	
	Telephone #: (205) 325 - 5979	Fax #: (205) 325 - 5981
	Email Address: denardd@jccal.org	
CHIEF OPERATOR:	Lynn D. Jones	
	Name	
	Telephone #:_(205) 841 - 5939	Fax #:_(205) 841 - 7698
	Email Address: jonesly@jccal.org	
	Date: May 13, 2013	
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer	
	Consulting Engineer	
7	Telephone #: (205) 214 - 8610	Fax #: (205) 325 - 5981
I	Date: May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility Name:	Five Mile	Creek	WWTP
----------------	-----------	-------	------

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

BOD ₅ (**)
-
<u> </u>

 .

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	30	50,040
90% of the Design Criteria	27	31,525

	·
C.	How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow 0 (Check the appropriate point total) $0 - 4 = 0$ points 5 or more = 5 points
D.	How many times did the monthly flow (Column 1) to the WWTP exceed the design flow? O (Check the appropriate point total) $0 = 0$ points $1 - 2 = 5$ points $3 - 4 = 10$ points 5 or more $= 15$ points
E.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed 90% of the design loading? $\frac{0}{0}$ (Check the appropriate point total) $0 - 1 = 0$ points $2 - 4 = 5$ points 5 or more = 10 points
F.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed the design loading? $\frac{0}{0}$ (Check the appropriate point total) $0 = 0$ points $1 = 10$ points $2 = 20$ points $3 = 30$ points $4 = 40$ points 5 or more $= 50$ points
G.	Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.
	C points = $\frac{0}{1}$

F points = 0

TOTAL POINTS VALUE OR PART 1 0

Enter this value on Part 11: Summary Sheet.

D points =

E points =

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Permit	Months	$\begin{array}{c} {\rm BOD_5} \\ {\rm (CBOD_5)} \\ {\rm (mg/l)} \end{array}$	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Limit	May - Nov.	6.0	30.0	2.0	4.0
	Dec April	7.0	30.0	2.5	5.0

(2) DMR Concentration

<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	0.8	0.1	0	0.5
	February	0.8	0	0.04	0.5
-	March	0.7	0	0	0.5
2	April	1.4	0.8	0	0.7
	May	1.8	2.2	0.01	0.7
	June	1.8	1.2	0.01	0.7
3	July	2.2	0.9	0.01	0.6
	August	1.5	0.8	0.01	0.5
	September	0.8	0.1	0.1	0.6
4	October	0.6	0.1	0.04	0.5
	November	0.8	0.3	0.02	0.7
	December	1.1	0.2	0.06	0.6
	Annual Avg.	1.19	0.56	0.023	0.59

B. List the monthly average permit limit and DMR loadings below.

(1) NPDES Permit Loading

Permit	Months	(CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Limit	May - Nov.	1501	7506	500	1000
	April - Dec.	1751	7506	625	1251
(2) DMI	R Loading				
	•	BOD_5			

<u>Otr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
1	January	114	10	0	67
	February	108	0	6.1	61
•	March	89	0	0	55
2	April	125	71	0	61
	May	158	209	0,9	65
	June	136	92	0.7	59
3	July	140	63	0.6	41
	August	141	80	0.7	46
	September	83	15	10.2	66
4	October	51	3.9	2.8	40
	November	57	25	1.0	48
	December	126	22	6.8	68
	Annual Avg.	110.7	49.3	2.5	56.4

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points $Yes = 121$ points

D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points $Yes = 121$ points
F.	During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points $Yes = 121$ points
G.	During the past year did the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
Н.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
	165 – 121 points
I.	Enter each point value checked for C through H in the blanks below.
	C Points = 0
	D Points = 0
	E Points = 0
	F Points = 0
-	G Points = $\frac{0}{0}$

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

H Points = 0

Facility Name	Five Mile Creek WWTP	•
racinty Name.	THE THE STATE OF T	

Part 3: Age of the Wastewater Treatment Facility

A.	What year was the wastewater treatment plant constructed or last reconstructed?	2008

Subtract the above answer from the report year to determine age:

Age = (Last Calendar year) - (Answer to A)
$$Age \frac{4}{} = (\underline{2012}) - (\underline{2008})$$

Enter Age in Part C below.

B. Check the type of treatment facility employed.

	Facto
xMechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify:)	1.0

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}}$$
 x $\frac{4}{\text{(Age)}}$ = $\frac{8.0}{\text{(Factor)}}$ TOTAL POINT VALUE FOR PART 3

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? 0_____
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? 2
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 1
- D. Add together Answers A and B and subtract Answer C from that total.

 A + B C = 1 (Check the appropriate point total.)

 0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points

E. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0

- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 36
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 36
- H. Add together Answers E and F and subtract Answer G from that total. E + F G = 0 (Check the appropriate point total.)

I. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 5
Enter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

Part	5: Sludge Quantity and Storage	
A.	Please provide information concerning sludge quantity, combased on available data as requested on the MWPP Sewage	haracteristics, and storage practice Sludge Survey, ADEM Form 419.
В.	How many months of sludge storage capacity does the available, either on-site or off-site? (i.e., How many monland spreading or disposing of sludge?) 4 months	wastewater treatment facility have the can the facility operate withou
	(Check the appropriate point total.)	
	Greater than or equal to 4 months	= 0 points 🗸
	Less than 4 months, but greater than or equal to 3 months	- toward
	Less than 3 months, but greater than or equal to 2 months	= 20 points
	Less than 2 months, but greater than or equal to 1 month	= 30 points
	Less than one month	= 50 points
Ente	er this value on Part 11: Summary Sheet.	
	6: Sludge Disposal Practices and Sites	·
		rmation based on available data as orm 419.
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site info	orm 419. to and approval for sufficient land
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the second se	orm 419. to and approval for sufficient land
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the second content of the sludge Disposal Practices and Sites and S	orm 419. to and approval for sufficient land
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the same statements) 36 or more months = 0 points	orm 419. to and approval for sufficient land
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM Formation How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the state of the	orm 419. to and approval for sufficient land
Part	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM Formation How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal).	orm 419. to and approval for sufficient land
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Design	ignificantly increase? Estin Design	nate additio	nal loadings Design	below.	
Population:	Flow:	_MGD	BOD ₅ :		_lbs/day
Equivalent (PE)					
List industrial and/or resi	dential developments.				
No major new development planne	ed			•	
					٠.
		 -			
				-	
Will the additional loading	g overload the plant? (Chec	k the approp	riate point to	otal.)	
No = 0 points	Yes = 121 points	•			
Enter the point total in the	blank below.				
	A TOPO OF O	nt total = 12	1)	·	
Enter this value on Part 11: Summ					
Enter this value on Part 11: Summ	nary Sheet.				
Enter this value on Part 11: Summ	nary Sheet.		Form 441.		
TOTAL POINT VALUE FOR PAEnter this value on Part 11: Summ Part 8: Operator Certification Complete the Plant and Collection Do both the plant operator	nary Sheet. n System Personnel Invento	ry, ADEM 1		— Admini	strative
Enter this value on Part 11: Summ Part 8: Operator Certification Complete the Plant and Collectio Do both the plant operator	nary Sheet.	ry, ADEM l	vith ADEM	Admini	strative
Enter this value on Part 11: Summ Part 8: Operator Certification Complete the Plant and Collectio Do both the plant operator	nary Sheet. n System Personnel Inventor and collection system staffir	ry, ADEM l	vith ADEM	Admini	strative

A. Are User-Charge Revenues sufficient to cover operation and maintena how are O&M costs being financed? Include user charge rates. yes. user charge rates are based on a uniform volume charge per 100 cubic feet of 85% metered consumption for single family resident. User charge rate ending December 31, 2006 was \$7.40 / 1. Residential Minimum \$2.00	****
Residential Minimum \$2.00 Plus rate \$9.89 /1,0 Industrial Minimum \$2.00 Plus rate \$9.89 /1,0 Monthly residential rate based on 6,000 gallons usage \$ \$50.45 *Please complete the above information based on your user charge rates for a may attach a sample water and sewer bill for clarity. B. What financial resources are available to pay for the wastewater in reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater transported by the physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	nce expenses? If n
Residential Minimum \$2.00 Plus rate \$9.89 /1,0 Industrial Minimum \$2.00 Plus rate \$9.89 /1,0 Monthly residential rate based on 6,000 gallons usage \$ \$50.45 *Please complete the above information based on your user charge rates for a may attach a sample water and sewer bill for clarity. B. What financial resources are available to pay for the wastewater in reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater transfer facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	water
Industrial Minimum \$2.00 Plus rate \$9.89 /1,0 Monthly residential rate based on 6,000 gallons usage \$50.45 *Please complete the above information based on your user charge rates for it may attach a sample water and sewer bill for clarity. B. What financial resources are available to pay for the wastewater in reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater transfer facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	00cu.ft.
Industrial Minimum \$2.00 Plus rate \$9.89 /1,0 Monthly residential rate based on 6,000 gallons usage \$ \$50.45 *Please complete the above information based on your user charge rates for a may attach a sample water and sewer bill for clarity. B. What financial resources are available to pay for the wastewater in reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater to The physical and structural conditions of the wastewater facility are good. 3. Describe the general condition of the sewer system (sewer lines, manholes,	000 gal.
*Please complete the above information based on your user charge rates for a may attach a sample water and sewer bill for clarity. B. What financial resources are available to pay for the wastewater in reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater treatments and structural conditions of the wastewater facility are good. 3. Describe the general condition of the sewer system (sewer lines, manholes,	
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Approximately \$20,300,000 is currently available to fund capital improvements. Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater transfer the physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	the report year. You
Part 10: Subjective Evaluation A. Describe briefly the physical and structural conditions of the wastewater tre The physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	aprovements and/o
A. Describe briefly the physical and structural conditions of the wastewater tre The physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	
A. Describe briefly the physical and structural conditions of the wastewater tre The physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	
A. Describe briefly the physical and structural conditions of the wastewater tre The physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	
The physical and structural conditions of the wastewater facility are good. B. Describe the general condition of the sewer system (sewer lines, manholes,	
The physical and structural conditions of the wastewater facility are good. 3. Describe the general condition of the sewer system (sewer lines, manholes,	eatment facility
general condition of the sewer system (sewer mies, mannoles,	ramont facility.
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general condition of the sewer system (sewer mies, mannoles,	· .
general condition of the sewer system (sewer mies, mannoles,	
The general condition of the sewer system (sewer lines, manholes, lift stations) is good.	lift stations).
	.*
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	· · · · · · · · · · · · · · · · · · ·

	e next 5 years the WWTP will have improvements in automation and SCADA controls. Sewer
con	dition assessment and sewer line repair, replacement and renewal projects are ongoing activities.
Imp	rovements to Newfound, Cunningham and Penefield pump stations.
Wha of th	t is the theoretical design life of the plant, and what is the estimated remaining use wastewater treatment facility?
See	attached additional sheet.
syste	
See	attached additional sheet.
s the	community presently involved in formal planning for treatment facility upgradin
s the	community presently involved in formal planning for treatment facility upgradin
	community presently involved in formal planning for treatment facility upgradin
	community presently involved in formal planning for treatment facility upgradin
Yes.	community presently involved in formal planning for treatment facility upgradin many days in the last year were there residential backups at any point in the confor any reason other than clogging of the lateral connection?
Yes. How system Does	many days in the last year were there residential backups at any point in the conformany reason other than clogging of the lateral connection? 10
How yster Does res, d	many days in the last year were there residential backups at any point in the confor any reason other than clogging of the lateral connection? 10the plant have a written plan for preventive maintenance on major equipment ite

Five Mile Creek WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structure = 50 –age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

Part 10.E

Fully saturated antecedent ground conditions coupled with 2.34 inches of rainfall on January 26, 2012 caused two I/I related SSOs in the Five Mile Creek collection system. The day's rainfall was not unusual with hourly totals approaching 1-year 2-hour and 1-year 6-hour return period frequencies, but the impact to the sewer system and resulting SSOs was much more severe than from significantly higher intensity and many times higher total precipitation storms encountered prior to and following this event. Prolonged weather patterns producing saturated ground conditions prior to a storm have been identified as the primary cause of most I/I related SSOs observed in the last few years. Three minisystem areas that contribute excessive I/I have been included in a SSES project that includes television inspection (TVI), manhole inspections, and smoke testing of all sewers. The SSES project commenced on February 21, 2013 and will be complete August 21, 2013. Defects and/or deficiencies identified will be remedied. Engineering capacity analysis of the sewers will also be performed.

	·
I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	BUSWAY replacement cost: \$57, 723.13
	Lightning struck the No. 3 generator through it's exhaust stack on the roof. Ground wiring had to be
	reconfigured and rewired to prevent damage from future lightning strikes. Repair Cost for reconfigured
	ground wiring: \$9, 645.00. Repair of No. 3 generator: \$5,713.34(Incomplete and ongoing)
	UV Repairs \$3,864.13
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program. The goal of the Program is to develop and provide
	tools, technologies, and procedures that will empower and enable the County to better manage the sanitary sewer
	collection system. The developed Program will establish a comprehensive asset management system with processes
	and procedures to identify and prioritize future collection system capital and operating replacement and maintenance
	requirements. The Program is an extension and improvement to the current MOM. The Program's objectives are
	focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name: Five Mile Creek WWTP		
Part 11: Summary Sheet	4	
1. Enter in the values from Parts 1 left column to determine the M the previous calendar year.	through 8 in the left column bel WPP Report point total the wast	ow. Add the numbers in the tewater system generated for
Actual Values	Maximum Possible	
Part 1 o points	80 points	
Part 2 o points	121 points	·
Part 3 8 points	40 points	
Part 4 <u>5</u> points	200 points	
Part 5 o points	50 points	
Part 6 o points	50 points	
Part 7 o points	121 points	
Part 8 o points	121 points	
Total 13 points	783 points	
 Check the facility type that best de 	scribes the plant's treatment and	disposal of wastewater.
Mechanical plant with surface wa	nter discharge	
Aerated Lagoon or stabilization p		e
Mechanical plant using land dispo		•
Aerated Lagoon or stabilization p	ond using land disposal of liquic	I wastes
3. Check the range that describes the a 0 - 70 pts. Actions as	action needed to address problen Appropriate*	ns identified in the report.
71 - 120 pts. Department	tal Recommendation Range*	
121 – 783 Municipalit Other actions may be required by NP	ty Action Range* DES outside the scope of this r	enort
, quinte of the	samue the scope of this i	opor u
4. Complete the Municipal Water Pol	lution Prevention Resolution Fo	rm, ADEM Form 418.

5.	In Question 1, do any of the actual point values in the possible points in the right column? (Check the appropriat	e left column equal the maximum e response) Yes No
	If yes, provide a written explanation for this situation in the	e space below.
•		
•		
4		

Five Mile Creek Wastewater Treatment Plant ATTACHMENT 2 – Raw Sewage Bypass and SUMMARY







Summary of Unpermitted Discharges - Five Mile Creek

January 01, 2012 through December 31, 2012

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C00998	1/26/12	3410 Happy Hollow Lane	Five Mile - Downstream of Barton Branch (Remainder of System)	Five Mile Creek	89,333	Manhole/ Junction Box	WWTP operator error	Heavy Rain	Influent Gate Raised	Brian Champion	Sewer Maintenance Supervisor
N	otes: Follow	Notes: Following a power outage, WWTP operator failed to manually set influent gate at correct position to hand peak flows caused by heavy rains.	to manually set influent gate	e at correct position to ha	nd peak flows co	aused by heavy rai	12.	Western de la companya de la company			
C00999	1/26/12	1/26/12 1908 & 1919 East Lawson Dr	Five Mile - Upstream of Barton. Branch	Five Mile Creek	157,700	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance
N	otes: Floodi	Notes: Flooding from rain in overflow area.	A SALASA A A A SA SA A A A SA SA SA SA SA SA	en plan av Val 1 de Graf de propriet, est de moste en mille en en entrance de la companyación de constante en							TOSTA TOCING
C01000	1/26/12	1/26/12 1220 Sweet Water Cir	Five Mile - Upstream of Barton Branch	Five Mile Creek	134,050	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
N	otes: Floodi	Notes: Flooding from rain in overflow area.	demand the in section to the content of the content		and the second participation of the second s	Version of the surphythese surphythese successions and an experimental surphythese successions and the surphythese successions and the succession	erd emmende omre endem medam "Delle pad pad pad pagangang byty.		A man man and de stande per ser ser ser ser ser ser ser ser ser s		
C01005	3/6/12	Wright Street & Laburnum Drive	Five Mile - Upstream of Barton Branch	Storm Drain	9,300	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N	Notes:										Supervisor
C01007	4/17/12	4/17/12 1495 Center Point Parkway	Five Mile - Upstream of Barton	Feeder to Five Mile Creek	10,700	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N.	Notes:	од петеманалистика в да дей відей відей верементов петеманалиста в техня сключення верементов верементов верем	Diamen								Supervisor
C01009	5/9/12	1832 Brewster Road	Five Mile - Upstream of Barton Branch	Drainage Ditch	2,050	Manhole	Grease	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N	Notes:	Notes:	emanuse espera Laboratoro est documba de la fabrica estilenda estado monto.	на часта да посфиција надаваја се предосугаја его историја на постава на постава на постава на постава на пост				-			Supervisor

State State State State Storm Drain Storm Drai	Event No.	Date Reportec	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
615/12 1651 Viking Drive Tree Mile - Daninge Ditch 11,000 Manhole Grease No Rain Blockage Removed Dispersant of Barton Barton Barton Barton Branch Notes: 8/14/12 1848 Centerpoint Parkway Frive Mile - Upstream of Barton Branch Notes: 8/14/12 1108 200 20th Ave NW Frive Mile - Daninge Ditch Notes: 8/14/12 1108 200 20th Ave NW Frive Mile - Daninge Ditch Notes: 9/27/12 1 Tranhigar Square Upstream of Barton Branch Notes: 1026/12 100 Manhole Grease No Rain Blockage Removed Grease No Rain Blockage Removed Spring Wile Creek Storm Drain 8/400 Manhole Grease/ Rags No Rain Blockage Removed Spring Wile Creek Mile - Storm Drain 8/400 Manhole Grease/ Branch Bran		6/12/12 tes:		Five Mile - Upstream of Barton Branch	Storm Drain	2,850	Manhole	Grease/ Rags	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
Manhole Grease No Rain Blockage Removed Drainage Ditch Branch		6/15/12 tes:		Five Mile - Upstream of Barton Branch	Drainage Ditch	11,000	Manhole	Grease	No Rain	Blockage Removed	Don	Sewer Video Operations Supervisor
8/11/12 1105 Spring Villa Circle Upstream of Barton Upstream of Barton Manes: 8/14/12 1848 Centerpoint Parkway Upstream of Barton Mozes: 8/14/12 1848 Centerpoint Parkway Upstream of Barton Mozes: 8/27/12 1 Trafigler Square Upstream of Barton Mozes: 9/27/12 1 Trafigler Square Upstream of Barton Upstream of Barton Mozes: 9/27/12 1 Trafigler Square Upstream of Barton Upstream of Barton Upstream of Barton Mozes: 9/27/12 1 Trafigler Square Upstream of Barton Mozes: 9/27/12 1 Trafigler Square Upstream of Barton Mozes: 1026/12 110 & 200 20th Ave NW Five Mile - Drainage Dirch III Manhole Upstream of Barton Barton Barton House Upstream of Barton Upstream of Barton Upstream of Barton House Upstream of Barton Baranch Roses: 1026/12 110 & 200 20th Ave NW Upstream of Barton Barton House Upstream of Barton		6/25/12 tes:		Five Mile - Upstream of Barton Branch	Ground Absorbed	24,000	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
8/14/12 1848 Centerpoint Parkway Upstream of Barton 8/27/12 1 Trafialgar Square 9/27/12 1 Trafialgar Square 9/27/12 1 Trafialgar Square 9/27/12 1 Trafialgar Square 10/26/12 110 & 200 20th Ave NW Five Mile - Commonshape 10/26/12 110 & 200 20th Ave NW 10/26/12 110 & 200 20th Ave	C01016	8/11/12 tes:		Five Mile - Upstream of Barton Branch	Drainage Ditch/ Five Mile Creek	61,050	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
8/27/12 1 Tammera Trail Upstream of Barton Branch Notes: 9/27/12 1 Traffalgar Square Upstream of Barton Branch Notes: 9/27/12 1 Traffalgar Square Upstream of Barton Notes: 10/26/12 110 & 200 20th Ave NW Five Mile - Branch Notes: 10/26/12 110 & 200 20th Ave NW Branch Branch Notes:		8/14/12 tes:		Five Mile - Upstream of Barton Brauch	Storm Drain	3,750	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
9/27/12 1 Trafalgar Square Five Mile - Five Mile Creek 22,446 Manhole Grease/ Debris/ No Rain Blockage Removed Upstream of Barton Branch 10/26/12 110 & 200 20th Ave NW Five Mile - Drainage Ditch Ross: 10/26/12 110 & 200 20th Ave NW Five Mile - Drainage Ditch Ross	C01020	8/27/12		Five Mile - Upstream of Barton Branch	Storm Drain	8,400	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
10/26/12 110 & 200 20th Ave NW Five Mile - Drainage Ditch 123 Manhole Debris/ Rags No Rain Blockage Removed Upstream of Barton Branch		9/27/12	Ì	Five Mile - Upstream of Barton Branch	Five Mile Creek	22,446	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian . Champion	Sewer Maintenance Supervisor
	No	10/26/12		Five Mile - Upstream of Barton Branch	Drainage Ditch	123	Manhole	Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

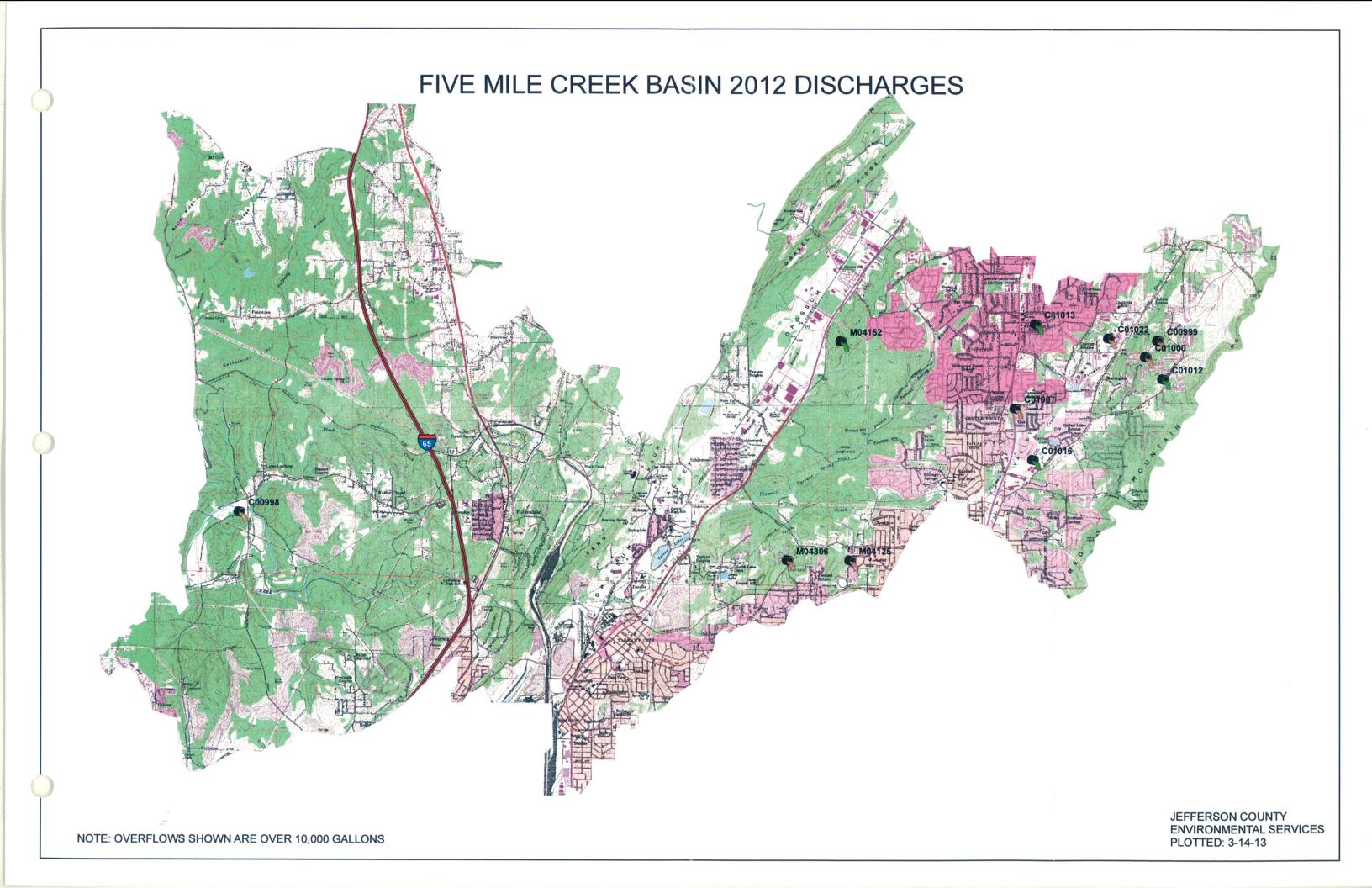
)					
Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C01025	11/4/12 Notes:	317 Wink Circle	Five Mile - Upstream of Barton Branch	Storm Drain	169	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
C01026	11/6/12 Notes:	11/6/12 1805 Lyle Drive	Five Mile - Upstream of Barton Branch	Drainage Ditch	98	Manhole	Grease/ Debris/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
1028	11/29/12	4150 Pinson Valley Parkway	Five Mile - Downstream of Barton Branch (Remainder of System)	Ground Absorbed	70	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04096	1/10/12 Notes:	1401 Carson Road N	Five Mile - Upstream of Barton Branch	Ground Absorbed/ Drainage Ditch	6,100	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04125	1/27/12 Notes:	9832 Red Mill Rd	Five Mile - Upstream of Barton Branch	Storm Drain/ Five Mile Creek	62,700	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04126		1/27/12 4141 Pinson Valley Parkway	Five Mile - Upstream of Barton Branch	Ground Absorbed	1,500	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04128	1/31/12 Notes:	627 Earline Cir	Five Mile - Upstream of Barton Branch	Storm Drain	3,050	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
		AND		THE REPORT OF THE PROPERTY OF							

Event No.	Date Reported Location	Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04130	1/31/12 tes: Pump c	1/31/12 181 Goodrich Drive (Goodrich PS) Five Mile - Gro Upstream of Barton Branch Notes: Pump controller failed causing the pumps to not operate manually or automatically.	Five Mile - Upstream of Barton Branch Branch connully or automati	Ground Absorbed	300	Pump Station	P.S. Equipment Failure	No Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
M04133	2/3/12 Notes:	1020 Pinson Valley Parkway	Five Mile - Downstream of Barton Branch (Remainder of System)	Ground Absorbed	6,100	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04152	3/2/12 Notes:	1800 Indian Summer Drive	Five Mile - Upstream of Barton Branch	Ground Absorbed	159,000	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04181	4/11/12 Notes:	900 Winchester Circle	Five Mile - Upstream of Barton Branch	Storm Drain	6,500	Manhole	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04195	5/8/12 Notes:	213 13th Ave NW	Five Mile - Upstream of Barton Branch	Drainage Ditch	1,500	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04212	6/18/12 Notes:	9849 Airport Road	Five Mile - Upstream of Barton Branch	Ground Absorbed	5,550	Manhole	Grease/ Rags	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
M04215	6/28/12 Notes:	2801 Pinson Valley Parkway	Five Mile - Upstream of Barton Branch	Ground Absorbed	4,500	Manhole	Grease/ Rags	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

			-								
Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04231	8/13/12 Notes:	8/13/12 1800 Indian Summer Drive	Five Mile - Upstream of Barton Branch	Ground Absorbed	4,000	Manhole	Grease/ Debris	Light Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
M04240	8/28/12	8/28/12 1401 Tarrant Huffman Road Notes: Line was repaired when camera was removed.	Five Mile - Downstream of Barton Branch (Remainder of System)	Drainage Ditch/ Dolcito Quarry	8,976	Pipe	Grease/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04241	9/2/12 Notes:	112 Lawson Road	Five Mile - Upstream of Barton Branch	Drainage Ditch	783	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04264	M04264 10/15/12 Notes:	504 Winterpark Cir	Five Mile - Upstream of Barton Branch	Drainage Ditch	107	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04269	10/22/12 Notes:	M04269 10/22/12 1321 7th PL NW	Five Mile - Upstream of Barton Branch	Ground Absorbed/ Drainage Ditch	786	Manhole	Grease/ Roots/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04271	10/24/12 Notes:	1313 Five Mile Road	Five Mile - Upstream of Barton Branch	Ground Absorbed	9,930.	Manhole	Grease/ Roots/ Debris/ Rags/ Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04281	11/16/12 Notes:	11/16/12 1400 Wharton Ave	Five Mile - Downstream of Barton Branch (Remainder of System)	Ground Absorbed	8	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Event No.		Date Reported Location	Collection System	Ultimate Destination	Est Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04294	M04294 12/9/12 1315.2 Notes:	nd St. NW	Barto	Drainage Ditch	1,287	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04296	12/12/12 Notes:	illage Mill Rd	Five Mile - Gr Upstream of Barton Branch	Ground Absorbed	174	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04306	5 12/26/12 Notes:	M04306 12/26/12 Pape Ave & Airport Rd Notes:	Five Mile - Upstream of Barton Branch	Drainage Ditch/Five Mile Creek	15,504	Manhole	Grease/Debris	Heavy Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor



Five Mile Creek Wastewater Treatment Plant ATTACHMENT 3 – MWPP Sewage Sludge SURVEY



MWPP SEWAGE SLUDGE SURVEY

Facility E	Background Information:			•	
1. Facili	ty Information	•	Permit N	umber:	AL0026913
	Name:	FIVE MILE (CREEK WWTP	•	
	Street Address:	3410 HAPPY	HOLLOW LANE FUL	TONDALE,	AL 35068
	County:	JEFFERSON			
. Facili	ty Contact				
	Name:	LYNN D. JOI	ves .		
	Title:	PLANT MAN	······································	·	
	Telephone:	205-841-593			
	Permittee Name:	JEFFERSON	COUNTY COMMISSION	ON	
	Mailing Address:		716 RICHARD ARRIN		D N.
* *		BIRMINGHA			
acility F	low Information				
	y Wastewater Treatment (Capacity			
	Avg. Daily Flow for 20		11.76	MGD	
	Facility Design Capac	ity:	30	MGD	•
Eatim	otad Cantana Ownellie Han			_	
ESuma	ated Septage Quantity Har				-
	Average Domestic Se	T	N/A	_gallons pe	
	Average Commercial	Septage:	N/A	_gallons pe	r month
. Metho	d of Septage Processing I Mixed with Influen	t Wastewater for	Treatment		
	Mixed with Sewag		reamen	٠.	
		- J.aago	N/A		
Estima	ated Percentage Contributi	ng Wastewater Fl	ow .		•
	Residential:	93 %			
	Industrial:	2 %			• • • • • • • • • • • • • • • • • • •
	Other:	<u>5</u> %	Describe: COMMER	CIAL	
List typ	e of wastewater treatment	process(es) utiliz	ed at this facility		
	Screening, grit remov			rification, s	andfiltration.
	UV disnfection				
Estima	ted sewage sludge wastin	rate at this facili			D 21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
_5tima	ica sewage sluage wastili	grate at this racin			lb/day dry weight
	• • • •		or <u>32,254.00</u>		gallons per day
Estima	ted untreated sludge recei	ved from off site:	•		lb/day dry weight
			or N/A		gallons per day
					Samono boi day
Estimat	ted percent solids of comb	ined sewage slud	ne prior to treatment:		3.7 %

Thickening Drying Beds (air drying) 10. Estimate the total volume of sludge generated: 1522 (dry U.S. tons per year) Sludge Disposal Methods 1. Which of the following describes the current method of sewage sludge disposal for this facility: Current Practices Proposed Practic Approved by ADEM Quantity Approved by ADE	Aerobic Digestion	,			Sludge Quanti ated pounds p	
Drying Beds (air drying) 10. Estimate the total volume of sludge generated: 1522 (dry U.S. tons per year) Sludge Disposal Methods 1. Which of the following describes the current method of sewage sludge disposal for this facility: Current Practices Proposed Practic Approved by ADEM Quantity Approved					<u></u>	
10. Estimate the total volume of sludge generated: 1822	<u> </u>					
Sludge Disposal Methods 1. Which of the following describes the current method of sewage sludge disposal for this facility: Current Practices Proposed Practic Approved by ADEM Quantity Approved by ADEM Quantity Approved by ADEM Shipped Is22 Agriculture DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD						
Sludge Disposal Methods 1. Which of the following describes the current method of sewage sludge disposal for this facility: Current Practices Approved by ADEM Quantity Yes No (dry U.S. tons/year) 1. Land Application, Bulk Shipped Agriculture Forest Proposed Practic Approved by ADEM Quantity Yes No (dry U.S. tons/year) 1. Say No (dry U.S. tons/year) 1. Say No (dry U.S. tons/year) 1. Say No (dry U.S. tons/year) Yes No (dry U.S. tons/year) I Say Instancy No (dry U.S. tons/year) I Day In U.S. tons/year) Yes No (dry U.S. tons/year) I Say Instancy No (dry U.S. tons/year) I Day In U.S. tons/year) Yes No (dry U.S. tons/year) Yes No (dry U.S. tons/year) Yes No (dry U.S. tons/year) I Say Instancy No (dry U.S. tons/year) I Day Instancy No (dr	10. Estimate the total volume of sludge	generated:	•	(dry		year)
1. Which of the following describes the current method of sewage sludge disposal for this facility: Current Practices Approved by ADEM Yes No Quantity Quantity Yes No 1522 Agriculture D D D	Sludge Disposal Methods			, ,	• •.	• /
Current Practices	-	current met	hod of sewa	ne sludge disposal for th	nie facility	
Approved by ADEM					-	Practices
a. Land Application, Bulk Shipped Agriculture			•		Approved	
Shipped 1522 ■ Agriculture □ □ Forest □ □ Public Contact □ □ Lawn/Home Garden □ □ Lawn/Home Garden □ □ Agriculture □ □ Agriculture □ □ Forest □ □ Public Contact □ □ Public Contact □ □ Public Contact □ □ Lawn/Home Garden □ □ Lawn/Home Garden □ □ Incineration □ □ Incineration <td< td=""><td>a B Land Application Rulk</td><td><u>Yes</u></td><td><u>No</u></td><td>(dry U.S. tons/year)</td><td><u>Yes</u></td><td><u>No</u></td></td<>	a B Land Application Rulk	<u>Yes</u>	<u>No</u>	(dry U.S. tons/year)	<u>Yes</u>	<u>No</u>
Agriculture □ <t< td=""><td></td><td></td><td></td><td>1522</td><td></td><td></td></t<>				1522		
Public Contact						
Lawn/Home Garden	☐ Forest		0			П
b. [] Land Application,	Public Contact	0				
Bagged/Other Container Agriculture	Lawn/Home Garden	0	D			
Agriculture						
Described Describe De					Ō	0 -
C. [] Incineration [] [] [] [] [] [] [] [] [] [] [] [] []	☐ Forest	0				
c. [] Incineration [] [] [] [] [] d. [] Subtitle D Landfill (Disposal Only) [] [] [] [] [] [] e. [] Lined Treatment Lagoon or Stabilization Pond [] [] [] [] [] [] [] [] [] [] [] [] []	Public Contact	D				0
d. [] Subtitle D Landfill (Disposal Only) e. [] Lined Treatment Lagoon or Stabilization Pond f. [] Unlined Lagoon or Stabilization Pond [] [] [] g. [] Other (Please Describe) [] [] []	I Lawn/Home Garden		0		0	0
(Disposal Only) e. Il Lined Treatment Lagoon or Stabilization Pond f. Il Unlined Lagoon or Stabilization Pond Il I	c. I Incineration	0			0	0
or Stabilization Pond	(Disposal Only)	0	. 0		0	, 0
Stabilization Pond [] [] [] [] [] [] [] [] [] [] [] [] []	or Stabilization Pond	0	0		О	. 0
g. [] Other (Please Describe)		П	Π		П	п
		_		· · · · · · · · · · · · · · · · · · ·		
						-
			<u> </u>	•		
2. If "f" was selected above and sludge is stored for 2 or more years, enter the distance between the				•		

ADEM FORM 419 8/02

	al concentrations of the fo	Sample	Sample	Detection Level of			
Analyte	(mg/kg or ppm)	Туре	Date*	Analysis(mg/kg)			
Arsenic	<pql< td=""><td>Grab</td><td>*</td><td>11.0</td></pql<>	Grab	*	11.0			
Cadmium	<pql< td=""><td>Grab</td><td>*</td><td>8.0</td></pql<>	Grab	*	8.0			
Chromium	84	Grab	*	8.0			
Copper	368	Grab	*	8.0			
Lead	33	Grab	*	15.0			
Mercury	2.0	Grab	*	0.6			
Molybdenum	<pql< td=""><td>Grab</td><td>*</td><td>5.0</td></pql<>	Grab	*	5.0			
Nickel	65	Grab	*	6.0			
Selenium	<pql< td=""><td>Grab</td><td>*</td><td>15.0</td></pql<>	Grab	*	15.0			
Zinc	1,933	Grab	*	18.0			
Ammonium-				10.0			
Nitrogen	***************************************	N/A	N/A				
Nitrate-							
Vitrogen		N/A	N/A				
Total Kjeldahl	00.007						
Nitrogen 29,667 Grab * 1.8 *Yearly Average PQL= Practical Quantitative Limit 2. Enter the estimated or determined percent solids of the sewage sludge when sampled for the above							
. Which class of CFR Part 503	ded for Sewage Sludge at of pathogen reduction doe 3) ass A Alternative A1 - Time and ' Alternative A2 - Alkaline Tr Alternative A3 - Analysis a	s the sewage sludge m Temperature reatment	neet at the facility? (A	s defined in			
0 <i>A</i>	Alternative A4 - Analysis O Alternative A5 - Processes II Heat Drying II Pasteurization II Composting Alternative A6 - PFRP Equ	only to Further Reduce Pat Il Thermophili Il Gamma Ra Il	ic Aerobic Digestion	Heat TreatmentBeta Ray Irradiation			

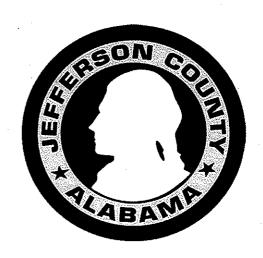
Vector Attraction Control

☐ Neither or Unknown

I Option 2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction I Option 3 - Aerobic Processes with Bench-Scale Demonstration of Volatile Solids Reduction I Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge I Option 5 - Aerobic Processes plus Elevated Temperature I Option 6 - Raised pH to 12 and Retained at 11.5 I Option 7 - 75% Solids with no Unstabilized Solids I Option 8 - 90% Solids with Unstabilized Solids I Option 9 - Injection Below Land Surface I Option 10 - Incorporation into Soli within 6 or 8 Hours I Option 11 Covering Active Sewage Sludge Unit Daily I None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performat the site? I Yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/yeax 3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? No complaints have been received.		Dopuoni	- Minimum 38% Reduction in Volatile Solids
Il Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge Il Option 5 - Aerobic Processes plus Elevated Temperature Il Option 6 - Raised pH to 12 and Retained at 11.5 Il Option 7 - 75% Solids with no Unstabilized Solids Il Option 8 - 90% Solids with Unstabilized Solids Il Option 9 - Injection Below Land Surface Il Option 10 - Incorporation into Soil within 6 or 8 Hours Il Option 11 Covering Active Sewage Sludge Unit Daily Il None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performs at the site? Il Yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year		U Option 2	- Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
Option 5 - Aerobic Processes plus Elevated Temperature Option 6 - Raised pH to 12 and Retained at 11.5 Option 7 - 75% Solids with no Unstabilized Solids Option 8 - 90% Solids with Unstabilized Solids Option 9 - Injection Below Land Surface Option 10 - Incorporation into Soil within 6 or 8 Hours Option 11 Covering Active Sewage Sludge Unit Daily None of the Above None of the Above Groundwater Monitoring If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? If yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Titton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year 1		I Option 4	- Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
□ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface □ Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Titton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year		I Option 5	- Specific Oxygen Optake Rate (SOUR) for Aerobically Digested Sludge
□ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface □ Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performat the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year 3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors?		Option 6	- Raised nH to 12 and Retained at 11.5
□ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface □ Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performs at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this □ No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year		Option 7	- 75% Solids with no Unstabilized Solids
☐ Option 9 - Injection Below Land Surface ☐ Option 10 - Incorporation into Soil within 6 or 8 Hours ☐ Option 11 Covering Active Sewage Sludge Unit Daily ☐ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performat the site? ☐ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Titton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year		Option 8 -	- 90% Solids with Unstabilized Solids
Option 10 - Incorporation into Soil within 6 or 8 Hours Option 11 Covering Active Sewage Sludge Unit Daily None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performs at the site? If yes No survey, Also please submit a copy of the groundwater monitoring reports along with the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year	,	DOption 9 -	- Injection Below Land Surface
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 If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, and Rye Grass. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? 	Land Applic	cation of Sew	/age Sludge
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2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year 3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors?	 If sewag 	je sludge is la	and applied in bulk form, what type of crop or other vegetation is grown on this site?
 If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lbs/acre/year If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? 	Tifton Bern	nuda Grass,	and Rye Grass.
3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors?		· · · · · · · · · · · · · · · · · · ·	
3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors?		·	
neighbors?	A 15	je sludge is la	and applied in bulk form, what is the nitrogen requirement for this crop or vegetation?
neighbors?	600lbs/acre	e/year	
neighbors?	600lbs/acre	e/year	
No complaints have been received.	3. If sewag	je sludge is la	and applied in bulk form, briefly describe the nature of any complaints filed from
	3. If sewagneighbors?	je sludge is la	
	3. If sewagneighbors?	je sludge is la	
	3. If sewagneighbors?	je sludge is la	
	3. If sewagneighbors?	je sludge is la	
	3. If sewag neighbors?	je sludge is la	

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submitt a copy with the MWPP in lieu of this Attachment.

Five Mile Creek Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



2012	PLANT AND COLLECT	TION SYSTEM PER	SONNEL INVENT	ORY
FACILITY NAME:	Five Mile Creek WWTP		PLANT GRADE:	IV
PERMIT NUMBER:	AL0026913			
PLANT MANAGER:	Lynn Jones			# <u>(205)</u> 841-5939
SYSTEM MANAGER	: David Denard		TEL.#	‡ (205) 325-5806
PLANT OPERATORS	S:		-	
	NAME	GRADE OR TRAINEE STATUS		EXP. DATE
1 PMgr	Lynn Jones	Grade IV	C003327	9/30/2014
2 PSpv	Charles King	Grade IV	C003272	8/31/2014
3 SSpv	Wayne Hawkins	Grade IV	C005284	6/30/2013
4 SSpv	Terry Joe MaHaffey	Grade IV	C003135	8/31/2013
5 SSpv	Randy Maxwell	Grade IV	C003076	11/30/2015
6 SSpv	Tony Sutton	Grade IV	C002294	11/30/2015
7 SSpv	Robert Tyler	Grade IV	C003008	11/30/2015
8 Op II	Mark Cruce	Grade IV	C001682	3/31/2015
9 Op II	Adam Smith	Grade IV	C002236	4/30/2013
10 Op il	Daniel Tesseneer	Grade IV	C006050	6/30/2014
11 Op I	Ellis Brown	Trainee		
12 Op I	Johnny McDonough	Trainee		
13 Op I	Sam Shears	Trainee		
14 Op I	Todd Smitherman	Trainee		
15 Op I	Michael Wright	Trainee		
OPERATO	IENT/SUPER\ GRADE IV R(S): GRADE IV FIFIED OPER. (TRAINEES)	40 7 40 3 40 5	AVERAGE 1ST 2ND 3RD	NUMBER OF EMPLOYEES PER SHIF START TIME 7:00 a.m. 2 3:00 p.m. 2 11:00p.m.

OPERATOR SHIFTS NORMALLY WORKED FACH DAV-

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X	х	х	Х	х	X	x
×	x	Х	х	х	x	x

ADEM USE ONLY		
DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE? DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?	YES	NO
Revised 2/25/2013	ADEM FORM	441 8/02

		PLANT AN	ND COLLECT	TION SY	STEM PER	ONNE	L INVENTO	DRY	Cont	nued
FACILITY NAME: Five Mile Creek WWTP				_PLAN1	Γ GRADE:	IV		active/Meride		
PERMI	T NUMBER:	AL00269	913							
PLANT	SUPERINTE	NDENT:	Lynn Jones				TEL.#	_(205) 84	11-5939	
SYSTE	M MANAGER	R: David D	enard			-	 TEL. #	(205) 32	***************************************	
PLANT	OPERATOR	S:						_(200) 02	5-666	
	<u> </u>	NAM	ME	TRAI	GRADE OF		RATOR NO.	}	EXP. DATE	
	15	Garren H		7	rainee				DA . D/AL	
	16		<u>lcDonough</u>		rainee					
	17	Billy Joe I	***		rainee					_[
	18	Samuel S		T	rainee				-	
	19	Todd Smi			rainee					
	20	Daniel Te			rainee					\neg
2	21	Michael V	Vright	<u> </u>	rainee					
		 -		 		· · · · · · · · · · · · · · · · · · ·	 			
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			MAN HRS./WK	NUMBER	?				-	
MANAGE OPERAT	MENT/SUPE	RVISOR			<u> </u>					
O, 2,011		GRADE I-C								
		GRADE I		· · · · · · · · · · · · · · · · · · ·	-					-
		GRADE II			1		AVERAGE	NUMBER	OF EMPLOYEES PE	RSHIFT
		GRADE III		<u>. </u>	-		407		l .	
		GRADE IV			1		1ST 2ND		START TIM	/E
DESIGNA	TED TRAINE	E(S)		-	1		3RD		•	
ABORAT					1		SKD			L
MAINTEN	ANCE				1					
THER P	LANT WORK	ERS]				0	
	R SHIFTS N	ORMALLY W	ORKED EACH	DAY:	J				•	
OPERATO										
OPERATO		MON	THES	MED	THURS		A			
OPERATO 1ST	SUN	MON	TUES	WED	THURS	FRI	SAT			
		MON	TUES	WED	THURS	FRI	SAT		٠.	

1. DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

YES	NO			
ADEM FORM 441 8/02				

PLAN	T AND COLLECTION SY	STEM PERSON	NEL INVENTOR	₹Y.	
2012	•			•	;
FACILITY NAME: Sewer Lin	ne Maintenance	•	PLANT G	RADE: IV	
PERMIT NUMBER: AL 00561	·		•		
PLANT SUPERINTENDENT:	Brian Champion	·		TEL. # (205) 238-37	78 <u>5</u>
SYSTEM MANAGER:	David Denard			TEL. # (205) 325-59	
•					
PLANT OPERATORS:	·				
	GRADE	OR			
NAME	TRAINEE S	TATUS OF	PERATOR NO.	EXP. DATE	- 1
1. Brian Champion	: I(c)	C003094	6/30/2015	l
2. Don Goodwin	I(c)	C005423	6/30/2015	ļ
5. Lavon Evans	I(c)	C004631	12/31/2014	ļ
6. Brian Rohling	1(c)	C005418	6/30/2015	ļ
7.					l
8.					ļ
9.					
10.					
					ĺ
COLLECTION SYSTEM OPERATOR:	S: .				
1.					
2.					.
3.					
4.		<u> </u>			
					- 1
I	MAN HRS./WK	NUMBER			
MANAGEMENT/SUPERVISOR					- 1
OPERATOR(S):					
GRADE	i-c	Licaran			
GRAI			AVERAGE NUMBER OF	F EMPLOYEES PER SHI	IFT:
GRAD					
GRAD			1ST	START TIME	
GRADI			2ND		\neg
DESIGNATED TRAINEE(S)	-		3RD		$\neg \neg$
LABORATORY					\neg
MAINTENANCE					ļ
OTHER PLANT WORKERS					
OPERATOR SHIFTS NORMALLY WO	ORKED EACH DAY:				
SUN MON		THURS FRI	SAT		
1ST	······	1			
2ND					
3RD		- 			
ADEM USE ONLY					
		•		YES 1	NO
				·	<u>"-</u>
1. DOES PLANT OPERATOR STAFFING O	OMPLY WITH DIVISION 10 OF ADEM	ADMINISTRATIVE CODE	=?	i 1	
DOES PLANT OPERATOR STAFFING C DOES COLLECTION SYSTEM OPERAT					

Leeds WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Leeds WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway, Water Division
Alabama Department of Environmental Management
Water Division – Municipal Branch
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)
Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Leeds Wastewater Treatment Facility, NPDES Permit No. AL0067067. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown of Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
David Willoughby, Leeds WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FAC	CILITY: Leeds (Norman R. Skinner) WWTP	NPDES #:_AL0067067
MUNICIPALITY:	Jefferson County	COUNTY: Jefferson
CONTACT PERSO	N: David Denard	,
	Municipal Official	
	Director of Environmental Services	
	Title	
	Telephone #: (205) 325-5979	_ Fax #: (205) 325-5981
	Email Address: denardd@jccal.org	
CHIEF OPERATOR	R: David Willoughby	
	Name	
	Telephone #: (205) 699-8495	Fax #:_`(205) 699-0640
	Email Address: willoughbyd@jccal.org	
	Date: May 9, 2013	
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer	
	Consulting Engineer	
	Telephone #: 205-214-2610	Fax #: 205-325-5981
	Date:May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	1.51	83	978
February	1.26	119	1121
March	1.39	94	916
April	0.85	118	803
May	0.84	104	674
June	0.48	140	512
July	0.38	122	330
August	0.75	114	. 721
September	0.91	92	678
October	0.68	104	615
November	0.55	144	649
December	1.21	115	969
Annual Avg.	0.90	112	747
			141

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)	
Design Criteria	5.0	8340	
90% of the Design Criteria	4.5	7506	

C.	How many times did the O (Check the appro		nn 1) to the WWT	P exceed 90% of de	sign flow?
	17	<u> </u>	•		

$$0 - 4 = 0$$
 points 5 or more = 5 points

$$0 = 0$$
 points $1 - 2 = 5$ points $3 - 4 = 10$ points 5 or more = 15 points

$$0 - 1 = 0$$
 points $2 - 4 = 5$ points 5 or more $= 10$ points

$$0 = 0$$
 points $1 = 10$ points $2 = 20$ points $3 = 30$ points $4 = 40$ points 5 or more $= 50$ points

D points =
$$0$$

TOTAL POINTS VALUE OR PART 1 _ 0 Enter this value on Part 11: Summary Sheet.

^{*}To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Permit	<u>Months</u>	$(CBOD_5)$ (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Limit	May-Nov	4.0	24	2.0	4.0
	Dec-Apr	10.0	24	3.0	8.0

(2) DMR Concentration

<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	0.41	0.00	0.71	1.48
	February	0.33	0.00	0.00	0.42
	March	0.31	0.00	0.00	0.31
2	April	0.94	0.20	0.01	0.41
	May	0.70	0.15	0.00	0.36
	June	0.82	0.35	0.15	0.58
3	July	0.37	0.16	0.00	0.20
	August	0.21	0.35	0.01	0.31
	September	0.19	0.00	0.00	0.44
4	October	0.19	0.40	0.00	0.43
	November	0.62	0.00	0.55	1.29
	December	0.35	0.13	0.01	0.50
	Annual Avg.	0.45	0.15	0.12	0.56

List the monthly average permit limit and DMR loadings below.

BOD₅

3.0

1.0

3.6

2.1

(1) NPDES Permit Loading

Permit	<u>Months</u>	(CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Limit	May-Nov	66.7	400	33.3	66.7
	Dec-Apr	166	400	50.0	133
(2) DM	R Loading				•
<u>Qtr</u>	Month	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)
1	January	6.0	0.0	7.20	16.6
	February	3.5	0.0	0.05	4.4
	March	3.1	0.0	0.00	3.1
2	April	7.7	1.5	0.06	3.0
	May	5.7	0.8	0.00	2.7

0.00 3.7 October 1.0 1.8 0.00 2.3

November 2.7 0.0 2.33 5.7 December 2.6 0.6 0.02 4.9

1.1

0.5

1.9

0.0

1.04

0.00

0.05

Annual Avg. 3.5 0.7 0.90 4.3

During the past year did the BOD5 concentration (mg/l) and/or loading (lbs/day) exceed the C. product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points $Y_{es} = 121$ points

June

July

August

September

3

2.9

0.5

2.0

D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the
	monthly average permit limit during four months of any two consecutive quarters? (Check
	the appropriate point total.)

No =
$$0$$
 points $Yes = 121$ points

No =
$$0$$
 points $\frac{1}{121}$ points

No =
$$0$$
 points $Yes = 121$ points

No = 0 points
$$Yes = 121$$
 points

No = 0 points
$$Yes = 121$$
 points

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) ___ 0 (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

Part 3: Age of the Wastewater Treatment Facility

A.	What year was the wastewater treatment plant constructed or last reconstructed?	1995	
			_

Subtract the above answer from the report year to determine age:

$$Age = (Last Calendar year) - (Answer to A)$$

Age
$$\frac{17}{} = (\underline{2012}) - (\underline{1995})$$

Enter Age in Part C below.

B. Check the type of treatment facility employed.

	Facto
XMechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify:	 1.0

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}} \times \frac{17}{\text{(Age)}} = \frac{34}{\text{TOTAL POINT VALUE FOR PART 3}}$$

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) ___8

G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated?

8

H. Add together Answers E and F and subtract Answer G from that total. E + F - G = 0 (Check the appropriate point total.)

$$0 = 0$$
 points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more $= 100$ points

I. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 _ 0 Enter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

<u>Part</u>	5: Sludge Quantity an	d Storage		
A.	Please provide information based on available date	nation concerning sludge quantity, chata as requested on the MWPP Sewage	naracteristics, and storage prace Sludge Survey, ADEM Form	tice 419.
B.	How many months available, either on-sland spreading or dis	of sludge storage capacity does the rite or off-site? (i.e., How many monosing of sludge?)	wastewater treatment facility ths can the facility operate with	hav thou
	Less than 3 months,	ol to 4 months but greater than or equal to 3 months but greater than or equal to 2 months but greater than or equal to 1 month	= 0 points	
	AT DOMETURE TO THE	ND D A D CC O		
Ente	AL POINT VALUE FOR this value on Part 11:	Summary Sheet.		
Ente		Summary Sheet.	·	-
Ente Part	this value on Part 11: 6: Sludge Disposal Prace Please provide the si	Summary Sheet.	mation based on available dat orm 419.	a as
Ente	this value on Part 11: 6: Sludge Disposal Prace Please provide the strequested on the MW How many months of	Summary Sheet. stices and Sites udge disposal practices and site infor	orm 419. to and approval for sufficient I	

Facility Name: Leeds (Norman R. Skinner) WWTP	·

Part 7: New Development

Are there any major new developments (industrial, commercial, or residential) in the last calendar year or anticipated in the next 2-3 years such that either flow or BOD₅ loadings to the sewage system could significantly increase? Estimate additional loadings below.

Design Design Design
Population: _____ Flow: ____ MGD BOD5: ____ lbs/day
Equivalent (PE)

List industrial and/or residential developments.

The Environmental Services Department has not received any applicable sewer availability requests that would significantly impact the sewer system, but the department is aware of long-term development concepts that could affect the collection system and potentially the WWTP in the next 5 to 10 years.

Will the additional loading overload the plant? (Check the appropriate point total.)

No = 0 points Yes = 121 points

Enter the point total in the blank below.

TOTAL POINT VALUE FOR PART 7 ___ (highest point total = 121) Enter this value on Part 11: Summary Sheet.

Part 8: Operator Certification

Complete the Plant and Collection System Personnel Inventory, ADEM Form 441.

Do both the plant operator and collection system staffing comply with ADEM Administrative Code; Division 10, Operator Certification Program? (Check the appropriate point total.)

Yes = $\frac{0}{4}$ points No = $\frac{121}{4}$ points

TOTAL POINT VALUE FOR PART 8 ____ (highest point total = 121) Enter this value on Part 11: Summary Sheet.

Par	t 9: Financial Status				······································	
A.	Are User-Charge Reven how are O&M costs bein	ues sufficient g financed? <u>In</u>	to cover operation	on and ma	aintenance exper	ises? If r
	Yes. User rates are based on a	uniform volume cha	arge per 100 cubic feet (of 85% of me	tered water	•
	consumption.					
	Residential Minimum	\$2.00	Plus rate	\$9.89	/1,000 gal.	
	Industrial Minimum	\$2.00	Plus rate	\$9.89	/1,000 gal.	
	Monthly residential rate	based on 6.00	0 gallons usage \$	50.45		
:DI.a						
rie nav	ase complete the above inf attach a sample water and	<u>ormation base</u> sewer bill for	<u>ed on your user c.</u> claritv.	<u>harge rat</u>	es for the report	year. You
3.	What financial resource reconstruction needs?	es are availab	le to pay for the	e wastew	ater improvemen	nts and/o
	Approximately \$20,300,000 is curr	ently available to fu	ınd capital improvement	5.		
				·	· · · · · · · · · · · · · · · · · · ·	
art 1	0: Subjective Evaluation				<u></u>	
٠.	Describe briefly the physic	al and structur	ral conditions of the	he wastew	vater treatment fa	cility.
	Physical and structural condition a	re very good.				
		<u> </u>				
	Describe the general condit	ion of the sew	er system (sewer	lines, mar	nholes, lift station	ıs).
	The general condition of the sewer	system is good.				

		•
_		
W	That is the theoretical design life of the plant, and what is the estimated ren f the wastewater treatment facility?	naining use
;	See attachment	
		•
-		* .
_		
W sy	hat problems, if any, over the last year have threatened treatment or convestem?	eyance with
	None.	
		•
	the community presently involved in formal planning for treatment facility es.	upgrading?
_		·
lo ys	w many days in the last year were there residential backups at any point item for any reason other than clogging of the lateral connection?	in the collec
o es	es the plant have a written plan for preventive maintenance on major equip , describe.	oment items
Ye	s. Maintenance schedules and records or repairs are maintained at the plant.	

Leeds WWTP (MWPP 2012)

Part 10.C

Sewer line repairs and replacement are continual activities planned for the collection systems. UV system will likely be replaced in the next 4 to 5 years. The Coosa Ave. pump station, force main and gravity sewer will likely require a capacity expansion in the next 5-10 years. Replacement of the current SCADA with Citect and improvements to the Parkway pump station.

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	Replaced #2 influent pump rotating assemble at a approximate cost of \$30,000.
	Replaced one rotating assembly for RAS pump #3 at a approximate cost of \$6,000.
	Replaced one backwash pump on sand filter #2 at a approximate cost of \$3,000.
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program (Program). The goal of the Program is to develop and
	provide tools, technologies, and procedures that will empower and enable the County to better manage the sanitary
	sewer collection system. The developed Program will establish a comprehensive asset management system with
	processes and procedures to identify and prioritize future collection system capital and operating replacement and
	maintenance requirements. The Program is an extension and improvement to the current MOM. The Program's
	objectives are focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name: Leeds (Norman R. Skinner) WWTP		
	·	
Part 11: Summary Sheet		

1. Enter in the values from Parts 1 through 8 in the left column below. Add the numbers in the left column to determine the MWPP Report point total the wastewater system generated for the previous calendar year.

Actual Values	Maximum Possible
Part 1 _ 0 _ points	80 points
Part 2 0 points	121 points
Part 3 34 points	40 points
Part 4 <u>0</u> points	200 points
Part 5 <u>0</u> points	50 points
Part 6 _ 0 _ points	50 points
Part 7 <u>0</u> points	121 points
Part 8 _ o _ points	121 points
Total 34 points	783 points

2. Check the facility type that best describes the plant's treatment and disposal of wastewater.

Mechanical plant with surface water discharge
Aerated Lagoon or stabilization pond with surface water discharge
Mechanical plant using land disposal of liquid wastes
Aerated Lagoon or stabilization pond using land disposal of liquid wastes

3. __Check the range that describes the action needed to address problems identified in the report.

71 - 120 pts. Actions as Appropriate*
Departmental Recommen

71 - 120 pts. Departmental Recommendation Range*
121 - 783 Municipality Action Range*

†O4h and the NDDES (11 4)

*Other actions may be required by NPDES outside the scope of this report.

4. Complete the Municipal Water Pollution Prevention Resolution Form, ADEM Form 418.

)	5.	In Question 1, do any of the actual point values in the left column equal the maximum possible points in the right column? (Check the appropriate response) Yes No
		If yes, provide a written explanation for this situation in the space below.

Leeds Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>







Summary of Unpermitted Discharges - Leeds

January 01, 2012 through December 31, 2012

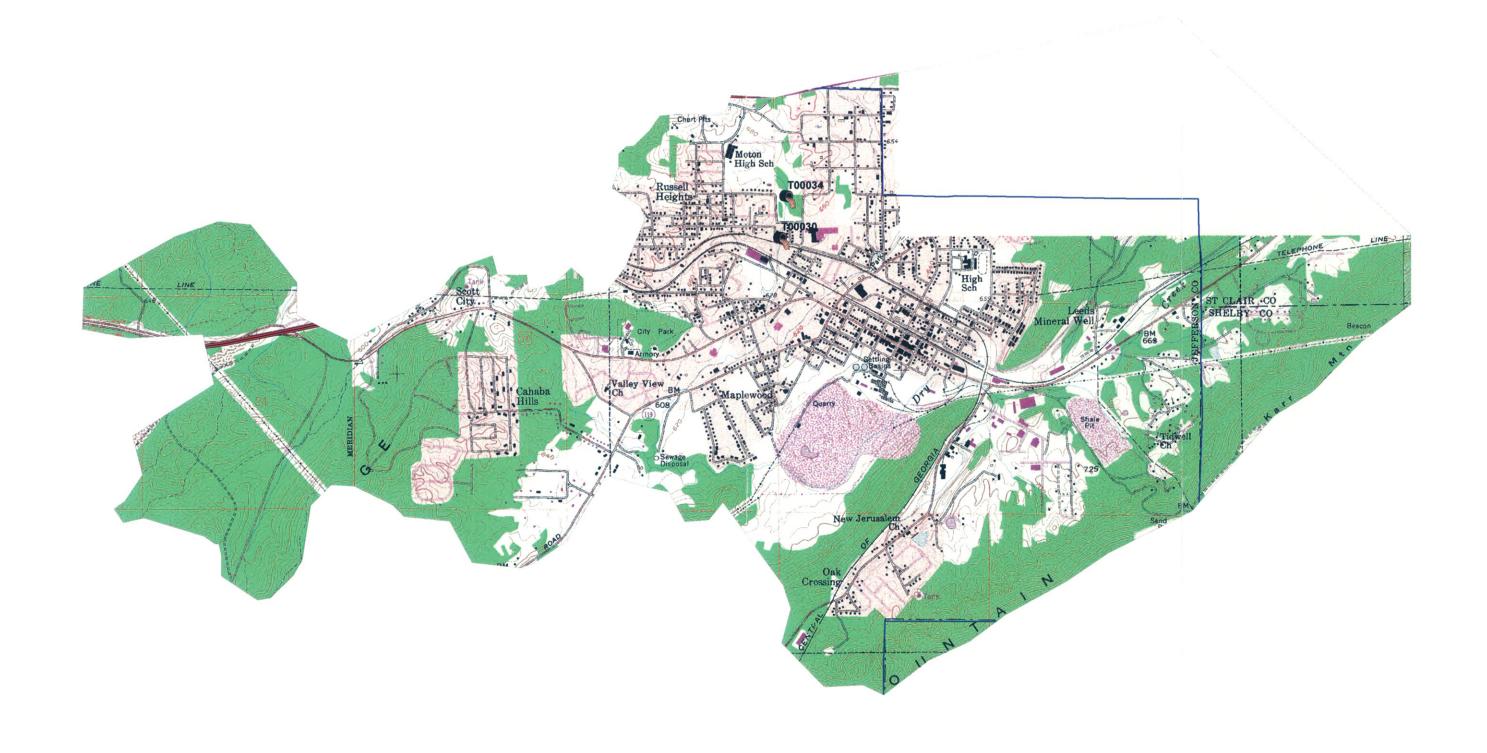
NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04148	2/28/12 fotes: Blocka	M04148 2/28/12 7317 Friar Lane Notes: Blockage relieved itself before crew arrival.	Leeds	Ground Absorbed	135	Manhole	Unknown	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00028	6/5/12 Notes:	1111 Ashville Road	Leeds	Ground Absorbed	240	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00030	Į,	8/15/12 8100 Franklin Ave/ 8101 Ware Ave Leeds	Leeds	Drainage Ditch/ Little Cahaba River	95,400	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Don	Sewer Video Operations Supervisor
T00033	10/10/12 Notes:	T00033 10/10/12 990 Montevallo Road Notes:	Leeds	Ground Absorbed	150	Cleanout	Gravity Main Break	No Rain	No Rain Blockage Removed/Line Repaired	Brian	Sewer Maintenance Supervisor
T00034	10/24/12 Notes:	10/24/12 1915 Capitol St	Leeds	Feeder Creek to Little Cahaba	43,658	Manhole	Grease/ Roots/ Debris/ Rags/ Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00036	10/26/12 Notes:	T00036 10/26/12 1915 Capitol St Notes:	reeds	Ground Absorbed	3,240	Manhole	Grease/ Roois/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

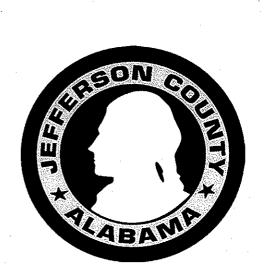
	Title	Sewer Maintenance Supervisor	Sewer Maintenance Supervisor
			Sev Mainte Super
	Person Reporting	Brian Champion	Brian Champion
	Action Taken	Blockage Removed	Blockage Removed
	Weather	No Rain	No Rain
é	Cause	Grease/ Rags	Car Grease/ Debris/ Rocks/ Grass Clippings
,	Source	Manhole	Manhole
	Est. Vol. (gal)	729	369
	Ultimate Destination	Ground Absorbed	Ground Absorbed
-	Collection System	Leeds	Leeds
	Event Date No. Reported Location	11/5/12 7501 Parkway Drive	11/5/12 1424 Ashville Rd Leeds
	Date Report	Vor	11/5/1. Notes:
	Event No.	T00037	T00038

LEEDS BASIN 2012 DISCHARGES



JEFFERSON COUNTY ENVIRONMENTAL SERVICES PLOTTED: 3-11-13

Leeds Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



MWPP SEWAGE SLUDGE SURVEY

Facility Background Information:		
1. Facility Information	Permit Nu	ımber: AL0067067
Name:	LEEDS (NORMAN R. SKINNER)	
Street Address:	800 HELEN STREET	
County:	JEFFERSON	
2. Facility Contact		
Name:	David Willoughby	
Title:	PLANT SUPERINTENDENT	
Telephone:	(205) 699-8495	
Permittee Name:	JEFFERSON COUNTY COMMISS	ION (Leeds WWTP)
Mailing Address:	SUITE A-300, 716 RICHARD ARR	
Facility Flow Information		
1. Facility Wastewater Treatment Cap	acity	
Avg. Daily Flow for 2012		MGD
Facility Design Capacity:	5.0	MGD
2 Estimated Sentage Quantity Handle	od (Paniduala Ramayad fram Cartis	- Fants Ocenteres >
Estimated Septage Quantity Handle Average Domestic Septa		- · · · · · · · · · · · · · · · · · · ·
Average Commercial Se		gallons per month
Avorago Commercial Ce	plage. IVA	gallons per month
3. Method of Septage Processing		
	astewater for Treatment	
Mixed with Sewage S	Sludge	
X	N/A	
4. Estimated Percentage Contributing	Wastewater Flow	
Residential: 92	%	
Industrial: 3	%	
Other: 5	% Describe: COMMER	CIAL
5. List type of westervistes treatment as		
5. List type of wastewater treatment pr	ocess(es) utilized at this facility: EMOVAL, EXTENDED AERATION W	UTH ACTIVATED
sludge, sand filtration, U\		MITACIIVATED
Estimated sewage sludge wasting r	· · · · · · · · · · · · · · · · · · ·	lb/day dry weight
	or <u>13,652</u>	gallons per day
7. Estimated untreated sludge receive	d from off site: N/A	lb/day dry weight
	or N/A	gallons per day
	· · · · · · · · · · · · · · · · · · ·	ganoris per day
Estimated percent solids of combine	ed sewage sludge prior to treatment:	%

A 11 51 0				ludge Quanti ted pounds p	
Aerobic Digestion					<u>.</u>
Drying Beds(Air Drying)		· · · · · · · · · · · · · · · · · · ·			
10. Estimate the total volume of sludge	generated:			255	
			(dry l	J.S. tons per	year)
Sludge Disposal Methods					
1. Which of the following describes the	current met	had of saws	ae sludae disposal for th	in facility	
and the second of the second of the	ouricin injet	Current F	ge sludge disposal for th Practices	Proposed	Practices
	Approved	by ADEM	Quantity	Approved	
	<u>Yes</u>	No	(dry U.S. tons/year)	Yes	<u>No</u>
 a. X Land Application, Bulk Shipped 			255		
X Agriculture	0	. []		0	0
☐ Forest					П
Public Contact	0	0		0	0
Lawn/Home Garden		0			0
b. I Land Application,					
Bagged/Other Container B Agriculture	0	п		Pi	_
Forest		0		0	<u> </u>
Public Contact		0		<u> </u>	· []
	0	- 0			0
☐ Lawn/Home Garden	0	. 0	+	0	0
c. I Incineration	0	0		0	О
d. 🏻 Subtitle D Landfill					
(Disposal Only)					
e. 🛘 Lined Treatment Lagoon				_	_
or Stabilization Pond		Ī			0
f. 🛘 Unlined Lagoon or Stabilization Pond	п	п		-	_
	0	0		0	
g. I Other (Please Describe)	0	0 .			
If "f" was selected above and sludge is	s stored for	2 or more ye	ears, enter the distance b	etween the	
urface disposal site and the property line			feet		

ADEM FORM 419 8/02

1. Enter the total	al concentrations of the	following analytes using	existing data. Do not	enter TCLP results.
Analyte	Concentration (mg/kg or ppm)	Sample Type	Sample Date	Detection Level of Analysis
Arsenic	<pql< td=""><td>GRAB</td><td>*</td><td>11.0</td></pql<>	GRAB	*	11.0
Cadmium	<pql< td=""><td>GRAB</td><td>*</td><td>8.0</td></pql<>	GRAB	*	8.0
Chromium	60	GRAB	*	8.0
Copper	858	GRAB	*	8.0
Lead	27	GRAB	*	15.0
Mercury	2.0	GRAB	*	0.6
Molybdenum	18.00	GRAB	*	5.0
Nickel	44	GRAB	*	6.0
Selenium	<pql< td=""><td>GRAB</td><td>*</td><td>15.0</td></pql<>	GRAB	*	15.0
Zinc	815	GRAB	*	18.0
Ammonium- Nitrogen	N/A	N/A	*	N/A
Nitrate- Nitrogen	N/A	N/A	. *	N/A
Total Kieldahi				

analysis:	estimated or determined percent soil 84 %	ds of the sewage sludge when samp	led for the above
Treatment Pr	ovided for Sewage Sludge at the Fac	cility	
	ss of pathogen reduction does the se		s defined in
40 CFR Part	503)	,	,
0	Class A		
	Alternative A1 - Time and Temper		·
	Alternative A2 - Alkaline Treatmen		
	Alternative A3 - Analysis and Oper	ration	
•	Alternative A4 - Analysis Only		•
	Alternative A5 - Processes to Furt		
	Heat Drying	Thermophilic Aerobic Digestion	Heat Treatment
	☐ Pasteurization	☐ Gamma Ray Irradiation	Beta Ray Irradiation
	☐ Composting		
	Alternative A6 - PFRP Equivalent		
х	Class B		
	X Alternative B1 - Fecal Coliform Co.	unt	
	☐ Alternative B2 - Process to Signific		
	Aerobic Digestion	Air Drying	Anaerobic Digestion
	Composting	☐ Lime Stabilization	
	Alternative B3 - PSRP Equivalent		

Vector Attraction Control

☐ Neither or Unknown

27,250

1.8

□ Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge □ Option 5 - Aerobic Processes plus Elevated Temperature □ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 - Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this X No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600 lb/acre/year(Reclamation) 3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? No complaints have been received	□ Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge □ Option 5 - Aerobic Processes plus Elevated Temperature □ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? □ Yes		☐ Option 2	 - Minimum 38% Reduction in Volatile Solids - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
□ Option 5 - Aerobic Processes plus Elevated Temperature □ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this X No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600 lb/acre/year(Reclamation) 3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors?	□ Option 5 - Aerobic Processes plus Elevated Temperature □ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performe at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this X No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600 lb/acre/year(Reclamation)		[] Option 4	- Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Studge
□ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this X No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600 lb/acre/year(Reclamation)	□ Option 6 - Raised pH to 12 and Retained at 11.5 □ Option 7 - 75% Solids with no Unstabilized Solids □ Option 8 - 90% Solids with Unstabilized Solids □ Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours □ Option 11 Covering Active Sewage Sludge Unit Daily □ None of the Above Groundwater Monitoring 1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performe at the site? □ Yes (If yes, please submit a copy of the groundwater monitoring reports along with this X No survey. Also please provide the approximate depth to groundwater and the groundwater monitoring procedures used to obtain the data.) Land Application of Sewage Sludge Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass 2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600 lb/acre/year(Reclamation)		DOption 5	- Aerobic Processes plus Elevated Temperature
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neighbors?	neighbors?			
neighbors?	neighbors?			
neighbors?	neighbors?			
No complaints have been received	No complaints have been received	If sewa neighbors	ge sludge is la ?	and applied in bulk form, briefly describe the nature of any complaints filed from
		No compla	ints have bee	en received

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submitt a copy with the MWPP in lieu of this Attachment.

Leeds Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



Designated traines	FACILITY NAME:	Leeds (No	man R. Skin	ner) WWTI	Ρ		_	PLANT GRA	ADE:		<u> </u>
SYSTEM MANAGER: David Denard TEL. # (205) 325-5800 PLANT OPERATORS: GRADE OR NAME TRAINEE STATUS OPERATOR NO. EXP. DATE Sen Cato IV C001942 11/30/2015 David Willoughby IV C000444 11/30/2015 David Willoughby IV C002816 11/30/2015 Allino McCarty IV C003209 7/31/2015 Jermon Ramsey IV C003658 8/31/2015 Anthony Weldon IV C002650 11/30/2013 Allille G. Harmon Eric T. Lewler COLLECTION SYSTEM OPERATORS: MAN HRS /WK NUMBER DESIGNATED TRAINEE(S) ADDRESSED START TIME GRADE II	PERMIT NUMBER:	AL0067067	7								
PLANT OPERATORS: NAME	PLANT SUPERINTEN	DENT:	David Willo	ughby					TEL.#	(205) 699-8	495
NAME	SYSTEM MANAGER:		David Dena	ard		••••			TEL.#	(205) 325-5	806
NAME	PLANT OPERATORS			00.							
Doris Gill	· N	AME				c	PERATOR N	o.	EXP.	. DATE	
David Willoughby	Ben Cato				IV	••	C001942		11/3	0/2015	-
David Willoughby	Doris Gill				IV		C000444		11/3	0/2015	-
Wanda June McCarty					IV		C002616		11/3	0/2015	•
Name					IV						-
Anthony Weldon IV C002650 11/30/2013 Willie G. Harmon Eric T. Lawler COLLECTION SYSTEM OPERATORS: MAN HRS./WK NUMBER MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I GRADE II GRADE IV DESIGNATED TRAINEE(S) LABORATORY MAINTENANCE OTHER PLANT WORKERS 80 2 OPERATOR SHIFTS NORMALLY WORKED EACH DAY: SUN MON TUES WED THURS FRI SAT 1ST X X X X X X X X X										•	•
### Willie G. Harmon Eric T. Lawler											•
Eric T. Lawler COLLECTION SYSTEM OPERATORS: MAN HRS./WK NUMBER MANAGEMENT/SUPERVISOR OPERATOR(S): GRADE I-C GRADE II					11		0002000				•
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GRADE III	or 2,0 (1 or (10).	GRADE I-C								•	
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2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

FACILITY NAME:	Sewer Line Maintenand	æ		PLAN	T GRADE: IV
PERMIT NUMBER:					
PLANT SUPERINTENDEN	rr:				TEL # (205) 540-75
SYSTEM MANAGER:	David De	enard			TEL# (205) 325-59
		•			4
PLANT OPERATORS:		CDAD	·- ^6		•
24	A 4 457	GRAD TRAINEE	i	OPERATOR NO.	L EXP. DATE
	AME	l(c)	SUNIOS	C002094	6/30/2015
Brian Champion Don Goodwin		1(c)		C005423	6/30/2015
Lavon Evans		1(c)		C004631	12/31/2014
Brian Rohling		I(c)		C005418	6/30/2015
DIGHT LYOTHING		1,7,			
COLLECTION SYSTEM O	PERATORS:		;	i	1 1
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OPERATOR(S): DESIGNATED TRAINEE(S)	GRADE I-C GRADE I GRADE II GRADE III GRADE IV	AN HRS./WK	NUMBER	1ST 2ND	<u> </u>
OPERATOR(S): DESIGNATED TRAINEE(S LABORATORY	GRADE IC GRADE II GRADE III GRADE IV S)	AN HRS./WK	NUMBER	1ST 2ND	<u> </u>
OPERATOR(S): DESIGNATED TRAINEE(S LABORATORY MAINTENANCE	GRADE IC GRADE II GRADE III GRADE IV S)	AN HRS./WK	NUMBER	1ST 2ND	<u> </u>
OPERATOR(S): DESIGNATED TRAINEE(S LABORATORY MAINTENANCE	GRADE IC GRADE II GRADE III GRADE IV S)	H DAY:		1ST 2ND 3RD	<u> </u>
OPERATOR(S): DESIGNATED TRAINEE(S LABORATORY MAINTENANCE OTHER PLANT WORKER	GRADE IC GRADE II GRADE III GRADE IV S)	H DAY:	NUMBER	1ST 2ND	<u> </u>
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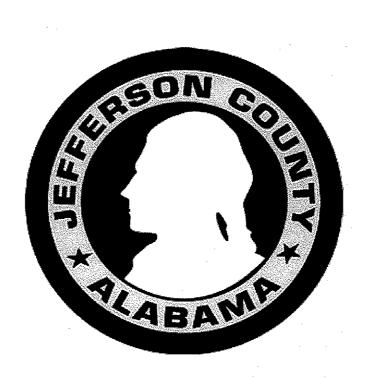
Prudes Creek WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Prudes Creek WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway Alabama Department of Environmental Management Water Division – Municipal Branch P.O. Box 301463 Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)

Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Prudes Creek Wastewater Treatment Facility, NPDES Permit No. AL0056120. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Lynn Jones, Prudes Creek WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FAC	CILITY: Prudes Creek WWTP	NPDES #:_AL0056120
MUNICIPALITY:_	Jefferson County Commission	COUNTY: Jefferson
CONTACT PERSO	N: David Denard	
	Municipal Official	
	Director of Environmental Services	
•	Title	
	Telephone #: (205) 325 - 5979	Fax #: (205) 325 - 5981
	Email Address: denardd@jccal.org	
CHIEF OPERATO	R: Lynn D. Jones	·
	Name	
	Telephone #: (205) 841 - 5939	Fax #: (205) 841 - 7698
	Email Address: jonesly@jccal.org	
	Date: May 10, 2013	
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer	·
	Consulting Engineer	
	Telephone #: (205) 214 - 8610	Fax #: (205) 325 - 5981
	Date: May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility Name	Prudes Creek	WWTF
CACHILLA MARINE.		

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	0.52	40	162
February	0.46	49	168
March	0.45	39	119
April	0.19	57	85
May	0.25	97	183
June	0.24	104	203
July	0.20	85	151
August	0.32	31	78
September	0.36	14	40
October	0.24	50	77
November	0.14	72	99
December	0.46	45	138
Annual Avg.	0.32	57	125

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	0.9	2144
90% of the Design Criteria	0.81	1930

C.	How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow (Check the appropriate point total) 0 - 4 = 0 points 5 or more = 5 points
D.	
υ.	How many times did the monthly flow (Column 1) to the WWTP exceed the design flow? O (Check the appropriate point total)
	0 = 0 points $1 - 2 = 5$ points $3 - 4 = 10$ points 5 or more $= 15$ points
E.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed 90% of the design loading? 0 (Check the appropriate point total)
	0-1=0 points $2-4=5$ points 5 or more $=10$ points
F.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed the design loading? 0 (Check the appropriate point total)
	0 = 0 points $1 = 10$ points $2 = 20$ points $3 = 30$ points $4 = 40$ points 5 or more $= 50$ points
G.	Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.
	C noints = 0

TOTAL POINTS VALUE OR PART 1 0
Enter this value on Part 11: Summary Sheet.

D points =

E points =

F points =

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

D	Months	$\begin{array}{c} \mathrm{BOD_5} \\ \mathrm{(CBOD_5)} \\ \mathrm{(mg/l)} \end{array}$	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)	
Permit Limit	April-October	8.0	30.0	2.5	5.0	_
•	Nov May	25.0	30.0	10.0	20.0	

(2) DMR Concentration

<u>Qtr</u>	Month	$\begin{array}{c} \mathrm{BOD_5} \\ \mathrm{(CBOD_5)} \\ \mathrm{(mg/l)} \end{array}$	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	0.7	0.5	0.1	0.5
-	February	0.4	0.0	0.1	0.3
	March	0.6	0.0	0.0	0.2
2	April	0.6	0.3	0.0	0.2
	May	0.6	0.1	0.0	0.2
	June	1.3	0.6	0.0	0.3
3	July	0.5	0.6	0.0	0.2
	August	0.3	0.3	0.0	0.3
	September	0.4	0.2	0.1	0.4
4	October	0.8	1.2	0.1	0.6
	November	0.7	0.0	0.0	0.3
	December	1.0	1.7	0.1	0.5
	Annual Avg.	0.7	0.45	0.04	0.34

- B. List the monthly average permit limit and DMR loadings below.
- (1) NPDES Permit Loading

	Months	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Permit Limit	April-October	60.0	225	18.7	37.5
	Nov May	187	225	75.0	150

(2) DMR Loading

<u>Qtr</u>	<u>Month</u>	$\begin{array}{c} \mathrm{BOD}_5 \\ \mathrm{(CBOD}_5) \\ \mathrm{(lbs/day)} \end{array}$	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
1	January	3.4	5.2	1.0	3.0
·	February	1.5	0.0	0.2	1.1
	March	2.0	0.0	0.0	0.8
2	April	0.9	0.5	0.0	0.4
	May	1.2	0.2	0.0	0.5
	June	2.9	1.5	0.0	0.6
3	July	1.1	1.4	0.0	0.4
	August	0.7	1.0	0.1	0.9
	September	1.3	0.4	0.4	1.5
4	October	1.4	2.3	0.2	1.0
	November	1.0	0.0	0.0	0.4
	December	4.7	10.7	0.4	2.2
	Annual Avg.	1.8	1.9	0.2	1.1

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points $Yes = 121$ points

D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)
-	No = 0 points $Yes = 121$ points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)

No = 0 points
$$\frac{\boxed{}}{\text{Yes}} = 121 \text{ points}$$

F. During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points Yes = 121 points

G. During the past year did the NH₃-N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)

No =
$$\overline{0}$$
 points $Yes = \overline{121}$ points

H. During the past year did either the NH₃-N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)

I. Enter each point value checkedfor C through H in the blanks below.

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

Faci	ility Name: Prudes Creek WWTP		
Part	3: Age of the Wastewater Treatment Facility		
A.	What year was the wastewater treatment plant con-	structed or last reconstructed? 2006	
	Subtract the above answer from the report year to	determine age:	•
	Age = (Last Calendar year) - (Answer to A)		
	Age $\frac{6}{}$ = (2012)) - (2006)	_)	
•	Enter Age in Part C below.		
В.	Check the type of treatment facility employed.		
		Factor	٠
	× Mechanical Treatment Plant	2.0	
	Aerated Lagoon	1.5	•
	Stabilization Pond	1.0	
	Other (Specify:)	1.0	
C.	Multiply the factor listed next to the type of the fa of your facility to determine the total point value for		ıge
	$\frac{2.0}{\text{(Factor)}} \times \frac{6.0}{\text{(Age)}} = \frac{12}{\text{TOTAL POINT V}}$	ALUE FOR PART 3	٠

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? 0
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? 1
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 1
- D. Add together Answers A and B and subtract Answer C from that total.

 A + B C = 0 (Check the appropriate point total.)

 0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points
- E. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0
- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 5
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 5
- H. Add together Answers E and F and subtract Answer G from that total. E + F G = 0 (Check the appropriate point total.)

1. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 DEnter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

Part	5: Sludge Quantity and Storage		
A.	Please provide information concerning sludge quantity, che based on available data as requested on the MWPP Sewage		
B.	How many months of sludge storage capacity does the variable, either on-site or off-site? (i.e., How many month land spreading or disposing of sludge?) 4 months		•
	(Check the appropriate point total.) Greater than or equal to 4 months Less than 4 months, but greater than or equal to 3 months Less than 3 months, but greater than or equal to 2 months Less than 2 months, but greater than or equal to 1 month Less than one month	= 0 points	
тот	AL POINT VALUE FOR PART 5 0		
	r this value on Part 11: Summary Sheet.		
Ente			•
Ente	r this value on Part 11: Summary Sheet.	orm 419. to and approval f	or sufficient lan

Part 7: N	New Development					
Ar cal	re there any major i lendar year or antici e sewage system cou	pated in the i	next 2-3 years s	such that eith	er flow or BOD	o loadings to
Pe	Design opulation: quivalent (PE)		Design Flow:	MGD	Design BOD ₅ :	lbs/day
	ist industrial and/or	residential de	velopments.			
. No	one					
				·		
W	Vill the additional loa	nding overload	the plant? (Ch	eck the appro	priate point tota	1.)
Ent	No = 0 points $\boxed{\checkmark}$ ter the point total in	•	= 121 points Dw.			
	POINT VALUE FOI s value on Part 11: S			oint total = 1	21)	
Dowt 9. O	- Catifacti					· •
	perator Certification the Plant and Colle		Personnel Inver	itory, ADEM	Form 441.	
	both the plant opera de; Division 10, Ope					
	Yes = 0 points	No=	121 points			
	POINT VALUE FOR value on Part 11: So			st point total =	= 121)	

ш	rt 9: Financial Status		
۱.	Are User-Charge Revenues sufficient to how are O&M costs being financed? <i>Incl</i>	cover operation and ude user charge rates	maintenance expenses? I
	Yes. User charge rates are based on a uniform volume	charge per 100cu.ft. of 85% i	netered water consump-
	tion for single family residents. User charge rate ending	g Dec. 31, 2012 was \$7.40/10	Ocu.ft. and is still in effect.
	Residential Minimum \$2.00	Plus rate \$9.89	/1,000 gal.
	Industrial Minimum \$2.00	Plus rate \$9.89	/1,000 gal.
	Monthly residential rate based on 6,000 g	gallons usage \$_\$50.45	
Ple ay	ease complete the above information based attach a sample water and sewer bill for cl	on your user charge arity.	rates for the report year.
	What financial resources are available	to pay for the wast	ewater improvements an
	reconstruction needs?		
	Approximately \$20,300,000 is currently available to fund		
	•		· · · · · · · · · · · · · · · · · · ·
	•		
rt	•		
rt	Approximately \$20,300,000 is currently available to fund	l capital improvements.	
rt	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation	l capital improvements.	
<u>rt</u>	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural	l capital improvements.	
<u>rt</u>	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural	l capital improvements.	
<u>rt</u>	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural	l capital improvements.	
<u>rt</u>	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural	capital improvements.	tewater treatment facility.
rt	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural The physical and structural conditions are good.	capital improvements. I conditions of the was	stewater treatment facility.
rt	Approximately \$20,300,000 is currently available to fund 10: Subjective Evaluation Describe briefly the physical and structural The physical and structural conditions are good. Describe the general condition of the sewer	capital improvements. I conditions of the was	stewater treatment facility.

Improvements to Adamsville pumps.	
·	
What is the theoretical design life of the plant, and what is of the wastewater treatment facility?	s the estimated remaining use
See attachment	
What problems, if any, over the last year have threatened system?	·
At least two of the six SSO events were from ROW maintenance crews dama	ging force main
clean outs.	· · · · · · · · · · · · · · · · · · ·
Is the community presently involved in formal planning fo	r treatment facility upgrading
	,
<u> </u>	
How many days in the last year were there residential bac system for any reason other than clogging of the lateral con	
Does the plant have a written plan for preventive maintenages, describe.	ance on major equipment iter
Yes. The shop supervisor has a written plan for preventive maintenance supp	orted by our INFOR maintenance progra

Prudes Creek WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structure = 50 –age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
·	In our automation efforts at Prudes Creek WWTP we have replaced the manual valves on our R.A.S. telescopic valves
	with actuators. The cost was \$17,240.00
	UV Repairs \$11,594.60
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program. The goal of the Program is to develop and provide
	tools, technologies, and procedures that will empower and enable the County to better manage the sanitary sewer
	collection system. The developed Program will establish a comprehensive asset management system with processes
	and procedures to identify and prioritize future collection system capital and operating replacement and maintenance
	requirements. The Program is an extension and improvement to the current MOM. The Program's objectives are
	focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Part 11: Summary Sheet	
	ough 8 in the left column below. Add the numbers in the P Report point total the wastewater system generated for
Actual Values	Maximum Possible
Part 1 opoints	80 points
Part 2 <u>0</u> points	121 points
Part 3 12 points	40 points
Part 4 o points	200 points
Part 5 opoints	50 points
Part 6 o points	50 points
Part 7 opoints	121 points
Part 8 opoints	121 points
Total 12 points	783 points
✓ Mechanical plant with surface water Aerated Lagoon or stabilization pon Mechanical plant using land disposa Aerated Lagoon or stabilization pon 3. Check the range that describes the act ✓ 0 - 70 pts. Actions as Ap	d with surface water discharge al of liquid wastes d using land disposal of liquid wastes tion needed to address problems identified in the report.
71 - 120 pts. Departmental 121 - 783 Municipality *Other actions may be required by NPDI	Recommendation Range* Action Range* ES outside the scope of this report.
4. Complete the Municipal Water Pollui	tion Prevention Resolution Form, ADEM Form 418.

Facility Name: Prudes Creek WWTP

5.	In Question 1, do any of the possible points in the right co. If yes, provide a written explain.	lumn? (Check the appr	opriate response)	Yes No
	<u>.</u>			
•				
			,	
		,		
		·		
				//

Prudes Creek Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>





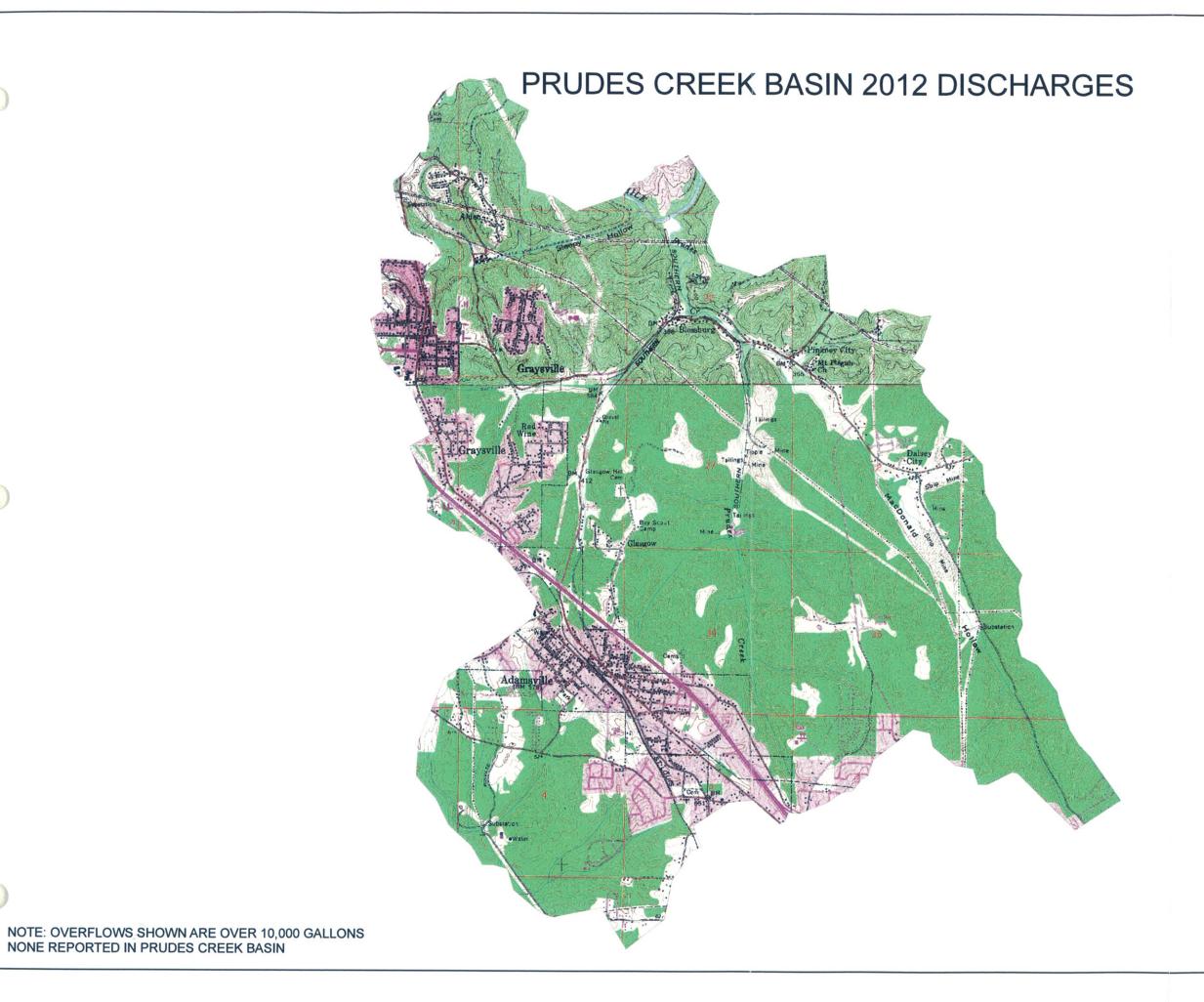


Summary of Unpermitted Discharges - Prudes Creek

January 01, 2012 through December 31, 2012

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

Event No. T00024	Date Reported 3/9/12	Date Reported Location 3/9/12 212 2nd Ave NW	Collection System Prudes Creek	Ultimate Destination Ground Absorbed	Est. Vol. (gal) 600	Source	Cause Surcharge from Rain	Weather Moderate Rain	Action Taken Vacuum Truck Utilized	Person Reporting Ken Bennett	Title WWTP Manager
T00027	5/11/12 otes:	Tilson Ave & Hazelwood Road	Prudes Creek	Venison Branch	4,625	Pipe	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
T00029	7/24/12 ⁷ otes: Grass c	T00029 7/24/12 Adams Ave & Ross St Prudes Creek Notes: Grass cuting crew damaged the cleanout cap. Cleanout cap was replaced.	Prudes Creek leanout cap was replaced.	Ground Absorbed	2,250	Cleanout	Force Main Break	No Rain	Line Repaired	Ken Bennett	Ken Bennett WWTP Manager
T00031	8/27/12	гсе та	Prudes, Creek in cleanout.	Ground Absorbed	405	Force Main Cleanout	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
T00032	9/4/12 Notes:	9/4/12 4204 Basswood Circle	Prudes Creek	Ground Absorbed	180	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00039 11/1	11/17/12 fotes: Volume	11/17/12 4600 Hazelwood Rd Notes: Volume was not determinable.	يد	Venison Creek	NELLY VIETNAMENT THE STREET	Pipe	Force Main Break	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor



JEFFERSON COUNTY ENVIRONMENTAL SERVICES PLOTTED: 3-11-13

Prudes Creek Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



MWPP SEWAGE SLUDGE SURVEY

Facility Bad	ckground Information:				
1. Facility	Information		Permit	Number:	AL0056120
	Name:	PRUDES CRI	EEK WWTP		
	Street Address:	500 WATER	TRAIL GRAYSVILLE	E, AL 35073	
	County:	JEFFERSON			
2. Facility	Contact				
-	Name:	LYNN D. JOI	IES		
	Title:		NT MANAGER		
	Telephone:	205-841-593	9		
	Permittee Name:	JEFFERSON	COUNTY COMMIS	SION	•
	Mailing Address:	SUITE A-300	716 RICHARD ARR	INGTON BLVD	N.
		BIRMINGHA	M, AL 35203		
Facility Flor	w Information				
1. Facility	Wastewater Treatment C				
	Avg. Daily Flow for 201		0.32	MGD	
	Facility Design Capacit	y:	0.9	MGD	
2. Estimate	ed Septage Quantity Hand	dled (Residuals I	Removed from Sept	tic Tank System	าร)
	Average Domestic Sep	otage:	N/A	gallons per	month
	Average Commercial S	_	N/A	gallons per	
3. Method	of Septage Processing Mixed with Influent Mixed with Sewage				
	<u> </u>	•	N/A		
4. Estimate	ed Percentage Contributir	ng Wastewater F	low		·
	Residential:	<u>98</u> %			
•	Industrial:	%		•	•
	Other:	2 %	Describe: COMM	ERCIAL	······································
5. List type	e of wastewater treatment	process(es) utili	zed at this facility:		
-	Screening, grit remov	•	=	clarification, sa	andfiltration.
	UV disinfection				·
6. Estimate	ed sewage sludge wasting	g rate at this faci	ity:		lb/day dry weight
			or	57.07	gallons per day
7 Fetimot	ed untreated sludge recei	ved from off eito	•		lb/day dry weight
ı. ⊑sumak	en mili ealen sinnde i ecel	ved from on site.			gallons per day
			or <u>N/A</u>		gallons per day
8. Estimate	ed percent solids of comb	ined sewage slu	dge prior to treatme	ent:	2.3 %

ADEM FORM 419 8/02 Page 1 of 4

Sludge Disposal Methods	Current	Practices Qu		0 J.S. tons per is facility: Proposed Approved Yes []	Practices
10. Estimate the total volume of sludge generated: Sludge Disposal Methods 1. Which of the following describes the current method Approved by Yes a. Land Application, Bulk Shipped Agriculture Forest Forest Dublic Contact Duawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Disposal Methods Approved by Yes a. Land Application, Brorest Dublic Contact Disposal Methods Approved by Yes a. Land Application, Brorest Dublic Contact Disposal Methods Approved by Yes a. Land Application, Brorest Dublic Contact Dublic Contac	Current y ADEM <u>No</u>	Practices Qu	disposal for th nantity . tons/year)	J.S. tons per is facility: Proposed Approved Yes	Practices by ADEM <u>No</u>
Sludge Disposal Methods 1. Which of the following describes the current method Approved by Yes a. Land Application, Bulk Shipped Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden	Current y ADEM <u>No</u>	Practices Qu	disposal for th nantity . tons/year)	J.S. tons per is facility: Proposed Approved Yes	Practices by ADEM <u>No</u>
Sludge Disposal Methods 1. Which of the following describes the current method Approved by Yes a. Land Application, Bulk Shipped Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden	Current y ADEM <u>No</u>	Practices Qu	disposal for th nantity . tons/year)	J.S. tons per is facility: Proposed Approved Yes	Practices by ADEM <u>No</u>
Sludge Disposal Methods 1. Which of the following describes the current method Approved by Yes a. Land Application, Bulk Shipped Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Agriculture Forest Public Contact Lawn/Home Garden Lawn/Home Garden Lawn/Home Garden Lawn/Home Garden	Current y ADEM <u>No</u>	Practices Qu	disposal for th nantity . tons/year)	J.S. tons per is facility: Proposed Approved Yes	Practices by ADEM <u>No</u>
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Approved b Yes a. Land Application, Bulk Shipped Agriculture Forest Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Dayriculture Dayricult	Current y ADEM <u>No</u>	Practices Qu	antity . tons/year)	Proposed Approved Yes	by ADEM <u>No</u>
Approved b Yes a. Land Application, Bulk Shipped Agriculture Forest Forest Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Forest Forest Lawn/Home Garden Lawn/Home Garden Lawn/Home Garden	Current y ADEM <u>No</u>	Practices Qu	antity . tons/year)	Proposed Approved Yes	by ADEM <u>No</u>
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a. Land Application, Bulk Shipped Agriculture Forest Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden	No		. tons/year)	Yes I	<u>No</u>
Shipped Agriculture Forest Public Contact Lawn/Home Garden b. Land Application, Bagged/Other Container Agriculture Forest Public Contact Lawn/Home Garden	0 0 0		0	0	
☐ Forest ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	0 0 0			0	_
Description Descri	0				
D Lawn/Home Garden b. D Land Application, Bagged/Other Container D Agriculture D Forest D Public Contact D Lawn/Home Garden	0			. П	
b. [] Land Application, Bagged/Other Container [] Agriculture [] Forest [] Public Contact [] Lawn/Home Garden	0				
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☐ Public Contact ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	п			0	
Il Lawn/Home Garden II	ш				
a I Incineration II				<u> </u>	
C. II incineration	П			0	
d. 🛘 Subtitle D Landfill			•		
(Disposal Only)				. 0	
e. Il Lined Treatment Lagoon	-				_
or Stabilization Pond f. Unlined Lagoon or					
Stabilization Pond	0			0	0
g. Other (Please Describe)	0				0

ADEM FORM 419 8/02 Page 2 of 4

	al concentrations of the following Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Type	Date	Analysis (mg/kg)
Arsenic	<pql< td=""><td>Grab</td><td>*</td><td>11.0</td></pql<>	Grab	*	11.0
Cadmium	<pql< td=""><td>Grab</td><td>*</td><td>8.0</td></pql<>	Grab	*	8.0
Chromium	37	Grab	*	8.0
Copper	210	Grab	*	8.0
Lead	41	Grab	*	15.0
Mercury	5.7	Grab	*	0.6
Molybdenum	<pql< td=""><td>Grab</td><td>*</td><td>5.0</td></pql<>	Grab	*	5.0
Nickel	25	Grab	*	6.0
Selenium	<pql< td=""><td>Grab</td><td>*</td><td>15.0</td></pql<>	Grab	*	15.0
Zinc	1,150	Grab	*	18.0
Ammonium- Nitrogen		N/A	N/A	N/A
Nitrate-				
Nitrogen		N/A	N/A	N/A
Total Kjeldahl Nitrogen	29,150.00	Grab	*	1.8
* = Yearly Averag			Quantitative Limit	1.0
	imated or determined perc	•		led for the above
analysis:	54 %		gg	
	ded for Sewage Sludge at			
	of pathogen reduction doe	s the sewage sludge n	neet at the facility? (A	s defined in
40 CFR Part 503	ass A			
= -	ass A Alternative A1 - Time and	Temperature	•	•
	Alternative A2 - Alkaline Tr			
	Alternative A3 - Analysis a		•	
	Alternative A4 - Analysis C	- ·		•
	Alternative A5 - Processes		thogens (PFRP)	•
	Heat Drying		lic Aerobic Digestion	☐ Heat Treatment
	Pasteurization	Gamma Ra	_	Beta Ray Irradiation
	☐ Composting	0	,	

☐ Pasteurization ☐ Composting	Gamma Ray Irradiation	Beta Ray Irradiation
Alternative A6 - PFRP Equivalent		·
Class B		
■ Alternative B1 - Fecal Coliform Co.	unt ·	
Alternative B2 - Process to Signific	antly Reduce Pathogens (PSRP)	
Aerobic Digestion	Air Drying	Anaerobic Digestion
Composting	Lime Stabilization	
Alternative B3 - PSRP Equivalent		
	·	

■ Neither or Unknown

Vector Attraction Control

Page 3 of 4 **ADEM FORM 419 8/02**

		- Anaerobic Processes, with Bench-Scale Demonstration of \	
	•	- Aerobic Processes, with Bench-Scale Demonstration of Vol	
		- Specific Oxygen Uptake Rate (SOUR) for Aerobically Diges	sted Sludge
		- Aerobic Processes plus Elevated Temperature	
	•	- Raised pH to 12 and Retained at 11.5	•
	•	- 75% Solids with no Unstabilized Solids	
	•	- 90% Solids with Unstabilized Solids	•
	•	- Injection Below Land Surface	,
		0 - Incorporation into Soil within 6 or 8 Hours	
•		1 Covering Active Sewage Sludge Unit Daily	
	None of t	the Above	
Canada da da			
Groundwa	iter Monitorin	19	••
1. If dispo	sal practice	is surface disposal or land application, is groundwater monito	orina required or performe
at the site			
	☐ Yes	(If yes, please submit a copy of the groundwater monitor	ing reports along with this
	₽ No	survey. Also please provide the approximate depth to gr	
		· · · · · · · · · · · · · · · · · · ·	
		groundwater monitoring procedures used to obtain the de	ala.)
Land Anal	ingling of Co	-	ala.)
Land Appl	ication of Se	wage Sludge	aid.)
		wage Sludge	aid.)
Answer the	e following q	wage Sludge uestions if sewage sludge is applied to land.	
Answer the	e following q ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation	
Answer the	e following q ge sludge is	wage Sludge uestions if sewage sludge is applied to land.	
Answer the	e following q ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation	
Answer the	e following q ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation	
Answer the 1. If sewa Tifton Berr	e following q ge sludge is muda Grass	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass.	on is grown on this site?
Answer the 1. If sewa Tifton Berr 2. If sewa	e following q ge sludge is muda Grass ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement for	on is grown on this site?
Answer the 1. If sewa Tifton Berr 2. If sewa	e following q ge sludge is muda Grass ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass.	on is grown on this site?
Answer the 1. If sewa Tifton Berr 2. If sewa	e following q ge sludge is muda Grass ge sludge is	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement for	on is grown on this site?
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Answer the 1. If sewa Tifton Berr 2. If sewa The nitro	e following q ge sludge is muda Grass ge sludge is gen require	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement forment is 600lbs/acre/year.	on is grown on this site? or this crop or vegetation?
Answer the 1. If sewa Tifton Berr 2. If sewa The nitrod 3. If sewa	e following q ge sludge is muda Grass ge sludge is gen require	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement for	on is grown on this site? or this crop or vegetation?
Answer the 1. If sewa Tifton Berr 2. If sewa The nitros 3. If sewa neighbors	e following q ige sludge is muda Grass ge sludge is gen require ge sludge is ?	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement forment is 6001bs/acre/year. land applied in bulk form, briefly describe the nature of any contents.	on is grown on this site? or this crop or vegetation?
Answer the 1. If sewa Tifton Berr 2. If sewa The nitros 3. If sewa neighbors	e following q ge sludge is muda Grass ge sludge is gen require	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement forment is 6001bs/acre/year. land applied in bulk form, briefly describe the nature of any contents.	on is grown on this site? or this crop or vegetation?
Answer the 1. If sewa Tifton Berr 2. If sewa The nitros 3. If sewa neighbors	e following q ige sludge is muda Grass ge sludge is gen require ge sludge is ?	wage Sludge uestions if sewage sludge is applied to land. land applied in bulk form, what type of crop or other vegetation, and Rye Grass. land applied in bulk form, what is the nitrogen requirement forment is 6001bs/acre/year. land applied in bulk form, briefly describe the nature of any contents.	on is grown on this site? or this crop or vegetation?

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

ADEM FORM 419 8/02 Page 4 of 4

Prudes Creek Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

FACILITY NAME:	Prudes Creek WWTP		PLANT GRADE:	11 .
PERMIT NUMBER:	AL0056120		•	
PLANT MANAGER:	Lynn Jones		ŤEL.;	# (205) 841-5939
SYSTEM MANAGER	: David Denard		TEL	# (205) 325-5806
PLANT OPERATORS	S:			
	NAME	GRADE OR TRAINEE STATUS		EXP. DATE
1 PMgr	Lynn Jones	Grade IV	C003327	9/30/2014
2 PSpv	Charles King	Grade IV	C003272	3/31/2014
3 SSpv	Wayne Hawkins	Grade IV	C005284	6/30/2013
4 SSpv	Terry Joe MaHaffey	Grade IV	C003135	8/31/2013
5 SSpv	Randy Maxwell	Grade IV	C003076	11/30/2015
6 SSpv	Robert Tyler	Grade IV	C003008	11/30/2015
7 SSpv	Tony Sutton	Grade IV	C002294	11/30/2015
8 Op II	Mark Cruce	Grade IV	C001682	3/31/2015
9 Op II	Adam Smith	Grade IV	C002236	4/30/2013
10 Op II	Daniel Tesseneer	Grade IV	C006050	6/30/2014
11 Op I	Ellis Brown	Trainee		
12 Op I	Johnny McDonough	Trainee		
13 O p I	Sam Shears	Trainee		
14 O p I	Todd Smitherman	Trainee		·
15 O p I	Michael Wright	Trainee		
OPERATO NONCER	OR(S): GRADE I-C GRADE I GRADE II GRADE III GRADE IV TIFIED OPERATOR I:	40 1 40 1	AVERAGI 1S 2NI 3RI	0 3:00p.m.
	OPERATOR SUN MON X X	SHIFTS NORMALLY W TUES WED X X	ORKED EACH DAY: THURS FRI X X	SAT X

ADEM USE ONLY	YES	NO
1. DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?		
2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?		
	ADEM FORM	441 8/02

Revised 2/25/2013

FACILITY	/ NAME:	Prudes WV	VTP			PLANT G	RADE:	IV		
PERMIT	NUMBER:	AL0026913								
PLANT S	UPERINTE	NDENT:	Lynn Jones	•			TEL. #	(205) 841-5	939	•
SYSTEM	MANAGER	: David Den	ard				_TEL.#	(205) 325-58	306	
DI ANT O	PERATORS				-					
resivi Q	I LIVITOR			- G	RADE OR		-	1 _		
1:	_	NAME Garren Hul			E STATUS nee	OPERA	TOR NO.	<u> </u>	XP. DATE	<u> </u>
1:		Johnny Mc		<u> </u>	nee	•				
1		Billy Joe Po		Trai						
1:		Samuel Sh		Trai						-
1:	—	Todd Smith		Trai						
2		Daniel Tes		··	nee					1
2	1	Michael Wr		Trai						
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•	<u> </u>			<u> </u>						
				l	i					
	÷		MAN HRS./WK	NUMBER						
	MENT/SUP	ERVISOR						e e		
OPERAT	OR(S):	CDADELO								
		GRADE I-C GRADE I		<u> </u>	-		AVEDACE	NUMBER O	F EMPLOYEES	DED GUIS
			i i					NUMBER O	FEMILOTEES	FER SHIP
				1						
		GRADE II							START	TIME
		GRADE II GRADE III					1ST		START	TIME
DESIGNA	ATED TRAIN	GRADE II GRADE III GRADE IV					1ST 2ND		START	TIME
DESIGNA LABORA	ATED TRAIN	GRADE II GRADE III GRADE IV					1ST		START	TIME
	TORY	GRADE II GRADE III GRADE IV					1ST 2ND		START	TIME
LABORA [*] MAINTEN	TORY	GRADE III GRADE III GRADE IV IEE(S)					1ST 2ND		START	TIME
LABORA MAINTEN OTHER F	TORY IANCE PLANT WOF	GRADE III GRADE IV IEE(S)	VORKED EACH	H DAY:			1ST 2ND		START	TIME
LABORA MAINTEN OTHER F	TORY NANCE PLANT WOF OR SHIFTS	GRADE III GRADE IV IEE(S) RKERS NORMALLY W			TIMES		1ST 2ND 3RD		START	TIME
LABORATION MAINTEN OTHER F	TORY IANCE PLANT WOF	GRADE III GRADE IV IEE(S)	VORKED EACH	H DAY:	THURS	FRI	1ST 2ND		START	TIME
LABORA MAINTEN OTHER F	TORY NANCE PLANT WOF OR SHIFTS	GRADE III GRADE IV IEE(S) RKERS NORMALLY W			THURS	FRI	1ST 2ND 3RD		START	TIME

1. DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?
2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

YES	NO
ADEM EODS	1441 9/02

FACILITY NAME: S	Sewer Line Ma	aintenance	_			Pi	LANT GRADE:	ı	IV
PERMIT NUMBER:			_			•			14
PLANT SUPERINTENDENT:							TEL.#	(205) 54	0-7
SYSTEM MANAGER:	<u> </u>	David Denard	1			····	TEL.#		
DI 41100 4		•					·		
PLANT OPERATORS:							•		
MARK	·-			ADE OR	1.			_	
NAMi Brian Champion	<u> </u>			EE STATUS		ATOR NO.	EXP.	DATE	
Don Goodwin			l(c)		C002094			6/30/2015	
Lavon Evans			l(c) l(c)		C005423			6/30/2015	
Brian Rohling			1(c)		C004631			2/31/2014	
	···		(6)		C005418			6/30/2015	
			<u> </u>						
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		·							
		MAN HE	RS.NVK	NUMBER					
MANAGEMENT/SUPERVISOR	2	MAN HE	RS./WK	NUMBER					
PERATOR(S):		MAN HE	RS.NVK	NUMBER					
PERATOR(S):	GRADE I-C	MAN HE	RS.AWK	NUMBER					
OPERATOR(S): G	GRADE IC	MAN HE	RS.MK	NUMBER	AVEF	RAGE NUMB	ER OF EMPLOY	EES PER SI	: HII
OPERATOR(S): G	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF		 1		;HII
OPERATOR(S): G	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	181	 1	EES PER SI	;HIF
OPERATOR(S): G	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	1ST 2ND	 1		;FUF
OPERATOR(S): G	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	181	 1		;FUF
OPERATOR(S): G (C) DESIGNATED TRAINEE(S)	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	1ST 2ND	 1		HIF
OPERATOR(S): G C DESIGNATED TRAINEE(S) ABORATORY	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	1ST 2ND	 1		;H11
OPERATOR(S): G C DESIGNATED TRAINEE(S) ABORATORY IAINTENANCE	GRADE IC GRADE I GRADE II	MAN HE	RS.MK	NUMBER	AVEF	1ST 2ND	 1		HIF
OPERATOR(S): G C DESIGNATED TRAINEE(S) ABORATORY IAINTENANCE	GRADE IC GRADE I GRADE III GRADE III			NUMBER	AVEF	1ST 2ND	 1		HUF
OPERATOR(S): G G G G G G G G G G G G G	GRADE IC GRADE I GRADE III GRADE III					1ST 2ND 3RD	 1		HHF
OPERATOR(S): G G G G G G G G G G G G G	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:		NUMBER		1ST 2ND	 1		HIF
DPERATOR(S): GESIGNATED TRAINEE(S) ABORATORY IAINTENANCE OTHER PLANT WORKERS PERATOR SHIFTS NORMALE SUN	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:				1ST 2ND 3RD	 1		HIF
DPERATOR(S): GESIGNATED TRAINEE(S) ABORATORY IAINTENANCE OTHER PLANT WORKERS PERATOR SHIFTS NORMALE SUN	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:				1ST 2ND 3RD	 1		HIF
DPERATOR(S): GESIGNATED TRAINEE(S) ABORATORY IAINTENANCE OTHER PLANT WORKERS PERATOR SHIFTS NORMALE SUN ST	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:				1ST 2ND 3RD	 1		HIF
DPERATOR(S): GESIGNATED TRAINEE(S) ABORATORY IAINTENANCE OTHER PLANT WORKERS PERATOR SHIFTS NORMALE SUN ST	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:			FRI S	1ST 2ND 3RD	 1		HIF
DPERATOR(S): GESIGNATED TRAINEE(S) ABORATORY IAINTENANCE OTHER PLANT WORKERS PERATOR SHIFTS NORMALE SUN ST	GRADE IC GRADE II GRADE III GRADE IV	EACH DAY:			FRI S	1ST 2ND 3RD	 1		HIF

ADEM FORM 441 8/02

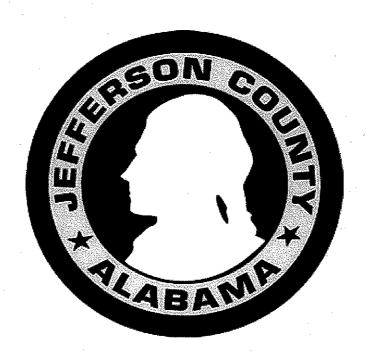
Trussville WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Trussville WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON - PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN - PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

TONY PETELOS –

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

May 31, 2013

Mr. Nick Caraway Alabama Department of Environmental Management Water Division - Municipal Branch P.O. Box 301463 Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Trussville Wastewater Treatment Facility, NPDES Permit No. AL0022934. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely.

David Denard, Director **Environmental Services Department**

Celeste Brown, JCESD Barton Laboratory pc: Daniel White, JCESD Deputy Director David Willoughby, Trussville WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FACI	LITY: Trussville WWTP	NPDES #:_AL 0022934	
MUNICIPALITY:	COUNTY:Jefferson		
CONTACT PERSON	David Denard		
•	Municipal Official		
•	Director of Environmental Services		
	Title	· · · · · · · · · · · · · · · · · · ·	
	Telephone #: (205) 325-5979	Fax #: (205) 325-5981	
	Email Address: denardd@jccal.org	· · · · · · · · · · · · · · · · · · ·	
CHIEF OPERATOR:	David Willoughby		
,	Name		
	Telephone #: (205) 655-3617	Fax #: (205) 655-9240	
	Email Address: willoughbyd@jccal.org	= 40.	
	Date: May 9, 2013		
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer		
	Consulting Engineer		
1	Telephone #: 205-214-8610	Fax #: 205-325-5981	
Т	Date: May 8, 2013		

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility Name ^{. T}	russville WWTF
------------------------------	----------------

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	2.70	98	2101
February	2.48	100	2073
March	2.45	101	1942
April	1.64	138	1845
May	1.68	148	2063
June	1.47	143	1696
July	1.42	139	1549
August	1.99	92	1461
September	2.17	94	1595
October	1.67	123	1683
November	1.41	141	1653
December	2.18	140	2463
Annual Avg.	1.94	120.4	1831.8

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	4.0	10014
90% of the Design Criteria	3.6	9012

C.	How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow? (Check the appropriate point total)
	0-4=0 points 5 or more = 5 points
D.	How many times did the monthly flow (Column 1) to the WWTP exceed the design flow? O(Check the appropriate point total)
	0 = 0 points $1 - 2 = 5$ points $3 - 4 = 10$ points 5 or more = 15 points

F.	How many to	imes did the mo	onthly BOD ₅ (c	or CBOD ₅)* loa	ding (lbs/day)	(Column 3) to the
	WWTP exce	ed the design l	oading? 0	_(Check the ap	propriate point	total)
	7			Г		
i.	0 = 0 points	1 = 10 points	2 = 20 points	3 = 30 points	4 = 40 points	5 or more = 50 points

G. Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.

TOTAL POINTS VALUE OR PART 1 __0 Enter this value on Part 11: Summary Sheet.

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

	<u>Months</u>	$\begin{array}{c} \mathrm{BOD_5} \\ \mathrm{(CBOD_5)} \\ \mathrm{(mg/l)} \end{array}$	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Permit Limit	May-Nov	3.0	30.0	1.0	2.0
	Dec-Apr	10.0	30.0	1.0	3.0

(2) DMR Concentration

<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	0.8	0.95	80.0	0.55
	February	0.6	0.35	0.03	0.58
	March	0.5	0.19	0.00	0.37
2	April	0.7	0.54	0.00	0.53
	May	0.8	0.62	0.23	0.70
	June	0.9	0.28	0.00	0.39
3	July	0.3	0.45	0.03	0.45
	August	0.3	0.00	0.02	0.29
•	September	0.3	0.13	0.01	0.29
4	October	0.3	0.07	0.00	0.25
	November	0.5	0.00	0.00	0.30
	December	0.3	0.32	0.00	0.23
	Annual Avg.	0.52	0.32	0.03	0.41

B. List the monthly average permit limit and DMR loadings below.

(1) NPDES Permit Loading

Permit	<u>Months</u>	BOD_5 (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Limit	May-Nov	100.0	1000.0	33.3	66.7
	Dec-Apr	333.0	1000.0	33.3	100.0

(2) DMR Loading

<u>Otr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
1	January	28.6	43.4	4.45	16.9
	February	13.0	7.1	0.80	12.3
	March	9.9	4.1	0.00	7.1
2	April	9.2	6.6	0.00	7.1
	May	11.3	6.6	3.06	9.9
	June	10.2	3.2	0.00	4.6
3	July	3.9	5.8	0.47	5.3
	August	5.4	0.0	0.40	4.8
	September	5.6	3.3	0.38	5.4
4	October	3.6	0.9	0.00	3.4
	November	5.3	0.0	0.00	3.6
	December	5.8	5.9	0.00	3.9
	Annual Avg.	9.3	7.2	0.80	7.0

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points Yes = 121 points

\mathbf{D}_{\cdot}	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the
	monthly average permit limit during four months of any two consecutive quarters? (Check
	the appropriate point total.)

No =
$$0$$
 points Yes = 121 points

No =
$$0$$
 points $Yes = 121$ points

No =
$$0$$
 points $\frac{\boxed{}}{}$ Yes = 121 points

No = 0 points
$$Yes = 121$$
 points

No =
$$\overline{0}$$
 points \overline{Y} Yes = 121 points

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) __0 (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

Facility Name: Trussville WWTP	_	 ·	
Part 3: Age of the Wastewater Treatment Facility		 	

A.	What year was the wastewater treatment plant constructed or last reconstructed?	1998
	Subtract the above answer from the report year to determine age:	

B. Check the type of treatment facility employed.

Enter Age in Part C below.

	Factor
Mechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify:)	1.0

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}} \times \frac{14}{\text{(Age)}} = \frac{28}{\text{TOTAL POINT VALUE FOR PART 3}}$$

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? _____0___
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? __0___
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 0
- D. Add together Answers A and B and subtract Answer C from that total.

 A + B C = 0 (Check the appropriate point total.)

 0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points
- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) __3___
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? __3
- H. Add together Answers E and F and subtract Answer G from that total. E + F - G = 0 (Check the appropriate point total.)

I. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 0 Enter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

Part	5: Sludge Quantity and Storage		
A.	Please provide information concerning sludge quantity, che based on available data as requested on the MWPP Sewage		
В.	How many months of sludge storage capacity does the variable, either on-site or off-site? (i.e., How many month land spreading or disposing of sludge?)		
	(Check the appropriate point total.) Greater than or equal to 4 months	= 0 points 🔽	
	Less than 4 months, but greater than or equal to 3 months	= 10 points	
	Less than 3 months, but greater than or equal to 2 months	= 20 points	
	Less than 2 months, but greater than or equal to 1 month	= 30 points	
	Less than one month	= 50 points	
	AL POINT VALUE FOR PART 50 r this value on Part 11: Summary Sheet.		
Ente	r this value on Part 11: Summary Sheet.		
Ente			-
Ente Part	r this value on Part 11: Summary Sheet.		- available data
Ente Part A.	r this value on Part 11: Summary Sheet. 6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site infor	orm 419. to and approval f	or sufficient la
Ente Part A.	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site inforrequested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the access the same statement of the statement of the same statement	orm 419. to and approval f	or sufficient la
Ente Part A.	6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site inforrequested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access	orm 419. to and approval f	or sufficient la
Ente Part A.	r this value on Part 11: Summary Sheet. 6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the access to provide proper land disposal?)	orm 419. to and approval f	or sufficient la
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Ente Part A.	r this value on Part 11: Summary Sheet. 6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site inforrequested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites disposal site	orm 419. to and approval f	or sufficient la
Part A.	r this value on Part 11: Summary Sheet. 6: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site inforrequested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal? (Check the access disposal sites to provide proper land disposal sites to provid	orm 419. to and approval f	or sufficient la

Part 7: New Development				. · ·
Are there any major new calendar year or anticipate the sewage system could s	ed in the next 2-3 years	such that eith	er flow or BOD	of loadings t
Design Population:	Design Flow:	MGD	Design BOD ₅ :	lbs/day
Equivalent (PE) List industrial and/or resi	dential developments.			
No major new development				
		· · · · · · · · · · · · · · · · · · ·		
			e e	

Will the additional loadin No = 0 points	- -	heck the appro	priate point tota	l.)
Enter the point total in the	Yes = 121 points blank below.			
TOTAL POINT VALUE FOR P. Enter this value on Part 11: Summ		point total = 1	21)	
Part 8: Operator Certification			-	
Complete the Plant and Collection	on System Personnel Inve	entory, ADEM	Form 441.	
Do both the plant operator Code; Division 10, Operator	and collection system start Certification Program?	affing comply (Check the a	with ADEM Acopropriate point	lministrative total.)
Yes = 0 points	No = $\frac{121}{120}$ points			·
TOTAL POINT VALUE FOR PAET 11: Summ		est point total	= 121)	

	t 9: Financial Status					
λ.	Are User-Charge Reven how are O&M costs bein	ues sufficient ag financed? <u>Ir</u>	to cover operation	and mai	intenance expens	es?]
	Yes. User charge rates are bas	ed on a uniform vol	ume charge per 100 cubic	feet of 85%	of metered water	
	consumption. Charge rate was	\$7.40/100 ft3 endin	g 12/31/2012.			
	Residential Minimum	\$2.00	Plus rate	\$9.89	/1,000 gal.	
	Industrial Minimum	\$2.00	Plus rate	\$9.89	/1,000 gal.	
	Monthly residential rate	based on 6,00	0 gallons usage \$_	50.45		
<u>le</u> iv	ase complete the above int attach a sample water and	formation base	ed on your user ch	arge rate	s for the report y	ear.
	What financial resource reconstruction needs?			wastewa	ter improvement	s ar
	Approximately \$20,300,000 is cur	rently available to f	und capital improvements.	·		
	Approximately \$20,300,000 is cur	rently available to fi	und capital improvements.			
	Approximately \$20,300,000 is cur	rently available to fi	und capital improvements.			
<u>t</u>]	Approximately \$20,300,000 is cur	rently available to fi	und capital improvements.		,	
<u>t</u>]	10: Subjective Evaluation				ater treatment fac	ility.
<u>"t</u>]		cal and structu	ral conditions of th		ater treatment fac	ility.
t]	10: Subjective Evaluation Describe briefly the physic	cal and structu	ral conditions of th		ater treatment fac	ility.
<u>t</u>]	10: Subjective Evaluation Describe briefly the physic	cal and structu	ral conditions of th		ater treatment fac	ility
<u>.t</u>]	10: Subjective Evaluation Describe briefly the physical sound and structures are physically sound	cal and structu I and in good workin	ral conditions of th	e wastew		
rt 1	10: Subjective Evaluation Describe briefly the physically sound All structures are physically sound Describe the general condi	cal and structu I and in good working tion of the sew	ral conditions of th	e wastew		
rt 1	10: Subjective Evaluation Describe briefly the physical sound and structures are physically sound	cal and structu I and in good working tion of the sew	ral conditions of th	e wastew		

	next 5 years?
	Collection system repairs and replacement are continual activities. Trussville WWTP Phase I and II
	TMDL improvements; replacement of the current SCADA software with Citect. Improvements to
	Wisteria trace pump station and vfd improvements at Cedar Creek town homes.
	What is the theoretical design life of the plant, and what is the estimated remaining of the wastewater treatment facility?
	See attachment
	What problems, if any, over the last year have threatened treatment or conveyance system? None
]	s the community presently involved in formal planning for treatment facility upgrad
Į S	How many days in the last year were there residential backups at any point in the ystem for any reason other than clogging of the lateral connection?
I y	Does the plant have a written plan for preventive maintenance on major equipment res, describe.
	Yes. O&M manuals are on site.

Trussville WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	Three new mixers were replaced in the aeration basins at a cost of about \$70,000.00
	Replaced grit hopper, classifier and pump assembly at a cost of \$18,000.00
	Replace three RAS pump assemblies at a cost of \$17,000.00
	Repaired digester gear box and replace coupling at a cost of \$13,000.00
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program (Program). The goal of the Program is to develop and
	provide tools, technologies, and procedures that will empower and enable the County to better manage the sanitary
	sewer collection system. The developed Program will establish a comprehensive asset management system with
	processes and procedures to identify and prioritize future collection system capital and operating replacement and
	maintenance requirements. The Program is an extension and improvement to the current MOM. The Program's
	objectives are focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Part	11: Summary Sheet		
1.		1 through 8 in the left column below. IWPP Report point total the wastewa	
	Actual Values	Maximum Possible	
	Part 1 _ 0 points	80 points	
	Part 2o_points	121 points	
	Part 328_points	40 points	
	Part 4 0 points	200 points	
	Part 5 points	50 points	
	Part 6 _ o _points	50 points	
	Part 7 o points	121 points	
	Part 8 _ 0 _ points	121 points	
	Total 28 points	783 points	
2.	Check the facility type that best of	lescribes the plant's treatment and disp	posal of wastewater.
Ī₹	Mechanical plant with surface v		
F. 20000	<u> </u>	pond with surface water discharge	
	Mechanical plant using land dis	posal of liquid wastes	
	Aerated Lagoon or stabilization	pond using land disposal of liquid wa	istes
	0 - 70 pts. Actions a	e action needed to address problems in s Appropriate* ental Recommendation Range* lity Action Range*	·
*Oth	er actions may be required by N	PDES outside the scope of this repo	ort.
4.	Complete the Municipal Water P	ollution Prevention Resolution Form,	ADEM Form 418.

Facility Name: Trussville WWTP

5.	possible j	points in t	any of the act the right column ritten explanation	? (Check the	appropriate res	sponse) Yes	No
						-	
				,,,,,	-		
						·	
· .							
					.*		

Trussville Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>





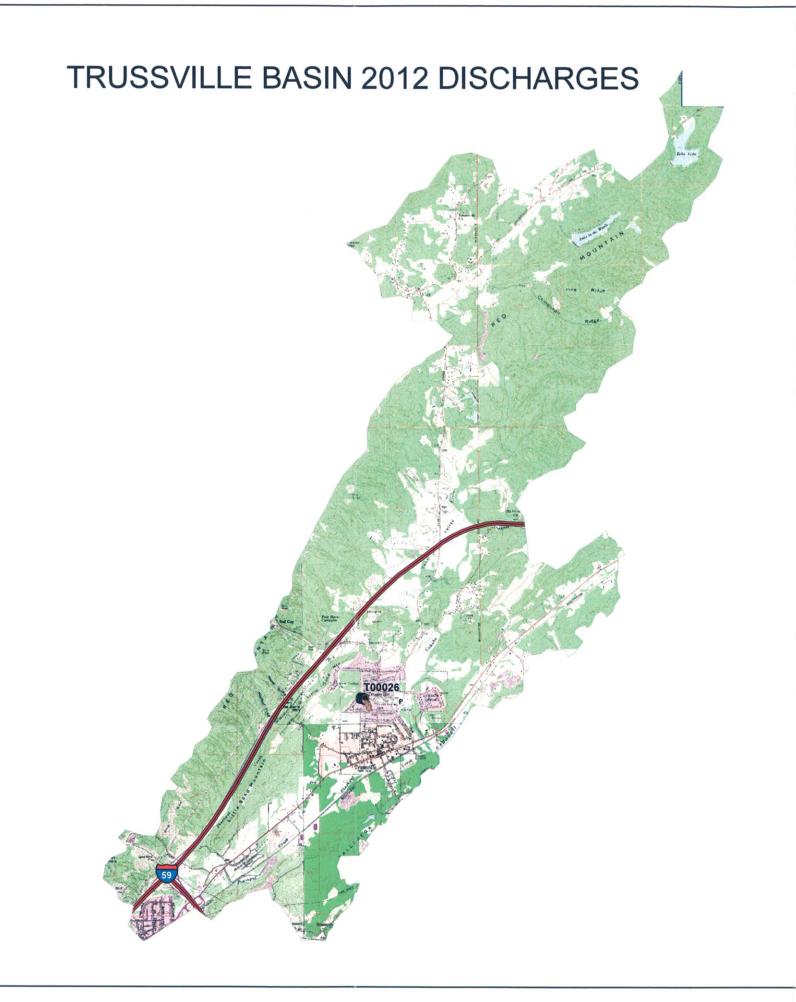


Summary of Unpermitted Discharges - Trussville

January 01, 2012 through December 31, 2012

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

Event No.	Event Date No. Reported Location	Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04104	1/17/12 Notes:	M04104 1/17/12 315 Main St Notes:	Trussville	Storm Drain	84	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00026	5/5	5/5/12 301 Brentwood Ave	Trussville	Ground Absorbed	10,032	Cleanout	Grease/Roots/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
V	Notes:	NOTES:	وها المحافظة والمحافظة والمواسطة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة	en e	er de en	100 are c'ével évalement de mente per per		in's fruits in childhips business Cheateuri	et defende frejelige frej Lebis i Lebisch der bet betekel en der umanwenne, for enne	And manufacture of the state of	/THENANUMENTE OF THE THE PARTY OF THE PARTY
T00040	12/17/12 Notes:	T00040 12/17/12 303 Mountain Dr Notes:	Trussville	Ground Absorbed	'	Cleanout	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
				AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN	The state of the second and the seco	-		SALET THE SALET AND THE PARTY	Control of the Contro	TO SHARE THE PARTY OF THE PARTY	Control of the Contro



Trussville Wastewater Treatment Plant ATTACHMENT 3 – MWPP Sewage Sludge SURVEY



MWPP SEWAGE SLUDGE SURVEY

Fa	acility Background Information:				
1.	Facility Information		Permit N	umber:	AL0022934
	Name:	Trussville WW	TP		
	Street Address:	325 City Hall D	rive		
	County:	Jefferson			
2.	Facility Contact				
	Name:	David Willough	ıby		
	Title:	Plant Superinte			
	Telephone:	(205) 655-3617			
	Permittee Name:	Jefferson Cour	nty Commission-	Trussville W	WTP
	Mailing Address:	Suite A-300, 71	6 Richard Arringt	ton JR. Blvd.	N.
		Birmingham Al			
Fa	acility Flow Information				
1	Facility Wastewater Treatment Cap	acity			
••	Avg. Daily Flow for 2012	•	1.9	MGD	
	Facility Design Capacity:		4.0	 MGD	
2	Estimated Cantage Overtity Handle	ad (Basiduala Bar	anual fram Cantia	Tamle Custana	-\
۷.	Estimated Septage Quantity Handle	•		•	•
	Average Domestic Septa		N/A	gallons per	
	Average Commercial Se	ptage:	N/A	gallons per	month
3.	Method of Septage Processing				÷
	Mixed with Influent W	Vastewater for Tre	eatment		
	Mixed with Sewage S	Sludge		+	
	X		N/A		
A	Estimated Percentage Contributing	Wastowater Flow	,		
7.	Residential: 90	%	·		
	Industrial: 2	_ % _ %			
	Other: 8	_	escribe:	Commercia	al .
	Other.	_ 70 De		Commercia	
5.	List type of wastewater treatment pr	rocess(es) utilized	l at this facility:		
	Bar Screening, Grit Rer	noval, Extended	Aeration with Ac	tivated Sludg	je,
	Clarification, UV Disinfe	ection, Step Aera	ttion		
6.	Estimated sewage sludge wasting r	ate at this facility:			lb/day dry weight
			or <u>2</u>	1,178	gallons per day
_					
7.	Estimated untreated sludge receive	d from off site:		N/A	lb/day dry weight
			or		gallons per day
8.	Estimated percent solids of combine	ed sewage sludge	e prior to treatment	t:	<u>2.1</u> %

ADEM FORM 419 8/02

Acushia Diverse	_			ludge Quanti ted pounds p	
Aerobic Digestic Thicker	<u>n</u>		<u> </u>		
Drying Beds (Air Dr	ying)				
Estimate the total volume of sludge	generated:	:	(dry l	531 J.S. tons per	year)
idge Disposal Methods					
Which of the following describes the	current me				
	A normal (a)	Current F		-	Practices
	Yes Yes	d by ADEM <u>No</u>	Quantity (dry U.S. tons/year)	Approved <u>Yes</u>	by ADEM <u>No</u>
a. X Land Application, Bulk Shipped	<u></u>	<u> </u>	531	100	110
X Agriculture	Х				0
I Forest	0			[*] 	
☐ Public Contact				0	
☐ Lawn/Home Garden		0		0	
b. Il Land Application,					
Bagged/Other Container	n				-
☐ Agriculture ☐ Forest	0	0		0	. 0
☐ Public Contact				[] []	0
Lawn/Home Garden	<u> </u>	Ö 0			
ii Lawii/Hollie Gargeii	П	Ц		П	
c. Il Incineration	0		·	Ö	0
d. 🏻 Subtitle D Landfill					
(Disposal Only)					
e. D Lined Treatment Lagoon	-	-		-	-
or Stabilization Pond f. 🏿 Unlined Lagoon or	<u> </u>			ū	
Stabilization Pond	П				П
g. [] Other (Please Describe)				0	0
			<u>.</u>		
			,		

Pollutant Concentrations

analysis:

 Enter the total concentrations of the following analytes using existing data. Do not enter TCL
--

	Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Туре	Date	Analysis
Arsenic	<pql< td=""><td>Grab</td><td>*</td><td>11.0</td></pql<>	Grab	*	11.0
Cadmium	<pql< td=""><td>Grab</td><td>*</td><td>8.0</td></pql<>	Grab	*	8.0
Chromium	266	Grab	*	8.0
Copper	1,370	Grab	*	8.0
Lead	24	Grab	*	15.0
Mercury	2	Grab	*	0.6
Molybdenum	19	Grab	*	5.0
Nickel	126	Grab	*	6.0
Selenium	<pql< td=""><td>Grab</td><td>*</td><td>15.0</td></pql<>	Grab	*	15.0
Zinc	1,270	Grab	*	18.0
Ammonium- Nitrogen	*************	N/A	N/A	N/A
Nitrate-				
Nitrogen	***************************************	N/A	N/A	N/A
Total Kjeldahl				
Nitrogen	25,000	Grab	*	1.8

		FQL-Flat	Jucai Quantilative Limit	- I carry Ave	aye
2.	Enter the	e estimated or	determined percent so	lids of the sewage sludge whe	en sampled for the abo
ana	alysis:	58	%		

Treatment Provided for Sewage Sludge at the Facility	
1. Which class of pathogen reduction does the sewage sludge meet at the facility?	(As defined in
40 CFR Part 503)	

. 303)		
l Class A		
Alternative A1 - Time and Temperature	ature	•
Alternative A2 - Alkaline Treatmen	t	
[] Alternative A3 - Analysis and Oper	ation	•
Alternative A4 - Analysis Only	•	
Alternative A5 - Processes to Furti	ner Reduce Pathogens (PFRP)	
I Heat Drying	☐ Thermophilic Aerobic Digestion	I Heat Treatment
Pasteurization	Gamma Ray Irradiation	☐ Beta Ray Irradiation
☐ Composting		
Alternative A6 - PFRP Equivalent	•	
·		
Class B		

Class B		
Alternative B1 - Fecal Coliform Co	unt	
Alternative B2 - Process to Signific		
X Aerobic Digestion	X Air Drying	Anaerobic Digestion
Composting	Lime Stabilization	
Alternative B3 - PSRP Equivalent		

■ Neither or Unknown

Vector Attraction Control Option 1 - Minimum 38% Reduction in Volatile Solids Option 2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction Option 3 - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge Option 5 - Aerobic Processes plus Elevated Temperature Option 6 - Raised pH to 12 and Retained at 11.5 Option 7 - 75% Solids with no Unstabilized Solids Option 8 - 90% Solids with Unstabilized Solids Option 9 - Injection Below Land Surface X Option 10 - Incorporation into Soil within 6 or 8 Hours Option 11 Covering Active Sewage Sludge Unit Daily None of the Above
Groundwater Monitoring
If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? If yes
Land Application of Sewage Sludge
Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass
If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lb/acre/year (Reclamation Site)
3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? No complaints have been received

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

ADEM FORM 419 8/02 Page 4 of 4

Trussville Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



SYSTEM M	PERINTENI	AL0022934 DENT:	David Willo				_			
SYSTEM M		DENT:	David Millo							
PLANT OP	ANAGER:									5) 655-361
			David Dena	ard	•	•			TEL.# <u>(20</u>	5) 325-580
	ERATORS:			GRA	DE OR		,			
	N/	AME		TRAINE	E STATUS	(OPERATOR NO).	EXP. DA	Œ
David Willo	ughby				IV		C002616		11/30/20	15
Brian Key					IV		C003285		1/1/2014	<u> </u>
Ladonna Co	alburn				IV		C002043		12/31/201	4
Rosemary S	Sparks				IV		C002168		12/31/201	14
Ronald Joh	nson				11		C005501		2/28/201	4
					·					
										·
				<u>. </u>						
	JN STSTER	M OPERATO								
				•						
						·				
			B & A A A L	DO BAIL	NUMBER					
MANAGEM	ENT/SUPEI	RVISOR		RS./WK 20	3					
OPERATOR	R(S):									
		GRADE I-C								
		GRADE II		10	1		AVERAGE N	UMBER OF I	EMPLOYEES	PER SHIF
	4	GRADE III		,U			1ST	3	STAR	T TIME
		GRADE IV		10	1		2ND		•	
DESIGNATI	ED TRAINE	E(S)					3RD			
LABORATO	RY									
MAINTENA										
OTHER PLA	ANT WORK	ERS	4	10	1 1					
OPERATOR	R SHIFTS N	ORMALLY V	VORKED E/	ACH DAY:						
	SUN	MON	TUES	WED	THURS	FRI	SAT			
1ST	х	х	×	×	х	х	х			
2ND										
3RD				<u> </u>						

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

FACILITY NAME: Sev PERMIT NUMBER:	ver Line Mai	ntenance.	-	•			PLANT	GRADE:	<u>N</u>
PLANT SUPERINTENDENT:	*	-··		•	,				
SYSTEM MANAGER:	_ D	avid Denai		<u> </u>			_	TEL.#	(205) 540
	_		·			·	_	TEL.#	(205) 325
PLANT OPERATORS:					•				
-			GR	ADE OR					
NAME			TRAIN	EE STATUS	1	OPERATOR N	10.	EXP. D	DATE [
Brian Champion			1(c)		C0020			1	6/30/2015
Don Goodwin			l(c)		C0054	23			6/30/2015
Lavon Evans			l(c)		C0046	31			2/31/2014
Brian Rohling	-		1(c)		C0054	18			3/30/2015
					T			<u> </u>	200,2010
								! .	1
<u> </u>									
OPERATOR(S): GR/	ADE I-C	MAN H	RS.AWK	NUMBER					·
G	RADE I	MAN H	RS./WK	NUMBER		AVERAGE NI	JMBER (DF EMPLOYE	ES PER SH
OPERATOR(S): GR/ G GI	RADE I	MAN H	RS./WK	NUMBER			JMBER (DF EMPLOYE	ES PER SH
OPERATOR(S): GR/ G GI GR	RADE II RADE III	MAN H	RS.WK	NUMBER		1ST	JMBER (ES PER SH
OPERATOR(S): GR/ G GI GR GR	RADE I	MAN H	RS.WK	NUMBER		1ST 2ND	JMBER (
OPERATOR(S): GR/ G GI GI GR GR DESIGNATED TRAINEE(S)	RADE II RADE III	MAN H	RS.MK	NUMBER		1ST	JMBER (
OPERATOR(S): GR/ GR/ GI GR/ GR/ GR/ CR/ DESIGNATED TRAINEE(S) ABORATORY	RADE II RADE III	MAN H	RS.MK	NUMBER		1ST 2ND	JMBER (
OPERATOR(S): GR/ GR/ GI GR/ GR/ GR/ GR/ DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE	RADE II RADE III	MAN H	RS.MK	NUMBER		1ST 2ND	JMBER (
OPERATOR(S): GR/ G GI GI GR GR DESIGNATED TRAINEE(S)	RADE II RADE III	MAN H	RS./WK	NUMBER		1ST 2ND	JMBER (
OPERATOR(S): GR/ GR/ GI GR/ GR/ GR/ DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS	RADE II RADE III RADE IV			NUMBER		1ST 2ND	JMBER (
OPERATOR(S): GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER (
OPERATOR(S): GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MA	RADE III RADE IV WORKED E			NUMBER	FRI	1ST 2ND	JMBER C		
OPERATOR(S): GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MA	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER C		
OPERATOR(S): GRA GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MAINTENANCE ND	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER C		
OPERATOR(S): GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER (
OPERATOR(S): GRA GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MAINTENANCE OTHER ST	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER (
OPERATOR(S): GRA GRA GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) .ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MAINTENANCE ST	RADE III RADE IV WORKED E	EACH DAY			FRI	1ST 2ND 3RD	JMBER (
OPERATOR(S): GROUND GRO	RADE III RADE IV WORKED E	EACH DAY	WED	THURS		1ST 2ND 3RD SAT	JMBER (RT TIME
OPERATOR(S): GRA GRA GRA GRA GRA GRA GRA DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY SUN MAINTENANCE OTHER ST	WORKED E	EACH DAY TUES	WED	THURS	TIVE COL	1ST 2ND 3RD SAT			

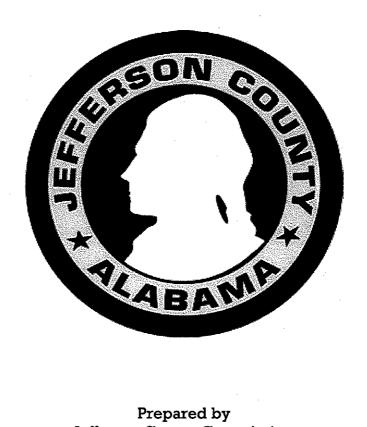
Turkey Creek WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Turkey Creek WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by
Jefferson County Commission
Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

ENVIRONMENTAL SERVICES

CHIEF EXECUTIVE OFFICER

Office of

TONY PETELOS –

DAVID A. DENARD Director of Environmental Services Suite A-300 716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

May 31, 2013

Mr. Nick Caraway
Alabama Department of Environmental Management
Water Division – Municipal Branch
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)

Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Turkey Creek Wastewater Treatment Facility, NPDES Permit No. AL0022926. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Chad Quick, Turkey Creek WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FAC	CILITY: Turkey Creek WWTP	NPDES #:_AL 0022926
MUNICIPALITY:_	Jefferson County	COUNTY:
CONTACT PERSO		
,	Municipal Official	•
	Director of Environmental Services	
	Title	·
	Telephone #: (205)325-5806	Fax #: (205)325-5981
	Email Address: denardd@jccal.org	
CHIEF OPERATO	R: Chad Quick	
	Name	
	Telephone #: (205)681-7971	Fax #: (205)680-8139
	Email Address: quickc@jccal.org	
	Date: May 10, 2013	
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer	
· · ·	Consulting Engineer	
	Telephone #: (205) 214-8610	Fax #: (205) 325-5981
	Date: May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility Nam	٠.	Turkey	Creek
raciniv ivam	е.		

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	5.9	51.4	2421
February	5.4	40.6	1744
March	5.3	48.7	2045
April	4.1	68.9	2420
May	4.3	63.1	2160
June	3.5	69.3	2103
July	3.7	102.1	3202
August	4.2	61.6	2158
September	4.6	58.8	2252
October	3.6	80.4	2318
November	3.5	77.5	2299
December	5.3	49.1	2231
Annual Avg.	4.44	64.3	2279

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	5.0	7506
90% of the Design Criteria	4.5	6755

C. How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow?

5 (Check the appropriate point total)

$$0-4=0$$
 points 5 or more = 5 points

D. How many times did the monthly flow (Column 1) to the WWTP exceed the design flow?

10 (Check the appropriate point total)

$$0 = 0 \text{ points} \quad 1 - 2 = 5 \text{ points} \quad 3 - 4 = 10 \text{ points} \quad 5 \text{ or more} = 15 \text{ points}$$

E. How many times did the monthly BOD₅ (or CBOD₅)* loading (lbs/day) (Column 3) to the WWTP exceed 90% of the design loading? 0 (Check the appropriate point total)

$$0 - 1 = 0$$
 points $2 - 4 = 5$ points 5 or more $= 10$ points

F. How many times did the monthly BOD₅ (or CBOD₅)* loading (lbs/day) (Column 3) to the WWTP exceed the design loading? 0 (Check the appropriate point total)

$$0 = 0$$
 points $1 = 10$ points $2 = 20$ points $3 = 30$ points $4 = 40$ points 5 or more $= 50$ points

G. Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.

C points =
$$\frac{5}{10}$$
D points = $\frac{10}{10}$

E points =
$$0$$

F points =
$$0$$

TOTAL POINTS VALUE OR PART 1 15
Enter this value on Part 11: Summary Sheet.

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Permit Limit	Months	$\begin{array}{c} \mathrm{BOD_5} \\ \mathrm{(CBOD_5)} \\ \mathrm{(mg/l)} \end{array}$	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
	April-Oct.	20.0	24.0	2.5	Report
	Nov-March	20.0	24.0	5.0	Report

(2) DMR Concentration

<u>Otr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	1.45	8.2	0.0	0.61
	February	1.07	5.5	0.0	0.38
	March	0.85	4.2	0.0	0.30
2	April	1.14	4.2	0.0	0.79
	May	1.33	6.6	0.0	0.69
	June	1.35	6.8	0.0	0.65
3	July	1.34	5.8	0.0	0.45
	August	1.19	5.2	0.0	0.00
	September	0.82	6.3	0.0	0.50
4	October	0.92	5.5	0.0	0.42
	November	0.69	5.9	0.0	0.48
	December	1.08	7.7	0.0	0.48
	Annual Avg.	1.10	5.97	0.0	0.48

B. List the monthly average permit limit and DMR loadings below.

BOD₅

(1) NPDES Permit Loading

Permit	Months	$(CBOD_5)$ (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Limit	April-Oct	834	1000	104	Report
	Nov-March	834	1000	208	Report
(2) DM	R Loading				
<u>Otr</u>	<u>Month</u>	BOD_5 (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)
1	January	71.5	391	0.0	25
	February	47.7	240	0.0	14
	March	37.4	181	0.0	10
2 .	April	40.9	149	0.0	37
	May	46.0	235	0.0	31
	June	40.3	205	0.0	18

182

202

289

170

180

370

232.9

0.0

0.18

0.0

0.0

0.23

0.0

0.03

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$\overline{0}$$
 points Yes = $\overline{121}$ points

41.9

43.2

37.4

27.0

20.7

50.6

3

July

August

October

November

December

Annual Avg. 42.1

September

14

0

31

11

16

22

19.2

D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
	No = $\frac{10}{0}$ points Yes = $\frac{121}{12}$ points
F.	During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
G.	During the past year did the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
Н.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
I.	Enter each point value checkedfor C through H in the blanks below.
	C Points $= 0$
	D Points = $\frac{0}{1}$
	$E Points = \frac{0}{0}$
	F Points = 0
	G Points = $\frac{0}{2}$

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) 0 (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

H Points = $\underline{0}$

Facility Name:	Turkey Creek WWTP.	•
•		

Part 3: Age of the Wastewater Treatment Facility

A. What year was the wastewater treatment plant constructed or last reconstructed? 2004

Subtract the above answer from the report year to determine age:

$$Age = (\underline{2012}) - (\underline{2004})$$

Enter Age in Part C below.

B. Check the type of treatment facility employed.

	Factor
×Mechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify:)	1.0

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}}$$
 x $\frac{8.0}{\text{(Age)}}$ = $\frac{16}{\text{TOTAL POINT VALUE FOR PART 3}}$

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? 0_____
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? 0
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 0
- D. Add together Answers A and B and subtract Answer C from that total.

 A + B C = 0 (Check the appropriate point total.)

 0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points
- E. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0
- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 3_____
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 3
- H. Add together Answers E and F and subtract Answer G from that total. E + F G = 0 (Check the appropriate point total.)

$$0 = 0$$
 points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more $= 100$ points

1. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 DEnter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

Part	t 5: Sludge Quantity and Storage
A .	Please provide information concerning sludge quantity, characteristics, and storage practice based on available data as requested on the MWPP Sewage Sludge Survey, ADEM Form 419.
B.	How many months of sludge storage capacity does the wastewater treatment facility hav available, either on-site or off-site? (i.e., How many months can the facility operate without land spreading or disposing of sludge?) 4 months
	(Check the appropriate point total.) Greater than or equal to 4 months Less than 4 months, but greater than or equal to 3 months Less than 3 months, but greater than or equal to 2 months Less than 2 months, but greater than or equal to 1 month Less than one month ■ 0 points □ = 20 points □ = 30 points □ = 50 points □
	AL POINT VALUE FOR PART 5 0 r this value on Part 11: Summary Sheet.
Part	6: Sludge Disposal Practices and Sites
A.	Please provide the sludge disposal practices and site information based on available data as requested on the MWPP Sewage Sludge Survey, ADEM Form 419.
3.	How many months or years does the facility have access to and approval for sufficient land disposal sites to provide proper land disposal? (Check the appropriate point total.)
	36 or more months = 0 points
	AL POINT VALUE FOR PART 6 others.

Part 7: New Development				
Are there any major new calendar year or anticipated the sewage system could sign	in the next 2-3 years	such that eith	er flow or BOD	loadings to
Design Population: Equivalent (PE)	Design Flow:	MGD	Design BOD ₅ :	lbs/day
List industrial and/or reside	ential dayslanments			
No new developments are planned.	chidal developments.			
No new developments are planned.				
		·		· · · · ·
		<u></u> .		
	·			
Will the additional loading	overload the plant? (Cl	neck the appro	priate point total	l.)
No = 0 points $\boxed{\checkmark}$ Enter the point total in the black	Yes = 121 points ank below.	*. *		
TOTAL POINT VALUE FOR PAR Enter this value on Part 11: Summa		point total = 1	21)	
Part 8: Operator Certification				
Complete the Plant and Collection	System Personnel Inve	ntory, ADEM	Form 441.	
Do both the plant operator and Code; Division 10, Operator	nd collection system sta Certification Program?	affing comply (Check the ap	with ADEM Ad propriate point t	ministrative otal.)
Yes = 0 points	No = $\frac{121}{1}$ points			
TOTAL POINT VALUE FOR PAR				

Dor	nut Or Financial Status		
Par	art 9: Financial Status		
A.	Are User-Charge Revenues sufficient to how are O&M costs being financed? <i>Inclu</i>	cover operation and a de user charge rates.	maintenance expenses? If
	Yes, user charge rates are based on a uniform volume c	harge per 100 cubic feet of 8	5% of meter
	consumption for single family residence.	· ·	·
	Residential Minimum \$2.00	Plus rate \$9.89	/1,000 gal.
	Industrial Minimum \$2.00	Plus rate	/1,000 gal.
	Monthly residential rate based on 6,000 ga	allons usage \$ 50.45	
*Ple	lease complete the above information based o	on vour user charge r	rates for the report year V
may	y attach a sample water and sewer bill for cla	rity.	wes for use report year. 1
В.	What financial resources are available reconstruction needs?	to pay for the waste	ewater improvements and
	Approximately \$20,300,000 is currently available to fund of	capital improvements.	
Part	t 10: Subjective Evaluation		
4 .	Describe briefly the physical and structural	conditions of the was	ewater treatment facility
	The physical and structural conditions at the plant are in e		cwater treatment facility.
	Proposal and obtained contained by the plant are in e	Aceitett Strape.	· · · · · · · · · · · · · · · · · · ·
3.	Describe the general condition of the sewer	system (sewer lines, r	nanholes, lift stations).
	Sewer lines are good.		
	Sewer lines are good. Manholes are good		· · · · · · · · · · · · · · · · · · ·
			· · · · · · · · · · · · · · · · · · ·

	Sewer line repair and replacement are continued activities planned for the collection system.
	Replacement of the current SCADA software with Citect.
	What is the theoretical design life of the plant, and what is the estimated remaining use of the wastewater treatment facility?
	See attachment
	What problems, if any, over the last year have threatened treatment or conveyance with system?
	None
ĺ	Is the community presently involved in formal planning for treatment facility upgrading?
	How many days in the last year were there residential backups at any point in the colleystem for any reason other than clogging of the lateral connection? 1
	Does the plant have a written plan for preventive maintenance on major equipment item es, describe.
	Yes, O&M manuals for all equipment are on site. We record lubrication and repairs on all equipment into the plants
	computer maintenance program.

Turkey Creek WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
	appropriate response.) Tes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	Mechanical seal for the peak flow pump, cost = \$ 8512.06
	UV repairs at a cost of \$ 12965.32
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012for the development of a
	comprehensive Collection System Asset Management Program. The goal of the Program is to develop and provide
	tools, technologies, and procedures that will empower and enable the County to better manage the sanitary sewer
	collection system. The developed program will establish a comprehensive asset management system with processes
	and procedures to identify and prioritize future collection system capital and operating replacement and maintenance
	requirements. The Program is an extension and improvement to the current MOM. The Program's objectives are
	focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name: Turkey Creek WWTP	· · · · · · · · · · · · · · · · · · ·	
Part 11: Summary Sheet	<u> </u>	
1. Enter in the values from Parts 1 left column to determine the MV the previous calendar year.	through 8 in the left column belowPP Report point total the waste	ow. Add the numbers in the ewater system generated for
Actual Values	Maximum Possible	
Part 1 15 points	80 points	
Part 2 o points	121 points	
Part 3 16 points	40 points	
Part 4 o points	200 points	
Part 5 o points	50 points	
Part 6 o points	50 points	
Part 7 o points	121 points	
Part 8 o points	121 points	
Total 31 points	783 points	
 Check the facility type that best de 	scribes the plant's treatment and o	disposal of wastewater.
Mechanical plant with surface wa	•	
Aerated Lagoon or stabilization p		•
Mechanical plant using land disp	-	• •
Aerated Lagoon or stabilization p	ond using land disposal of liquid	wastes
	Appropriate*	as identified in the report.
	tal Recommendation Range* ty Action Range*	1
*Other actions may be required by NP		eport.
- -	^	•
4. Complete the Municipal Water Pol	llution Prevention Resolution For	m, ADEM Form 418.

5.	In Question 1, do any of the actual point values in the left column of possible points in the right column? (Check the appropriate response) If yes, provide a written explanation for this situation in the space below.	equal Yes	the maximum
•			
•		<u> </u>	
			.,

Turkey Creek Wastewater Treatment Plant ATTACHMENT 2 - Raw Sewage Bypass and SUMMARY







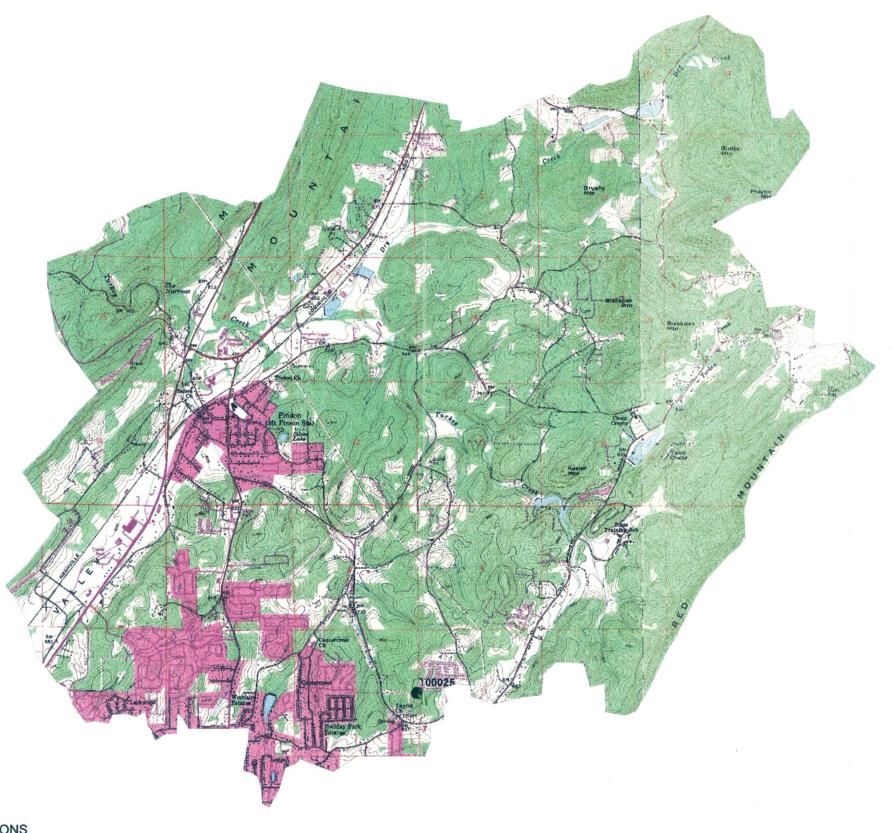
Summary of Unpermitted Discharges - Turkey Creek

January 01, 2012 through December 31, 2012

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

Event No.	Date Reported	Event Date No. Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
T00023	2/27 s:	2/27/12 101 Westchester Dr Turkey Creek S	Turkey Creek	Storm Drain	3,450	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
T00025	4/3/12 Notes:	r00025 4/3/12 4555 Sterling Glen Lane Turkey Creek Di	Turkey Creek	Drainage Ditch		,500 Manhole Grease No Rain Blockage Rer	Grease	No Rain	noved	Brian Sv Champion Main Sup	Sewer Maintenance Supervisor
T00035	10/25/12 Notes:	T00035 10/25/12 800 Farrington Dr Turkey Creek S Notes:	Turkey Creek		833	Manhole	Roots	No Rain	noveđ	Brian Champion	Sewer Maintenance Supervisor

TURKEY CREEK BASIN 2012 DISCHARGES



JEFFERSON COUNTY ENVIRONMENTAL SERVICES PLOTTED: 3-11-13

NOTE: OVERFLOWS SHOWN ARE OVER 10,000 GALLONS

Turkey Creek Wastewater Treatment Plant ATTACHMENT 3 – MWPP Sewage Sludge SURVEY



MWPP SEWAGE SLUDGE SURVEY

Facility b	Background Information:				
1. Facili	ity Information	•	Permit	Number:	AL0022926
	Name:	Turkey Cre	eek WWTP		
	Street Address:	7137 Dispo	osal Plant Road		
	County:	Jefferson			
2 Facili	ty Contact				
2. T doi:	Name:	Chad Quic	·k		
	Title:	Plant Supe			- 3 - 41 - 411
	Telephone:	(205) 681-7			
	Permittee Name:		County Commission	n- Turkev Cre	ek WWTP
	Mailing Address:		0, 716 Richard Arrin	-	
			m AL 35203		
Facility F	Flow Information				
1. Facili	ty Wastewater Treatment (•			
	Avg. Daily Flow for 20		4.44	MGD	
	Facility Design Capac	sity:	5.0	MGD	
2. Estim	rated Septage Quantity Ha	ndled (Residuals	Removed from Sep	tic Tank Syste	ms)
	Average Domestic Se	•	N/A	gallons pe	•
	Average Commercial	. •	N/A	gallons pe	
	· ·	. 0		•	
3. Metho	od of Septage Processing				
	☐ Mixed with Influer		or Treatment		
	☐ Mixed with Sewa	je Sludge			
	X		N/A		
4 Estim	ated Percentage Contribut	ing Wastewater	Flow		
	Residential: 95	%	1 1011		
	Industrial: 0	%			
	Other: 5	 %	Describe:	Commerc	rial
	<u> </u>			Commen	<u> </u>
5. List ty	pe of wastewater treatmer	it process(es) ut	ilized at this facility:		
	Bar Screening, Grit	Removal, Exter	ded Aeration with	Activated Sluc	dge,
	Clarification, UV Dis	infection, Step	Aeration		
6 : E-#					116 / al mar a dim a constitution d
o. Esum	ated sewage sludge wastir	ig rate at this rat		4005	_ lb/day dry weight
			or	4995	_ gallons per day
7. Estim	ated untreated sludge rece	eived from off site	e:	N/A	lb/day dry weight
			or		gallons per day
8. Estim	ated percent solids of com	bined sewage sl	udge prior to treatme	ent:	2.2 %

ADEM FORM 419 8/02 Page 1 of 4

	÷			udge Quanti ed pounds p	•
Aerobic Digestion, Drying Be	eds (Air Dry	ing)			
	-				
. Estimate the total volume of sludge	generated:			219.4	
			(dry U	I.S. tons per	year)
udge Disposal Methods					
Which of the following describes the	current met	hod of sewa	ge studge disposal for th	s facility	
Trinori or the femotiang decombed the	our one moe	Current F		Proposed	Practices
		by ADEM	Quantity	Approved	by ADEM
- William 11 11 12 12 12 12 12 12 12 12 12 12 12	<u>Yes</u>	<u>No</u>	(dry U.S. tons/year)	<u>Yes</u>	<u>No</u>
a. X Land Application, Bulk Shipped			219.4		
X Agriculture	Х	0	213.4	. 🛮	
☐ Forest		_	•		_
☐ Public Contact	0	0		0.	0
Lawn/Home Garden	0	0		0	<u> </u>
b. I Land Application,					
Bagged/Other Container					
Agriculture		Ö		0 .	
☐ Forest					
☐ Public Contact					
I Lawn/Home Garden		D			
c. I Incineration	0			0	0
d. 🏿 Subtitle D Landfill					
(Disposal Only)		0		<u> </u>	
e. I Lined Treatment Lagoon	-	-	_	_	_
or Stabilization Pond f. [] Unlined Lagoon or	П	П			
Stabilization Pond	ם	0			П
g. I Other (Please Describe)		0		_	_
				- .	_
			-		
			<u>-</u>		

ADEM FORM 419 8/02

Pollutant Concentrations

analysis:

			. Do not enter TCLP results.

	Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Type	Date	Analysis
Arsenic	<pql< td=""><td>Grab</td><td>*</td><td>11.0</td></pql<>	Grab	*	11.0
Cadmium	<pql< td=""><td>Grab</td><td>*</td><td>8.0</td></pql<>	Grab	*	8.0
Chromium	61	Grab	*	8.0
Copper	342	Grab	*	8.0
Lead	15	Grab	*	15.0
Mercury	2	Grab	* .	0.6
Molybdenum	<pql< td=""><td>Grab</td><td>*</td><td>5.0</td></pql<>	Grab	*	5.0
Nickel	30	Grab	*	6.0
Selenium	<pql< td=""><td>Grab</td><td>*</td><td>15.0</td></pql<>	Grab	*	15.0
Zinc	892	Grab	*	18.0
Ammonium- Nitrogen	(19(1)(1)(1)(1)(N/A	N/A	N/A
Nitrate- Nitrogen	***************************************	N/A	N/A	N/A
Total Kjeldahl Nitrogen	25,167	Grab	* Voods Assess	1.8

		1 WL-110	iciicai Quaixii	anve Lillin		_	I cally Ave	ayc		
2.	Enter the	estimated or	r determined	percent soli	ds of the	sewage:	sludge whe	n sampled t	for the a	above
an	alysis:	87.5	%	•						

R Part 503) Il Class A		
Alternative A1 - Time and Tempe	rature	•
☐ Alternative A2 - Alkaline Treatmen		•
Alternative A3 - Analysis and Ope	ration	
Alternative A4 - Analysis Only		
Alternative A5 - Processes to Furt	ther Reduce Pathogens (PFRP)	
I Heat Drying	Thermophilic Aerobic Digestion	☐ Heat Treatment
Pasteurization	Gamma Ray Irradiation	Beta Ray Irradiation
Composting		
Alternative A6 - PFRP Equivalent		

Neither or Unknown

[] Aerobic Digestion

Composting

Alternative B3 - PSRP Equivalent

ADEM FORM 419 8/02 Page 3 of 4

Air Drying

Lime Stabilization

Anaerobic Digestion

Υ.	Vector Attraction Control
j.	☐ Option 1 - Minimum 38% Reduction in Volatile Solids
	Option 2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
	Doption 3 - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
	Doption 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge
	Option 5 - Aerobic Processes plus Elevated Temperature
	Doption 6 - Raised pH to 12 and Retained at 11.5
	Option 7 - 75% Solids with no Unstabilized Solids
	Option 8 - 90% Solids with Unstabilized Solids
	Option 9 - Injection Below Land Surface
	Option 10 - Incorporation into Soil within 6 or 8 Hours
	Option 11 Covering Active Sewage Sludge Unit Daily
	None of the Above
	Groundwater Monitoring
	1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed
	at the site?
	Yes (If yes, please submit a copy of the groundwater monitoring reports along with this
	x No survey. Also please provide the approximate depth to groundwater and the
	groundwater monitoring procedures used to obtain the data.)
	g
	Land Application of Sewage Sludge
	Land Application of Octrage Cidege
	Answer the following questions if sewage sludge is applied to land.
γ.	If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site?
/	
	Tifton Bermuda Grass, Ryegrass
	2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation?
	600lb/acre/year (Reclamation Site)
	OUDINGO E- year (Neclaination Oile)
	3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from
	neighbors?
	No complaints have been received
	TO VOID WITH MOUT TOVOTTON

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

ADEM FORM 419 8/02 Page 4 of 4

Turkey Creek Wastewater Treatment Plant ATTACHMENT 4 – Plant and Collection System Personnel Inventory



PLANT SUPERINTENDENT: Chad Quick TEL. # (205)831-7971	PLANT SUPERINTENDENT: Chad Quick TEL.# (205)681-797		cey Creek WV				_	RADE:	Contract of	<u> </u>
SYSTEM MANAGER: David Denard	SYSTEM MANAGER: David Denard TEL.# (205)326-823 PLANT OPERATORS: CRADE OR			al a la			_		(005)004	
PLANT OPERATORS:	PLANT OPERATORS:									
TRAINEE STATUS OPERATOR NO. EMP. DATE	NAME		David D	enard	· • · · · · · · · · · · · · · · · · · ·			TEL.#	(205)326	5-8232
NAME	TRAINEE STATUS OPERATOR NO. EXP. DATE	PLANT OPERATORS:		GRA	DE OR					
Mark Lee	Mark Lee	NAME	•	TRAINE	E STATUS	(PERATOR NO.	EXP	. DATE	_
Chad Quick	Chad Quick	Eric Pond			IV		C003706	2/28	3/2016	
Pat McCarty	Pat McCarty	Mark Lee			IV		C000389	8/31	/2013	_
MAN HRS./WK	MAN HRS./WK NUMBER	Chad Quick			IV		C003616	2/28	3/2015	
START TIME START TIME START TIME START TIME START TIME TOTHER PLANT WORKER SUN MON TUES WED THURS FRI SAT SAT	Sefferey Gillian	Pat McCarty			IV		C003224	8/31	/2014	-
Adam Moore IV C006513 11/1/2014 COLLECTION SYSTEM OPERATORS:	Adam Moore				IV		C000447	11/3	0/2015	_
COLLECTION SYSTEM OPERATORS: MAN HRS./WK NUMBER 120 3 OPERATOR(S): GRADE IC GRADE II GRADE IV 120 3 DESIGNATED TRAINEE(S) LABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORKED EACH DAY: SUN MON TUES WED THURS FRI SAT 1ST X X X X X X X X X X X X X X X X X X X	COLLECTION SYSTEM OPERATORS: MAN HRS./WK NUMBER 120 3 OPERATOR(S): GRADE I GRADE II GRADE II GRADE III GRADE III GRADE III GRADE III GRADE III GRADE IV 120 3 DESIGNATED TRAINEE(S) LABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMALLY WORKED EACH DAY: SUN MON TUES WED THURS FRI SAT 1ST X X X X X X X X X X X X X X X X X X X									-
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		3RD	l							

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

PERMIT NUMBER: PLANT SUPERINTENDENT: SYSTEM MANAGER:						· <u> </u>	PLANT GRADE:		V
			_	•					
OTOTEM MANAGER;	-						TEL.#	(205) 540	0-7
	-	David Denar	<u>d</u>		····		TEL. #	(205) 32	5-59
PLANT OPERATORS:									
			GE	ADE OR					
NAM	Æ			EE STATUS	l open	ATOR NO.	1	- I	
Brian Champion			1(c)		C002094	ATON NO.	EAP.	DATE	
Don Goodwin			1(c)	· · · · · · · · · · · · · · · · · · ·	C005423			6/30/2015 6/30/2015	
Lavon Evans			1(c)		C004631			12/31/2014	
Brian Rohling			l(c)		C005418		- 	6/30/2015	
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MANAGEMENT/SUPERVISOR	٦ Г	MAN H	RS./WK	NUMBER	1				
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OPERATOR(S):	GRADE II				AVEF	RAGE NUM	BER OF EMPLOY	/EES PER SI	HIF
OPERATOR(S):	GRADE II GRADE III				AVEF	RAGE NUM	 -	YEES PER SI	HIF
OPERATOR(S):	GRADE II				AVEF		 -		HIF
OPERATOR(S): CONTROL OF THE PROPERTY OF THE P	GRADE II GRADE III				AVEF	1ST	 -		HIF
DESIGNATED TRAINEE(S) ABORATORY	GRADE II GRADE III				AVEF	1ST 2ND	 -		HIF
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE	GRADE II GRADE III				AVEF	1ST 2ND	 -		#IF
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE	GRADE II GRADE III				AVEF	1ST 2ND	 -		
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS	GRADE II GRADE III GRADE IV	EACH DAY			AVEF	1ST 2ND	 -		HIF
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Valley Creek WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Valley Creek WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by
Jefferson County Commission
Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway Alabama Department of Environmental Management Water Division – Municipal Branch P.O. Box 301463 Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)
Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Valley Creek Wastewater Treatment Facility, NPDES Permit No. AL0023655. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Robby Bennett, Valley Creek WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FACI	LITY: Valley Creek WWTP	NPDES #:_AL0023655
MUNICIPALITY: Je	fferson County	COUNTY: Jefferson
CONTACT PERSON	David Denard	
	Municipal Official	
	Director of Environmental Services	
	Title	
	Telephone #: (205) 327-8232	Fax #:_(205) 325-5981
	Email Address: denardd@jccal.org	
CHIEF OPERATOR	Robby Bennett	·
	Name	
	Telephone #: (205) 428-2614	Fax #: (205) 426-3274
	Email Address: bennettr@jccal.org	
	Date: May 9, 2013	
REVIEWED BY:	Daniel A. White, P.E., ESD Engineer	·
(Consulting Engineer	
ר	Telephone #: 205-214-8610	_Fax #: 205-325-5981
·	Date: May 8, 2013	·

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	54.6	74.0	30,614.4
February	47.1	70.5	26,315.8
March	45.8	74.5	26,169.7
April	33.6	103.1	28,017.3
May	28.5	111.0	26,623.0
June	25.2	137.4	29,387.8
July	21.7	136.2	25,467.2
August	36.1	81.7	22,596.6
September	32.1	88.9	24,337.9
October	33.6	80.8	21,899.2
November	22.0	128.9	24,230.9
December	52.1	79.2	28,218.4
Annual Avg.	36.0	97.2	26,157.0

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	85.0	141,780
90% of the Design Criteria	76.5	127,602

	,
C.	How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow the appropriate point total)
	0 - 4 = 0 points 5 or more = 5 points
D.	How many times did the monthly flow (Column 1) to the WWTP exceed the design flow? the appropriate point total)
	0 = 0 points $1 - 2 = 5$ points $3 - 4 = 10$ points 5 or more $= 15$ points
E.	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed 90% of the design loading? $\frac{0}{1000}$ the appropriate point total) $\frac{1}{100}$ the appropriate point total) $\frac{1}{100}$ To more = $\frac{1}{100}$ points
F	How many times did the monthly BOD ₅ (or CBOD ₅)* loading (lbs/day) (Column 3) to the WWTP exceed the design loading? 0 the appropriate point total) $0 = 0$ points $1 = 10$ points $2 = 20$ points $3 = 30$ points $4 = 40$ points 5 or more $= 50$ points
G.	Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.
	C points = 0
	D points = 0
	E points = 0
	F points = 0

TOTAL POINTS VALUE OR PART 1 ©

Enter this value on Part 11: Summary Sheet.

^{*}To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Permit Limit	$\begin{array}{c} BOD_5 \\ (CBOD_5) \\ \underline{Months} \end{array} \qquad (mg/l)$		TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)	
	May - Nov	8.0	24.0	1.0	3.0	
	Dec - Apr	8.0	24.0	1.0	4.0	

(2) DMR Concentration

	$\begin{array}{ccc} & & BOD_5 \\ & (CBOD_5) \\ \hline Otr & \underline{Month} & \underline{(mg/l)} \end{array}$			•				
<u>Otr</u>			TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)			
1	January	1.6	3.3	0.0	0.9			
	February	1.4	3.2	0.1	0.8			
	March	1.4	2.9	0.0	0.8			
2	April	1.4	3.5	0.0	1.0			
-	May	1.9	4.4	0.0	1.1			
	June	1.4	6.5	0.0	1.0			
3	July	1.2	3.2	0.1	0.9			
	August	1.0	3.0	0.1	0.8			
	September	1.4	4.5	0.1	1.1			
4	October	1.7	5.5	0.1	1.1			
	November	1.7	4.5	0.1	1.2			
	December	2.3	6.4	0.3	1.4			
	Annual Avg.	1.53	4.2	0.08	0.99			

List the monthly average permit limit and DMR loadings below.

BOD₅

(1) NPDES Permit Loading

Permit	<u>Months</u>	(CBOD ₅) (lbs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)		
Limit	May - Nov 5671		17013	708	2126		
•	Dec - Apr	5671	17013	708	2835		
(2) DM	R Loading						
<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)		
1	January	762.3	1570.6	4.0	406.4		
	February	540.9	1277.6	21.3	317.9		
	March	526.0	1088.1	12.2	285.1		
2	April	415.8	981.5	4.4	271.3		
	May	485.9	1122.7	4.1	279.3		

August 308.9 954.5 16.4 219.2 September 448.0 1378.5 300.0 28.2 October 490.5 1614.7 31.9 318.0 November 328.0 863.6 11.4 220.8 December 966.0 2952.9 490.0 73.1

1531.3

606.2

7.3

26.2

Annual Avg. 483.87 1329 20 291

During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the C. product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points $Yes = 121$ points

314.3

219.9

June

July

3

210.5

174.5

•	
D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points Yes = 121 points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
F.	During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
G.	During the past year did the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
Н.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
[.	Enter each point value checkedfor C through H in the blanks below.

C Points = 0D Points = 0E Points = 0F Points = 0 G Points = 0H Points = 0

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) 0 Enter this value on Part 11: Summary Sheet.

Part	3: Age of the Wastewater Treatment Facility				<u> </u>		
Α.	What year was the wastewater treatment plant co	ns	tructed o	r last re	econstru	ıcted? 200)5
	Subtract the above answer from the report year to	o d	etermine	age:			
	Age = (Last Calendar year) - (Answer to A	()					
	Age $\frac{2012}{}$ = (2005) $-(7)$		_)				
	Enter Age in Part C below.						
В.	Check the type of treatment facility employed.						
			Factor				
	X Mechanical Treatment Plant		2.0				
	Aerated Lagoon		1.5		-		
	Stabilization Pond		1.0	ž			-
	Other (Specify:)	1.0	•			
C.	Multiply the factor listed next to the type of the of your facility to determine the total point value			ır comr	nunity (employs b	y the ag
	$\frac{2.0}{\text{(Factor)}}$ x $\frac{7}{\text{(Age)}}$ = $\frac{14}{\text{TOTAL POINT}}$	VA	ALUE FO	OR PAI	RT 3		

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

	t 4: Bypassing and Overflows
A.	How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? _0
B.	How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? 19
C.	How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 6
D.	Add together Answers A and B and subtract Answer C from that total. A + B - C = 13 (Check the appropriate point total.) $0 = 0$ points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more 100 points
E .	How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0
F.	How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 140
G.	How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 140
H.	Add together Answers E and F and subtract Answer G from that total. E + F - G = 0 (Check the appropriate point total.) 0 = 0 points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more 100 points
Ι.	Add point values circled in D and H and enter the total in the blank below.
	AL POINT VALUE FOR PART 4 100 this value on Part 11: Summary Sheet.
	All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

ADEM FORM 417 01/09 m2

<u>Part</u>	t 5: Sludge Quantity and Storage	
A.	Please provide information concerning sludge quantity, ch based on available data as requested on the MWPP Sewage	naracteristics, and storage practice Sludge Survey, ADEM Form 419
В.	How many months of sludge storage capacity does the available, either on-site or off-site? (i.e., How many month land spreading or disposing of sludge?) 4	wastewater treatment facility hav ths can the facility operate withou
	(Check the appropriate point total.) Greater than or equal to 4 months Less than 4 months, but greater than or equal to 3 months	= 0 points
	Less than 3 months, but greater than or equal to 2 months Less than 2 months, but greater than or equal to 1 month Less than one month	= 20 points
	er this value on Part 11: Summary Sheet.	
Part (6: Sludge Disposal Practices and Sites	
A.	Please provide the sludge disposal practices and site infor requested on the MWPP Sewage Sludge Survey, ADEM Fo	mation based on available data as orm 419.
В.	How many months or years does the facility have access to disposal sites to provide proper land disposal? (Check the a	to and approval for sufficient land ppropriate point total.)
	36 or more months = 0 points	
	12 - 23 months = 20 points ☐ 6 - 11 months = 30 points ☐ Less than 6 months = 50 points ☐	
	AL POINT VALUE FOR PART 6 other.	

Part 7: New Development	nent				
calendar year or	anticipated in	relopments (industrate the next 2-3 years icantly increase? E	such that eith	ner flow or BOD	5 loadings t
Design Population: Equivalent (PE		Design Flow:	MGD	Design BOD ₅ :	lbs/day
List industrial a	nd/or residenti	al developments.	·		
The Environmental S	Services Department	has not received any appli	cable sewer		
availability requests	that would significan	tly impact the sewer systen	n.		
	-				
			· ·		
No = 0 poi	nts	erload the plant? (Cl	heck the appro	ppriate point total	.)
Enter the point to	otal in the blank	k below.			
TOTAL POINT VALU Enter this value on Part			point total = 1	21)	
Part 8: Operator Certif	ication				
Complete the Plant and	l Collection Sys	stem Personnel Inve	ntory, ADEM	Form 441.	
Do both the plant Code; Division 1	operator and on the contract of the contract o	collection system startification Program?	affing comply (Check the a	with ADEM Adopropriate point to	ministrative otal.)
Yes = 0 po	ints N	No = $\frac{121}{1}$ points	,		
ΓΟΤΑL POINT VALU Enter this value on Part			st point total =	= 121)	

Fac	ility Name: Valley Creek WWTP	·		
Par	t 9: Financial Status			 .
A.	Are User-Charge Revenues sufficient how are O&M costs being financed?	ent to cover operation and no in the cover operation and no include user charge rates.	naintenance expenses	? If no
	Yes. User rates are based on a uniform volume	e charge per 100 cubic feet of 85% of m	etered water	
	consumption.	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
•	Residential Minimum \$2.00	Plus rate \$9.89	/1,000 gal.	
	Industrial Minimum \$2.00	Plus rate \$9.89	/1,000 gal.	
	Monthly residential rate based on 6	,000 gallons usage \$_50.45		
*Ple	case complete the above information l	nasad on vour usar charae r	utas for the variet name	w Va
may	attach a sample water and sewer bill	for clarity.	<u>ues joi ine report yet</u>	. 101
В.	What financial resources are avaireconstruction needs?	ilable to pay for the waste	water improvements	and/o
	Approximately \$20,300,000 is currently available	to fund capital improvements.		
				-
			 	
Part	10: Subjective Evaluation			
A.	Describe briefly the physical and stru	ectural conditions of the west	expector treatment facili	4
	Mostly new or recently renovated and in good co		ewater treatment facili	ııy.
	mostly new or recently renovated and in good co	Maison.	·	
В.	Describe the general condition of the	sewer system (sewer lines, n	nanholes, lift stations).	
	Assets are generally considered to be in good to	fair condition.		

See attachment				
	·			
				·
What is the theore of the wastewater	etical design life of the treatment facility?	plant, and what i	s the estimated	remaining use
See attachment				
				 _
				-
-				
What problems, is system?	f any, over the last year	r have threatened	treatment or co	onveyance with
See attachment				
			<u></u>	
Is the community	presently involved in fo	ormal planning fo	or treatment faci	lity upgrading
	· · · · · · · · · · · · · · · · · · ·			
	•			
How many days in system for any rea	n the last year were the son other than clogging	ere residential bag of the lateral co	ckups at any ponnection? 24	oint in the coll
Does the plant haves, describe.	ve a written plan for pro	eventive mainten	ance on major o	equipment iten
Yes. We have a comp	rehensive maintenance plan tha	at schedules all prevent	ive	

Valley Creek WWTP (MWPP 2012)

Part 10.C

Dewatering control improvements, Digester mixing system replacement, headworks screen refurbishment, multiple pump station improvements and sewer line repairs and replacement are continual activities planned for the collection system. Valley Trunk to Glenn Oaks sewer repairs and replacements, Tin Mill Road sewer improvements, collection system condition assessment and repair, replacement and renewal projects, Valley Creek WWTP energy and process optimization improvements. Cahaba River WWTP to Valley solids transfer force main; replacement of the current SCADA software with Citect, improvements to 15 pump stations, Eastern Valley Road force main elimination, Valley Creek collection system hydraulic model.

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

Part 10.E

Fully saturated antecedent ground conditions coupled with 2.34 inches of rainfall on January 26, 2012 caused twelve I/I related SSOs in the Valley Creek collection system. The day's rainfall was not unusual with hourly totals approaching 1-year 2-hour and 1-year 6-hour return period frequencies, but the impact to the sewer system and resulting SSOs was much more severe than from significantly higher intensity and many times higher total precipitation storms encountered prior to and following this event. Prolonged weather patterns producing saturated ground conditions prior to a storm have been identified as the primary cause of most I/I related SSOs observed in the last few years. The mini-system areas that have repeat overflows attributed to excessive I/I have been included in a SSES project that includes television inspection (TVI), manhole inspections, and smoke testing of all sewers. The SSES project commenced on February 21, 2013 and will be complete August 21, 2013. Defects and/or deficiencies identified will be remedied. Several collapsed sections of sewer discovered through the TVI have already been repaired. Engineering capacity analysis of the sewers will also be performed.

While very small in volume, the Eastern Valley Road force main broke six times in 2012 contributing to six separate SSO events. The department has an engineering design plan prepared to eliminate the deteriorated portion of sewer and is acquiring Right-of-Way to complete the construction effort. The Right-of-Way acquisition is expected to be complete by July 1, 2013, and the construction work is scheduled to be complete by December 1, 2013.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	Netzsch Pump Rebuilds - \$33,020
	Polymer Flow Meter Replacements - \$20,400
	Rebuild Flygt Pump - \$17,108
	UV PLC Parts - \$14,509
	Anaerobic digester clean-out project - \$924,240
	Final clarifier rebuild - \$ 654,000
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program (Program). The goal of the Program is to develop and
	provide tools, technologies and procedures that will empower and enable the County to better manage the sanitary
	sewer collection system. The developed Program will establish a comprehensive asset management system with
	processes and procedures to identify and prioritize future collection system capital and operating replacement and
	maintenance requirements. The Program is an extension and improvement to the current MOM. The Program's
	objectives are focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name: Valley Creek WWTP	
Part 11: Summary Sheet	
1. Enter in the values from Parts 1 left column to determine the M the previous calendar year.	through 8 in the left column below. Add the numbers in the WPP Report point total the wastewater system generated for
Actual Values	Maximum Possible
Part 1 o points	80 points
Part 2 o points	121 points
Part 3 14 points	40 points
Part 4 100 points	200 points
Part 5 o points	50 points
Part 6 o points	50 points
Part 7 o points	121 points
Part 8 o points	121 points
Total 114 points	783 points
Mechanical plant with surface was Aerated Lagoon or stabilization p Mechanical plant using land disp Aerated Lagoon or stabilization p 3. Check the range that describes the 0 - 70 pts. Actions as	pond with surface water discharge posal of liquid wastes pond using land disposal of liquid wastes action needed to address problems identified in the report. Appropriate*
	ntal Recommendation Range* ity Action Range* PDES outside the scope of this report.
4. Complete the <i>Municipal Water Pol</i>	llution Prevention Resolution Form. ADEM Form 418

If yes, provide a written explanation for this situation in the space below.	5.	In Question 1, do possible points in	any of the actual the right column? (point values Check the appr	in the left colu opriate response	umn equal the n) Yes N
		If yes, provide a w	ritten explanation fo	or this situation	in the space be	low.
		<u> </u>	· .	•		
					· · · · · · · · · · · · · · · · · · ·	

Valley Creek Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>





Summary of Unpermitted Discharges - Valley Creek

January 01, 2012 through December 31, 2012

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C00990	1/4/12	5000 Eastern Valley Road	Valley	Ground Absorbed	250	Pipe	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
N	Notes:	of management management and an appear has been expected by high and appear of the property of the second with the		TO CARROLL STATE OF THE STATE O		en-en-en-en-en-en-en-en-en-en-en-en-en-e	jega de de principal de	-	e de esperit de participa de la descripción de la descripción de la manera de la manera en consecuente de la d	Particular Laborator Salvine en constituente de la	
C00992	1/13/12 oves: The pu	1/13/12 3696 Hilltop Road (Morgan Valley Ground Absorbed/ 550 Pump Static Greenwood #2 PS) Notes: The pump motor failed on #2 pump set causing the breakers to trip both pump sets. The breaker was reset to bring station back on line.	Valley e breakers to trip both pump	Ground Absorbed/ Drainage Ditch	550 et to bring statio	Pump Station on back on line.	P.S. Equipment Failure	No Rain	Punp Station Repaired	Ken Bennett	WWTP Manager
C00993	1/21/12 otes: Manho	1/21/12 306 4th Ave SW Valley Drains Feeder Notes: Manhole was not overflowing upon crew arrival but there was evidence of an overflow.	Valley we there was evidence of an o	Drainage Ditch/ Feeder to Valley Creek	12	Manhole	Surcharge from Rain	Heavy	Biockage Removed/ Debris Cleaned up	Brian	Sewer Maintenance Supervisor
norm and recover are constructed in	- International Control of the Contr	And the second s					esseptement of the first testiniciate benefit in the line of the second		The same of the sa	***************************************	
C00994	C00994 1/22/12 Notes: The air	1/22/12 3696 Hilltop Road (Morgan Valley Ground Absorbed 100 Greenwood #2 PS) Notes: The air release valve line that drains back to the wetwell broke, causing sewage to discharge from the pump building.	Valley vetwell broke, causing sewag	Ground Absorbed ge to discharge from the pi	100 ump building.	Pump Station	P.S. Equipment Failure	No Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
C00995	1/26/12	1/26/12 306 4th Ave SW	Valley	Storm Drain/ Valley Creek	6,246,800	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
N	lotes: Floods	Notes: Flooding from rain in overflow area.		yem (in a primary many party of the state of				**************************************	Applicate the second of the following section of the second secon	-	***************************************
C00996	1/26/12	1/26/12 601 Crumpton Dr SW	Valley	Dramage Ditch/ Valley Creek	64,600	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance
N.	otes: Floodi	Notes: Flooding from rain in overflow area.	den gen between en	engel perjumpyllimeth bit efente er professorlet des segli se service-e-service ped	one service and an analysis of the service and service	ente Andrewski de antistate de mante mante nomas	A series to the feet of the fe				odper visor
C00997	1/26/12	1/26/12 1923 21st Ave S	Valley	Ground Absorbed	55,500	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance
N	otes: Flood	Notes: Flooding from rain in overflow area.									TOGIA ISAINS

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C01001	1/27/12	5054 Eastern Valley Road	Valley	Ground Absorbed	625	Pipe	Force Main Break	Moderate Rain	Line Repaired	Ken Bennett	WWTP Manager
V	Notes:	ere menter ga ment paper et trapatet kord år i Hadd erkeliktikkelende det travikke forstik men vers erkeret.	APPLICATION OF THE PROPERTY OF	de minima de constitución en comparte personales en constitución de constituci	PARTITION AND AND AND AND AND AND AND AND AND AN			***************************************			
C01002	2/17/12	2115 Long 12th Street N	Valley	Ground Absorbed	009	Cleanout	Cleanout on	No Rain	Cleanout Repaired	Ken Bennett	WWTP Manager
Λ	Votes: Clean	Notes: Cleanout was damaged by grounds crew.	k Stalibu bir dalah dalah dalah sebenjaran perupagan perupagan perupagan perupagan perupagan perupagan perupag	en e	a property and a second se	месту т еврересску валамена лучий освает					
C01003	3/1/12	614 Brookwood Village	Valley	Storm Drain	1,672	Cleanout	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
×	Notes:									•	Supervisor
C01004	3/3/12	5005 Eastern Valley Road	Valley	Ground Absorbed	1,275	Pipe	Force Main Break	Heavy Rain	Line Repaired	Ken Bennett	WWTP Manager
V	Notes:	The second section of the second seco	***************************************	to be designed to the second state of the seco	***************************************						
C01006	4/7/12	2155 Woods Trace	Valley	Storm Drain	086	Manhole	P.S. Equipment Failure	No Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
2	Votes: Contra	Notes: Control cable was damaged in the wetwell causing the pumps not to operate in Auto.	the pumps not to operate in	1 Auto.		-					-
C01008	4/18/12	3339 Country Club Road	Valley	Ground Absorbed/ Drainage Ditch	17,617	Manhole/ Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N	Notes:		een Geschijschere daar en de					A PRINCIPAL PROPERTY OF THE PR	A PARTIE AND	A THE PERSON NAMED OF THE	Supervisor
C01010	5/21/12	5034 Eastern Valley Road	Valley	Ground Absorbed	1,225	Pipe	Force Main Break	No Rain	Line Repaired	Brian Champion	Sewer Maintenance
N	Notes:		CAME PERSONAL PROPERTY OF THE PERSON OF THE		an entered the section of the sectio				1		Supervisor
C01014	7/16/12	400 Asbury Howard St	Valley	Ground Absorbed	6,000	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
2	Notes:					٠					Supervisor

Page 3 of 20

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C01015	8/11/12	306 4th Ave SW	Valley	Ground Absorbed/ Drainage Ditch/ Valley Creek	26,000	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
Λ	Notes:	m maken menemenan beriar in sementan der selbergen besterbet besterbet in de de menemente besterbet besterbet	van habiberteleniseten anatelenasiivelenisen en en enempays	NORMALIA CONTRACTOR MATERIALA CANTACTURA CONTRACTOR CON	A COMMENTAL MATERIAL PROPERTY OF THE PROPERTY	HARMACAN BORRANA BARRACAN BARRACAN ACTUAL COMPANSA ACTUAL COMP			, programment of the control of the		¥ .
C01018	8/14/12 Notes:	5000 Eastern Valley Road	Valley	Ground Absorbed	580	Pipe	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
C01021	9/6/12	115 4th Ave S	Valley	Storm Drain	400	Manhole	Grease/ Rags/ Rocks/ Plumbers Tape	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
ν	Notes:							***************************************			
C01023	10/16/12 Notes:	G&H Road & Eastern Valley Road	Valley	Ground Absorbed	2,088	Pipe	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
C01027	11/8/12	11/8/12 250 Homewood Park W Valley Feed Sh Sh Sh. Sh Shee: Line was damaged by construction crew performing work for the City of Homewood.	Valley 18 work for the City of Home	Feeder Creek to Pipe Construct Shades Creek Damag	erminable as v	Pipe nive break was belo	Construction Damage	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor
					1		-	ATT AND EAST OF THE PERSON AND EAST OF THE		790000000000000000000000000000000000000	-
C01030	12/10/12 Notes:	12/10/12 2485 John Hawkins Parkway tes:	Valley	Shades Creek	16,660	Pump Station	P.S. Power Outage	Light Rain	Power Restored	Ken Bennett	WWTP Manager
C01031	12/22/12 Notes:	3696 Hill Top Rd	Valley	Ground Absorbed	2,440	Pump Station	P.S. Equipment Failure	No Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
C01032	12/27/12 fotes: Line w	12/27/12 5050 Eastern Valley Rd Notes: Line was repaired on 12-27-2012	Valley	Ground Absorbed	2,600	Pipe	Force Main Break	No Rain	Line Repaired	Ken Bennett	WWTP Manager
M04093	1/5/12	228 Beech Circle	Valley	Ground Absorbed		Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
VI	IVOIES.	CANADA PARA PARA PARA PARA PARA PARA PARA P	DAN PROBATION AND ALVE CHAMPED OF A CHAMPED AND A CHAMPED A CHAMPED AND A CHAMPED AND A CHAMPED AND A CHAMPED AND A CHAMPED A CHAMPED AND A CHAMPED AND A CHAMPED A CHAMPED A CHAMPED A	The state of the s		МОТО В В В В В В В В В В В В В В В В В В		***************************************			***************************************

Page 4 of 20

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04094	1/6/12 Notes:	1700 Oxmoor Road	Valley	Storm Drain	5,250	Manhole	Rags	No Rain	Blockage Removed	Brian Champion	Sewer Mainterance Supervisor
32	1/9/12 Notes:	800 Montclair Road	Valley	Storm Drain	291,000	Manhole	Grease	Light Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04098	1/11/12 Notes:	1628 17th St SW	Valley	Storm Drain/ Valley Creek	14,550	Manhole	Surcharge from Rain	Moderate Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04099	1/11/12 Notes:	2119 Futton Ave SW	Valley	Storm Drain/ Valley Creek	8,550	Manhole	Surcharge form Rain	Moderate Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04100	M04100 1/11/12	3386 Clarendon Ave	Valley	Valley Creek	29,200	Manhole	Grease	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04101	1/11/12 otes: Manko	1/11/12 St. Charles Ave & 21st Street Valley Ste Va Va Notes: Manhole not overflowing upon crew arrival, but there was evidence on the pavement.	Valley here was evidence on the pave.	Storm Drain/ Valley Creek	r	Manhole	Surcharge from Rain	Moderate Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04102	1/12/12 Hes: The lev	1/12/12 Howard Ave & Jaybird Road Valley Notes: The level control failed at the pump station causing the pumps not to operate.	Vailey g the pumps not to operate.	Drainage Ditch	300	Manhole	P.S. Equipment Failure	Moderate Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
M04103	1/13/12 Notes:	202 Hardy St	Valley	Storm Drain	3,812	Cleanout	Grease/ Debris/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04107	1/21/12 Notes:	530 Brewer Dr	Valley	Drainage Ditch	2,160	Cleanout	Grease/ Debris	Heavy Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04108	1/23/12 Notes:	M04108 1/23/12 400 12th St SW Notes:	Valley	Ground Absorbed	2,700	Manhole	Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04110	1/25/12 Notes:	7th Ave & Oregon St	Valley	Drainage Ditch/ Feeder to Village Creek	7,500	Manhole	Roots/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04111	1/26/12 otes: Floodin	1/26/12 2200 Fulton Ave & 22nd St SW Notes: Flooding from rain in overflow area.	Valley	Storm Drain/ Valley Creek	2,716,515	Manhole/ Cleanout	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04112	1/26/12 otes: Floodin	1/26/12 St. Charles Ave & 21st St SW Notes: Flooding from rain in overflow area.	Valley	Valley Creek	6,111,000	Manhole	Surcharge form Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04113	1/26/12 nes: Floodin	1/26/12 210 4th Ave N Notes: Flooding from rain in overflow area.	Valley	Drainage Ditch	81,500	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor
M04114	1/26/12 otes: Floodin	1/26/12 1920 Grant Ave SW Notes: Flooding from rain in overflow area.	Valley	Drainage Ditch/ Valley Creek	51,000	Manhole	Grease	Heavy Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04115	1/26/12 otes: Floodin	1/26/12 432 21st St SW Notes: Flooding from rain in overflow area.	Valley	Storm Drain/ Valley Creek	420,750	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor

1261 1844 Princeton Ave Valley Storm Denial	Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title	
126/12 1009 17th PL SW Valley Ground Absorbed 9,950 Manhole Vandahism Henry Blockage Removed Brian 126/12 11th Ave SW & Goldwire St Valley Ground Absorbed 13,900 Manhole Surchange from Rain Henry Blockage Removed Brian 126/12 11th Ave SW & Goldwire St Valley Ground Absorbed 320 Cleanout Greater Debris Heavy Blockage Removed Brian 126/12 11th Ave SW & Goldwire St Valley Ground Absorbed 320 Cleanout Greater Debris Rain Ince Monitored Brian 126/12 25th St & Detter Court Valley Storm Drain 45,800 Manhole Surchange from Rain Heavy Ince Monitored Brian 126/12 25th St & Detter Court Valley Ground Absorbed 45,800 Manhole Surchange from Rain Heavy Ince Monitored Brian 126/12 25th St & Detter Court Valley Valley Ground Absorbed 45,800 Manhole Surchange from Rain Ince Monitored Brian 126/12 25th St & De	M04116	1/26/12	1844 Princeton Ave	Valley	Storm Drain/ Valley Creek	506,250	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Surervisor	
126/12 1009 178 PL SW Valley Ground Absorbed 9,950 Manhole Suncharge from the reversion area in coversion area. 126/12 114 Ave SW & Goldwrife or version area 126/12 114 Ave SW & Goldwrife or version area 126/12 114 Ave SW & Goldwrife or version area 126/12 114 Ave SW & Goldwrife or version area 126/12 114 Ave SW & Goldwrife or version area 126/12 1	M.	tes: Floodi	ng from rain in overflow area.			den la materna des montes que se esta de se	THE COME PROPERTY OF THE PARTY		a til de se de	Addisability opi in pri deprimentation processor de la constitución de		ner reduc	
126/12 11th Ave SW & Goldwire St	M04118	1/26/12	1009 17th PL SW	Valley	Ground Absorbed	9,950	Manhole	Vandalism	Heavy Rain	Blockage Removed:	Brian Champion	Sewer Maintenance	
126/12 11th Ave SW & Cloidwire St Valley Ground Absorbed 13,900 Manhole Surcharge from rist in overflow area. Rain Rain Rain Rain Champion Ch	N.	tes: Floodi	ng from rain in overflow area.									rock rodno	
12612 306 Columbinan Road Valley Ground Absorbed 920 Cleanout Grease/ Debris Heavy Blockage Removed Brian Champion Peder to Valley Storm Drainge Ditch 12612 25th St & Dartmouth Ave Valley Ground Absorbed 45,500 Manhole Surtharge from Heavy Line Monitored Brian Champion Information Rain Rain Rain Rain Heavy Line Monitored Brian Rain Rain Rain Heavy Line Monitored Brian Rain Rain Rain Heavy Line Monitored Brian Rain Rai	M04119	1/26/12	11th Ave SW & Goldwire St	Valley	Ground Absorbed	13,900	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance	
1/26/12 3/06 Columbiana Road Valley Ground Absorbed 920 Cleanout Grease/ Debris Heavy Blockage Removed Champion Rain Rain Rain Champion Champion Champion Champion Rain Rain Rain Champion	N.	stes: Floodi	ng from rain in overflow area.									Supervisor	
126/12 25th St & Dartmouth Ave Valley Storm Drain' 48,800 Manhole Surcharge from Rain Rain Line Monitored Brian Champion	M04120	1/26/12	306 Columbiana Road	Valley	Ground Absorbed	920	Cleanout	Grease/ Debris	Heavy Rain	Blockage Removed	Brian Champion	Sewer Maintenance	
1726/12 25th St & Dartmouth Ave Valley Valley Creek Valley Creek Valley Creek Valley Creek Valley Creek Valley Creek Valley Champion Chees: 1726/12 231 Dexter Court Valley Creek Valley Creek Valley Champion Chees: Flooding from rain in overflow area. 1726/12 406 Wickstead Rd Valley Creek Valley Creek Valley Creek Tooling from rain in overflow area. 1726/12 500 19th St S on 19th S on 19th St S on 19th S on 19th St S	Ne	ites:	end despendente (Andréa, Andréa, Meire (Recipa) (Meir), Andréa Mainnéa de ceire de cear de meire de meire de m	POWER AND		AND ALCOHOLD SECURE DEPARTMENT OF THE PARTY.	de designations de la constantina della constant	OWN AND ADDRESS OF THE STATE OF		A COMPANY A PROPERTY OF THE PR	THE STORY WE WANTED AND ADDRESS AND ADDRES	roer a rodino	
1/26/12 231 Dexter Court Valley Ground Absorbed/ Creek 45,500 Manhole Rain Surcharge from Rain Heavy Rain Line Monitored Champion Brian Champion 1/26/12 406 Wickstead Rd Valley Drainage Ditch/ Feeder to Valley 107,444 Cleanout Rain Surcharge from Rain Line Monitored Rain Brian Champion 1/27/12 500 19th St S Valley Storm Drain 72,000 Manhole Grease/ Rags No Rain Blockage Removed Champion Champion	M04121	1/26/12	25th St & Dartmouth Ave	Valley	Storm Drain/ Valley Creek	48,800	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance	
1/26/12 231 Dexter Court 1/26/12 231 Dexter Court 1/26/12 231 Dexter Court 1/26/12 231 Dexter Court 1/26/12 4/06 Wickstead Rd Valley Drainage Ditch Drainage Ditch 107,444 Cleanout Surcharge from Rain Rain Rain Rain Rain Champion Champion 1/27/12 5/00 19th St S Valley Storm Drain 1/27/12 5/00 19th St S Valley Storm Drain 1/27/12 1/27/	N.	stes:								-		Supervisor	
otes: Flooding from rain in overflow area. 1/26/12 406 Wickstead Rd Valley Drainage Ditch/ Otek Creek 1/26/12 406 Wickstead Rd Valley Drainage Ditch/ Otek Creek 1/27/12 500 19th St S Walley Valley Storm Drain Storm Drain 72,000 Manhole Grease/ Rags No Rain Blockage Removed Brian Champion otes:	M04122	1/26/12		Valley	Ground Absorbed/ Feeder to Valley	45,500	Manhole	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance	
1/26/12 406 Wickstead Rd Valley Drainage Ditch/ 107,444 Cleanout Surcharge from Heavy Line Monitored Brian Creek 1/27/12 500 19th St S Walley Valley Storm Drain 72,000 Manhole Grease/ Rags No Rain Blockage Removed Brian Champion Champion	Ŋ	tes: Floodi	ng from rain in overflow area.		war.							ouper visor	
otes: Flooding from rain in overflow area. 1/27/12 500 19th St S Valley Storm Drain 72,000 Manhole Grease/Rags No Rain Blockage Removed Brian Champion otes:	M04123		406 Wickstead Rd	Valley	Drainage Ditch/ Feeder to Valley Creek	107,444	Cleanout	Surcharge from Rain	Heavy Rain	Line Monitored	Brian Champion	Sewer Maintenance Supervisor	
1/27/12 500 19th St S Valley Storm Drain 72,000 Manhole Grease/ Rags No Rain Blockage Removed Brian Champion Champion	Ne	tes: Floodi	ng from rain in overflow area.	OPTION TO THE PROPERTY OF THE PARTY OF THE P			***************************************			оступности странента права в предостава на предоста		TOSTA FORMO	
	M04124	1/27/12	500 19th St S	Valley	Storm Drain	72,000	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance	
	N.	ites:	t de cheche est est est est est est est est est es	THE PROPERTY OF THE REPORT OF THE PROPERTY OF					-			Supervisor	

Event I No. Re,	Date eported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04127 1/'	31/12	2001 Winnsboro Rd	Valley	Ground Absorbed	360	Manhole	Roots/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04131 2/	2/2/12	2727 Jefferson Ave SW	Valley	Ground Absorbed	4,100	Manhole	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04132 2/	2/2/12 2/2/12 5:	6144 Owens St	Valley	Ground Absorbed	2,300	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04134 2	2/6/12 s: PS had	2/6/12 1300 Moss Lane (Moss Lanc PS) Valley Notes: PS had a motor failure. A replacement pump was installed.	Valley sstalled.	Ground Absorbed	006	Pump Station	P.S. Equipment Failure	No Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
M04135 2/	2/7/12 s:	5024 Scenic View Dr	Valley	Ground Absorbed	5,602	Cleanout	Roots/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04137 2	2/8/12	104 Bessemer Super Highway	Valley	Ground Absorbed	2	Cleanout	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04139 2/	2/12/12 es:	915 Valley Ridge Dr	Vailey	Storm Drain	3,750	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04140 2/	2/12/12 es:	915 Valley Ridge Dr	Vailey	Storm Drain	4,250	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
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Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Саиѕе	Weather	Action Taken	Person Reporting	Tüle
M04141	2/13/12 Notes:	1001 17th St S	Valley	Ground Absorbed	3,000	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04144	2/19/12 nes: Level a	M04144 2/19/12 Howard Ave & Jaybird Road Valley Notes: Level control faiture caused the pumps not to operate in Auto.	Valley ate in Auto.	Drainage Ditch	630	Manhole	P.S. Equipment Failure	Moderate	Pump Station Repaired	Ken Bennett	WWTP Manager
M04145	2/20/12 Notes:	5916 Ave M	Valley	Ground Absorbed	11	Cleanout	Grease/Roots/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04147	, 2/22/12 Notes:	2/22/12 490 Robert Jemison Rd	Valley	Drainage Ditch	21,950	Pipe	Gravity Main Break	No Rain	Line Repaired	Brian	Sewer Maintenance Supervisor
M04149	2/28/12 Notes:	1012 Tuscaloosa Ave	Valley	Ground Absorbed	6,800	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04150) 2/29/12 Notes:	813 Green Springs Hwy	Valley	Storm Drain	4,200	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04153	3/6/12 Notes:	4205 Stone River Circle	Valley	Ground Absorbed/ Drainage Ditch	55,712	Manhole/ Cleanout	Roots/ Rags	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04154	3/6/12 otes: Manhol	3/6/12 1222 13th Ave N V	Valley ine.	Drainage Ditch	3,000	Manhole	Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

3/6/12 3/8/12 3/8/12 3/8/12	1449 Spaulding Ishkooda Road		To the state of th		Source	Cause	Weather	Action Taken	Reporting	Title
3/8/12 ues: 3/8/12	9 Graymont Ave W	Valley	Ground Absorbed	12,707	Cleanout	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04159 3/8/12 354!		Valley	Storm Drain	9,226	Manhole/ Cleanout	Rags	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
	3548 Douglas Road was not determinable.	Valley	Ground Absorbed		Pipe	Gravity Main Break	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor
M04160 3/9/12 How	3/9/12 Howard Ave and Jaybird Road Notes: Breakers ripped at station. Breakers reset.	Valley	Drainage Ditch	009	Manhole	P.S. Equipment Failure	Moderate Rain	Pump Station Repaired	Ken Bennett	WWTP Manager
.1 3/11/12 Notes:	700 Valley Ave	Valley	Storm Drain	24,500	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04162 3/12/12 532 Notes:	532 35th Street	Valley	Ground Absorbed	15,300	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04163 3/12/12 2724 Cherokee Drive	4 Cherokee Drive	Valley	Ground Absorbed/ Drainage Ditch	8,000	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04164 3/14/12 330	330 11th Street S	Valley	Ground Absorbed	4,489	Cleanout	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04165	3/15/12 Notes:	4800 Montevallo Road	Valley	Storm Drain	5,700	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04166	3/15/12 Notes:	915 Valley Ridge Dr	Valley	Ground Absorbed	3,050	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04168	3/20/12 Notes:	3924 Forest Glen Drive	Valley	Drainage Ditch/ Shades Creek	77,000	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04169	3/20/12	3/20/12 1501 Arthur Shores Drive SW Valley Gr. Notes: Contractor build retaining wall on top of sewer line. Volume was not determinable.	Valley Polume was not determine	Ground Absorbed	винивандинизандагада калада	Pipe	Gravity Main Break	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor
M04170	3/20/12 Notes:	3/20/12 4801 Sharpsburg Drive	Valley	Storm Drain	14,300	Manhole	Grease/Rags/ Piece of Pipe	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04172	3/24/12 Notes:	3/24/12 2655 Montevallo Road	Valley	Drainage Ditch/ Storm Drain/ Warkins Branch	000,00	Manhole	Grease/ Roots/ Debris/ Rags/ Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04173	3/27/12 Notes:	1444 Mat Leonard Drive	Valley	Ground Absorbed	3,600	Manhole	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04174	8	3/29/12 324 11th Street	Valley	Ground Absorbed	3	Cleanout	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Modern M	Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
North Mailey Ground Absorbed 29,010 Cleanout Grease No Rain Blockage Removed Champion Storm Drain Stor	M04175	4/5/12 tes:	3817 Montevailo Road	Valley	Ground Absorbed	10	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
Ave Valley Storm Drain Storm D	M04177	4/6/12 tes:	1631 Cresthill Road	Valley	Ground Absorbed/ Storm Drain	29,010	Cleanout	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
Ave Valley Storm Drain 3,500 Manhole Grease No Rain Blockage Removed Brian Champion Storm Drain Storm	M04178	4/9/12	2300 Montevallo Road	Valley	Drainage Ditch/ Storm Drain/ Shades Creek	14,300	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
Valley Drainage Ditch/ Storm Drain No Rain Blockage Removed Champion Ground Absorbedy 6,933 Manhole Grease/ Rags Moderate Blockage Removed Champion Nalley Storm Drain 29,959 Cleanout Grease Roots No Rain Blockage Removed Champion Valley Storm Drain 5,400 Manhole Roots No Rain Blockage Removed Champion	M04180	4/11/12		Valley	Storm Drain	3,500	Manhole	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
4/17/12 3429 Bessemer Super Hwy Valley Creek Storm Drain Oters: 4/12/12 1501 Montolair Road Valley Storm Drain St	M04182	4/11/12 tes: Volum	808 Cobb Street e was not determinable.	Valley	Drainage Ditch/ Storm Drain		Pipe	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
4/22/12 1501 Montclair Road Valley Storm Drain 29,959 Cleanout Grease No Rain Blockage Removed Brian Champion 9/22/12 1116 Iredell Cir Valley Storm Drain 5,400 Manhole Roots No Rain Blockage Removed Brian Champion	M04184	4/17/12 tes:	3429 Bessemer Super Hwy	Valley	Ground Absorbed/ Valley Creek	6,933	Manhole	Grease/ Rags	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
4/22/12 1116 Iredell Cir Valley Storm Drain 5,400 Manhole Roots No Rain Blockage Removed Brian Champion	M04186	4/22/12 tes;	1501 Montclair Road	Valley	Storm Drain	29,959	Cleanout	Grease	No Rain	Biockage Removed	Brian Champion	Sewer Maintenance Supervisor
	.0.1	4/22/12 tes:	1116 Iredell Cir	Valley	Storm Drain	5,400	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

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Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04188	4/23/12	124 Vail Ave	Valley	Lick Creek	17,500	Manhole	Grease/ Debris/ Rags/ Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04189	4/30/12	4490 Bessener Super Highway	Valley	Ground Absorbed	11,537	Cleanout	Grease/ Roots	No Rain	Biockage Removed	Brian Champion	Sewer Maintenance Successive
N.	Notes:								***************************************		Toors Today
M04190) 5/2/12	1836, 1849 Jefferson Ave & 1848 Alemeda Ave SW	Valley	Drainage Ditch/ Storm Drain	1,796	Pipe	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04193	5/5/12	5116 Janet Lane	Valley	Feeder Creek to Shades Creek	25,375	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes:	afria) титріана актрыйту патрыянтя ўскупу купускті калумему греній Кала Суле за байлаймі і вей велод	vorumberessendes styrsteren ha hanten beliefeldskinklen	вей температория положного поставления	AND THE PROPERTY OF THE PROPER	PERSONAL PRINCIPAL PROPERTY PR					iosty iodino
M04194	5/7/12	2321 1st St S	Valley	Ground Absorbed	1,523	Pipe/ Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
Ne	Notes:				***************************************	- The state of the					
M04198	5/14/12	5/14/12 1725 7th Ave N	Valley	Ground Absorbed	96	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes:										Supervisor
M04199	5/14/12	6500 Cherokee Drive	Valley	Ground Absorbed	35,280	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes:	April a momentum en				SPRANKS SPRESS CHEST STATES TO CHARLES AND	A PARTY OF THE PROPERTY OF THE				Instruction of the state of the
M04201	5/16/12	915 Valley Ridge Drive	Valley	Ground Absorbed	4,500	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes;	MANA PROMININA MANAMANA MANAMANA MANAMANA PROMININA MI KAMIMININA AYANG-ANAGA-ANAGA-ANAGA-AYAN-AYANA SI							THE THE PROPERTY OF THE PROPER	-	roera rodino

Event No. h											
	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04202 5/	5/17/12	5/17/12 517 Lakeridge Drive	Valley	Ground Absorbed	4,900	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04203 Note	5/20/12 ?s: Alagas	5/20/12 414 Broadway Street Valley Shades Creek Pi Notes: Alagasco bored through and damaged sanitary sewer line. Line was repaired by their contractor. Volume was not determinable.	Valley er line. Line was repaired b	Shades Creek y their contractor. Volum	e was not determ	Pipe inable.	Construction Damage	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04207 5/	5/25/12	500 Robert Jemison Road	Valley	Ground Absorbed	27,776	Cleanout	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04209 6	6/4/12	546 Selma Road	Vailey	Ground Absorbed	4,650	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04211 6/	6/18/12	6/18/12 1612 Elm Street es:	Valley	Ground Absorbed	10,200	Manhole	Grease/Roots	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
M04218 7/	9/12	601 Valley Ave	Vailey	Storm Drain	14,000	Manhole	Grease/ Debris/ Rags/ Paper Solids	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04219 7/11/12	7/11/12	2316 Highland Crest	Vailey	Storm Drain	11,100	Manhole	Grease/ Debris	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04220 7/	7/14/12	202 Morris Blvd	Valley	Storm Drain	2,850	Manhole	Roots/Rags/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title	
M04221	7/15/12 Notes:	5008 5th Ave N	Valley	Ground Absorbed	9,250	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04222	ő.	7/24/12 2700 Dartmouth Ave	Valley	Ground Absorbed	21	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04225	7/31/12 Otes: The pun	7/31/12 5401 8th Avenue (Wylam PS) Valley Drainage Ditch 15,810 Pump Station P.S. Equipment Heavy Pump Station Repaired Ken Bennett WWTP Failure Rain Notes: The pump station dry well filled with water and damaged the electrical components when one of the pumps malfunctioned. This caused both pumps to fail. You were utilized to pump wetwell while pumps were being repaired.	Valley naged the electrical compone	Drainage Ditch ents when one of the pump.	15,810 s maifunctioned	Pump Station	P.S. Equipment Failure h pumps to fail. Vacue	Heavy Rain m trucks were	Pump Station Repaired utilized to pump werwell while p	Ken Bennett	WWTP Manager	
M04227	' 8/2/12 Notes:	1501 Arthur Shores Drive SW	Valley	Storm Drain	9,200	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04228	8/5/12 Notes:	736 30th PL SW	Valley	Ground Absorbed	3,336	Cleanout	Grease/ Debris/ Rags	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04229	8/5/12 / 8/5/12 / 8/5/12 / 8/5/12	1791 51st St S	Valley	Ground Absorbed	37,400	Pipe	Greaase/ Debris/ Gravity Main Break Caused By Tree	Light Rain	Blockage Removed/ Line Repaired	Brian Champion	Sewer Maintenance Supervisor	
M04230	8/6/12 Notes:	709 Oak Street	Vailey	Ground Absorbed	10,032	Cleanout	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor	
M04232	8/15/12 Notes:	8/15/12 2917 Tempest Drive SW	Vailey	Ground Absorbed	5,150	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor	

Event	Date Reported	Date Renorted 1	2 2 2	Ultimate	Est. Vol.					Person	
233	8/15/12 Notes:	Location 5710 Monte Sano Road	Couection system Valley	Ground Absorbed	3,000	Source Manhole	Cause Grease/Rags	Weather No Rain	Action Taken Blockage Removed	keporung Don Goodwin	Title Sewer Video Operations Supervisor
M04234	1 43	8/16/12 400 Green Springs Highway	Valley	Storm Drain	2,800	Manhole	Rags	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
M04235	8/16/12 Notes:	1128 West Rue Maison	Valley	Ground Absorbed	4,400	Manhole	Grease/ Rags	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
M04236	8/20/12 Notes:	104 Woodmont Drive	Valley	Griffin Branch Creek	95,450	Manhole ,	Grease/ Roots	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04242	9/3/12 Notes:	2122 Fulton Ave	Valley	Storm Drain/ Valley Creek	138	Manhole	Surcharge from Rain	Moderate Rain	Line Monitored	Brian	Sewer Maintenance Supervisor
M04244	9/4/12 Notes:	2732 Cherokee Court	Valley	Storm Drain/ Feeder to Shades Creek	69	Manhole	Grease/ Roots	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04248	9/13/12	9/13/12 3509 Old Leeds Court Valley Storm Drain Manholk Manhole was not overflowing upon crew arrival. There was only evidence in the street and the volume was not able to be determined.	Valley There was only evidence in th	Storm Drain te street and the volume we	as not able to be	Manhole determined.	Grease/ Roots/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04249	9/14/12 Notes:	402 Palisades Blvd	Valley	Storm Drain	5,814	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

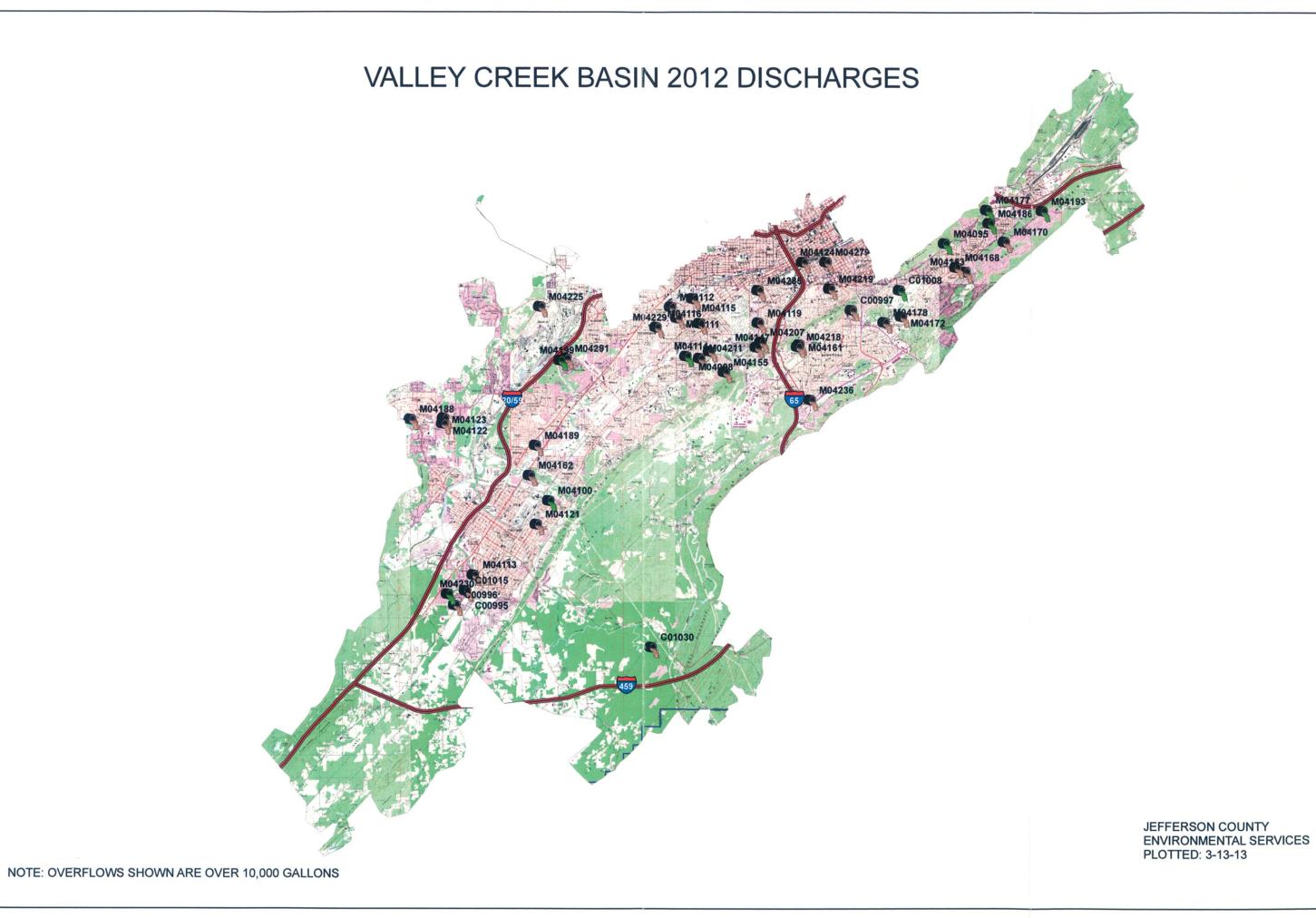
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Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04250	9/15/12	9/15/12 321 South Park Rd SW	Valley	Ground Absorbed/ Storm Drain	18	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04251	21/12	3364 Smyer Road	Valley	Shades Creek	ii ——ii jais kalajah (Agumprapa)	Manhole	Roots/ Debris	No Rain	Blockage Removed	Brian	Sewer Maintenance
×	iotes: Manho creek.	Notes: Manhole was not overflowing upon crew arrival. There was only evidence in the street and the volume was not able to be determined. Due to evidence and the proximity to Shades Creek, an assumption was made that the discharge reached the creek.	There was only evidence in t	he street and the volume was	not able to be	determined. Due	to evidence and the pn	ximity to Shade.	s Creek, an assumption was m	ade that the discha	Supervisor ge reached the
M04255	10/1/12	2405 Berkley Ave	Valley	Storm Drain/ Valley Creek	494	Manhole	Grease	Heavy Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04256	5)	10/2/12 1401 24th PL SW	Valley	Ground Absorbed/ Valley Creek	350	Manhole	Grease	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
N	Notes:	مع المعالمة والمعارضة المعارضة والمعارضة والمعارضة والمعارضة والمعارضة والمعارضة والمعارضة والمعارضة والمعارضة									
M04257	10/3/12 Notes:	208 17th Ave SW	Valley	Storm Drain	76	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04258	10/11/12	10/11/12 2905 Carlisle Road Valley	Valley	Storm Drain/ Shades Creek		Manhole	Broken Manhole Invert	No Rain	Project Planned to Replace/Repair Line	Brian Champion	Sewer Maintenance Supervisor
M04259	10/11/12	10/11/12 1512 Bessemer Road	Vailey	Ground Absorbed	4 I	Floor Drain of Business	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N	Notes:	-				-					Supervisor
M04260	10/11/12	M04260 10/11/12 2230 Highland Ave S	Valley	Ground Absorbed		Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
N	iotes: Yolum	Notes: Volume was not determinable. Manhole not overflowing upon crew arrival, but there was evidence on the pavement.	lowing upon crew arrival, bu	it there was evidence on the p	рауетет.	the first the section of the section	ALEMANDALTHAN CONTRACTOR STATEMENT OF STATEM	THE THE PERSON NAMED IN TH	***************************************		

M04261 10. Notes: Notes: Notes:	10/12/12			TOTAL MANAGE		Source	Cause	Weather	Action Taken	Reporting	Title
M04262 10		2728 Cherokee Drive	Valley	Ground Absorbed	3,840	Manhole	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
	0/12/12	M04262 10/12/12 11th Ave N & 23rd St N	Valley	Storm Drain	3,952	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04263 10)	15/12	616 30th St S	Valley	Drainage Ditch/ Feeder Creek to Valley Creek	2,125	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04267 10.	22/12	2230 Highland Ave S	Valley	Ground Absorbed	180	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04270 10,	0/24/12	M04270 10/24/12 2205 5th Terrace S	Valley	Ground Absorbed	935	Bypass Pump	Crew Setting a New Manhole	No Rain	Manhole was Set	Brian Champion	Sewer Maintenance Supervisor
M04272 10)	0/30/12	10/30/12 6702 Forest Dr	Vailey	Storm Drain	1,575	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04273 11	1/2/12	11/2/12 1449 Spaulding-Ishkooda Road	Vailey	Drainage Ditch	2,156	Cleanout	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04274 11	11/3/12	Montclair Rd & 52nd St	Valley	Storm Drain	461	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

						•						
Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title	1
M04275	11/8/12 Notes:	11/8/12 2830 19th St N	Valley	Ground Absorbed	624	Cleanout	Roots/ Rags	No Rain	Blockage Remoyed	Brian Champion	Sewer Maintenance Supervisor	
M04276	11/9/12 oues: AT&TE	11/9/12 2045 Medical Center Dr Valley Storm Drain Notes: AT&T bored through the pipe with a fiber optic line creating a rag blockage. Volume was not determinable.	Valley re creating a rag blockage. V	Storm Drain	ible.	Pipe	Construction Damage/Rags	No Rain	Blockage Removed/ Line Repaired	Brian Champion	Sewer Maintenance Supervisor	
M04278	11/14/12	11/14/12 Goldwire St & 1st Ave Valley Storm Dr. Notes: Overflowing manholes were private, blockage that caused the overflow was in a County main.	Valley caused the overflow was in c	Storm Drain a County main.	240	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04279	11/15/12 Notes:	11/15/12 713.27th St.S es:	Valley	Storm Drain	25,300	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04280	11/16/12 Notes:	M04280 11/16/12 175 Old Montgomery Hwy Notes:	Valley	Ground Absorbed	216	Manhole	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04282	11/17/12	11/17/12 1801 Montolair Rd Valley Ground Absorbed Notes: Volume was not determinable. Manhole not overflowing upon crew arrival, but there was evidence on the ground.	Valley owing upon crew arrival, but	Ground Absorbed t there was evidence on th	e ground.	Cleanout	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04283	11/18/12 Notes:	7205 Pine Tree Lane	Valley	Ground Absorbed	474	Cleanout	Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04284	11/18/12	M04284 11/18/12 1924 Fulton Ave Valley Storm Drain Notes: Yolume was not determinable as discharge source could not be located. Once blockage was removed discharge stopped.	Valley could not be located. Once	Storm Drain blockage was removed di	scharze stopped.	Could Not Determine	Roots/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04285	11/18/12	11/18/12 Goldwire St & 1st Ast SW Valley Sto. Notes: Crew reported that manhole had sticks in the manhole that contributed to the blockage.	Valley whole that contributed to the blo	Storm Drain	12,958	Manhole	Grease/ Debris/ Rags/ Vandalism	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04286	11/20/12	M04286 11/20/12 42nd St & Debardeleben Ave Valley St	Valley	Storm Drain	enterental de la constante	Pipe	Grease/ Debris/ Plastic	No Rain	Blockage Removed/ Line Repaired	Brian Champion	Sewer Maintenance Supervisor
M04287	11/22/12 Notes:	11/22/12 Intersection of 34th St & Ave S	Valley	Storm Drain 610 Man	610	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04289	11/26/12 Notes:	Intersection of 34th St & Ave S	Valley	Storm Drain	51	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04290	11/27/12	11/27/12 42nd St & Debardeleben Ave Valley Storm Drain Pi	Valley was running through a storm	Storm Drain manhole. Contractor se,	parated the com	Pipe	Other	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor
M04291	11/30/12	11/30/12 Forest Dr & Grasselli Rd lotes:	Valley	Storm Drain	11,100	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04292	12/3/12 Notes:	3821 South Cove Dr.	Valley	Storm Drain	202	Manhole	Gravity Main Break	No Rain	Blockage Removed/Project Planned to Replace/Repair Line	Brian Champion	Sewer Maintenance Supervisor
M04295	12/10/12	12/10/12 400 Wickstead Rd Notes: Flooding from rain in overflow area	Valley D	Drainage Ditch/Valley Creek	2,484	Manhole	Surcharge from Rain/Grease	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
****		in the same which program is the state of th	AND THE PROPERTY IN THE SECOND		VARIABLE BEING AND STATE STORESTEEN MANUFACTURES.	hard broads a necessary and a second		***************************************		-	

				-							
Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04297	12/12/12 Notes:	12/12/12 2901F Wilson Rd	Valley	Ground Absorbed	4	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04298	12/13/12 Notes:	M04298 12/13/12 26 Shade St Notes:	Valley	Ground Absorbed	183	Manhole	Grease/Debris/Ra gs	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor
M04300	12/17/12 Notes:	M04300 12/17/12 516 16th Way SW Notes:	Valley	Ground Absorbed	110	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04301	2	12/19/12 615 1st St N nes:	Valley	Storm Drain	113	Manhole	Grease/Debris/Ra gs	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04302	. 12/19/12 Notes:	M04302 12/19/12 1625 6th Ave N Notes:	Valley	Ground Absorbed	-	Pipe	Grease/Debris/Ra gs/Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04303		12/20/12 516 14th St N	Valley	Feeder Creek to Valley Creek	1,500	Manhole	Grease/Debris	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04308	12/28/12 Notes:	M04308 12/28/12 3822 South Cove Dr	Valley	Ground Absorbed	09	Manhole	Debris/Mud	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor



Valley Creek Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



MWPP SEWAGE SLUDGE SURVEY

Facility Bac	kground Information:					•	
1. Facility li	nformation		·	Permit Nu	mber:	AL0023655	
	Name:	Valley Cree	ek WWTP				
	Street Address:	3923 Clear	Water Drive E	Besseme	r, AL 35023		
	County:	Jefferson					
2. Facility C	Contact		•				
z. roomey c	Name:	Robby Ben	inett				
	Title:	Plant Mana					
	Telephone:	205-428-26		•			_
	Permittee Name:		County Comm	nission			
	Mailing Address:), 716 Richard		n JR. Blvd.	N	
	v		m AL 35203				
Egoility Eloy	/ Information						
•		••					
1. Facility V	Vastewater Treatment Cap Avg. Daily Flow for 2012	•	36.	Λ	MGD		
	Facility Design Capacity:		85.		_MGD		
	r domity Design Supacity.						
2. Estimate	d Septage Quantity Handle	ed (Residuals	Removed from	m Septic 7	Γank System	s)	
	Average Domestic Septa	age:	347,9		_gallons per	month	
	Average Commercial Se	ptage:	N/A	4	_gallons per	month	
3 Methodic	of Septage Processing						
o. Mediod C	Mixed with Influent W	Vastewater fo	r Treatment				
	☐ Mixed with Sewage S						
	_	₹	ent wastewate	er for trea	atment		
•				*	·		
4. Estimate	d Percentage Contributing		Flow				
	Residential: 85	_%					
	Industrial: 7	_%					
	Other: 8	_%	Describe: _		Commercia	<u>al</u>	
5. List type	of wastewater treatment p	rocess(es) uti	ilized at this fac	cility:			
•	Screening, Grit Remova			•	l Sludge,		
	Clarification & UV Disin					······································	
0 F-2	d	-110-5	1114				
o. Estimate	d sewage sludge wasting r	ate at this fac	_	400	000	lb/day dry weight	
			or_	139	,363	gallons per day	
7. Estimate	d untreated sludge receive	d from off site	e:			lb/day dry weight	
	Ü		or _			gallons per day	
	,		_				
გ. Estimate	d percent solids of combine	ed sewage sli	uage prior to tr	reatment:		%	

ADEM FORM 419 8/02 Page 1 of 4

				ludge Quant ited pounds p	-
Thickening			·		
Anerobic Digesti	on				
Mechanical Dewatering (Belt	Filter Press	ses)	_		
Lime Stabilizatio	n		-		
Estimate the total volume of sludge	generated:		(dry \	4196 J.S. tons per	year)
ludge Disposal Methods					
Which of the following describes the	current met	thod of sewa	ge sludge disposal for th	is facility:	
		Current F			l Practices
•		by ADEM	Quantity		by ADEM
	<u>Yes</u>	<u>No</u>	(dry U.S. tons/year)	<u>Yes</u>	<u>No</u>
a. X Land Application, Bulk		*	4406		
Shipped X Agriculture	Х	. 🛮	4196	0	0
☐ Forest		. 0		0	0
□ Public Contact	u 0	0		0	0
Lawn/Home Garden	0			. 0	0
b. I Land Application,					•
Bagged/Other Container I Agriculture	0			0	
☐ Forest	. 0	0		0	0
☐ Public Contact	0	0			0
	_				
I Lawn/Home Garden	10	0			
c. Incineration	0				_ 0
d. 🏿 Subtitle D Landfill					
(Disposal Only)		0			0
e. 🛘 Lined Treatment Lagoon					
or Stabilization Pond		. 0			
f. Unlined Lagoon or	п	п		m	п
Stabilization Pond		0	•		П
g. Other (Please Describe)	. 0	0			
· · · · · · · · · · · · · · · · · · ·			<u></u>		•
			-		
			ears, enter the distance		

ADEM FORM 419 8/02 Page 2 of 4

Pollutant Concentrations

	 Enter the total concentrations of the following 	g analytes using	existing data.	Do not enter TCLP results.
--	---	------------------	----------------	----------------------------

	Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Туре	Date	Analysis
Arsenic	<pql< td=""><td>Grab</td><td>yearly average</td><td>11.0</td></pql<>	Grab	yearly average	11.0
Cadmium	<pql< td=""><td>Grab</td><td>yearly average</td><td>8.0</td></pql<>	Grab	yearly average	8.0
Chromium	31	Grab	yearly average	8.0
Copper	330	Grab	yearly average	8.0
Lead	23	Grab	yearly average	15.0
Mercury	1.2	Grab	yearly average	0.6
Molybdenum	9.1	Grab	yearly average	5.0
Nickel	25	Grab	yearly average	6.0
Selenium	<pql< td=""><td>Grab</td><td>yearly average</td><td>15.0</td></pql<>	Grab	yearly average	15.0
Zinc	996	Grab	yearly average	18.0
Ammonium- Nitrogen				
Nitrate-				
Nitrogen				
Total Kjeldahl				
Nitrogen	21,308	Grab		
	PQL=Practical Quantitativ	e Limit	*= Yearly Average	

2. Enter	the estimated o	or determined	percent solids	of the sewage	sludge wher	n sampled for	the above
analysis:	24.4	%		· -			

Treatment Provided for Sewage Sludge at the Facility

1.	Which class of pathogen reduction does the sewage sludge meet at the facility	y? (As defined in
40	CFR Part 503)	

(503)		
I Class A		
Alternative A1 - Time and Temper	ature	
Alternative A2 - Alkaline Treatmen	t	
Alternative A3 - Analysis and Oper	ration	
Alternative A4 - Analysis Only		
Alternative A5 - Processes to Furt	her Reduce Pathogens (PFRP)	
I Heat Drying	☐ Thermophilic Aerobic Digestion	☐ Heat Treatment
Pasteurization	☐ Gamma Ray Irradiation	Beta Ray Irradiation
Composting	0	<u> </u>
Alternative A6 - PFRP Equivalent		
•		
☑Class B		
X Alternative B1 - Fecal Coliform Co	unt	
Alternative B2 - Process to Signific		·
X Aerobic Digestion	Air Drying	Anaerobic Digestion
	H ' "	I Allaelobic Digestion
□ Composting	xLime Stabilization	

■ Neither or Unknown

☐ Alternative B3 - PSRP Equivalent

ADEM FORM 419 8/02 Page 3 of 4

Vector Attraction Control	
Option 1 - Minimum 38% Reduction in Volatile Solids Option 2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction Option 3 - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge Option 5 - Aerobic Processes plus Elevated Temperature Option 6 - Raised pH to 12 and Retained at 11.5 Option 7 - 75% Solids with no Unstabilized Solids Option 8 - 90% Solids with Unstabilized Solids Option 9 - Injection Below Land Surface Option 10 - Incorporation into Soil within 6 or 8 Hours Option 11 Covering Active Sewage Sludge Unit Daily None of the Above	
Groundwater Monitoring	
1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed at the site? [I] Yes [I	
Land Application of Sewage Sludge	
Answer the following questions if sewage sludge is applied to land. 1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site? Tifton Bermuda Grass, Ryegrass	
	-
 If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation? 600lb/acre/year (Reclamation Site) 	
	_
If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from neighbors? No complaints have been received	
	_

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

ADEM FORM 419 8/02 Page 4 of 4

Valley Creek Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



		-				 	, ,	ANT GRADE:	<u>IV</u>	
PERMI	IT NUMBER:	AL002365	55							
PLANT	SUPERINTEN	IDENT:	Robby B	ennett				TE	EL. # (205) 42	28-2614
SYSTE	M MANAGER:		David Do	enard				TE	EL.# (205) 32	5-5979
PLANT	OPERATORS:	;								
	N	IAME			RADE OR IEE STATUS	I ОР	ERATOR NO.	1	EXP. DATE	
Robby E	Bennett			IV		C001594		9/30	/2015	
David H	Humphryes			IV		C000819		12/3	1/2014	
	Maneice			IV .		C000819)	8/3	1/2015	
	n Waters			IV		C002962			30/2015	
	en Gooden)		IV	·	C000519	••••		1/2015	_
	da Waldrop			IV	•	C003017			30/2015	_
	te Akins			IV		C001557			30/2015	
	n Bates		•	liv	·	C006032			30/2014	
	en Burns			IV	·····	C006163			1/2014	
	Cleckler			IV	 	C002038			30/2015	
COLLEC	CTION SYSTEM									
CÖLLEC	CTION SYSTEM									
IANAGI	CTION SYSTEM	RVISOR GRADE I-C GRADE I	MAN 240 160	HRS./WK	NUMBER 6	A	VERAGE NUM	BER OF EMP	LOYEES PER S	HIFT:
IANAGI	CTION SYSTEM	RVISOR GRADE I-C GRADE I GRADE II	MAN 240 (160	HRS./WK	6 ////////////////////////////////////	A		BER OF EMP		
IANAGI	CTION SYSTEM	RVISOR GRADE I-C GRADE I	MAN 240 160	HRS.AWK	6 ////////////////////////////////////	A	VERAGE NUM 1ST 4 2ND 27	BER OF EMP	LOYEES PER S	
IANAGI	CTION SYSTEM	RVISOR GRADE I-C GRADE II GRADE III GRADE IV	MAN 240 160	HRS./WK	6	A	1ST 4	BER OF EMP		E O
IANAGI PERAT ESIGNA	EEMENT/SUPERTOR(S);	RVISOR GRADE I-C GRADE II GRADE III GRADE IV	MAN 240 240 260 2720 760 40	HRS.AWK	18 19 1	A	1ST 4 2ND 27	BER OF EMP		E 0
IANAGI PERAT ESIGNA ABORA	CTION SYSTEM EMENT/SUPER TOR(S): IATED TRAINER ATORY ENANCE	RVISOR GRADE I-C GRADE III GRADE IIII GRADE IV E(S)	MAN 240 1160 720 760 40 320	HRS.AWK	6 4 4 18 19	A	1ST 4 2ND 27	BER OF EMP		E 0
IANAGI PERAT ESIGNA ABORA AINTEI THER I	EEMENT/SUPERTOR(S);	RVISOR GRADE I-C GRADE III GRADE IIII GRADE IV E(S)	720 760 40 320		18 19 1	FRI	1ST 4 2ND 27	BER OF EMP		E 0
MANAGI PERAT BORA IAINTEI ITHER I PERAT	EMENT/SUPER TOR(S): IATED TRAINER ATORY NANCE PLANT WORKER TOR SHIFTS NO SUN X	RVISOR GRADE I-C GRADE III GRADE IVI E(S) ERS ORMALLY WAN MON	720 760 40 320 40 VORKED E TUES	ACH DAY: WED	6 4 4 18 19 1 8 1 1 THURS X	FRI X X	1ST 4 2ND 27 3RD 5	BER OF EMP		E 0
ABORA IAINTEI THER I	EMENT/SUPER TOR(S): IATED TRAINER ATORY ENANCE PLANT WORKER TOR SHIFTS NO	RVISOR GRADE I-C GRADE II GRADE III GRADE IV E(S) ERS ORMALLY WANN	720 760 40 320 40 VORKED E	ACH DAY:	6 4 4 18 19 1 8 1 1 THURS X	FRI	1ST 4 2ND 27 3RD 5	BER OF EMP		E 0

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PERMIT NUMBER:	AL002365	5					<u>-</u>			
PLANT SUPERINTEND	DENT:	Robby Ber	nnett					TEL. #	(205) 428-	-2614
SYSTEM MANAGER:		David Den	ard					- TEL.#	(205) 325-	5979
PLANT OPERATORS:			•••						<u> </u>	
			-	ADE OR						
	AME	<u> </u>		EE STATUS		ERATOR	NO.	 	. DATE	-
William Doss			IV		C005868			5/30/2013		_
Michael Gaines			IV	·	C000725			11/30/2015	5	_
Mary Hardisty	· · · · · · · · · · · · · · · · · · ·		IV		C000374	ļ		8/31/20	13	
Heath Hinch			l∨		C001149)		8/31/20	13	_
Robert Myers			IV		C005721			9/30/20	14	_
Neal Poole			IV	•	C006958	}	 	7/31/20		_
James Rogers		· ** • 	IV		C002364			11/30/2		_
Joel Waldrop			IV		C003020			11/30/2		-
					C003020			11/30/2	013	-
Mike Bauer			Traine		<u> </u>					-
Kenneth Bush			Traine	e						_
COLLECTION SYSTEN	· .									-
	· .									- -
	· .	NO:								- - -
	· .		HRS./WK	NUMBER						- -
			HRS./WK	NUMBER 6						- -
	RVISOR	MAN H	HRS./WK	6						- - -
MANAGEMENT/SUPER	RVISOR GRADE I-C	MAN H 240 160	HRS./WK							-
MANAGEMENT/SUPER	RVISOR GRADE I-C GRADE I	MAN F 240 160	HRS./WK	6	A	VERAGE	NUMBER O	F EMPLOYE	ES PER SH	- - -
MANAGEMENT/SUPER	RVISOR GRADE I-C	MAN H 240	HRS./WK	6	A					
MANAGEMENT/SUPER	RVISOR GRADE I-C GRADE I GRADE II	MAN F 240 160	HRS./WK	6	A	VERAGE 1ST 2ND	4		ES PER SH	
MANAGEMENT/SUPER	RVISOR GRADE I-C GRADE I GRADE III GRADE IVI	MAN F 240 160	HRS./WK	6	A	1ST	4 27			0
MANAGEMENT/SUPER	RVISOR GRADE I-C GRADE I GRADE III GRADE IVI	MAN H 240 160 720 760 40	HRS./WK	4 18	A	1ST 2ND	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINE	RVISOR GRADE I-C GRADE I GRADE III GRADE IVI	720 760 40 320	HRS./WK	18 19 1 8	A	1ST 2ND	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S); DESIGNATED TRAINER	RVISOR GRADE I-C GRADE II GRADE III GRADE IV E(S)	MAN H 240 160 720 760 40	HRS./WK	18 19	A	1ST 2ND	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINER ABORATORY MAINTENANCE OTHER PLANT WORKE	RVISOR GRADE I-C GRADE II GRADE III GRADE IV E(S)	720 760 40 320		18 19 1 8	A	1ST 2ND	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINER ABORATORY MAINTENANCE OTHER PLANT WORKE	GRADE I-C GRADE II GRADE III GRADE IV E(S)	MAN F 240 160 720 760 40 320 40	CH DAY:	18 19 1 8 1		1ST 2ND 3RD	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINER ABORATORY MAINTENANCE OTHER PLANT WORKE OPERATOR SHIFTS NO	RVISOR GRADE I-C GRADE II GRADE III GRADE IV E(S) ERS DRMALLY WANN	MAN F 240 160 720 760 40 320 40 WORKED EA TUES	CH DAY:	18 19 1 1 8 1	FRI	1ST 2ND 3RD	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINER ABORATORY MAINTENANCE DTHER PLANT WORKE OPERATOR SHIFTS NO SUN IST X	GRADE I-C GRADE II GRADE III GRADE IV E(S) ERS DRMALLY W MON	720 760 40 320 40 VORKED EA	CH DAY:	18 19 1 8 1 THURS	FRI X X	1ST 2ND 3RD	4 27			0 800
MANAGEMENT/SUPER OPERATOR(S): DESIGNATED TRAINER LABORATORY MAINTENANCE OTHER PLANT WORKE OPERATOR SHIFTS NO SUN IST X	RVISOR GRADE I-C GRADE II GRADE III GRADE IV E(S) ERS DRMALLY WANN	MAN F 240 160 720 760 40 320 40 WORKED EA TUES	CH DAY:	18 19 1 1 8 1	FRI	1ST 2ND 3RD	4 27			0 800

1. DOES PLANT OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

PERMIT NUMBER:	A1 00000	ek WWTP	·			FLANI	GRADE:	IV	
	AL002365							,	
PLANT SUPERINTEN	DENT:	Robby Ber	ınett		·		TEL.#	(205) 428-26	i14
SYSTEM MANAGER:		David Den	ard				TEL.#	(205) 325-59	79
PLANT OPERATORS:			. GD	ADE OR			•		
N	AME			EE STATUS		OPERATOR NO.	EXP.	DATE	
Doug Carter			Trainee	* .					
Ed Crumley			Trainee						
John Ellard			Traine	e				-	
Keith Frederick			Traine	e .		·			
Malcolm Glass			Traine	<u></u> е					
Earl Harper	· .		Traine	е .					
Jeff Hill			Traine			-			
Danny Hill	<u> </u>	· •	Traine	9					
Joshua Hughes			Traine						
Donald Kelly			Traine		<u> </u>				
						<u> </u>			
		MAN F	IRS./WK	NUMBER 6		·			
MANAGEMENT/SUPE OPERATOR(S):					4				
	RVISOR GRADE I-C GRADE	160		4		AVERAGE NUMBE	R OF EMPLOYE	ES PER SHIFT	r -
	GRADE I-C	160		4		AVERAGE NUMBER	R OF EMPLOYE	ES PER SHIFT	Т:
	GRADE I-C GRADE I GRADE II	160				1ST 4	·	TART TIME 0	,
OPERATOR(S):	GRADE I-C GRADE II GRADE III GRADE IV	160 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		18		1ST 4 2ND 27	·	TART TIME 0	00
	GRADE I-C GRADE II GRADE III GRADE IV	160				1ST 4	·	TART TIME 0	,
OPERATOR(S): DESIGNATED TRAINE	GRADE I-C GRADE II GRADE III GRADE IV	720 760		18 19		1ST 4 2ND 27	·	TART TIME 0	00
OPERATOR(S): DESIGNATED TRAINE LABORATORY	GRADE I-C GRADE II GRADE III GRADE IV	720 760 40		18 19 1		1ST 4 2ND 27	·	TART TIME 0	00
OPERATOR(S): DESIGNATED TRAINE LABORATORY MAINTENANCE OTHER PLANT WORK OPERATOR SHIFTS N	GRADE I-C GRADE II GRADE III GRADE IV E(S) ERS	720 760 40 320 40 VORKED EA	WED	18 19 1 8 1	FRI	1ST 4 2ND 27 3RD 5	·	TART TIME 0	00
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DESIGNATED TRAINE LABORATORY MAINTENANCE OTHER PLANT WORK OPERATOR SHIFTS N SUN IST X ZND X	GRADE I-C GRADE III GRADE III GRADE IV E(S) ERS ORMALLY V MON	720 760 40 320 40 VORKED EA TUES	X X	18 19 1 8 1 1 THURS X X	X X	1ST 4 2ND 27 3RD 5	·	TART TIME 0	00

FACILITY NAME		reek WWT	г 			PLAN	IT GRADE:	IV
PERMIT NUMBE	R: AL0023	655				·		
PLANT SUPERI	NTENDENT:	Robby	Bennett	·	*		TEL.#	(205) 428-2614
SYSTEM MANA	SER:	David	Denard.				TEL.#	(205) 325-5979
PLANT OPERAT	ORS:							
	NAME			RADE OR NEE STATUS	1	OPERATOR NO.) EVD	. DATE
/ince Leroy			Trainee	122 0171100	†	OF ERATOR NO.	EAP	. DATE
lerman McClain			Trainee		 		<u> </u>	
Percy Mims	-		Traine	<u> </u>		-		
Emma Plea	sant		Traine					
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		_ ···		·	 			
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Jason Sims			Traine	9 6	ļ		<u>.</u>	
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on Goodwi			I(c)		C0054		6/30/20	
avon Evan			l(c)		C0046		12/31/2	
Brian Rohlin	g .		I(c)		C0054	18	6/30/20	15
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ID X	X	X	X	Х	Х	Х		
RD X	X	Х	X	Х	X	x		

ADEM FORM 441 8/02

PLANT SUPERIN SYSTEM MANAG	R:	e Maintenance	-				PLANT G	RADE:	ĬΣ
SYSTEM MANAG	ITENDENT:		_					TEL.#	(205) 540-7
	ER:	David Denar	d				•		(205) 325-5
DI AME ODEDAT	ODO.	٠					-		
PLANT OPERAT	URS.		CB	ADE OD					
	NAME			ADE OR EE STATUS	1 00	ERATOR NO		EVD DA	I
Brian Champion			1(c)		C002094	LIVITOR N	"	EXP. DA	
Don Goodwin			l(c)		C005423				0/2015
Lavon Evans			1(c)		C004631				1/2014
Brian Rohling			I(c)		C005418				0/2015
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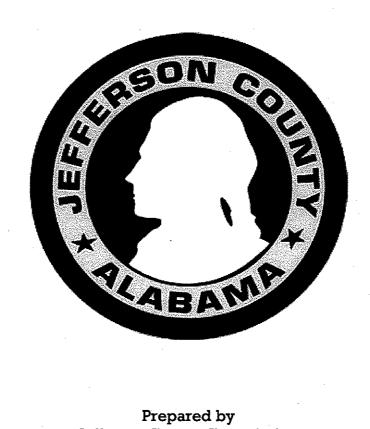
Village Creek WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Village Creek WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by
Jefferson County Commission
Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway Alabama Department of Environmental Management Water Division – Municipal Branch P.O. Box 301463 Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Village Creek Wastewater Treatment Facility, NPDES Permit No. AL0023647. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director Environmental Services Department

TONY PETELOS --

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Greg James, Village Creek WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FACI	LITY: Village Creek WWTP	NPDES #:_AL0023647
MUNICIPALITY: Jef	ferson County	COUNTY: Jefferson
CONTACT PERSON		
	Municipal Official	
	Director, Environmental Services Department	
	Title	
	Telephone #: 205-327-8232	Fax #: 205-325-5981
	Email Address: denardd@jccal.org	
CHIEF OPERATOR:	Greg James	
	Name	
	Telephone #: 205-791-6405	Fax #: 205-791-3030
	Email Address: jamesgr@jccal.org	· · · · · · · · · · · · · · · · · · ·
	Date: May 10, 2013	
REVIEWED BY:	Daniel A. White, P.E.	
-	Consulting Engineer	
ר	Telephone #: 205-214-8610	Fax #: 205-325-5981
I	Date: May 8, 2013	

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility Name: Village Creek WWTP

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Avo Mo Flo	umn 1 erage nthly wrate GD) 002	Average BOD ₅ (Conce	umn 2 e Monthly (CBOD ₅) entration ng/l) 002	Column 3 Average Loading BOD ₅ (CBOD ₅) Ol (lbs/day**) OO2		
January	28.1	25.6	60	35.7	13489	6669	
February	27.7	19.1	54	33	12142	5259	
March	25.4	20.3	64.9	42.9	12687	6566	
April	13.4	17.0	65.4	53.4	7543	7665	
May	15.3	19.0	90.9	70.6	11977	11134	
June	18.1	11.3	110.5	63.2	17782	6123	
July	18.6	8.1	87.9	59.4	13385	4259	
August	29.0	14.2	55.4	37.5	12361	4598	
September	29.1	11.9	69.3	21.5	16638	3198	
October	20.8	15.5	77.4	44.3	12962	5737	
November	15.1	12.2	106.9	75.1	12863	7815	
December	22.2	17.8	67.4	57.9	11336	9066	
Annual Avg.	21.9	16.0	75.8	49.6	12930	6507	
					·		

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

•	Average I	Design Flow	Average Design BOD ₅ Loading (lbs/day)	
Design Criteria	60.0	60.0	70056	70056
90% of the Design Criteria	54.0	54.0	63050	63050

C.	How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow? (Check the appropriate point total)						
	0 - 4 = 0 points 5 or more $= 5$ points						
D.	How many times did the monthly flow (Column 1) to the WAYTD exceed the decimal						

G.	Enter each point value marked for	or Cthrough F and enter the	sum in the appropriate blank
	below.		

TOTAL POINTS VALUE OR PART 1 0
Enter this value on Part 11: Summary Sheet.

^{*}To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Permit	<u>Months</u>	BOD_5 $(CBOD_5)$ (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Limit	May-Nov	4	24.0	1.0	Report
	Dec-Apr	6	24.0	1.0	Report

(2) DMR Concentration

<u>Qtr</u>	<u>Month</u>	(CBe	OD5 OD5) g/I) OO2		SS 1g/l) 002 .		I ₃ -N g/1) 002 .	7. (m) 166	KN 1g/l) 002 .
1	January	0.82	0.64	1.3	0.00	0.04	0.00	0.45	0.00
1	•			1.3	0.20	0.01	0.00	0.45	0.37
•	February	0.65	0.85	1.7	0.00	0.00	0.00	0.52	0.27
	March	0.66	0.63	0.7	0.10	0.04	0.04	0.71	0.30
2	April	1.00	0.75	1.2	0.1	0.02	0.16	1.50	0.71
	May	0.88	0.61	1.9	0.1	0.01	0.00	0.62	0.19
	June	1.13	0.75	2.9	0.1	0.01	0.02	0.44	0.57
3	July	0.75	0.60	2.4	0.60	0.00	0.00	0.29	0.49
	August	0.63	0.39	1.9	0.3	0.02	0.00	0.45	0.73
	September	0.68	0.45	1.6	0.1	0.02	0.02	0.77	0.61
4	October	0.64	040	1.6	0.10	0.00	0.01	0.61	028
	November	0.76	0.58	1.0	0.00	0.03	0.00	0.75	0.54
	December	0.93	0.63	1.4	0.3	0.02	0.03	0.75	0.40
	Annual Avg.	0.79	0.61	1.64	0.16	0.015	0.024	0.66	0.46

B. List the monthly average permit limit and DMR loadings below.

(1) NPDES Permit Loading

Permit	<u>Months</u>	BOD_5 (CBOD ₅) (Ibs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)
Limit	May-Nov	2001	12009	500	Report
	Dec-Apr	3002	12009	500	Report
(8) 35 5					

(2) DMR Loading

<u>Otr</u>	Month	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
1	January	335	369	2.1	184
	February	305	414	0.0	124
	March	229	160	17.3	141
2	April	234	149	26.2	377
	May	215	286	1.1	188
	June	244	443	2.4	118
3	July	160	424	0.7	71
	August	268	531	4.6	189
	September	265	435	9.8	420
4	October	177	343	1.2	130
	November	154	137	3.8	144
	December	288	362	9.9	182
	Annual Avg.	239	337	6.6	189

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$\frac{\sqrt{}}{0}$$
 points $\frac{\sqrt{}}{2}$ Yes = $\frac{\sqrt{}}{121}$ points

D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points $\frac{ \mathcal{Y} }{\text{points}}$ Yes = 121 points
F.	During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
	No = 0 points $Yes = 121$ points
G.	During the past year did the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
Н.	During the past year did either the NH ₃ -N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.) No = 0 points Yes = 121 points
I.	Enter each point value checked for C through H in the blanks below.
	C Points = 0
	D Points = $\frac{1}{0}$
	E Points = 0
	F Points = 0
•	G Points = $\frac{1}{0}$

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

H Points = $\underline{0}$

Facility Name:	Village Creek WWTP	

Part 3: Age of the	Wastewater	Treatment	Facility

A. What year was the wastewater treatment plant constructed or last reconstructed? 2004

Subtract the above answer from the report year to determine age:

Age = (Last Calendar year) - (Answer to A)
$$Age = (2012) - (2004)$$

Enter Age in Part C below.

B. Check the type of treatment facility employed.

	Factor
XMechanical Treatment Plant	2.0
Aerated Lagoon	1.5
Stabilization Pond	1.0
Other (Specify:)	1.0

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}}$$
 x $\frac{8}{\text{(Age)}}$ = $\frac{16}{\text{16}}$ TOTAL POINT VALUE FOR PART 3

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? 0
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? o_____
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 0
- D. Add together Answers A and B and subtract Answer C from that total. A + B - C = 0 (Check the appropriate point total.)

$$0 = 0$$
 points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more $= 100$ points

- E. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0
- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 49
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 49
- H. Add together Answers E and F and subtract Answer G from that total. E + F - G = 0 (Check the appropriate point total.)

$$0 = 0$$
 points $1 = 5$ points $2 = 10$ points $3 = 15$ points $4 = 20$ points $5 = 25$ points $6 = 30$ points $7 = 35$ points $8 = 40$ points $9 = 45$ points $10 = 50$ points 11 or more 100 points

I. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 0 Enter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

<u>Part</u>	5: Sludge Quantity and Storage	
A.	Please provide information concerning sludge quantity, ch based on available data as requested on the MWPP Sewage	naracteristics, and storage practice Sludge Survey, ADEM Form 419
B.	How many months of sludge storage capacity does the variable, either on-site or off-site? (i.e., How many month land spreading or disposing of sludge?) >4	wastewater treatment facility have this can the facility operate withou
	(Check the appropriate point total.)	
	Greater than or equal to 4 months	= 0 points 🗸
	Less than 4 months, but greater than or equal to 3 months	= 10 points
	Less than 3 months, but greater than or equal to 2 months	= 20 points
	Less than 2 months, but greater than or equal to 1 month	= 30 points
	Less than one month AL POINT VALUE FOR PART 5 this value on Part 11: Summary Sheet.	= 50 points
Enter	AL POINT VALUE FOR PART 5 0	= 50 points []
Enter	AL POINT VALUE FOR PART 5 o this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information.	mation based on available data as
Part 6	AL POINT VALUE FOR PART 5 othis value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites	mation based on available data as orm 419.
Part 6	AL POINT VALUE FOR PART 5 othis value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the access the facility have access the disposal sites to provide proper land disposal? (Check the access the facility have access t	mation based on available data asorm 419.
Part 6	AL POINT VALUE FOR PART 5 o this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the access the facility have ac	mation based on available data as orm 419.
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Enter Part 6	AL POINT VALUE FOR PART 5 o this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the author) and or more months are points at 10 points at 10 points at 10 points	mation based on available data asorm 419.

Part 7:	: New Development				·
. (Are there any major ne calendar year or anticipa the sewage system could	ted in the next 2-3 yes	rs such that eith	er flow or ROD	le loadings t
	Design Population: Equivalent (PE)	Design Flow:	MGD	Design BOD ₅ :	lbs/day
	List industrial and/or res	idential developments.			
					•
	Will the additional loading	ng overload the plant? (Check the appro	priate point total	.)
E	No = 0 points $ \boxed{\checkmark} $ Enter the point total in the	Yes = 121 points blank below.			
	L POINT VALUE FOR P nis value on Part 11: Sum		st point total = 12	21)	
				•	
Part 8:	Operator Certification				
Comple	ete the Plant and Collection	on System Personnel In	ventory, ADEM	Form 441.	
D C	o both the plant operator ode; Division 10, Operator	and collection system or Certification Program	staffing comply n? (Check the ap	with ADEM Adapropriate point to	ministrative otal.)
·	Yes = 0 points	No = 121 points			
ΓΟΤΑL Enter thi	POINT VALUE FOR PAis value on Part 11: Summ	ART 8 0 (high	nest point total =	121)	

art	9: Financial Status
	Are User-Charge Revenues sufficient to cover operation and maintenance expenses? If how are O&M costs being financed? <i>Include user charge rates</i> .
	Yes,user charge rates are based on a uniform volume charge/100 cubic ft of 85% of metered water consumed
	for single family. User rate ending 12/31/2012 is \$6.87/100 cubic ft of 85% of metered water consumption.
	Residential Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Industrial Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Monthly residential rate based on 6,000 gallons usage \$_{50.45}
	ase complete the above information based on your user charge rates for the report year. I attach a sample water and sewer bill for clarity.
	What financial resources are available to pay for the wastewater improvements and reconstruction needs?
•	_ · · · · · · · · · · · · · · · · · · ·
•	reconstruction needs?
•	reconstruction needs?
	reconstruction needs?
	reconstruction needs? Approximately \$20,300,000 is currently available to fund capital improvements.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facility.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facility.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facility.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facility. Physical and structural conditions are acceptable.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facility. Physical and structural conditions are acceptable. Describe the general condition of the sewer system (sewer lines, manholes, lift stations).

See attachmer	ıt .				

What is the to	theoretical design li water treatment fac	ife of the plant, a	and what is the e	stimated remaini	ng us
See attachmen	t			÷	,
What probles system?	ms, if any, over the	e last year have t	hreatened treatm	ent or conveyand	ce wi
The primary ca	use of SSOs was blockag	es from grease. These	occurred in residentia	l areas.	
				<u>:</u>	
				·	
Is the commu	mity presently invo	lved in formal p	lanning for treati	nent facility upg	rading
Yes	•			•	
How many d system for an	ays in the last year y reason other than	were there residuely a clogging of the	lential backups lateral connectio	at any point in then? 7	ne col
Does the plan yes, describe.	t have a written pl	an for preventive	e maintenance or	ı major equipme	nt ite
We use Infor as	set management system fo	or preventive maintena	ince and regular maint	епапсе.	•

Village Creek WWTP (MWPP 2012)

Part 10.C

Collection system condition assessment and repair, replacement and renewal projects. Village Creek WWTP waste gas energy recovery and process optimization. Replacement of the current SCADA software with Citect. Village Creek WWTP immediate needs: Fairmont and Harrimon pump station improvements. Collegeville pump station pump and vfd replacements. Minor Parkway pump station vfd replacement.

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

I.	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
J.	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
K.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	De-watering centrifuge rebuild \$108,000
	Replaced four (4) Primary sludge pumps \$160,000
L.	List any additional comments. (Attach additional sheets if necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012 for the development of a
	comprehensive Collection System Asset Management Program (Program). The goal of the Program is to develop and
	provide tools, technologies, and procedures that will empower and enable the County to better manage the sanitary
	sewer collection system. The developed Program will establish a comprehensive asset management system with
	processes and procedures to identify and prioritize future collection system capital and operating replacement and
	maintenance requirements. The Program is an extension and improvement to the current MOM. The Program's
	objectives are focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name: Village Creek WWTP		
Part 11: Summary Sheet	· .	
	through 8 in the left column below. A WPP Report point total the wastewater	
Actual Values	Maximum Possible	
Part 1 o points	80 points	
Part 2 o points	121 points	
Part 3 14 points	40 points	
Part 4 o points	200 points	
Part 5 o points	50 points	
Part 6 o points	50 points	
Part 7 o points	121 points	
Part 8 o points	121 points	
Total 14 points	783 points	
Mechanical plant with surface w Aerated Lagoon or stabilization p Mechanical plant using land disp	pond with surface water discharge posal of liquid wastes	
	pond using land disposal of liquid waste	
✓ 0 - 70 pts. Actions as ☐ 71 - 120 pts. Departmen	action needed to address problems ident Appropriate* at all Recommendation Range* ity Action Range* PDES outside the scope of this report	
4. Complete the Municipal Water Po	llution Prevention Resolution Form, A	DEM Form 418.

		•	n? (Check to on for this s			Yes v.	N _e
		 · .					
	··· ,	, ,,	· · · · · · · · · · · · · · · · · · ·				

Village Creek Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>







Summary of Unpermitted Discharges - Village Creek

January 01, 2012 through December 31, 2012

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
C00991	1/9/12	1/9/12 1325 Miami Trail	Village - East of WWTP	Village Creek	15,000	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
C01029	12/10/12 Notes:	12/10/12 2057 Melinda Dr & 712 Lois Ln	Village - West of WWTP (Remainder of System)	Ground Absorbed/Storm Drain	8,855	Cleanout/Man hole	Grease	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04092	1/4/12 Notes:	135 Finley Ave	Village - East of WWTP	Ground Absorbed/ Village Creek	33,000	Manhole	Vandalism/ Construction Damage/ Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04105	1/18/12 Notes:	M04105 1/18/12 3050 44th Ave N Notes:	Village - East of WWTP	Ground Absorbed	4,431	Cleamout	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04109	1/25/12 Notes:	Gadsden Hwy & Medical Park Dr	Village - East of WWTP	Storm Drain	750	Manhole	Gravity Main Break	No Rain	Line Repaired	Brian Champion	Sewer Maintenance Supervisor
M04129	1/31/12 Notes:	1/31/12 431741st Ave N	Village - East of WWTP	Ground Absorbed	6,082	Cleanout	Grease	No Rain	Blockage Removed	Brian	Sewer Maintenance Supervisor

Page 2 of 7

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title	
M04136	2/8/12	1200 10th St W	Village - East of WWTP	Storm Drain/ Village Creek	142,943	Pipe	Gravity Main Break	No Rain	Blockage Removed/Line Repaired	Brian Champion	Sewer Maintenance Supervisor	
V	Notes:		ed speciment managery by spranger property of the special distributions of	- The second	LEGISLES-BEIGLES-BANGLES-BEIGLES-CHE-	PAPERTO POR COURT IN CORPORATION AND AND AND AND AND AND AND AND AND AN	ACTUAL TO A STATE OF THE PARTY	NAMES OF TAXABLE AND PROPERTY OF TAXABLE PARTY.	***************************************		***************************************	
M04142	2/19/12	601 West Blvd	Village - East of WWTP	Drainage Ditch	7,300	Manhole	Debris/ Rags	Moderate Rain	Blockage Removed	Brian Champion	Sewer Maintenance	
ν	Notes:					***************************************				***************************************	TOSTA TOČIN	
M04146	2/22/12	3040 44th Ave N	Village - East of WWTP	Manhole	10,050	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
V	Notes:			-								
M04151	3/1/12 Notes:	190 Pratt Hwy	Village - West of WWTP (Remainder of System)	Storm Drain	3,000	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
M04158	3/8/12	26 Pratt Hwy	Village - East of WWTP	Drainage Ditch	7,106	Cleanout	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Smervior	
V	Notes:					-	***************************************				Torradas	
M04167	3/16/12	3000 29th Ave N	Village - East of WWTP	Storm Drain	3,900	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
V	Notes:											
M04171	3/21/12	332 Dalton Drive	Village - East of WWTP	Drainage Ditch	5,350	Manhole	Grease/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor	
ν	Notes:	VAR-MONERET REPORT A PORTAGO AND				And the second s					1	
M04176	4/5/12	9225 Brookhurst Drive	Village - East of WWTP	Ground Absorbed	`∞	Manhole	Grease/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance	
A.	Notes:					***************************************					oriber visor	

Page 3 of 7

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04179	4/9/12 Notes:	1624 Bradford Street	Village - West of WWTP (Remainder of System)	Ground Absorbed	4,400	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04183	4/15/12 Notes:	1605 28th St Ensley	Village - West of WWTP (Remainder of System)	Ground Absorbed/ Under House	21,720	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04196	5/10/12 Notes:	709 85th St S	Village - East of WWTP	Ground Absorbed	12	Cleanout	Grease/ Roots/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04200	5/15/12 Notes:	13 Ave W (Apt. #1)	Village - West of WWTP (Remainder of System)	Ground Absorbed	15	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04204	5/23/12 Notes:	4607 5th Ave S	Village - East of WWTP	Ground Absorbed	2,400	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04205	5/24/12 otes: Volum	5/24/12 4404 Sth Ave S Notes: Volume was not determinable.	Village - East of WWTP	Ground Absorbed		Manhole/ Cleanout	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04206	5/24/12 Notes:	1221 20th Ave N	Village - East of WWTP	Village Creek	51,250	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04208	5/31/12 Notes:	9225 Brookhurst Drive	Village - East of WWTP	Ground Absorbed	3,850	Manhole	Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Reported Location Collection System Destituction GSU Storm Datin 1,950 Manhole Grease Weather Action Taken Manhole Grease Weather Action Taken Manhole Grease Taken Blockage Ramoved WWTP Manhole Grease Weather Action Taken Manhole Grease Weather Action Taken Manhole Grease Taken Blockage Ramoved WWTP Manhole Grease No Rain Blockage Removed WWTP Manhole Grease Manhole Grease No Rain Blockage Removed WWTP Manhole Grease Manh	Event	Date			Ultimate	Est. Vol.					Person	
	No.	Reported	' Location	Collection System	Destination	(gai)	Source	Cause	Weather	Action Taken	Reporting	Title
O23/12 1100 Orean Ocean Road Village - East of Syorm Drain Storm Drain 13,500 Mambole Grease No Rain Blockage Removed Don 623/12 1537 Pice Road Village - West of System) Storm Drain 1,800 Mambole Grease No Rain Blockage Removed Don 623/12 1537 Pice Road Village - East of System) Storm Drain 2,050 Mambole Grease No Rain Blockage Removed Champion 7/6/12 4600 Roscoc Ave N Village - East of Storm Drain Storm Drain 775 Mambole Grease/ Rosc No Rain Blockage Removed Brian 7/6/12 4600 Roscoc Ave N Village - East of Storm Drain Storm Drain 775 Mambole Grease/ Rosc No Rain Blockage Removed Champion 7/6/12 7528 6th Ave S Village - East of Storm Drain Storm Drain 750 Mambole Grease/ Rosc No Rain Blockage Removed Brian 822/12 4652 Messer Airport Hovy Village - East of Ground Alsorbed 15,673 Cleanout Grease	M04210	6/12/12	1313 6th Place	Village - East of WWTP	Storm Drain	1,950	Manhole	Grease	Heavy Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
	M	otes:	UMBRIAND CHE IS NECLUS HAN LESANANNAS YORK EUR HAN SCHOUNDER JANGSCHAFFE HEILEN JANGSCHAFFE	Constitution on the second to the second constitution to the second technical sections and second se	pa manyan adap a siyap panisiya mbanayi mban mekan mekan indah diberah diberah diberah diberah diberah diberah	and complete the state of the s	ser sevenos erresoronomios respectivojas	RANK KIRANAN KANAN K	'M ITALIARDIA HAPIARIA KABARRATA KA	ARTHUR AND AND THE STATE OF THE	HAT MANUFACTURE COMPANY OF SELECTION OF SELE	
Votes: Notes: Notes:<	M04213	6/23/12	1100 Green Crest Road	Village - East of WWTP	Storm Drain	13,500	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
State Stat	Nc	otes:	туру — прод обесправного проденения выполняем по проденения выполняем выполняем выполняем выполняем выполняем					***************************************	***************************************		***************************************	Tools Today
Hotes: Tight Ave W & 1st St W Wyrpp - East of Ground Absorbed' 17,600 Manhole Grease/ Roots No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed' 17,600 Manhole Grease/ Roots No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed' 15,673 Manhole Grease/ Roots No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease/ Rogs No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease/ Rogs No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease/ Rogs No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Champion Whyrpp - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Champion	M04214	6/25/12	1537 Pike Road	Village - West of WWTP (Remainder of System)	Storm Drain	1,800	Manhole	Grease	No Rain	Blockage Removed	Don Goodwin	Sewer Video Operations Supervisor
73/12 16th Ave W & 1st St W Wyrpp Last of Storm Drain 2,056 Manhole Grease No Rain Blockage Removed Champion Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Storm Drain Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Storm Drain Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Storm Drain Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Storm Drain Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Storm Drain Cotes: 7/6/12 4600 Roscoe Ave N Wyrpp Last of Ground Absorbed 15,673 Cleanout Grease/ Rage No Rain Blockage Removed Champion Champion Wyrpp Wyrpp Last of Ground Absorbed 15,673 Cleanout Grease Roscoe No Rain Blockage Removed Champion Wobers:	Ne	otes:	A PARTY AND THE PROPERTY OF THE PARTY AND TH									
Votes:: Aborte: Chound Absorbed! 17,600 Manhole Grease/ Debris No Rain Blockage Removed Brian 7/30/12 8319 12th Ave S Village - East of WWTP Storm Drain 750 Manhole Grease/ Roots No Rain Blockage Removed Brian Notes:: WWTP Storm Drain 750 Manhole Grease/ Roots No Rain Blockage Removed Brian Notes:: WWTP WWTP Drainage Ditch 9,550 Manhole Grease/ Rags No Rain Blockage Removed Champion Notes:: 8/12/12 4652 Messer Airport Hwy Village - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Champion	M04216	7/3/12	16th Ave W & 1st St W	Village - East of WWTP	Storm Drain	2,050	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
1/6/12 4600 Roscoe Ave N WYTP Sorm Drain Votes: 1/30/12 8319 12th Ave S WYTP 1/30/12 7528 6th Ave S Village - East of WWTP Votes: 8/1/12 7528 6th Ave S Village - East of WWTP WWTP 1/30/12 1528 6th Ave S Village - East of WWTP WWTP Sorm Drain Votes: 8/1/12 7528 6th Ave S Village - East of WWTP WWTP WWTP WWTP Sorm Drain 1/30/12 7528 6th Ave S Village - East of Ground Absorbed Ground Absorbed I5,673 Cleanout Grease/ Rags No Rain Blockage Removed Champion Grease/ Rags No Rain Blockage Removed Ground Absorbed Size Size Size Size Size Size Size Size	N _t	otes:		***************************************	A SECURE PREVIOUS A TREATMENT AND DESCRIPTION OF THE PROPERTY OF THE	ATTERNATION OF STREET,	ES SALLON VILLO MANA DAVA DA MANA PARIA.	THE PROPERTY AND PERSONS ASSESSMENT ASSESSME			The state of the s	THE OWN PLANTING PROPERTY AND ADDRESS OF THE OWN PARTY.
730/12 8319 12th Ave S Willage - East of Storm Drain 750 Manhole Grease/ Roots Roots Roots Removed Brian Champion WWTP WWTP S WW	M04217	7/6/12	4600 Roscoe Ave N	Village - East of WWTP	Ground Absorbed/ Storm Drain	17,600	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
7/30/12 8319 12th Ave S Willage - East of WWTP 8/1/12 7528 6th Ave S Willage - East of WWTP 8/1/12 4552 Messer Airport Hwy WWTP 8/22/12 4552 Messer Airport Hwy WWTP WWTP 8/22/12 4552 Messer Airport Hwy WWTP WWTP WWTP Ground Absorbed 15,673 Cleanout Grease Roots No Rain Blockage Removed Brian Champion Grampion Ghampion Champion	N.	otes:		Management of the second secon	de Andrews American de marie en mariem des		***************************************	terralisma determination terralisma considerative sees	abendere es		de en	Sulper visor
8/1/12 7528 6th Ave S Village - East of Drainage Ditch 9,550 Manhole Grease/ Rags No Rain Blockage Removed Brian Champion Votes: 8/22/12 4652 Messer Airport Hwy Village - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Brian Champion Champion	M04224	7/30/12	8319 12th Ave S	Village - East of WWTP	Storm Drain	750	Manhole	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Simeraisor
8/1/12 7528 6th Ave S Village - East of Drainage Ditch 9,550 Manhole Grease/Rags No Rain Blockage Removed Brian Votes: 8/22/12 4652 Messer Airport Hwy Village - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Brian Champion Champion	N.	otes:										
Votes: 8/22/12 4652 Messer Airport Hwy Village - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Brian Champion Votes:	M04226	8/1/12	7528 6th Ave S	Village - East of WWTP	Drainage Ditch	9,550	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
8/22/12 4652 Messer Airport Hwy Village - East of Ground Absorbed 15,673 Cleanout Grease No Rain Blockage Removed Brian WWTP Champion Notes:	N.	otes:	дар дарына явуна, англууга фациуу и уздаунаулагияналага казан т. Единизгиясын из тавы давига.	***************************************	AL BOOLENSE DE LEVEL CONTRACTOR DE LEVEL DE LEVE	The designation of the section of th	والمقدات والمتاركة و	and and any and the state of th	-		- Annah - Anna	***************************************
	M04237	8/22/12		Village - East of WWTP	Ground Absorbed	15,673	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Smervisor
	Ň	otes:				-					41	TOTAL TOTAL

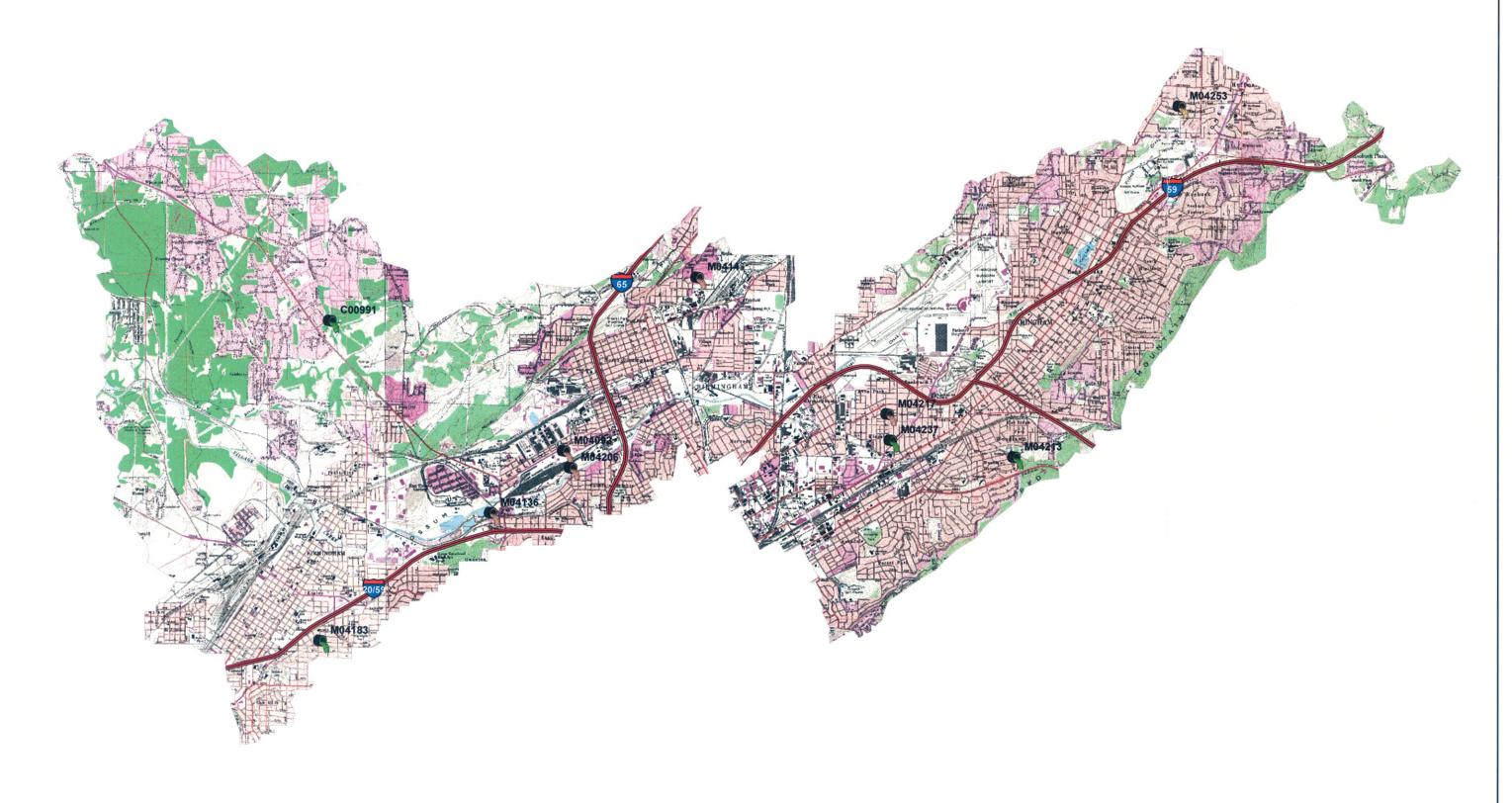
Page 5 of 7

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04238	8/27/12 Notes:	8505 9th Court S	Village - East of WWTP	Storm Drain	65	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04239	8/28/12 Notes:	327 Bishop Lane	Village - East of WWTP	Ground Absorbed	9	Manhole	Debris/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04243	9/4/12 Notes:	6705 Glasgow Ave S	Village - East of WWTP	Ground Absorbed	7	Cleanout	Grease/ Debris/ Rags	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04245	9/5/12 Notes:	2605 Bush Blvd	Village - East of WWTP	Ground Absorbed/ Storm Drain	561	Service Line	Grease/ Roots	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04246	9/8/12 Notes:	26 Pratt Hwy	Village - West of WWTP (Remainder of System)	Grouind Absorbed/ Storm Drain	6,264	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04247	9/11/12 Notes:	M04247 9/11/12 332 Daiton Drive Notes:	Village - East of WWTP	Drainage Ditch	106	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04252	9/26/12 Notes:	5018 18th Court N	Village - East of WWTP	Ground Absorbed	6	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
M04253	9/27/12.	400 Sunset Drive	Village - East of WWTP	Ground Absorbed	11,500	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor

Event No.	Date Reported	Date Reported Location	Collection System	Ultimate Destination	Est. Vol. (gal)	Source	Cause	Weather	Action Taken	Person Reporting	Title
M04254	9/27/12	5901 Crestwood Blvd	Village - East of WWTP	Drainage Ditch	206	Manhole	Grease/Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
N.	Notes:	e we i serve de de serve de l'ende frem s'ende de man et de man et de se de l'enderde de de l'étable de l'ende	AND AND THE PROPERTY COMMENTS OF AN AND AND AND AND AND AND AND AND AND	MARIANAN MAR	HERMANNAMANANANA MARKATAN	HARMAN SALAMAN SALAMAN ATALAM	THE PROPERTY OF THE PROPERTY O				
M04265	10/18/12	10/18/12 3000 30th Ave N	Village - East of WWTP	Ground Absorbed	57.	Manhole	Vandalism/ Grease/ Debris/ Rocks	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Surervisor
Nc	Notes:										4
M04266	10/19/12	5104 16th Ave N	Village - East of WWTP	Ground Absorbed	5,400	Cleanout	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
W	Notes:										ioera rodno
M04268	10/22/12	929 Five Mile Road	Village - East of WWTP	Ground Absorbed	480	Manhole	Grease/ Debris/ Rags	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes:	PARTITION AND THE PARTITION OF THE PARTI		WOMENSHAD AND SERVICE STATE OF THE SERVICE STATE SERVICE STATE SERVICE STATE SERVICE S	STANDARD STANDARD STANDARD	COLET-COPYRETEN BLYSHALT SHALT SAFALLES	THE ASSESSMENT ASSESSM	Water the Part of		HARPE AND PROPERTY OF THE PROP	oupervisor
M04277	11/13/12	400 Meehan Ave	Village - West of WWTP (Remainder of System)	Storm Drain	45	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance Supervisor
Ne	Notes:			***************************************	***************************************					والماء والماء والماء والماء والماء والماء والماء والماء والماء	***************************************
M04288	11/23/12	11/23/12 332 Dalton Drive	Village - East of WWTP	Drainage Ditch	3,927	Manhole	Grease/ Debris	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N	Notes:			Addings the state of the state							roera radino
M04293	12/9/12	2300 21st Ave N.	Village - East of WWTP	Ground Absorbed	513	Manhole	Grease	No Rain	Blockage Removed	Brian Champion	Sewer Maintenance
Ne	Notes:	A CONTRACT AND A CONT	er a i senare et asserti Dock en estanos den en estanos den estanos estanos estanos estanos estanos estanos es	Veri de periodo de la composition de la composition de la conferencia de la conferencia de la conferencia de l	دهد غراستانده و او دو او پاید دارد شده در می داده استان به در در داده در داده در داده در	والمورات وسائدا استدارة والويرات واستراسه في		(equi demonstrate quadratic principal angular que	the first of the first of the state of the s	***************************************	mera radno
M04299	12/15/12	5712 2nd Ave N	Village - East of WWTP	Storm Drain		Pipe	Grease/Debris/Ra gs	Light Rain	Blockage Removed	Brian Champion	Sewer Maintenance
N.	otes: Volum	Notes: Volume was not determinable. Sewer Main had liner in it. Seweage exited the system	liner in it. Seweage exited th	e system through a cracked service line.	d service line.		***************************************	***************************************			TOOK INTEG

Title	Sewer Maintenance Supervisor	Sewer Maintenance Supervisor	Sewer Maintenance Supervisor
Person Reporting	Brian Champion M	Brian Champion M	Brian Champion M
Action Taken	Blockage Removed	Blockage Removed	Blockage Removed
Weather	No Rain	No Rain	Light Rain
Cause	Grease	Grease	Grease/Debris/Ra gs
Source	Manhole	Manhole	Manhole
Est. Vol. (gal)	09	44	486
Ultimate Destination	Ground Absorbed	Ground Absorbed	Storm Drain
Collection System	Village - East of WWTP	Village - East of WWTP	Village - East of WWTP
Date Reported Location	M04304 12/22/12 Alley Between Joppa Ave & Joppa Crt Notes:	M04305 12/22/12 6502 Joppa Ave S Notes:	M04307 12/26/12 3168 30th Crt N
Event No.	M04304	M04305	M04307

VILLAGE CREEK BASIN 2012 DISCHARGES



JEFFERSON COUNTY ENVIRONMENTAL SERVICES PLOTTED: 3-14-13

Village Creek Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



MWPP SEWAGE SLUDGE SURVEY

Fa	acility Back	ground Information:					, a	٠
1.	Facility In	formation			Permit Nu	mber:	AL0023647	
		Name:	Village Cree	k WWTP				
		Street Address:	1440 Pleasa	nt Hill Road				
		County:	Jefferson					
2.	Facility Co	ontact						
		Name:	Greg James					
		Title:	Plant Manag					
		Telephone:	205-791-640					
		Permittee Name:	Jefferson Co	ounty Comm	ission			
		Mailing Address:	Suite A-300	716 Richard	Arrington	Jr. Blvd N.		
		· · · · · · · · · · · · · · · · · · ·	Birmingham,	, Al 35203				
Fa	acility Flow	Information						
1.	Facility W	astewater Treatment Capa	acitv					
		Avg. Daily Flow for 2000:		001-2	21.9 / 002-1	6.0	MGD	
		Facility Design Capacity:		001-60/002	-60 /Peak,	Both-400	MGD	
2.	Estimated	l Septage Quantity Handle	d (Residuals	Removed from	om Septic	Fank Svstems	.)	
		Average Domestic Septage	•	214905		gallons per n	•	
		Average Commercial Sep	-	390869			nonth (GREA	(SE)
		·	3					,
3.	Method of	f Septage Processing						
		X Mixed with Influent W		Treatment				
		Mixed with Sewage S	ludge					
								
1	Estimated	l Percentage Contributing	Mastawater F	-low			•	
⊸.	Louinaco	Residential: 87	%	IOW				
		Industrial: 8	. % . %					
		Other: 5	. % 	Describe:		Commercial		
			. ′°	Describe.		Commicional	· · ·	
5.	List type o	of wastewater treatment pr	ocess(es) utili	ized at this f	acility:			
		Screening, Grit Removal,	Activated Slu	idge, Clarific	ation			
		Chlorination, Dechlorination	on, Sand filtra	ition, Uv Dis	infection			
6	Estimated	l sewage sludge wasting ra	ate at this faci	lity:			lb/day dry w	eight
٠.		. comago diaago masiii.g m	ato at imo rao.	•	144000		gallons per o	-
				5 ,			Same Por	,
7.	Estimated	l untreated sludge received	d from off site	:	N/A		lb/day dry w	eight
				or			gallons per o	day
8.	Estimated	percent solids of combine	ed sewage slu	dge prior to	treatment:		3	%

ADEM FORM 419 8/02 Page 1 of 8

				iludge Quanti ated pounds p	-
Gravity Thickenir	ng		<u> </u>		
Mesophyllic Anaerobic Digestion	d Limo Stobi	lization	<u></u>		
Mechanical Dewatering (Centrifuge) and	J LIIILE SIADI	iization	<u> </u>		
Estimate the total volume of sludge	generated:		. 100 . 101 .	3268	
			(dry	U.S. tons per	year)
Sludge Disposal Methods					•
Which of the following describes the	current met	hod of sewa Current P		his facility: Proposed	Practice
	Approved <u>Yes</u>	by ADEM No	Quantity (dry U.S. tons/year)	Approved <u>Yes</u>	
a. X Land Application, Bulk			0000		
Shipped ☐ Agriculture	0	. 0	3268	. 0	0
☐ Forest		. 0			0
☐ Public Contact	_			0	
Lawn/Home Garden	D			0	
b. I Land Application,					
Bagged/Other Container				_	_
Agriculture		0		0	
☐ Forest		0		0	0
Public Contact		<u> </u>		0	0
☐ Lawn/Home Garden	0			0	
c. Il Incineration	0			0 .	
d. Subtitle D Landfill	·			_	
(Disposal Only)					
e. I Lined Treatment Lagoon or Stabilization Pond	0	ם		0	0
f. I Unlined Lagoon or	-	_		-	_
Stabilization Pond	0			0	
g. [] Other (Please Describe)				0	
			_	÷	
			-		
, 			-		
If "f" was selected above and sludge	is stored for	r 2 or more y	ears, enter the distance	between the	
surface disposal site and the property li	ne:	N/A	feet		

Page 2 of 8

1. Enter the total concentrations of the	following analytes using existing data.	Do not enter TCLP results.

	Concentration	Sample	Sample	Detection Level of
Analyte	(mg/kg or ppm)	Туре	Date	Analysis
Arsenic	<pql< td=""><td>Grab</td><td>Yearly Average</td><td>11</td></pql<>	Grab	Yearly Average	11
Cadmium	<pql< td=""><td>Grab</td><td>Yearly Average</td><td>8</td></pql<>	Grab	Yearly Average	8
Chromium	48	Grab	Yearly Average	8
Copper	430	Grab	Yearly Average	8
Lead	65	Grab	Yearly Average	. 15
Mercury	2.0	Grab	Yearly Average	0.6
Molybdenum	11	Grab	Yearly Average	5
Nickel	38	Grab	Yearly Average	6
Selenium	<pql< td=""><td>Grab</td><td>Yearly Average</td><td>15</td></pql<>	Grab	Yearly Average	15
Zinc	1,069	Grab	Yeariy Average	18
Ammonium- Nitrogen	N/A	N/A	N/A	N/A
Nitrate- Nitrogen	N/A	N/A	N/A	N/A
Total Kjeldahl Nitrogen	21,200	N/A	N/A	1.8

Enter the estimated or determined percent solid analysis: 28 %	s of the sewage sludge when samp	oled for the above
Treatment Provided for Sewage Sludge at the Faci	ility	
1. Which class of pathogen reduction does the sev	wage sludge meet at the facility? (A	As defined in
40 CFR Part 503)		
[] Class A		
Alternative A1 - Time and Tempera	ature	
Alternative A2 - Alkaline Treatment		
Alternative A3 - Analysis and Opera	ation	
Alternative A4 - Analysis Only		
Alternative A5 - Processes to Furth	er Reduce Pathogens (PFRP)	
I Heat Drying	Thermophilic Aerobic Digestion	Heat Treatment
Pasteurization	☐ Gamma Ray Irradiation	Beta Ray Irradiation
☐ Composting		
Alternative A6 - PFRP Equivalent		
X Class B		
Alternative B1 - Fecal Coliform County	unt	
Alternative B2 - Process to Signific	antly Reduce Pathogens (PSRP)	
Aerobic Digestion	Air Drying	Anaerobic Digestion
Composting	Lime Stabilization	
Alternative B3 - PSRP Equivalent		

Vector Attraction Control

Neither or Unknown

☐ Option 1 - Minimum 38% Reduction in Volatile Solids

		2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction 3 - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
		4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge
		5 - Aerobic Processes plus Elevated Temperature
		6 - Raised pH to 12 and Retained at 11.5
		7 - 75% Solids with no Unstabilized Solids
		3 - 90% Solids with Unstabilized Solids
		9 - Injection Below Land Surface
		0 - Incorporation into Soil within 6 or 8 Hours
		11 Covering Active Sewage Sludge Unit Daily
		the Above
Groundwa	iter Monitorii	ng ·
1. If dispo		is surface disposal or land application, is groundwater monitoring required or performed
	Yes	(If yes, please submit a copy of the groundwater monitoring reports along with this
	X No	survey. Also please provide the approximate depth to groundwater and the
		groundwater monitoring procedures used to obtain the data.)
Land Appl	ication of Se	ewage Sludge
		questions if sewage sludge is applied to land. s land applied in bulk form, what type of crop or other vegetation is grown on this site?
	muda Grass	Progress
THIOH DEL	illuua Grass	s, Ryegrass
		s land applied in bulk form, what is the nitrogen requirement for this crop or vegetation?
600 lbs/ac	re/year (Re	clamation Site)
	•	
0 15		Lead and its built forms briefly describe the nature of any complaints filed from
neighbors	•	s land applied in bulk form, briefly describe the nature of any complaints filed from
-	•	
None		

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

Village Creek Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



LAI	NT PERSONNEL INVENTORY										
er en	«							•	-		
· \ \ \	ACILITY NAME	Village Creek WWTP				PLANT GRADE	J V		-		
	PERMIT NUMBER	AL0023647					-				
	PLANT MANAGER	Greg James				TEL#	205-791				
	DEPARTMENT DIRECTOR	David Denard				TEL#	205-327	-8232			
	PLANT OPERATORS:										
	NAME	GRADE		OPERATO	R NO.	EXP. DATE					
1	Gregory James	IV		C0009	89	3/31/2015]				
2	Terrence Lane	. IV		C0034	37	3/31/2015					
3	Frederick Deamues	IV		C0018	85	3/31/2015	1				
4	Paul Hardisty	IV		C0010	001	2/28/2015	1				
5	Linda Jackson	. IV		-C0009	52	12/31/2014	1				
6	Ryan Tyler	· IV		C0029	23	6/30/2015	1				
7	Tim Gilliland	IV		C0048	66	9/30/2014	1 .				
8	Corey Bates	IV		C0015	83	2/28/2013	1				
9	Rickie Hogeland	IV		C0008	55	11/30/2015	1				
10	Orlando Walker	IV		C0005	36	11/30/2015	1				
11	Brenda Scott	IV		C0025	69	6/30/2015	1				
12	Fred Cooper	IV		C0017	44	11/30/2015	1			-	
13	Kim Hudson	IV		C0053	68	8/31/2013				-	
(COLLECTION SYSTEM	M OPERATORS:]							
٦ _ا]				
				T		· •		٠			
		MAN HRS/WI	(NUME	ER					4	
	MANAGEMENT/SUPERVISOR		320		8		AVERAGE	NUMBER	OF EMPL	OYEES PER SH	IFT:
	OPERATORS:							1ST	31	START TIME	8:00 AM
	GRADE IV		200		5			2ND	4		4:00 PM
	MAINTENANCE		200	1	5			3RD	4		12:00 AM
	OTHER PLANT WORKERS		960		24			4th	4		12:00 AM
	OPERATOR SHIFTS NORMALLY WO							5gh	4		12:00 PM
ı	Shift	Hours	Mon	Tues	Wed	Thu	Fri	Sat	Sun		
	1st	12 am to 8 am	Χ	Χ	Χ	X	Χ				
	2nd	8 am to 4 pm	Χ	Х	Х	Х	Х				
	3rd	4 pm to 12 am	Х	Х	Χ	Χ	Χ				
	4th	12 am to 12 pm						Χ	Χ		
	5th	12 pm to 12 am						Х	Х		
					<u></u>			-		YES	NO
	1. DOES PLANT OPERATOR STAFFING O	OMPLY WITH DIVISION :	10 OF AD	EM ADMINISTR	ATIVE CO	DE?					
	2. Does collection system operate						?				<u> </u>
							-				

4DEM FORM 441

FACILITY NAME:	Sewer Line Maintena				
PERMIT NUMBER:	Sever Little Mailler	ince		PLANT GRADE:	<u>IV</u>
PLANT SUPERINTENDEN	т-		•		
SYSTEM MANAGER:		Denard		TEL.#	<u>(205) 540-7</u>
	David	Deliain		TEL.#	(205) 325-5
PLANT OPERATORS:					
· Latt of Livitorio.		CDADE (n.m		
NA	ME	GRADE (1	,
Brian Champion	TALL.	TRAINEE ST			
Don Goodwin		I(c)	C002094		/30/2015
Lavon Evans		1(c)	C005423		/30/2015
Brian Rohling		I(c)	C004631		31/2014
	 		C005418	6/	30/2015
	······································				
					1
	-				
	··				
					
MANAGEMENT/SUPERVISO DPERATOR(S):	OR	IAN HRS.AWK N	JMBER		
	OR GRADE I-C	IAN HRS.AVK N			
	GRADE I-C GRADE I	IAN HRS.AVK N		NUMBER OF EMPLOYEE	ES PER SHIF
	GRADE I-C GRADE I GRADE II	IAN HRS.AVIK N		NUMBER OF EMPLOYER	ES PER SHIF
	GRADE I-C GRADE I GRADE II GRADE III	IAN HRS.AVIK N			ES PER SHIF
OPERATOR(S):	GRADE I-C GRADE I GRADE II	IAN HRS.AVK N	AVERAGE N	STAR	
OPERATOR(S): DESIGNATED TRAINEE(S)	GRADE I-C GRADE I GRADE II GRADE III	IAN HRS.AWK NE	AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY	GRADE I-C GRADE I GRADE II GRADE III	IAN HRS./WK NE	AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE	GRADE I-C GRADE I GRADE II GRADE III	IAN HRS./WK NE	AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY	GRADE I-C GRADE I GRADE II GRADE III	AN HRS.AWK NE	AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS	GRADE IC GRADE I GRADE II GRADE III GRADE III		AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE DTHER PLANT WORKERS DPERATOR SHIFTS NORMA	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS DPERATOR SHIFTS NORMAN	GRADE IC GRADE I GRADE II GRADE III GRADE III	H DAY:	AVERAGE N	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS DPERATOR SHIFTS NORMAN SUN	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMAN SUN ST	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DPERATOR(S): DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS DPERATOR SHIFTS NORMAN SUN	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMAN SUN ST	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORM SUN ST	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	
DESIGNATED TRAINEE(S) ABORATORY MAINTENANCE OTHER PLANT WORKERS OPERATOR SHIFTS NORMAN SUN ST	GRADE IC GRADE I GRADE II GRADE III GRADE IV	H DAY:	AVERAGE N 1ST 2NL 3RL	STAR	

Warrior WWTP

Municipal Water Pollution Prevention (MWPP) Annual Report Calendar Year 2012

For the

Warrior WWTP

as required by the Alabama Department of Environmental Management NPDES Program



Prepared by Jefferson County Commission Environmental Services Department

May 31, 2013

JEFFERSON COUNTY COMMISSION



DAVID CARRINGTON – PRESIDENT GEORGE F. BOWMAN SANDRA LITTLE BROWN – PRESIDENT PRO TEMPORE T. JOE KNIGHT JAMES A. "JIMMIE" STEPHENS

May 31, 2013

Mr. Nick Caraway
Alabama Department of Environmental Management
Water Division – Municipal Branch
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Municipal Water Pollution Prevention (MWPP)
Annual Report Calendar Year 2012

Mr. Caraway:

The Jefferson County Environmental Services Department submits the above referenced report for the Warrior Wastewater Treatment Facility, NPDES Permit No. AL0050881. Included is information as required in ADEM Form 41701/06ml, bypass/overflow event reports, MWPP Sewage Sludge Survey, and the Plant & Collection System Personnel Inventory.

If you have any questions regarding this information, please contact me at 205.325.5979 or Celeste Brown at Jefferson County Barton Laboratory at 205.238.3859.

Sincerely,

David Denard, Director

Environmental Services Department

TONY PETELOS -

Office of

DAVID A. DENARD

Suite A-300

CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SERVICES

Director of Environmental Services

716 Richard Arrington, Jr. Blvd. N. Birmingham, Alabama 35203 Telephone (205) 325-5979 Fax (205) 325-5981

pc: Celeste Brown, JCESD Barton Laboratory
Daniel White, JCESD Deputy Director
Chad Quick, Warrior WWTP

MUNICIPAL WATER POLLUTION PREVENTION (MWPP) ANNUAL REPORT

SUBMITTED BY:

TREATMENT FAC	ILITY: Warrior WWTP	NPDES #:_AL0050881		
MUNICIPALITY: Je	efferson County	COUNTY: Jefferson		
CONTACT PERSON	V. David Denard			
	Municipal Official			
	Director of Environmental Services			
	Title			
	Telephone #: (205)325-5806	Fax #: (205)325-5981		
	Email Address: denardd@jccal.org			
CHIEF OPERATOR	. Chad Quick			
	Name			
	Telephone #: (205)681-7971	Fax #: (205)680-8139		
	Email Address: quickc@jccal.org			
	Date: May 10, 2013			
REVIEWED BY:	Daniel White, P.E., ESD Engineer			
	Consulting Engineer			
	Telephone #: (205)214-8610	Fax #: (205)325-5981		
	Date: May 8, 2013			

MWPP Annual Report Information Source List

The following information will be needed to complete the compliance maintenance report that covers the calendar year of 2012 (due May 31, 2013).

- Part 1 A. The average plant influent flow for each month (million gallons per day/MGD) during the year.
 - B. The average plant influent BOD (CBOD) for each month (mg/l and lb/day) in the year.
 - C. The plant's average design flow (MGD) and design BOD loading (lbs/day).
- Part 2 A. The monthly average permit and DMR effluent concentration for BOD (CBOD), TSS, NH3-N, and/or TKN in mg/l for the year
 - B. The monthly average effluent limits and DMR loading for BOD, TSS, NH3-N, and/or TKN in lbs/day for the year
- Part 3 The age of the treatment plant defined as the number of years since the last major reconstruction to increase the organic or hydraulic capacity of the plant. The last calendar year minus the year the new construction was brought on-line.
- Part 4 Bypass and overflow information. This is the number of bypass or overflow events of untreated wastewater due to heavy rain or equipment failure whether intentional or inadvertent from all collection systems tributary to the treatment facility.
- Part 5 A. Describe the characteristics and quantity of sludge generated.
 - B. If sludge is landspread, how many months of sludge storage does the plant have? This should include on-site and off-site storage from the treatment plant. The digestor capacity may be used in the calculation.
- Part 6 A. Sludge Disposal Method
 - B. The number of approved land disposal sites for sludge available, and how many months or years these disposal sites will these be available for use.
- Part 7 The number of sewer extensions installed in the community last year--the design population, design flow, and design BOD for each sewer extension.
- Part 8 Operator Certification
- Part 9 Financial Status
- Part 10 Subjective Evaluation
- Part 11 Summary Sheet

State of Alabama MWPP Annual Report Department of Environmental Management

Instructions to the Operator-in-Charge

- 1. Complete all sections of the MWPP Report to the best of your ability.
- 2. Parts 1 through 8 contain questions for which points will be generated. These points are intended to communicate to the Department and the governing body or owner the actions necessary to prevent effluent violations. Enter the point totals from Parts 1 through 8 on Part 11: Summary Sheet.
- 3. Add the point totals on Part 11: Summary Sheet.
- 4. Submit the MWPP Report to the governing body and the consulting engineer and owner for review and approval.
- 5. The governing body should pass a resolution which contains the following points:
 - a. The resolution should acknowledge the governing body or owner has reviewed the MWPP Report.
 - b. The resolution should indicate what actions will be taken to prevent effluent violations.
 - c. The resolution should provide any other information the governing body or owner deems appropriate.
- 6. The MWPP Report and the resolution must be submitted by May 31st to Municipal Section, Water Division, ADEM, P.O. Box 301463, Montgomery, AL 36130-1463.

Facility	Name:	Warrior WWTF

Part 1: Influent Loading/Flows

A. List the average monthly volumetric flows and BOD₅ (CBOD₅) loadings received at your facility during the last calendar year.

<u>Month</u>	Column 1 Average Monthly Flowrate (MGD)	Column 2 Average Monthly BOD ₅ (CBOD ₅) Concentration (mg/l)	Column 3 Average Loading BOD ₅ (CBOD ₅) (lbs/day**)
January	0.11	230.0	211
February	0.11	173.8	156
March	0.12	230.0	200
April	0.09	260.0	220
May	0.09	313.0	232
June	0.08	358.8	225
July	0.06	367.8	196
August	0.09	272.2	213
September	0.09	282.5	233
October	0.07	236.4	144
November	0.06	308.8	170
December	0.09	220.6	189
Annual Avg.	0.09	271.2	199.1

^{**}As reported on NPDES Discharge Monitoring Reports (DMRs) and as required by EPA's NPDES Self-Monitoring System, User Guide, March 1985.

B. List the average design flow and average design BOD₅ loading for the facility below. If you are not aware of these design quantities, contact your consulting engineer or the Alabama Department of Environmental Management.

	Average Design Flow	Average Design BOD ₅ Loading (lbs/day)
Design Criteria	.20	475.0
90% of the Design Criteria	.18	427.5

C. How many times did the monthly flow (Column 1) to the WWTP exceed 90% of design flow?

Output

Outp

0 - 4 = 0 points 5 or more = 5 points

D. How many times did the monthly flow (Column 1) to the WWTP exceed the design flow?

O(Check the appropriate point total)

0 = 0 points 1 - 2 = 5 points 3 - 4 = 10 points 5 or more = 15 points

E. How many times did the monthly BOD₅ (or CBOD₅)* loading (lbs/day) (Column 3) to the WWTP exceed 90% of the design loading? 0 (Check the appropriate point total)

0-1=0 points 2-4=5 points 5 or more =10 points

F. How many times did the monthly BOD₅ (or CBOD₅)* loading (lbs/day) (Column 3) to the WWTP exceed the design loading? 0 (Check the appropriate point total)

0 = 0 points 1 = 10 points 2 = 20 points 3 = 30 points 4 = 40 points 5 or more = 50 points

G. Enter each point value marked for Cthrough F and enter the sum in the appropriate blank below.

C points = 0

D points = 0

E points = 0

F points = 0

TOTAL POINTS VALUE OR PART 1 0
Enter this value on Part 11: Summary Sheet.

*To obtain equivalent BOD₅ loading for comparison with design loading for those permittees using influent CBOD₅, divide annual average CBOD₅, loading in lbs/day from Part 1, A by 0.7.

Part 2: Effluent Quality/Plant Performance

A. List the monthly average permit limits for the facility in the blanks below and the average monthly effluent DMR BOD₅, (CBOD₅) TSS, NH₃-N and/or TKN concentration produced by the facility during the last calendar year.

(1) NPDES Permit Concentration

Dameit	<u>Months</u>	BOD_5 (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Permit Limit	April-Oct	18	24	1.2	Report
	Nov-March	25	24	2.1	Report

(2) DMR Concentration

<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (mg/l)	TSS (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
1	January	1.37	0.0	0.0	n/a
	February	1.50	0.0	0.0	n/a
	March	3.14	0.5	0.03	n/a
2	April	1.53	0.0	0.0	0.77
	May	2.44	0.3	0.02	0.54
	June	1.75	0.7	0.01	0.74
3	July	1.10	1.2	0.01	0.76
	August	1.10	1.8	0.0	0.13
	September	1.21	3.1	0.02	0.90
4	October	0.42	0.5	0.02	0.95
	November	0.59	0.2	0.0	n/a
	December	0.63	1.1	0.0	n/a
	Annual Avg.	1.40	0.78	.01	0.68

B. List the monthly average permit limit and DMR loadings below.

(1) NPDES Permit Loading

Permit	<u>Months</u>	BOD_5 (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH ₃ -N (lbs/day)	TKN (lbs/day)
Limit	April-Oct	15	20	1.0	Report
	Nov-March	20.8	20	1.7	Report

(2) DMR Loading

<u>Qtr</u>	<u>Month</u>	BOD ₅ (CBOD ₅) (lbs/day)	TSS (lbs/day)	NH3-N (lbs/day)	TKN (lbs/day)
1	January	1.3	0.0	0.00	n/a
	February	1.3	0.0	0.00	n/a
	March	2.7	0.4	0.02	n/a
2	April	1.3	0.0	0.00	0.86
	May	1.8	0.2	0.01	0.43
	June	1.2	0.7	0.00	0.50
3	July	0.7	0.7	0.00	0.34
	August	0.9	1.8	0.00	0.08
	September	1.3	3.5	0.02	0.59
4	October	0.3	0.4	0.01	0.70
	November	0.3	0.1	0.00	n/a
	December	0.6	1.2	0.00	n/a
	Annual Avg.	1.15	0.76	0.01	0.50

C. During the past year did the BOD₅ concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any consecutive quarters? (Check the appropriate point total.)

No =
$$0$$
 points $Yes = 121$ points

٠	
D.	During the past year did the BOD ₅ concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points $Yes = 121$ points
E.	During the past year did the effluent TSS concentration (mg/l) or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)
	No = 0 points Yes = 121 points

F. During the past year did the TSS concentration (mg/l) and/or loading (lbs/day) exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)

No = 0 points Yes = 121 points

G. During the past year did the NH₃-N or TKN concentration (mg/l) and/or loading (lbs/day) exceed the product of 1.4 times the monthly average permit limit during two months of any two consecutive quarters? (Check the appropriate point total.)

No = 0 points Yes = 121 points

H. During the past year did either the NH₃-N or TKN concentration (mg/l) and/or loading (lbs/day), exceed the monthly average permit limit during four months of any two consecutive quarters? (Check the appropriate point total.)

No = $\overline{0}$ points Yes = 121 points

I. Enter each point value checkedfor C through H in the blanks below.

C Points = 0

D Points = 0

E Points = 0

F Points = 0

G Points = 0

H Points = 0

HIGHEST INDIVIDUAL POINT VALUE FOR PART 2 (C-H) 0 (HIGHEST POINT = 121) Enter this value on Part 11: Summary Sheet.

Part	3: Age of the Wastewater Treatment Facility		
			• ;
A.	What year was the wastewater treatment plant const	ructed or last reconstructed?	2006
	Subtract the above answer from the report year to d	etermine age:	
	Age = (Last Calendar year) - (Answer to A)		
	Age $\frac{6}{}$ = (2012) (2006)	_)	
	Enter Age in Part C below.		
B.	Check the type of treatment facility employed.		
		Factor	
	× Mechanical Treatment Plant	2.0	
	Aerated Lagoon	1.5	
	Stabilization Pond	1.0	
	Other (Specify:	1.0	

C. Multiply the factor listed next to the type of the facility your community employs by the age of your facility to determine the total point value for Part 3:

$$\frac{2.0}{\text{(Factor)}}$$
 x $\frac{6.0}{\text{(Age)}}$ = $\frac{12}{\text{TOTAL POINT VALUE FOR PART 3}}$

Enter the above value on Part 11: Summary Sheet. If the total point value exceeds 40, enter 40 on Part 11: Summary Sheet.

Part 4: Bypassing and Overflows

- A. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to heavy rain? 0
- B. How many bypass or overflow events of untreated wastewater occurred in the last year prior to the headworks of the WWTP due to heavy rain? 0_____
- C. How many of the bypass or overflow events listed in Parts A and B have been corrected such that future bypass or overflow events at the same location due to heavy rain are not anticipated? 0
- D. Add together Answers A and B and subtract Answer C from that total.

 A + B C = 0 (Check the appropriate point total.)

 O = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points
- E. How many bypass or overflow events of untreated wastewater occurred in the last year at the WWTP due to equipment failure? (This includes clogged/broken lines or manholes.) 0
- F. How many bypass or overflow events of untreated wastewater occurred in the last year due to equipment failure prior to the headworks of the WWTP? (This includes clogged/broken lines or manholes.) 0_____
- G. How many of the bypass or overflow events listed in Parts E and F have been corrected such that future bypass or overflow events at the same location due to the same equipment failure are not anticipated? 0_____
- H. Add together Answers E and F and subtract Answer G from that total.

 E + F G = 0 (Check the appropriate point total.)

 0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 = 25 points 6 = 30 points 7 = 35 points 8 = 40 points 9 = 45 points 10 = 50 points 11 or more = 100 points
- I. Add point values circled in D and H and enter the total in the blank below.

TOTAL POINT VALUE FOR PART 4 DEnter this value on Part 11: Summary Sheet.

All bypass or overflow events that have occurred in the last year (for any reason) must be individually reported with this MWPP report.

<u>Part</u>	5: Sludge Quantity and Storage				
A.	Please provide information concerning sludge quantity, ch based on available data as requested on the MWPP Sewage	naracteristics Sludge Surv	, and s	storage DEM Fo	practice rm 419
B.	How many months of sludge storage capacity does the variable, either on-site or off-site? (i.e., How many months land spreading or disposing of sludge?) 4 months	wastewater t ths can the f	reatme acility	ent facil operate	ity hav withou
	(Check the appropriate point total.)		_	•	
	Greater than or equal to 4 months	= 0 points	E		
	Less than 4 months, but greater than or equal to 3 months	= 10 points	L		
	Less than 3 months, but greater than or equal to 2 months	= 20 points	I		
	Less than 2 months, but greater than or equal to 1 month	= 30 points	Respond	•	
		60 m a ima	_ []		
	Less than one month AL POINT VALUE FOR PART 5 this value on Part 11: Summary Sheet.	= 50 points			
Enter	AL POINT VALUE FOR PART 5 othis value on Part 11: Summary Sheet.	= 50 points	· [_]		
Enter	AL POINT VALUE FOR PART 5 0	= 50 points	· []		
Enter	AL POINT VALUE FOR PART 5 othis value on Part 11: Summary Sheet.	mation base		vailable	data as
Enter	AL POINT VALUE FOR PART 5 othis value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site infor	mation base orm 419.	d on a	sufficio	
Part (AL POINT VALUE FOR PART 5 o this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site infor requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the access to the same proper land disposal?)	mation base orm 419.	d on a	sufficio	
Part (AL POINT VALUE FOR PART 5 or this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site infor requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the access to more months = 0 points [7]	mation base orm 419.	d on a	sufficio	
Part (AL POINT VALUE FOR PART 5 or this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For How many months or years does the facility have accessed disposal sites to provide proper land disposal? (Check the accessed or more months) = 0 points	mation base orm 419.	d on a	sufficio	
Part (AL POINT VALUE FOR PART 5 or this value on Part 11: Summary Sheet. S: Sludge Disposal Practices and Sites Please provide the sludge disposal practices and site information requested on the MWPP Sewage Sludge Survey, ADEM For the How many months or years does the facility have access the disposal sites to provide proper land disposal? (Check the access to the facility have access to the fac	mation base orm 419.	d on a	sufficio	

1ty Name: Warnor WW IP 7: New Development			·	
Are there any major new calendar year or anticipate the sewage system could s	ed in the next 2-3 yea	rs such that eith	er flow or BOI	O ₅ loadings to
Design Population: Equivalent (PE)	Design Flow:	MGD	Design BOD ₅ :	lbs/day
List industrial and/or resign	· •			
	··			
Will the additional loading No = 0 points	Yes = 121 points blank below. ART 7 0 (higher	check the appro		1.)
: Operator Certification	C. C. L.	ADEN		
Do both the plant operator Code; Division 10, Operator	and collection system or Certification Program	staffing comply	with ADEM Ac	lministrative total.)
Yes = 0 points	No = $\frac{121}{120}$ points			
L POINT VALUE FOR PAthis value on Part 11: Summ		hest point total =	= 121)	

	9: Financial Status
•	Are User-Charge Revenues sufficient to cover operation and maintenance expenses how are O&M costs being financed? <u>Include user charge rates</u> .
	Yes, user charge rates are based on a uniform volume charge per 100 cubic feet of 85% of meter
	consumption for single family residence.
	Residential Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Industrial Minimum \$2.00 Plus rate \$9.89 /1,000 gal.
	Monthly residential rate based on 6,000 gallons usage \$_50.45
<u>Ple</u>	ase complete the above information based on your user charge rates for the report yea
ay	attach a sample water and sewer bill for clarity.
	What financial resources are available to pay for the wastewater improvements reconstruction needs?
	Approximately \$20,300,000 is currently available to fund capital improvements.
	Approximately \$20,300,000 is currently available to fund capital improvements.
	Approximately \$20,300,000 is currently available to fund capital improvements.
art	Approximately \$20,300,000 is currently available to fund capital improvements. 10: Subjective Evaluation
	10: Subjective Evaluation
	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facilities.
art	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facilities.
	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facilities.
••	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facilities.
••	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facil The physical and structural conditions at the Warrior Plant are in excellent condition.
	10: Subjective Evaluation Describe briefly the physical and structural conditions of the wastewater treatment facil The physical and structural conditions at the Warrior Plant are in excellent condition. Describe the general condition of the sewer system (sewer lines, manholes, lift stations)

Sewer line repair and repl	lacement are continued activ	ties planned for t	ne collection system.	
			,	
			-	
What is the theoretic of the wastewater tre	cal design life of the peatment facility?	olant, and wh	at is the estimate	ed remaining use
See attachment				
		-		
		······································		

What problems, if ar system?	ny, over the last year	have threater	ned treatment or	conveyance witl
None.				
				
		•	-···	·
,				×
s the community pre	esently involved in for	rmal planning	g for treatment fa	cility upgrading
·				
low many days in the system for any reason	he last year were then nother than clogging	e residential of the lateral	backups at any connection? 0	point in the coll
Ooes the plant have a es, describe.	a written plan for pre	ventive main	tenance on majo	r equipment iten
Yes, O&M manuals for all e	equipment are on site. We red	cord all lubrication	and repairs in the plan	nts computer program

Warrior WWTP (MWPP 2012)

Part 10.D

EPA's 2002 Clean Water and Drinking Water Infrastructure Gap Analysis Report estimates the useful life of treatment plant and pump station structures at 50 years and associated mechanical and electrical process equipment between 15 and 25 years. Calculated remaining useful life of the structures = 50 – age of facility. Calculated remaining useful life of the equipment = 25 – age of equipment.

•	Does this preventive maintenance program depict frequency of intervals, types of lubrication, and other preventive maintenance tasks necessary for each piece of equipment? (Check the appropriate response.) Yes No
•	Are these preventive maintenance tasks, as well as equipment problems, being recorded and filed so future maintenance problems can be assessed properly? (Check the appropriate response.) Yes No
ζ.	Describe any major repairs or mechanical equipment replacement made in the last year and include the approximate cost for those repairs. Do not include major treatment plant construction or upgrading programs.
	none
	<u> </u>
	List any additional comments. (Attach additional sheets if necessary.)
•	List any additional comments. (Attach additional sheets in necessary.)
	The County entered into an agreement with Hazen and Sawyer, P.C. on February 14, 2012for the development of a
	comprehensive Collection System Asset Management Program. The goal of the Program is to develop and provide
	tools, technologies, and procedures that will empower and enable the County to better manage the sanitary sewer
	collection system. The developed program will establish a comprehensive asset management system with processes
	and procedures to identify and prioritize future collection system capital and operating replacement and maintenance
	requirements. The Program is an extension and improvement to the current MOM. The Program's objectives are
	focused on achieving the MOM goals of continual refinement and continuous performance improvement.

Facility Name:	
Part 11: Summary Sheet	
1. Enter in the values from Parts left column to determine the N the previous calendar year.	1 through 8 in the left column below. Add the numbers in the MWPP Report point total the wastewater system generated for
Actual Values	Maximum Possible
Part 1 o points	80 points
Part 2 o points	121 points
Part 3 12 points	40 points
Part 4 o points	200 points
Part 5 o points	50 points
Part 6 o points	50 points
Part 7 o points	121 points
Part 8 o points	121 points
Total 12 points	783 points
2. Check the facility type that best d	describes the plant's treatment and disposal of wastewater.
✓ Mechanical plant with surface v	water discharge
	pond with surface water discharge
Mechanical plant using land dis	
Aerated Lagoon or stabilization	pond using land disposal of liquid wastes
\checkmark 0 - 70 pts. Actions a	e action needed to address problems identified in the report. s Appropriate* ental Recommendation Range*
121 – 783 Municipa	lity Action Range*
*Other actions may be required by N	PDES outside the scope of this report.
4. Complete the Municipal Water Pe	collution Prevention Resolution Form, ADEM Form 418.

5.	In Question 1, do any of the actual point values in the left column equal the maximum possible points in the right column? (Check the appropriate response) Yes No
	If yes, provide a written explanation for this situation in the space below.

Warrior Wastewater Treatment Plant <u>ATTACHMENT 2</u> – Raw Sewage Bypass and <u>SUMMARY</u>







Summary of Unpermitted Discharges - Warrior

January 01, 2012 through December 31, 2012

NOTE: Quantities shown in the column "Est. Volume" are ESTIMATED ONLY. These estimates are the County's best determination of the discharge volume, based upon site-determinable information and accepted estimating methods. However, such estimates are subject to a high number of variables which are completely beyond the County's control and which can have a significant effect upon the calculated amount. Therefore, these estimates are to be used for relative comparison only, not as actual discharge volumes.

Reported Location Event No.

Notes:

Collection System

Est. Vol. (gal) Ultimate Destination

Source

Weather

Cause

Action Taken

Reporting

Title

No Unpermitted Discharges for 2012

WARRIOR BASIN 2012 DISCHARGES



NOTE: OVERFLOWS SHOWN ARE OVER 10,000 GALLONS NONE REPORTED FOR WARRIOR BASIN.

JEFFERSON COUNTY ENVIRONMENTAL SERVICES PLOTTED: 3-11-13

Warrior Creek Wastewater Treatment Plant <u>ATTACHMENT 3</u> – MWPP Sewage Sludge <u>SURVEY</u>



MWPP SEWAGE SLUDGE SURVEY

F	acility Background Information:				
1.	. Facility Information		Perm	nit Number:	AL0050881
	Name:	Warrior WWTP		•	
	Street Address:	700 Blackburn D	rive		
	County:	Jefferson			
2.	Facility Contact				
	Name:	Chad Quick			•
	Title:	Plant Supervisor	ř .		
	Telephone:	(205) 681-7971			
	Permittee Name:	Jefferson Count	y Commissi	on- Turkey Cree	k WWTP
	Mailing Address:	Suite A-300, 716			
	-	Birmingham AL		•	
Fá	acility Flow Information				
	Facility Wastewater Treatment Cap	acity			
١.	Avg. Daily Flow for 2012:	acity	0.09	MGD	
	Facility Design Capacity:		0.2	MGD	
					
2.	Estimated Septage Quantity Handle	•		•	•
	Average Domestic Septa		N/A	gallons pe	
	Average Commercial Sep	itage:	N/A	gallons pe	rmonth
3.	Method of Septage Processing		•		
	☐ Mixed with Influent W	astewater for Trea	itment		
	Mixed with Sewage S	ludge	•	**	
	X		I/A		
1	Estimated Percentage Contributing	Mastewater Flow	•		
4.	Residential: 95	%			
	Industrial: 0	- ⁷⁶ - %			
	Other: 5	-	cribe:	Commerci	ial
	Guioi.	, n Des		Commerci	·
5.	List type of wastewater treatment pr	ocess(es) utilized :	at this facility:	;	
	Bar Screening, Grit Ren				
	Clarification, Traveling	3ridge Sand Filtra	ation, UV Dis	sinfection, Step	Aeration
6.	Estimated sewage sludge wasting ra	ate at this facility			lb/day dry weight
٠.		no at the radiity.	or ——	1509	gallons per day
			ÿ		. Sanorio por day
7.	Estimated untreated sludge received	i from off site:		N/A	lb/day dry weight
			or		gallons per day
8.	Estimated percent solids of combine	ed sewage sludge i	orior to treatn	nent:	1.8 %

ADEM FORM 419 8/02

Aerobic Digestion, Drying Be	ds (Air Dry	ring)		ludge Quanti ted pounds p	-
			· · · · · · · · · · · · · · · · · · ·		
Estimate the total volume of sludge	generated:		(dry L	13.2 J.S. tons per	vear)
ludge Disposal Methods			()		, ,
Which of the following describes the	current met	hod of sewa	ge sludge disposal for th	is facility:	
	A	Current F		-	Practices
	Approved Yes	by ADEM No	Quantity		by ADEM
a. X Land Application, Bulk Shipped	<u>168</u>	<u>NO</u>	(dry U.S. tons/year)	<u>Yes</u>	<u>No</u>
X Agriculture	Х	0		. п	0
☐ Forest		. 0		0	_
Public Contact	_	_	•		0
☐ Lawn/Home Garden		0			. 0
b. 🏿 Land Application,					
Bagged/Other Container					
Agriculture		0			
☐ Forest					
☐ Public Contact		0			
☐ Lawn/Home Garden	1				
c. Incineration	0		<u> </u>	. 0	П
d. 🛘 Subtitle D Landfill				÷	
(Disposal Only)					
e. 🛘 Lined Treatment Lagoon	_		•		_
or Stabilization Pond	<u> </u>	. 0		0	
f. I Unlined Lagoon or Stabilization Pond	п	0		0	0
g. I Other (Please Describe)	0	ם		0	<u> </u>
			-		
		****	-		

ADEM FORM 419 8/02

Pollutant Concentrations

 Enter the total concentrations of 	of the following an	alvtes usina existina da	ata. Do not enter TCLP results.

Concentration	Sample	Sample	Detection Level of
(mg/kg or ppm)	Туре	Date	Analysis
<pql< td=""><td>Grab</td><td>*</td><td>11.0</td></pql<>	Grab	*	11.0
<pql< td=""><td>Grab</td><td>*</td><td>8.0</td></pql<>	Grab	*	8.0
76	Grab	*	8.0
413	Grab	*	8.0
21	Grab	*	15.0
3	Grab	*	0.6
4.8	Grab	**	5.0
41	Grab	*	6.0
<pql< td=""><td>Grab</td><td>. *</td><td>15.0</td></pql<>	Grab	. *	15.0
688	Grab	*	18.0
2171431431177277	N/A	N/A	N/A
*************	N/A	N/A	N/A
28,100	Grab	*	1.8
	(mg/kg or ppm) <pql 21="" 3="" 4.8="" 41="" 413="" 688<="" 76="" <pql="" td=""><td>(mg/kg or ppm) Type <pql< td=""> Grab <pql< td=""> Grab 76 Grab 413 Grab 21 Grab 3 Grab 4.8 Grab 41 Grab <pql< td=""> Grab 688 Grab N/A N/A</pql<></pql<></pql<></td><td>(mg/kg or ppm) Type Date <pql< td=""> Grab * <pql< td=""> Grab * 76 Grab * 413 Grab * 21 Grab * 3 Grab * 4.8 Grab * 41 Grab * <pql< td=""> Grab * 688 Grab * N/A N/A</pql<></pql<></pql<></td></pql>	(mg/kg or ppm) Type <pql< td=""> Grab <pql< td=""> Grab 76 Grab 413 Grab 21 Grab 3 Grab 4.8 Grab 41 Grab <pql< td=""> Grab 688 Grab N/A N/A</pql<></pql<></pql<>	(mg/kg or ppm) Type Date <pql< td=""> Grab * <pql< td=""> Grab * 76 Grab * 413 Grab * 21 Grab * 3 Grab * 4.8 Grab * 41 Grab * <pql< td=""> Grab * 688 Grab * N/A N/A</pql<></pql<></pql<>

					•	
2. Enter t	he estimated o	r determined perce	ent solids of the	sewage sludge	when sampled	for the above
analysis:	77	%				

Treatment Provided for Sewage Sludge at the Facility

1.	Which class of pathogen reduction does the sewage sludge meet at the facility?	(As defined in
40	CFR Part 503)	
	Class A	

Class A		
Alternative A1 - Time and Temper	ature	
Alternative A2 - Alkaline Treatmen	t ·	
Alternative A3 - Analysis and Oper	ration	
Alternative A4 - Analysis Only		
Alternative A5 - Processes to Furti	ner Reduce Pathogens (PFRP)	
I Heat Drying	Thermophilic Aerobic Digestion	Heat Treatment
Pasteurization	Gamma Ray Irradiation	Beta Ray Irradiation
I Composting		
Alternative A6 - PFRP Equivalent		
_		
O! D		

XICIASS E

X Alternative B1 - Fecal Coliform Count

Alternative B2 - Process to Significantly Reduce Pathogens (PSRP)

Aerobic Digestion

Áir Drying Lime Stabilization

Anaerobic Digestion

CompostingAlternative B3 - PSRP Equivalent

Neither or Unknown

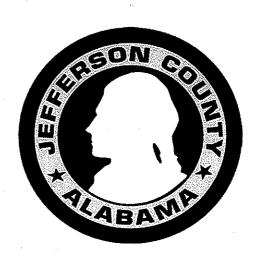
ADEM FORM 419 8/02 Page 3 of 4

Vector Attraction Control
Option 1 - Minimum 38% Reduction in Volatile Solids
Option 2 - Anaerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
Option 3 - Aerobic Processes, with Bench-Scale Demonstration of Volatile Solids Reduction
Option 4 - Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sludge
Option 5 - Aerobic Processes plus Elevated Temperature
Option 6 - Raised pH to 12 and Retained at 11.5
Option 7 - 75% Solids with no Unstabilized Solids
☐ Option 8 - 90% Solids with Unstabilized Solids
Option 9 - Injection Below Land Surface
x Option 10 - Incorporation into Soil within 6 or 8 Hours
Option 11 Covering Active Sewage Sludge Unit Daily
None of the Above
Groundwater Monitoring
1. If disposal practice is surface disposal or land application, is groundwater monitoring required or performed
at the site?
Yes (If yes, please submit a copy of the groundwater monitoring reports along with this
x No survey. Also please provide the approximate depth to groundwater and the
groundwater monitoring procedures used to obtain the data.)
Land Application of Sewage Sludge
Answer the following questions if sewage sludge is applied to land.
1. If sewage sludge is land applied in bulk form, what type of crop or other vegetation is grown on this site?
Tifton Bermuda Grass, Ryegrass
Thron Demidda Orass, Nyograss
2. If sewage sludge is land applied in bulk form, what is the nitrogen requirement for this crop or vegetation?
600lb/acre/year (Reclamation Site)
3. If sewage sludge is land applied in bulk form, briefly describe the nature of any complaints filed from
neighbors?
No complaints have been received
tio compositio data again togettas

Note: Permittees that submitted the "Annual Report Review Form" for sludge to the EPA may submit a copy with the MWPP in lieu of this Attachment.

ADEM FORM 419 8/02 Page 4 of 4

Warrior Wastewater Treatment Plant <u>ATTACHMENT 4</u> – Plant and Collection System Personnel Inventory



FACILITY NAME:	Warrior	r WWTP			. '	_ PLAN	NT GRADE:			
PERMIT NUMBER:	AL0050	881				_				
PLANT SUPERINTEN	DENT:	Chad Qu	ick				TEL.#	(205)681-7971		
SYSTEM MANAGER:		David De	nard				TEL.#	(205)326-8232		
PLANT OPERATORS	:	4	GRA	DE OR	•					
N	AME			E STATUS	0	PERATOR NO.	EXP	. DATE		
Eric Pond				IV		C003706	2/28	/2016		
Mark Lee				IV		C000389	8/31	/2013		
Chad Quick		-		IV		C003616	2/28	/2015		
Pat McCarty	•	٠		IV		C003224	8/31	/2014		
Jefferey Gillian				IV		C000447	11/3	0/2015		
Adam Moore	·			IV .		C006513	11/1	/2014		
						"				
								· .		
COLLECTION SYSTE					•		<u>F</u>			
COLLECTION STSTE	WOPERAT	ORS.	1	1			ı			
								•		
							•	· · ·		
		MAN H	RS./WK	NUMBER 3						
MANAGEMENT/SUPE	RVISOR			minimum l						
	RVISOR	12					•			
	ERVISOR GRADE I-	12				•				
	GRADE I-	12 ////////////////////////////////////				AVERAGE NUME	BER OF EMPLOY	EES PER SHIFT:		
	GRADE I-I GRADE GRADE	12 C C								
	GRADE I-I GRADE GRADE GRADE I	12 C C		Δ		1ST		EES PER SHIFT:		
OPERATOR(S):	GRADE I-GRADE GRADE GRADE I GRADE I	12 C		4		1ST				
MANAGEMENT/SUPE OPERATOR(S): DESIGNATED TRAINI LABORATORY	GRADE I-GRADE GRADE GRADE I GRADE I	12 C C		4		1ST				
OPERATOR(S): DESIGNATED TRAINI	GRADE I-GRADE GRADE GRADE I GRADE I	12 C C		4		1ST				
OPERATOR(S): DESIGNATED TRAINI LABORATORY MAINTENANCE	GRADE I- GRADE GRADE I GRADE I' EE(S)	12 C C		4	·	1ST				
OPERATOR(S): DESIGNATED TRAINI LABORATORY MAINTENANCE	GRADE I- GRADE GRADE I GRADE I' EE(S)	12 C C		4		1ST				
OPERATOR(S): DESIGNATED TRAINI LABORATORY MAINTENANCE OTHER PLANT WORK OPERATOR SHIFTS I	GRADE I-GRADE IGRADE IG	C C C C C C C C C C C C C C C C C C C	20 ACH DAY:			1ST				
DESIGNATED TRAINI LABORATORY MAINTENANCE OTHER PLANT WORK OPERATOR SHIFTS I	GRADE I-GRADE IGRADE IG	C C C C C C C C C C C C C C C C C C C	20 ACH DAY: WED	THURS	FRI	1ST				
DESIGNATED TRAINI LABORATORY MAINTENANCE OTHER PLANT WORK OPERATOR SHIFTS I SUN 1ST X	GRADE I-GRADE IGRADE IG	C C C C C C C C C C C C C C C C C C C	20 ACH DAY:		FRI X	1ST				
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2. DOES COLLECTION SYSTEM OPERATOR STAFFING COMPLY WITH DIVISION 10 OF ADEM ADMINISTRATIVE CODE?

ADEM FORM 441 8/02

PLANT AND COLLECTION SYSTEM PERSONNEL INVENTORY

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							•	CL.# (2)	<u>)5) 325-5</u>
PLANT OPERATORS:									
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	AME		TRAIN	EE STATUS	OPi	ERATOR NO). I	EXP. DATE	J
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Don Goodwin		·	i(c)		C005423			6/30/2	
Lavon Evans			I(c)		C004631			12/31/2	
Brian Rohling			l(c)		C005418			6/30/2	
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2012 Annual Biosolids Report

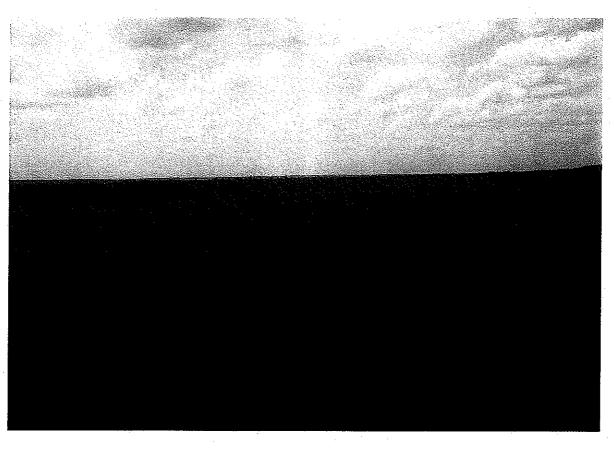
JEFFERSON COUNTY COMMISSION ENVIRONMENTAL SERVICES DEPARTMENT

JEFFERSON COUNTY, ALABAMA



BIOSOLIDS MANAGEMENT PROGRAM

Jefferson County Land Reclamation Program



REPORT PREPARED BY:

JEFFERSON COUNTY ENVIRONMENTAL SERVICES DEPARTMENT



Certification Statement

Executive Summary

Project Information

Jefferson County WWTPs
Flat Top/Bessie Mines Land
Reclamation Site
Beltona Land Reclamation Site

Biosolids Analysis

Test Methodology Analysis Results Sample Specimen Collection Sheets

Agronomic Rate Calculations

Design Considerations Calculations

Appendix A

Agronomic Rate Justification Letter
"Worksheet for Calculating Biosolids
Application Rates in Agriculture"

Appendix B

Flat Top/Bessie Mine VAR Summary Beltona VAR Summary

Appendix C

- 1 Jefferson County Map
- 2 Flat Top/Bessie Mines Land Reclamation Site
- 3 Beltona Land Reclamation Site

2012 EPA ANNUAL BIOSOLIDS REPORT

JEFFERSON COUNTY ENVIRONMENTAL SERVICES DEPARTMENT BIRMINGHAM, ALABAMA

Enclosed is the 2012 Annual Biosolids Monitoring Report for the Jefferson County Environmental Services' Biosolids Land Reclamation Program. This report is respectfully submitted to the Environmental Protection Agency (EPA) Region IV in accordance with the requirements of 40 CFR Part 503.

Information provided in this report includes:

- 1. Certification Statement for management practices, site restrictions, pathogen requirement, and vector attraction reduction requirements.
- 2. Executive Summary.
- 3. Project information for the Biosolids Management Program, including Jefferson County Wastewater Treatment Facility information and land application site data.
- 4. Biosolids testing methodology and analysis results, including sample collection forms.
- 5. Agronomic calculations, rate justification letter and sample worksheet for calculating agronomic rates.
- Vector Attraction Reduction Statistics.
- 7. Land application site maps.

SECTION 1 CERTIFICATION STATEMENT

CERTIFICATION STATEMENT FOR THE PREPARER and APPLIER OF BULK SEWAGE BIOSOLIDS

I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14, the site restrictions in §503.32 (b)(5), the Class B pathogen requirements in §503.32(b), and the vector attraction reduction requirements in §503.33(b)(6) or (10)(i) was prepared for each site on which bulk sewage sludge is applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Signature	 ate

<u>David Denard – Director, Jefferson County Environmental Services Department</u> Printed Name and Position

SECTION 2 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Jefferson County Environmental Services Department utilizes land application as the method of disposal for the biosolids currently produced by its wastewater treatment facilities. There are currently nine (9) wastewater treatment facilities operated by the Environmental Services Department. During 2012, these facilities treated an average daily flow of 104 MGD of wastewater and produced 11,340 dry tons of biosolids that were sent for land application. Seven (7) of the County's wastewater treatment facilities are Class I Publicly-Owned Treatment Works (POTWs), and therefore subject to the 40 CFR Part 503 reporting regulations.

Throughout 2012, the biosolids produced by Jefferson County's wastewater treatment facilities were land applied at two (2) former strip mine sites. Jefferson County is assisting the property owner, the United Land Corporation, in the reclamation of both sites through the land application of biosolids.

The Flat Top/Bessie Mines Land Reclamation Site (Flat Top) is located in northwestern Jefferson County and is approximately 4,670 acres total in size, with approximately 2,700 acres being disturbed through previous mining activities. Biosolids from eight (8) wastewater treatment facilities were applied at this site during 2012.

The Beltona Land Reclamation Site, located in northern Jefferson County, is approximately 1,000 acres in size, with about one-third of the site being previously disturbed through mining activities. Biosolids from two (2) wastewater treatment facilities were applied at Beltona during 2012.

Applicable site restrictions, general requirements, and management practices have been met at both Land Reclamation Sites. Biosolids were applied to both sites using the "Pollutant Concentration" (PC) option. Pathogen and vector attraction reduction requirements and all required site restrictions for Class "B" biosolids were also met.

SECTION 3 PROJECT INFORMATION

JEFFERSON COUNTY

WASTEWATER TREATMENT FACILITIES

System:

Jefferson County Commission/Environmental Services Department

716 Richard Arrington, Jr. Boulevard North

Birmingham, AL 35203

Summary:

The Jefferson County Environmental Services Department currently operates nine (9) wastewater treatment facilities. During 2012, these facilities treated an average daily flow of 104 MGD of wastewater and produced 11,340 dry (English) tons of biosolids that were land applied. Seven (7) of the County's wastewater treatment facilities are Class I POTWs, and therefore subject to the 40 CFR Part 503 reporting regulations.

Clas	ss I POTWs:	Dry Tons of E	Biosolids Land Applied
1.	Cahaba River Wastewater Treatment Plant NPDES Permit No. AL0023027		1,336
2.	Five Mile Creek Wastewater Treatment Plant NPDES Permit No. AL0026913		1,522
3.	Leeds Wastewater Treatment Plant NPDES Permit No. AL0022297		255
4.	Trussville Wastewater Treatment Plant NPDES Permit No. AL0022934	·	531
5.	Turkey Creek Wastewater Treatment Plant NPDES Permit No. AL0022936		219
6.	Valley Creek Wastewater Treatment Plant NPDES Permit No. AL0023655		4,196
7.	Village Creek Wastewater Treatment Plant NPDES Permit No. AL0023647		3,268
Non	-Class I POTWs (<1.0 MGD):		
1.	Prudes Creek Wastewater Treatment Plant NPDES Permit No. AL0056120		0
2.	Warrior Wastewater Treatment Plant NPDES Permit No. AL0050881		13
		TOTAL:	11,340 Dry Tons

Reporting Requirements:

Based on the quantity of biosolids land applied during 2012, the required frequency of monitoring was six (6) times per year. However, Jefferson County typically performs biosolids monitoring on a monthly basis (twelve times per year).

Pathogen Requirements:

Class "B" pathogen requirements were met through Alternative 1: The Monitoring of Fecal Coliform [503.32(b)(2)]. The geometric mean fecal coliform density per gram of dry biosolids was less than 2 million colony-forming units for each sampling event (see Biosolids Analysis Results).

Vector Attraction Reduction Summary:

The Valley Creek and Village Creek wastewater treatment facilities primarily utilize lime stabilization for vector attraction reduction of their biosolids. During 2012, approximately 57% of the County's land applied biosolids were stabilized as described in Option 6: Addition of Alkaline Material [503.33(b)(6)]. When biosolids from these treatment facilities are land applied at the Flat Top/Bessie Mines application site, they are incorporated into the soil within six (6) hours of application.

The biosolids from the remaining wastewater treatment facilities are land applied and incorporated into the soil within six (6) hours of application as described in Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]. This method of vector attraction reduction applied to approximately 43% of the County's total biosolids during 2012.

FLAT TOP/BESSIE MINES LAND RECLAMATION SITE

System:

Jefferson County Commission/Environmental Services Department

716 Richard Arrington, Jr. Boulevard North

Birmingham, AL 35203

Reporting Period:

January 1, 2012 to December 31, 2012

Site Address:

5201 Flat Top Road, Graysville, AL 35073

Site Description:

The Flat Top Land Reclamation Site is a former strip mine site, 4,670 acres total in size, with approximately 2,700 acres being previously disturbed through mining activities. Jefferson County is assisting the property owner in the reclamation of this site through the land application of biosolids.

There is currently no significant soil mass present at this site for growing vegetation and, in order to build soil mass, biosolids are being applied at a rate of 600 lb Nitrogen/Ac/year. When soil mass becomes adequate to sustain crop growth, Tifton Bermuda and Rye grass will be planted for nitrogen uptake.

Source of Biosolids:

During 2012, biosolids from eight wastewater treatment facilities were land applied at this site with no biosolids being hauled from the Prudes wastewater treatment facility.

Quantity:

A total of 8,319 dry (English) tons of biosolids were applied at the Flat Top Land Reclamation Site during 2012. Biosolids were applied to Plot 3 of the site (see Figure 2). Of the 8,319 total dry tons applied, 4,855 tons were not lime stabilized.

Pollutant Limits:

Biosolids were applied to this site using the "Pollutant Concentration" (PC) option (see 2012 Biosolids Analysis Results). In order to be representative of insitu conditions, monthly biosolids samples were taken from each treatment facility and then blended according to each facility's disposal ratio. Biosolids testing was then performed on this "blended" sample.

Pathogen Requirements:

Class "B" pathogen requirements were met through Alternative 1: The Monitoring of Fecal Coliform [503.32(b)(2)]. The geometric mean fecal coliform

density per gram of dry biosolids was less than 2 million colony-forming units for each sampling event (see 2012 Biosolids Analysis Results).

Vector Attraction Reduction Requirements:

Throughout 2012, the Valley Creek and Village Creek wastewater treatment facilities utilized lime stabilization for vector attraction reduction in the majority of their biosolids, as described in Option 6: Addition of Alkaline Material [503.33(b)(6)]. To satisfy the requirements of Option 6, sufficient lime was added to the biosolids to raise the pH to at least 12 for 2 hours and at least 11.5 for an additional 22 hours, without the addition of more lime. When biosolids from these treatment facilities are land applied at the Flat Top/Bessie Mines Reclamation Site, they are typically incorporated into the soil within six (6) hours of application as well.

For biosolids received at the Land Reclamation Site from the remaining treatment plants and the portion of biosolids from Valley and Village wastewater treatment facilities that did not receive lime stabilization, the method of vector attraction reduction used was Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]. These biosolids were land applied and incorporated into the soil within six (6) hours of application on the land.

Management Practices and Site Restrictions:

All applicable management practices stated in 503.14 were met at the site, including a minimum 100 ft. buffer zone around waters of the United States.

All applicable site restrictions stated in 503.32(b)(5) for Class "B" biosolids were also met. The Flat Top/Bessie Mines Land Reclamation site is in a remote area of Jefferson County and is located on private property; therefore there is no public access to the site.

BELTONA LAND RECLAMATION SITE

System:

Jefferson County Commission/Environmental Services Department

716 Richard Arrington, Jr. Boulevard North

Birmingham, AL 35203

Reporting Period:

January 1, 2012 to December 31, 2012

Site Address:

401-B Beltona Road, Warrior, AL 35180

Site Description:

The Beltona Land Reclamation Site, which is approximately 1,000 acres in size, is a former strip mine site located in northern Jefferson County. About one-third of the site has been utilized for biosolids land application, with plot sizes ranging from 3.0 acres to 20 acres. Jefferson County is assisting the property owner in the reclamation of this site through the land application of biosolids. Presently, Tifton Bermuda and Winter Rye grasses are grown at Beltona and are harvested several times a year as hay.

Source of Biosolids:

During 2012, biosolids from the Valley Creek and Village Creek wastewater treatment facilities were land applied at this site.

Quantity:

3,021 dry (English) tons of biosolids were land applied at the Beltona Land Reclamation Site during 2012.

Pollutant Limits:

Biosolids from two (2) of the County's wastewater treatment facilities were applied to this site using the "Pollutant Concentration" (PC) option. Biosolids testing was performed on samples from these facilities at a frequency that meets or exceeds the minimum monitoring frequency requirement for each facility (see 2012 Biosolids Analysis Results).

Pathogen Requirements:

Class "B" pathogen requirements were met through Alternative 1: The Monitoring of Fecal Coliform [503.32(b)(2)]. The geometric mean fecal coliform density per gram of dry biosolids was less than 2 million colony-forming units for each sampling event (see 2012 Biosolids Analysis Results).

Vector Attraction Reduction Requirements:

Throughout 2012, the Valley Creek and Village Creek wastewater treatment facilities utilized lime stabilization for vector attraction reduction of their biosolids, as described in Option 6: Addition of Alkaline Material [503.33(b)(6)]. To satisfy the requirements of Option 6, sufficient lime was added to the biosolids to raise the pH to at least 12 for 2 hours and at least 11.5 for an additional 22 hours, without the addition of more lime. Lime stabilized biosolids were then surface-applied at the Beltona Land Reclamation Site.

Management Practices and Site Restrictions:

All applicable management practices stated in 503.14 were met at the site, including a minimum 100 ft. buffer zone around waters of the United States.

All applicable site restrictions stated in 503.32(b)(5) for Class "B" biosolids were also met. The Beltona Land Reclamation Site is in a remote area of Jefferson County and is located on private property; therefore there is no public access to the site.

SECTION 4 BIOSOLIDS ANALYSIS

TEST METHODS FOR BIOSOLIDS ANALYSIS

Based on the quantity of biosolids land applied at the Flat Top/Bessie Mine Land Reclamation Site during 2012, the required frequency of monitoring was six (6) times per year; however, Jefferson County typically performs biosolids monitoring on a monthly basis (see 2012 Biosolids Analysis Results). Each month, samples were collected from each treatment facility and blended according to each facility's disposal ratio in order to be representative of in-situ conditions. Biosolids testing was then performed on this "blended" sample.

For the Beltona Land Reclamation Site, biosolids samples from the two (2) contributing treatment facilities were collected at a frequency that meets or exceeds the minimum monitoring frequency requirement for each facility (see 2012 Biosolids Analysis Results).

METALS ANALYSIS:

Following is a list of the biosolids sample preparation and test methods used when performing metals testing:

METHODS FOR EVALUATING SOLID WASTE, SW846 METHODS:

Arsenic	3050B, 7060A
Cadmium	3050B, 7130
Chromium	3050B, 7190
Copper	3050B, 7210
Lead	3050B, 7420
Mercury	7471B
Molybdenum	3050B, 7481
Nickel	3050B, 7520
Selenium	3050B, 7740
Zinc	3050B, 7950

FECAL COLIFORM TESTING:

For each sampling event, seven (7) samples were collected and tested according to the procedure outlined in Part 9222D, Standard Methods for the Examination of Water and Wastewater, and Appendix F of EPA's Environmental Regulations and Technology, Control of Pathogens and Vector Attraction in Sewage Sludge. The geometric mean fecal coliform density per gram of dry biosolids was less than 2 million colony-forming units for each sampling event (see 2012 Biosolids Analysis Results). Serial dilutions were prepared in the range of 10¹ through 10⁶, and on some occasions 10⁷, thus enabling coliform colony counts of greater than 20 million.

2012 BIOSOLIDS ANALYSIS RESULTS FLAT TOP/BESSIE MINES LAND RECLAMATION SITE (Blended sample from all facilities)

	As	PO	Çt	Cu	Pb	Hg	Mo	ž	S.	Z	% Moieture	Toon Colifornia
Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mø/kg	CFII/o*
1/24/2012	~PQL	<pql< td=""><td>57</td><td>470</td><td>37</td><td>1.5</td><td><pql< td=""><td>40</td><td>ZOJ></td><td>1.600</td><td>%09</td><td>a ()</td></pql<></td></pql<>	57	470	37	1.5	<pql< td=""><td>40</td><td>ZOJ></td><td>1.600</td><td>%09</td><td>a ()</td></pql<>	40	ZOJ>	1.600	%09	a ()
2/21/2012	ZPQL	<pql< td=""><td>36</td><td>360</td><td>37</td><td>1.4</td><td><pol< td=""><td>23</td><td><pol< td=""><td>820</td><td>%59</td><td>> 0</td></pol<></td></pol<></td></pql<>	36	360	37	1.4	<pol< td=""><td>23</td><td><pol< td=""><td>820</td><td>%59</td><td>> 0</td></pol<></td></pol<>	23	<pol< td=""><td>820</td><td>%59</td><td>> 0</td></pol<>	820	%59	> 0
3/6/2012	~PQL	-₽QL	51	390	33	1.1	^POL	39	-POL	1.400	51%	0
4/3/2012	<pql< td=""><td><pql< td=""><td>34</td><td>1,200</td><td>24</td><td>1.2</td><td>6</td><td>19</td><td>_TOd></td><td>1.100</td><td>52%</td><td>30</td></pql<></td></pql<>	<pql< td=""><td>34</td><td>1,200</td><td>24</td><td>1.2</td><td>6</td><td>19</td><td>_TOd></td><td>1.100</td><td>52%</td><td>30</td></pql<>	34	1,200	24	1.2	6	19	_TOd>	1.100	52%	30
5/8/2012	<pql< td=""><td><pql< td=""><td>100</td><td>1,700</td><td>43</td><td>1.8</td><td>17</td><td>09</td><td>17</td><td>2.100</td><td>58%</td><td>2.200</td></pql<></td></pql<>	<pql< td=""><td>100</td><td>1,700</td><td>43</td><td>1.8</td><td>17</td><td>09</td><td>17</td><td>2.100</td><td>58%</td><td>2.200</td></pql<>	100	1,700	43	1.8	17	09	17	2.100	58%	2.200
6/5/2012	<pql< td=""><td><pql< td=""><td>87</td><td>066</td><td>47</td><td>1.5</td><td>15</td><td>57</td><td>12</td><td>2,100</td><td>54%</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>87</td><td>066</td><td>47</td><td>1.5</td><td>15</td><td>57</td><td>12</td><td>2,100</td><td>54%</td><td>0</td></pql<>	87	066	47	1.5	15	57	12	2,100	54%	0
7/10/2012	<pql< td=""><td><pql< td=""><td>84</td><td>086</td><td>54</td><td>1.3</td><td>18</td><td>62</td><td>-PQL</td><td>2,400</td><td>58%</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>84</td><td>086</td><td>54</td><td>1.3</td><td>18</td><td>62</td><td>-PQL</td><td>2,400</td><td>58%</td><td>0</td></pql<>	84	086	54	1.3	18	62	-PQL	2,400	58%	0
8/7/2012	<pql< td=""><td><pql< td=""><td>0/</td><td>840</td><td>42</td><td>1.6</td><td>14</td><td>52</td><td>ZPQL</td><td>2,000</td><td>54%</td><td>150</td></pql<></td></pql<>	<pql< td=""><td>0/</td><td>840</td><td>42</td><td>1.6</td><td>14</td><td>52</td><td>ZPQL</td><td>2,000</td><td>54%</td><td>150</td></pql<>	0/	840	42	1.6	14	52	ZPQL	2,000	54%	150
9/11/2012	<pql< td=""><td>≺PQL</td><td>91</td><td>890</td><td>50</td><td>1.7</td><td>16</td><td>63</td><td><pql< td=""><td>2,300</td><td>55%</td><td>5</td></pql<></td></pql<>	≺PQL	91	890	50	1.7	16	63	<pql< td=""><td>2,300</td><td>55%</td><td>5</td></pql<>	2,300	55%	5
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11/6/2012	<pql< td=""><td><pql< td=""><td><i>L</i>6</td><td>1,200</td><td>65</td><td>2.1</td><td>17</td><td>74</td><td>16</td><td>2,800</td><td>64%</td><td>25 000</td></pql<></td></pql<>	<pql< td=""><td><i>L</i>6</td><td>1,200</td><td>65</td><td>2.1</td><td>17</td><td>74</td><td>16</td><td>2,800</td><td>64%</td><td>25 000</td></pql<>	<i>L</i> 6	1,200	65	2.1	17	74	16	2,800	64%	25 000
12/4/2012	<pql< td=""><td><pql< td=""><td>69</td><td>066</td><td>57</td><td>1.6</td><td>13</td><td>57</td><td>-PQL</td><td>2,400</td><td>53%</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>69</td><td>066</td><td>57</td><td>1.6</td><td>13</td><td>57</td><td>-PQL</td><td>2,400</td><td>53%</td><td>0</td></pql<>	69	066	57	1.6	13	57	-PQL	2,400	53%	0
Average	<pql< td=""><td><pql< td=""><td>69</td><td>920</td><td>44</td><td>1.5</td><td>H</td><td>50</td><td><₽0L</td><td>1.900</td><td></td><td></td></pql<></td></pql<>	<pql< td=""><td>69</td><td>920</td><td>44</td><td>1.5</td><td>H</td><td>50</td><td><₽0L</td><td>1.900</td><td></td><td></td></pql<>	69	920	44	1.5	H	50	<₽0L	1.900		
Maximum	<pql< td=""><td><pql< td=""><td>100</td><td>1,700</td><td>65</td><td>2.1</td><td>18</td><td>74</td><td>17</td><td>2.800</td><td></td><td></td></pql<></td></pql<>	<pql< td=""><td>100</td><td>1,700</td><td>65</td><td>2.1</td><td>18</td><td>74</td><td>17</td><td>2.800</td><td></td><td></td></pql<>	100	1,700	65	2.1	18	74	17	2.800		
TÒd	11	8.0	8.0	8.0	15	9.0	5.0	6.0	15	18		
EQ/PC Limit ¹	41	39	,	1,500	300	17		420	100	2,800		
Ceiling Limit ²	7.5	85	,	4,300	840	57	75	420	100	7.500		
A 11 11 4 4					- Control of the last of the l		*					

All pollutant concentrations given on a dry-weight basis

PQL = Practical Quantitation Limit

¹ Pollutant Concentration Limits taken from Table 3, Part 503.13

² Ceiling Concentration Limits taken from Table 1, Part 503

* Geometric mean fecal coliform density

Biosolids Land Reclamation Program

BELTONA LAND RECLAMATION SITE 2012 BIOSOLIDS ANALYSIS RESULTS (Valley Creek WWTP)

mg/kg mg/kg <th< th=""><th></th><th>As</th><th>ಶ</th><th>ڻ</th><th>Cu</th><th>Pb</th><th>Hg</th><th>Mo</th><th>Ni</th><th>Se</th><th>Zn</th><th>% Moisture</th><th>Recal Coliform</th></th<>		As	ಶ	ڻ	Cu	Pb	Hg	Mo	Ni	Se	Zn	% Moisture	Recal Coliform
PPQL PPQL 46 320 28 1.6 PPQL 21 PPQL 970 79% PPQL PPQL 34 270 18 1.0 PPQL 24 PPQL 77% 77% PPQL PPQL 26 220 20 PPQL PPQL 77% <th>Date</th> <th>mg/kg</th> <th>CFII/a*</th>	Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	CFII/a*
CPQL CPQL <th< td=""><td>1/24/2012</td><td><pql< td=""><td><pql< td=""><td>46</td><td>320</td><td>28</td><td>1.6</td><td>^PQL</td><td>21</td><td>^POL</td><td>970</td><td>%6<i>L</i></td><td>7</td></pql<></td></pql<></td></th<>	1/24/2012	<pql< td=""><td><pql< td=""><td>46</td><td>320</td><td>28</td><td>1.6</td><td>^PQL</td><td>21</td><td>^POL</td><td>970</td><td>%6<i>L</i></td><td>7</td></pql<></td></pql<>	<pql< td=""><td>46</td><td>320</td><td>28</td><td>1.6</td><td>^PQL</td><td>21</td><td>^POL</td><td>970</td><td>%6<i>L</i></td><td>7</td></pql<>	46	320	28	1.6	^PQL	21	^POL	970	%6 <i>L</i>	7
CPQL CPQL <th< td=""><td>2/21/2012</td><td><pql< td=""><td><pql< td=""><td>34</td><td>270</td><td>18</td><td>1.0</td><td><pql< td=""><td>24</td><td><pol< td=""><td>780</td><td>77%</td><td>,</td></pol<></td></pql<></td></pql<></td></pql<></td></th<>	2/21/2012	<pql< td=""><td><pql< td=""><td>34</td><td>270</td><td>18</td><td>1.0</td><td><pql< td=""><td>24</td><td><pol< td=""><td>780</td><td>77%</td><td>,</td></pol<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td>34</td><td>270</td><td>18</td><td>1.0</td><td><pql< td=""><td>24</td><td><pol< td=""><td>780</td><td>77%</td><td>,</td></pol<></td></pql<></td></pql<>	34	270	18	1.0	<pql< td=""><td>24</td><td><pol< td=""><td>780</td><td>77%</td><td>,</td></pol<></td></pql<>	24	<pol< td=""><td>780</td><td>77%</td><td>,</td></pol<>	780	77%	,
CPQL CPQL 30 270 11 5.6 21 CPQL 72% CPQL CPQL 27 300 17 1.2 7.4 24 CPQL 75% CPQL CPQL 27 300 17 1.2 7.4 24 CPQL 890 76% CPQL CPQL 23 410 28 1.0 13 35 CPQL 1,200 76% CPQL CPQL 23 280 19 0.90 13 19 CPQL 800 69% CPQL CPQL 27 370 27 0.97 19 23 CPQL 990 69% CPQL CPQL 27 370 12 20 CPQL 1,900 81% CPQL CPQL 29 43 2.5 16 49 CPQL 1,900 81% CPQL CPQL 30 19 0.99 7.3 22 <t< td=""><td>3/6/2012</td><td>~PQL</td><td>7Ò4></td><td>26</td><td>220</td><td>20</td><td><pql< td=""><td><pql< td=""><td>19</td><td><pol< td=""><td>640</td><td>%CL</td><td>0</td></pol<></td></pql<></td></pql<></td></t<>	3/6/2012	~PQL	7Ò4>	26	220	20	<pql< td=""><td><pql< td=""><td>19</td><td><pol< td=""><td>640</td><td>%CL</td><td>0</td></pol<></td></pql<></td></pql<>	<pql< td=""><td>19</td><td><pol< td=""><td>640</td><td>%CL</td><td>0</td></pol<></td></pql<>	19	<pol< td=""><td>640</td><td>%CL</td><td>0</td></pol<>	640	%CL	0
CPQL CPQL 27 300 17 1.2 7.4 24 CPQL 890 76% CPQL CPQL 39 410 28 1.0 13 35 CPQL 1,200 78% CPQL CPQL 23 280 19 0.90 13 19 CPQL 1,200 78% CPQL CPQL 22 310 19 1.0 16 20 CPQL 840 70% CPQL CPQL 27 370 27 0.97 19 23 CPQL 1,900 81% CPQL CPQL 27 30 19 0.99 7.3 22 CPQL 1,900 81% CPQL CPQL 30 19 0.99 7.3 22 CPQL 30 7.5 7.5 1,90 81% CPQL CPQL 30 13 2.5 11 9.1 2.5 1.5 1.5 1.5	4/3/2012	<pql< td=""><td><pql< td=""><td>30</td><td>270</td><td>21</td><td>1.4</td><td>5.6</td><td>21</td><td><pol< td=""><td>720</td><td>72%</td><td></td></pol<></td></pql<></td></pql<>	<pql< td=""><td>30</td><td>270</td><td>21</td><td>1.4</td><td>5.6</td><td>21</td><td><pol< td=""><td>720</td><td>72%</td><td></td></pol<></td></pql<>	30	270	21	1.4	5.6	21	<pol< td=""><td>720</td><td>72%</td><td></td></pol<>	720	72%	
CPQL CPQL 39 410 28 1.0 13 35 CPQL 1,200 78% CPQL CPQL 23 280 19 0.90 13 19 CPQL 1,200 70% CPQL CPQL 23 280 19 0.90 13 19 60L 69% 69% CPQL CPQL 27 0.97 19 23 CPQL 1,200 69% 69% CPQL CPQL 21 290 15 0.73 12 20 CPQL 1,900 69% CPQL CPQL 20 43 2.5 16 49 CPQL 1,900 81% CPQL CPQL 20 23 1.1 25 CPQL 1,900 81% CPQL CPQL 30 19 0.99 7.3 22 CPQL 1,900 81% CPQL CPQL 30 45 2.5 10	5/8/2012	<pql< td=""><td><pql< td=""><td>27</td><td>300</td><td>17</td><td>1.2</td><td>7.4</td><td>24</td><td><pql< td=""><td>890</td><td>%9L</td><td>0</td></pql<></td></pql<></td></pql<>	<pql< td=""><td>27</td><td>300</td><td>17</td><td>1.2</td><td>7.4</td><td>24</td><td><pql< td=""><td>890</td><td>%9L</td><td>0</td></pql<></td></pql<>	27	300	17	1.2	7.4	24	<pql< td=""><td>890</td><td>%9L</td><td>0</td></pql<>	890	%9L	0
<pql< th=""> PQL 23 280 19 0.90 13 19 <pql< th=""> 840 70% <pql< td=""> <pql< td=""> 22 310 19 1.0 16 20 <pql< td=""> 840 70% <pql< td=""> <pql< td=""> 22 310 19 1.0 16 20 <pql< td=""> 1900 69% <pql< td=""> <pql< td=""> 21 290 15 0.73 12 20 <pql< td=""> 1,000 66% <pql< td=""> <pql< td=""> 290 15 0.73 12 20 PQL 1,900 81% <pql< td=""> <pql< td=""> 20 43 2.5 16 49 <pql< td=""> 1,900 81% <pql< td=""> <pql< td=""> 31 330 23 1,1 9,1 25 PQL 1,900 81% <pql< td=""> <pql< td=""> 30 45 2.5 19 49 PQL 1,900 10 <pql< td=""> <pql< td=""> 30 45 <td< td=""><td>6/5/2012</td><td><pql< td=""><td><pql< td=""><td>39</td><td>410</td><td>28</td><td>1.0</td><td>13</td><td>35</td><td>-POL</td><td>1.200</td><td>78%</td><td>0</td></pql<></td></pql<></td></td<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<></pql<>	6/5/2012	<pql< td=""><td><pql< td=""><td>39</td><td>410</td><td>28</td><td>1.0</td><td>13</td><td>35</td><td>-POL</td><td>1.200</td><td>78%</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>39</td><td>410</td><td>28</td><td>1.0</td><td>13</td><td>35</td><td>-POL</td><td>1.200</td><td>78%</td><td>0</td></pql<>	39	410	28	1.0	13	35	-POL	1.200	78%	0
<pql< th=""> <pql< th=""> <22 <310 <19 <1.0 <16 <20 <pql< th=""> <990 <69% <pql< td=""> <27</pql<></pql<></pql<></pql<>	7/10/2012	<pql< td=""><td><pql< td=""><td>23</td><td>280</td><td>19</td><td>0.90</td><td>13</td><td>19</td><td>\POI_</td><td>840</td><td>%0L</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>23</td><td>280</td><td>19</td><td>0.90</td><td>13</td><td>19</td><td>\POI_</td><td>840</td><td>%0L</td><td>0</td></pql<>	23	280	19	0.90	13	19	\POI_	840	%0L	0
PPQL PPQL 27 370 27 0.97 19 23 PPQL 1,200 69% PPQL PPQL 21 290 15 0.73 12 20 PPQL 960 66% PPQL SPQL 59 43 2.5 16 49 PPQL 1900 81% PPQL SPQL 300 19 0.99 7.3 22 PPQL 1900 81% PPQL PPQL 31 330 23 1.1 9.1 25 PPQL 996 70% PPQL PPQL 31 330 2.5 19 49 PPQL 1,900 70% PPQL SPQL SPQL 1,900 70 1.900 70% 70% PPQL SPQL SPQL 1,900 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 <	8/7/2012	<pql< td=""><td><pql< td=""><td>22</td><td>310</td><td>19</td><td>1.0</td><td>16</td><td>20</td><td><pql< td=""><td>066</td><td>%69</td><td>0</td></pql<></td></pql<></td></pql<>	<pql< td=""><td>22</td><td>310</td><td>19</td><td>1.0</td><td>16</td><td>20</td><td><pql< td=""><td>066</td><td>%69</td><td>0</td></pql<></td></pql<>	22	310	19	1.0	16	20	<pql< td=""><td>066</td><td>%69</td><td>0</td></pql<>	066	%69	0
PPQL PPQL 21 290 15 0.73 12 20 PPQL 960 66% PPQL PPQL 59 620 43 2.5 16 49 PPQL 1,900 81% PPQL PPQL 20 300 19 0.99 7.3 22 PPQL 860 70% PPQL PPQL 31 330 23 1.1 9.1 25 PPQL 996 70% PPQL PPQL SPQL 49 PPQL 1,900 70% 70% 70% PPQL PPQL SPQL 49 PPQL 1,900 70 70% <td>9/11/2012</td> <td><pql< td=""><td><pql< td=""><td>27</td><td>370</td><td>27</td><td>0.97</td><td>19</td><td>23</td><td>4PQL</td><td>1.200</td><td>%69</td><td>Û</td></pql<></td></pql<></td>	9/11/2012	<pql< td=""><td><pql< td=""><td>27</td><td>370</td><td>27</td><td>0.97</td><td>19</td><td>23</td><td>4PQL</td><td>1.200</td><td>%69</td><td>Û</td></pql<></td></pql<>	<pql< td=""><td>27</td><td>370</td><td>27</td><td>0.97</td><td>19</td><td>23</td><td>4PQL</td><td>1.200</td><td>%69</td><td>Û</td></pql<>	27	370	27	0.97	19	23	4PQL	1.200	%69	Û
<pql< th=""> <pql< th=""> <th< td=""><td>10/2/2012</td><td><pql< td=""><td><pql< td=""><td>21</td><td>290</td><td>15</td><td>0.73</td><td>12</td><td>20</td><td>-PQL</td><td>960</td><td>%99</td><td></td></pql<></td></pql<></td></th<></pql<></pql<>	10/2/2012	<pql< td=""><td><pql< td=""><td>21</td><td>290</td><td>15</td><td>0.73</td><td>12</td><td>20</td><td>-PQL</td><td>960</td><td>%99</td><td></td></pql<></td></pql<>	<pql< td=""><td>21</td><td>290</td><td>15</td><td>0.73</td><td>12</td><td>20</td><td>-PQL</td><td>960</td><td>%99</td><td></td></pql<>	21	290	15	0.73	12	20	-PQL	960	%99	
<pql< th=""> <pql< th=""> <th< td=""><td>11/6/2012</td><td><pql< td=""><td><pql< td=""><td>59</td><td>620</td><td>43</td><td>2.5</td><td>16</td><td>49</td><td><pql< td=""><td>1.900</td><td>81%</td><td>ò</td></pql<></td></pql<></td></pql<></td></th<></pql<></pql<>	11/6/2012	<pql< td=""><td><pql< td=""><td>59</td><td>620</td><td>43</td><td>2.5</td><td>16</td><td>49</td><td><pql< td=""><td>1.900</td><td>81%</td><td>ò</td></pql<></td></pql<></td></pql<>	<pql< td=""><td>59</td><td>620</td><td>43</td><td>2.5</td><td>16</td><td>49</td><td><pql< td=""><td>1.900</td><td>81%</td><td>ò</td></pql<></td></pql<>	59	620	43	2.5	16	49	<pql< td=""><td>1.900</td><td>81%</td><td>ò</td></pql<>	1.900	81%	ò
<pql< th=""> PQL 31 330 23 1.1 9.1 25 <pql< th=""> 996 <pql< td=""> SPQL 45 2.5 19 49 <pql< td=""> 1,900 11 8.0 8.0 15 0.6 5.0 6.0 15 18 41 39 - 1,500 300 17 - 420 100 2,800 75 85 - 4,300 840 57 75 420 100 7500</pql<></pql<></pql<></pql<>	12/4/2012	<pql< td=""><td><pql< td=""><td>20</td><td>300</td><td>19</td><td>0.99</td><td>7.3</td><td>22</td><td><pql< td=""><td>860</td><td>70%</td><td>120.000</td></pql<></td></pql<></td></pql<>	<pql< td=""><td>20</td><td>300</td><td>19</td><td>0.99</td><td>7.3</td><td>22</td><td><pql< td=""><td>860</td><td>70%</td><td>120.000</td></pql<></td></pql<>	20	300	19	0.99	7.3	22	<pql< td=""><td>860</td><td>70%</td><td>120.000</td></pql<>	860	70%	120.000
<pql< th=""> PQL 31 330 23 1.1 9.1 25 <pql< th=""> <pql< td=""> SPQL 45 2.5 19 49 <pql< td=""> 11 8.0 8.0 8.0 15 0.6 5.0 6.0 15 41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100</pql<></pql<></pql<></pql<>													20000
<pql< th=""> SPQL 59 620 45 2.5 19 49 <pql< th=""> 11 8.0 8.0 8.0 15 0.6 5.0 6.0 15 41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100</pql<></pql<>	Average	~PQL	-PQL	31	330	23	1.1	9.1	25	<pol< td=""><td>966</td><td></td><td></td></pol<>	966		
11 8.0 8.0 8.0 15 0.6 5.0 6.0 15 41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100	Maximum	TÒd>	ZOd>	59	620	45	2.5	19	49	^POL	1.900		
11 8.0 8.0 8.0 15 0.6 5.0 6.0 15 41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100													
41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100	PQL	11	8.0	8.0	8.0	15	9.0	5.0	6.0	15	18		
41 39 - 1,500 300 17 - 420 100 75 85 - 4,300 840 57 75 420 100			·										
75 85 - 4,300 840 57 75 420 100	EQ/PC Limit ¹	41	39	-	1,500	300	17	•	420	100	2,800		1
	Ceiling Limit	7.5	85	-	4,300	840	57	75	420	100	7 500		

All pollutant concentrations given on a dry-weight basis

PQL = Practical Quantitation Limit

Pollutant Concentration Limits taken from Table 3, Part 503.13

² Ceiling Concentration Limits taken from Table 1, Part 503

* Geometric mean fecal coliform density

2012 BIOSOLIDS ANALYSIS RESULTS BELTONA LAND RECLAMATION SITE (Village Creek WWTP)

	As	рЭ	Cr	Cu	Pb	Hg	Mo	iN	Se	Zn	% Moisture	Fecal Coliform
Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	me/kg	CFU/9*
1/24/2012	<pql< td=""><td><pql< td=""><td><i>L</i>9</td><td>490</td><td>81</td><td>1.7</td><td>17</td><td>42</td><td>~POL</td><td>1.400</td><td>%9</td><td>5</td></pql<></td></pql<>	<pql< td=""><td><i>L</i>9</td><td>490</td><td>81</td><td>1.7</td><td>17</td><td>42</td><td>~POL</td><td>1.400</td><td>%9</td><td>5</td></pql<>	<i>L</i> 9	490	81	1.7	17	42	~POL	1.400	% 9	5
2/21/2012	<pql< td=""><td>TÒd></td><td>45</td><td>390</td><td>58</td><td>Z-PQL</td><td><pql< td=""><td>28</td><td><pql< td=""><td>086</td><td>%02</td><td>6</td></pql<></td></pql<></td></pql<>	TÒd>	45	390	58	Z-PQL	<pql< td=""><td>28</td><td><pql< td=""><td>086</td><td>%02</td><td>6</td></pql<></td></pql<>	28	<pql< td=""><td>086</td><td>%02</td><td>6</td></pql<>	086	%02	6
3/6/2012	<pql< td=""><td>7Òd></td><td>52</td><td>450</td><td>65</td><td>1.5</td><td>13</td><td>33</td><td><pql< td=""><td>1.100</td><td>%02</td><td>7 900</td></pql<></td></pql<>	7Òd>	52	450	65	1.5	13	33	<pql< td=""><td>1.100</td><td>%02</td><td>7 900</td></pql<>	1.100	%02	7 900
4/3/2012	<pql< td=""><td>TÒd></td><td>38</td><td>310</td><td>49</td><td>4.5</td><td>9.0</td><td>23</td><td>\POI</td><td>740</td><td>70%</td><td>4</td></pql<>	TÒd>	38	310	49	4.5	9.0	23	\POI	740	70%	4
5/8/2012	<pql< td=""><td><pql< td=""><td>54</td><td>470</td><td>69</td><td>2.4</td><td>13</td><td>39</td><td><pol< td=""><td>1.100</td><td>74%</td><td>1 600 000</td></pol<></td></pql<></td></pql<>	<pql< td=""><td>54</td><td>470</td><td>69</td><td>2.4</td><td>13</td><td>39</td><td><pol< td=""><td>1.100</td><td>74%</td><td>1 600 000</td></pol<></td></pql<>	54	470	69	2.4	13	39	<pol< td=""><td>1.100</td><td>74%</td><td>1 600 000</td></pol<>	1.100	74%	1 600 000
6/5/2012	<pql< td=""><td>7Òd></td><td>43</td><td>390</td><td>58</td><td>1.6</td><td>13</td><td>37</td><td>-TOd></td><td>096</td><td>72%</td><td>× ×</td></pql<>	7Òd>	43	390	58	1.6	13	37	-TOd>	096	72%	× ×
7/10/2012	<pql< td=""><td>ΠÒd></td><td>41</td><td>380</td><td>09</td><td>1.8</td><td>11</td><td>39</td><td>-PQL</td><td>950</td><td>72%</td><td>0</td></pql<>	ΠÒd>	41	380	09	1.8	11	39	-PQL	950	72%	0
8/7/2012	<pql< td=""><td><pql< td=""><td>47</td><td>450</td><td>1.1</td><td>1.9</td><td>12</td><td>47</td><td>~PQL</td><td>1,100</td><td>%9<i>L</i></td><td>7.400</td></pql<></td></pql<>	<pql< td=""><td>47</td><td>450</td><td>1.1</td><td>1.9</td><td>12</td><td>47</td><td>~PQL</td><td>1,100</td><td>%9<i>L</i></td><td>7.400</td></pql<>	47	450	1.1	1.9	12	47	~PQL	1,100	%9 <i>L</i>	7.400
9/11/2012	<pql< td=""><td><pql< td=""><td>50</td><td>200</td><td>71</td><td>2.2</td><td>16</td><td>55</td><td><pql< td=""><td>1,200</td><td>74%</td><td>58.000</td></pql<></td></pql<></td></pql<>	<pql< td=""><td>50</td><td>200</td><td>71</td><td>2.2</td><td>16</td><td>55</td><td><pql< td=""><td>1,200</td><td>74%</td><td>58.000</td></pql<></td></pql<>	50	200	71	2.2	16	55	<pql< td=""><td>1,200</td><td>74%</td><td>58.000</td></pql<>	1,200	74%	58.000
10/2/2012	<pql< td=""><td>~PQL</td><td>51</td><td>490</td><td><i>L</i>9</td><td>1.7</td><td>14</td><td>54</td><td><pql< td=""><td>1,200</td><td>73%</td><td>120 000</td></pql<></td></pql<>	~PQL	51	490	<i>L</i> 9	1.7	14	54	<pql< td=""><td>1,200</td><td>73%</td><td>120 000</td></pql<>	1,200	73%	120 000
11/6/2012	<pql< td=""><td><pql< td=""><td>44</td><td>430</td><td>99</td><td>2.2</td><td>10</td><td>49</td><td>-PQL</td><td>1,100</td><td>73%</td><td>68</td></pql<></td></pql<>	<pql< td=""><td>44</td><td>430</td><td>99</td><td>2.2</td><td>10</td><td>49</td><td>-PQL</td><td>1,100</td><td>73%</td><td>68</td></pql<>	44	430	99	2.2	10	49	-PQL	1,100	73%	68
12/4/2012	<pql< td=""><td><pql< td=""><td>40</td><td>410</td><td>09</td><td>1.6</td><td>9.4</td><td>45</td><td>-PQL</td><td>1,000</td><td>72%</td><td>0</td></pql<></td></pql<>	<pql< td=""><td>40</td><td>410</td><td>09</td><td>1.6</td><td>9.4</td><td>45</td><td>-PQL</td><td>1,000</td><td>72%</td><td>0</td></pql<>	40	410	09	1.6	9.4	45	-PQL	1,000	72%	0
Average	<pql< td=""><td>-PQL</td><td>48</td><td>430</td><td>99</td><td>1.9</td><td>1</td><td>41</td><td>TOd></td><td>1.070</td><td></td><td></td></pql<>	-PQL	48	430	99	1.9	1	41	TOd>	1.070		
Maximum	TÒd>	<pql< td=""><td></td><td>500</td><td>81</td><td>4.5</td><td>17</td><td>55</td><td><pql< td=""><td>1,400</td><td></td><td></td></pql<></td></pql<>		500	81	4.5	17	55	<pql< td=""><td>1,400</td><td></td><td></td></pql<>	1,400		
JÒd	11	8.0	8.0	8.0	15	9.0	5.0	6.0	15	18		
EQ/PC Limit ¹	41	39	ı	1,500	300	17		420	100	2,800		
Ceiling Limit ²	75	85		4,300	840	57	75	420	100	7.500		
All nollutant concentrations given on a deci-	ncentration	o divino		weight bosic			1 p. 114	,				

All pollutant concentrations given on a dry-weight basis PQL = Practical Quantitation Limit

Pollutant Concentration Limits taken from Table 3, Part 503.13

² Ceiling Concentration Limits taken from Table 1, Part 503

* Geometric mean fecal coliform density

		s Creel VTP	k	S	Jefferson Count	y Comr	nission Enviror	mental Se	ervices De	partm	ent-Barton Lab
S	Sample ID:	PRI	NOWS (RE	e-K	Biosolide		imary Measuri			que	st for Anai
S	ample Set-up				Time:		mpler Type:	ng Device	<u> </u>		
F	irst/Start San	ple Date:			Time:		ow Meter Type			-	
L	ast Sample D	ate:			Time:		mple Interval:	<u>. </u>			<u></u>
_ <u>[c</u>	ollection Dat	e:]	2-13-11		Time: 0313		mple Type:	Grab	Comp	ocite F	3
Sa	imple Split?	Yes	□ No			15.	mpie rype.		C/TCVC		
Sal	Don Lite Coppe College	/	12-13-		<u></u>		USTODY Ben Lite	***************************************	12-13-	- Cartellander	0848
Rex	Eived by) ///	Da / <mark>2// 3/</mark> Da	(,,	Time 244	18	inquished by		D 12/1	ate 3 / 11	Time 09
Rec	ceived by		-17/1°	3/	1 09.5 Time		nquished by			ate	Time
	•		24.		Time	Keij	nquished by		Da	tte	Time
Rec	eived by		Dat	e	Time	Relir	iquished by	 ,	Da	4-	Time
MU	ST BE COMP	LETED!	Preservation	n Meth	od: A L B L C		or and the property of the last of the las	PY /L	Barton La	Marketon and who	Time: 08/3
,	2				REQUEST	FOR A	NALYSIS	 			
X	Analyte DO Conductivity pH	Value	e Units mg/L μπhos S.U.	PM		Lab	☐ Field ☐	 		ERVAT C. to pH<2	TON METHOD:
	DO Conductivity		mg/L µmhos	PM	1	Lab	Field G Field G Field G		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH		mg/L μπhos S.U.	PM	1	Lab	☐ Field ☐	 	A -Iced, 4° B -H ₂ SO ₄ C -H ₂ O ₃	ERVAT C. to pH<2	ION-METHOD:
	DO Conductivity pH BOD ₅		mg/L μπhos S.U. mg/L	PM	1	Lab	☐ Field ☐ ☐ Field ☐ ☐ Field ☐ ☐ Analyte Arsenic		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH BOD ₅ CBOD ₅		mg/L μmhos S.U. mg/L	PM	1	Lab Lab Lab	☐ Field ☐ ☐ Field ☐ ☐ Field ☐ ☐ Analyte Arsenic Cadmium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH BOD ₅ CBOD ₅ TSS		mg/L µmhos S.U. mg/L mg/L mg/L	PM	1	Lab Lab Lab	Field Field Field Analyte Arsenic Cadmium Chromium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD		mg/L µmhos S.U. mg/L mg/L mg/L mg/L	PM	1	Lab Lab	☐ Field ☐ ☐ Field ☐ ☐ Field ☐ ☐ Analyte Arsenic Cadmium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD		mg/L µmhos S.U. mg/L mg/L mg/L mg/L mg/L	PM	1	Lab Lab	Field □ Field □ Field □ Field □ Analyte Arsenic Cadmium Chromium Copper Lead		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
7	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N		mg/L µmhos S.U. mg/L mg/L mg/L mg/L mg/L mg/L mg/L	PM	1	Lab Lab	Field Field Field Analyte Arsenic Cadmium Chromium Copper Lead Mercury		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N		mg/L µmhos S.U. mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	PM	1	Lab Lab Lab	Field □ Field □ Field □ Analyte Arsenic Cadmium Chromium Copper Lead Mercury Molybdenum		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
T T	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N Total-P ortho-P		mg/L	PM	1	Lab Lab Lab	Field Field Field Field Analyte Arsenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
T OO	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N Total-P ortho- P		mg/L	PM	1	Lab Lab Lab S	Field Field Field Field Analyte Ansenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Gelenium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:
G T T N T T T	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N Total-P ortho-P OC		mg/L mg/L	PM	1	Lab Lab Lab S	Field Field Field Field Analyte Arsenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Gelenium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	TON METHOD:
TO NOTE THE	DO Conductivity pH BOD ₅ CBOD ₅ TSS COD TKN NH ₃ -N Total-P ortho-P TOC		mg/L	PM	1	Lab Lab Lab SS SS	Field Field Field Field Analyte Ansenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Gelenium		M = PRES A - Iced, 4° B - H ₂ SO ₄ C - HNO ₃ D - NaOH	ERVAT C. to pH<2 to pH>1	ION-METHOD:

ANALYTICAL METHODS: R2=EPA-600/4-79-020; R3=EPA Method 1664; BR4=EPA SW846; all others ref. Standard Methods, 21st Ed. or later. DO, 4500-O C; Conductivity, 2510-B; pH, 4500-H*-B; BOD₅, 5210-B; CBOD₅, 5210-B; TSS, 2540-D; COD, 5220-D; TKN, R2 351.2; NH₃-N, 4500-NH₃-G; Total-P, 4500-P; ortho-P, 4500-P; TOC, 5310 B; Nitrate, 4500-NO3 H; Nitrite, 4500-NO₂ H; Turbidity, 2130 B; Hardness, 2340 C; Oil & Grease, R3, 1664; Arsenic, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7060 A); Cadmium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7130); Chromium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7190); Copper, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7210); Lead, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Mercury, 3112,B (BR4 7471 B); Molybdenum, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7481); Nickel, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7520); Selenium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7400); Silver, 3030,E, 3111,B, 3113 B; Zinc, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7950); Cyanide 4500-CN E; Volatile Organics, 6210 D; Semi-Volatile Organics, 6410 B; Sulfate, 4500-SO₄² E; FC, 9222 D; TRC, 4500-Cl'G.

TRC

E. Coli

mg/L

		1	s Cree WTP	k		Sa	Jefferson Co	unty Co ecti o) Mn	nission Enviro	onmental	Services	Depa	rtme	ent-Barton Lab	orate
		Sample ID:	PR	्यवया	REE	<u>k</u> '	Biosolida "			imary Measu					SE IOI PUIG	ys
		Sample Set-u	p Date;				Time:		9	mpler Type:	5.001					
		First/Start Sa.	mple Date	e:			Time:			w Meter Ty	ne:					
		Last Sample 1					Time:			nple Interval						
· SERVICE CO.	-	Collection Da		2-13-1	1		Time: 031	3	-	nple Type:	Gra	h Cor	nposi	te F		
_	4	Sample Split?	Yes	□ No	4750 (M.)	***********************	Series Se		_			VC/TC				
C)	Ben (1) Sample College	d by	12-1	3-/1 Date		CHAI 설치공 Time		ہر	JSTODY Den Jo nquished by	/	ALTERNATION NEW YORK	3-11	004404	0848	тэнау
1		Da Shu	<u> </u>	12/	36	.,	848	ľ	Ç				Date	,	Time	مبسره
\wedge		eceiled by		-17	Date	1	Time 1 09 15		Reli	nquished by	-	[2]	Date	11	OG Time	<u>"></u>
	-	Received by	1		Daté		Time	F	elir	iquished by			Date		Time	
V	b _{re}		omo niones es	-	Date	Sipanasia	Тіпе	R	elin	quished by			Date		Time	
$\wedge \wedge$	1,4	IUST BE COM	kirk LEDi	Preserv	á‡ióu∙v	/etho			ÖΣ		TP X	by Barton	Lab]	Time: 08/3	AND COMPANY
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	t	DO			<u>[</u>	100	Analyst Nan					A –Iced	•	964 I	ION METHOD:	
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10	H	рН		μm	.U.		<u> </u>		Lab			C-HN D-NaC				
,	H	BOD ₅				\perp		-	ab	The second second	in on system	2 440	ar or b	1101	1	_]
	H	CBOD ₅		m					<u> </u>	Analyte	Valu	e Unit	s F	М	Analyst Nam	е
_		TSS	+	mg		+			_	Arsenic	_					
		COD	 	mg	-	4		<u> </u>	_	Cadmium						
0	-	TKN	 	mg		_			_[Chromium				T		\neg
4	-	NH ₃ -N	 	mg		+			- (Copper						
V		Total-P		mg		+		4	[]	_ead						
		ortho-P		mg/		-			_ 1	Иегсигу				Τ		7
ł		TOC	+	. mg/.	-	╂-	<u> </u>	-	y	/olybdenum				Τ		
ŀ		Nitrate+ Nitrite	 	mg/		╀			N	lickel				T		7
ŀ		Turbidity	 	ing/l		╁_			S	elenium				T	······································	
ŀ	_	Hardness		N.T.U	 	├			Si	lver]	1	Γ	·	7
1			 	mg/L	 	<u> </u>		1	Zi	nc						7
	7	Oil & Grease		mg/L	,	L.	<u> </u>		Cy	yanide						7
1	`	Fecal Coliform	2.07×104	Col/100mL	<u> </u>	X	Claufitox	1	Su	lfate						1
-	+	É. Coli		Col/190mL				1	TR	c .		mg/L		-		1
	1	,			1			S	1	1						4

ANALYTICAL METHODS: R2=EPA-600/4-79-020; R3=EPA Method 1664; BR4=EPA SW846; all others ref. Standard Methods, 21st Ed. or later. DO, 4500-O C; Conductivity, 2510-B; pH, 4500-Ff -B; BOD₅, 5210-B; CBOD₅, 5210-B; TSS, 2540-D; COD, 5220-D; TKN, R2 351.2; NH₃-N, 4500-NH₃-G; Total-P, 4500-P F; ortho-P, 4500-P F; TOC, 5310 B; Nitrate, 4500-NO3 H; Nitrite, 4500-NO₂ H; Turbidity, 2130 B; Hardness, 2340 C; Oil & Grease, R3, 1664; Arsenic, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7060 A); Cadmium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7130); Chromium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7190); Copper, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7210); Lead, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Mercury, 3112,B (BR4 7471 B); B, 7740); Silver, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7110); Cyanide 4500-CN E; Volatile Organics, 6210 D; Semi-Volatile

	Prudes WW	/TP			Sai	Jefferson Co	unty Co l ecti o	013	nission Enviro	onmo	ental S usto	ervices D	epartm	ent-Barton Lab	oraton
-	Sample ID:	PRI	क्रायक (BEE.	1° N	Biosolida "			imary Measu						.,010
	Sample Set-up	Date:				Time:		4	mpler Type:	_					<u> </u>
	First/Start Sam	ple Date:				Time:		1	ow Meter Ty			,			
	Last Sample Da					Time:			mple Interval						 -
On the last	Collection Date		2-13-1	1		Time: (1813	3		mple Type:		Grab	Com	posite		
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(\land)	i t ,								NALYSIS	;			``	Time: 08/3	
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	COD	<u> </u>	mg	/L					Chromium	+		 		·	
Q L	TKN]	mg	/L			-	7	Соррег	+			+		
$\backslash \backslash L$	NH ₃ -N		mg/	L					Lead	╁					
V	Total-P		mg/	L			-1-	╌╂	Мегсигу	╁			-		
	ortho-P		mg/	L	 -		1	-+	Molybdenum	+					_
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	Turbidity		N.T.U		╁		-		elenium	-					_
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ANALYTICAL METHODS: R2=EPA-600/4-79-020; R3=EPA Method 1664; BR4=EPA SW846; all others ref. Standard Methods, 21st Ed. or later. DO, 4500-O C; Conductivity, 2510-B; pH, 4500-H*-B; BOD₅, 5210-B; CBOD₅, 5210-B; TSS, 2540-D; COD, 5220-D; TKN, R2 351.2; NH₃-N, 4500-NH₃-G; Total-P, 4500-P F; ortho-P, 4500-P F; TOC, 5310 B; Nitrate, 4500-NO3 H; Nitrite, 4500-NO₂ H; Turbidity, 2130 B; Hardness, 2340 C; Oil & Grease, R3, 1664; Arsenic, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7060 A); Cadmium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7130); Chromium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7190); Copper, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7210); Lead, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Mercury, 3112,B (BR4 7471 B); Molybdenum, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Silver, 3030,E, 3111,B, 3113 B; Zinc, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7950); Cyanide 4500-CN E; Volatile Organics, 6210 D; Semi-Volatile Organics, 6410 B; Sulfate, 4500-SO₄-E; FC, 9222 D; TRC, 4500-CTG.

	Prude:	s Cree NTP	k		Sa	Jefferson Cou	nty Cor	mmis	ssion Enviro	onmental	Services	Dep	artme	ent-Barton La	aborato
	Sample ID:	PR	בשמצו (REE!	L "	Biosolida "			ary Measu			πe	dne	st for An	alysi
	Sample Set-up			11	<u></u>	Time:			pler Type:	ing Dev	ice.			· · · · · · · · · · · · · · · · · · ·	
	First/Start Sar	nple Date	:			Time:			Meter Type						
	Last Sample D)ate:	-			Time:			ole Interval				·		
Carried States	Collection Da	te:	2-13-1	l		Time: 0313			ole Type;	Gra	h Co	mno	site L	1	
	Sample Split?	Yes							~JP		/VC/TC				
0	Ben lite	/	12-1	3-11	,	CHAII Mölə	OF	CÜS	TODY	/	12-	N HOLDER		0848	This back gree
.]	Sample College	d by	#	Date		Time	R	eling	uished by			Da		Time	
{	Received by	7111	141	3//	<u></u>	848		15	dr		12	123	3/11	00	15
\wedge	Received by		-12/	Date	1	10915			uished by			Da	te	Time	
Ċ	Received by			Daté		Time			uished by			Dat	e	Time	
V	Exercise and the second	_	NEWSCHOOL STATE	Date	jana 19	Time	ercercia Lua	linqı	ished by			Dat	е	Time	
^^	MUST BE COME	TÉLEDI	Preserv	ițiou v	einoc				by WW	TPX	/ by Barto	i Lal	bД	Time: 08/3	***************************************
()	⊠ Analyte	Valu	ıa İ IIni	s	4.1	REQUEST		AN	ALYSIS		PW = D			ION METHOD:	
~	DO	Juli			101	Analyst Nam					A – Ice	•		IOM METATODS	
_ \	Conductivity			g/L	-	<u></u>		ab 🗆			BH2	SO ₄ t	o pH<2		
12	pH		ļ ļum.	-	-			ab 🗅		<u>.</u>			pH<2 opH>1	•	
	BOD ₅	-		.U.	+			ab □	9127011111111111111111111111111111111111			MEMO	· [111-1		
ŀ	CBOD ₅		mg				E		Analyte	Valu	e Uni	ts	PM	Ánályst Na	me
_	TSS		mg					A	rsenic						
	COD		mg		- -	···	-	C	admium						
۸	TKN	 	mg	-	+			CI	ıromium			1			
d	NH ₃ -N	 	mg		╁			Co	ррег						
VI	Total-P	 	mg/		+			Le	ad			T			
-			mg/	- 	_	····	1	Ме	эгсигу						
- -	ortho-P	ļ	mg/	-	1			Mo	lybdenum			T		·	
	TOC	 	mg/l	4_	<u> </u>		1	Nic	kel			1			_
-	Nitrate+ Nitrite		mg/l	1_				Sele	nium			†			\neg
\perp	Turbidity		N.T.U	<u> </u>				Silv	er			+		"	
1	Hardness		mg/L	1_				Zino	;	· \	1	†	1		-
	Oil & Grease	·	mg/L				1	Cya	nide		1	+	1		-
X		1.14418	Col/100mL		D.	Claufton		Sulfa	ate		<u> </u>	+	+		\dashv
<u> </u>	E. Coli		Col/150mL			7		TRC		 -	mg/l	+	\top	······································	
ı	1.	1										+-		···	— [

ANALYTICAL METHODS: R2=EPA-600/4-79-020; R3=EPA Method 1664; BR4=EPA SW846; all others ref. Standard Methods, 21st Ed. or later. DO, 4500-O C; Conductivity, 2510-B; pH, 4500-H⁺-B; BOD₅, 5210-B; CBOD₅, 5210-B; TSS, 2540-D; COD, 5220-D; TKN, R2 351.2; NH₃-N, 4500-NH₃-G; Total-P, 4500-P F; ortho-P, 4500-P F; TOC, 5310 B; Nitrate, 4500-NO3 H; Nitrite, 4500-NO₂ H; Turbidity, 2130 B; Hardness, 2340 C; Oil & Grease, R3, 1664; Arsenic, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7190); Copper, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7210); Lead, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Mercury, 3112,B (BR4 7471 B); Molybdenum, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7481); Nickel, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7520); Selenium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 740); Silver, 3030,E, 3111,B, 3113 B; Zinc, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7950); Cyanide 4500-CN E; Volatile Organics, 6210 D; Semi-Volatile

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		s Cree	k			lefferson Cour	ity Cor	nmis	sion Enviro	onmental	Services I	Departm	ent-Barton Labora
		VTP			San	nple Colle	ctio	n / (Chain c	f Cust	ody / F	Reque	st for Analys
	Sample ID:		izorz (<u>BEEN</u>		iosalida "		Prim	ary Measu	ring Devi	ice:		
	Sample Set-up					Time:		Samp	ler Type:				
	First/Start Sar		<u> </u>			Time:		Flow	Meter Typ	oe:			
	Last Sample I		0 -			l'ime:		Samp	le Interval	: .			
S. C.	Collection Da	te: \	<u>2-13-1</u>	<u> </u>	7	lime: (1813	8	Samp	le Type:	Gra	ь Соп	iposite (3
$\overline{}$	Sample Split?	162	□ No	Sel (Harrison		-	*******		The last time of the last plant of the last of the last plant of the last plant of the last plant of the last p	TV}	VC/TC	/C/TC	VV)
0	Ben lite		12-13	3-11	•	CHAIN ØÖlG	(30) 	CUS	TODY	<i>!</i>			·
}	Sample College	d by		Date	-	Time	R	eling	uished by		12-1.	3~// Date	<i>0848</i> Time
- (In Blu		12/1	3/1	į	848		S.	\mathcal{H}_{a}			13/11	
_	Received by	///	. >	Date	11.	Time	Ŕ	elingi	ished by			/ 2 / // Date	Time
/	Received by		-17	<u>()</u>	/(/	0915							
ب -	incoeived by	1	1	Daté		Time	R	elinqu	ished by			Date	Time
O	Received by		I	Date		Time	Re	lingu	ished by			Date	Time
	MUST BE COME	LETED!	Preserve	tion M	jetjod:	A UB U	COLUMN AND		by WW	ЛРХ /	by Barton	NAME OF PERSONS ASSESSED.	MARCH TO THE PROPERTY OF THE PARTY OF THE PA
$(^{\wedge})_{i}$	T I	,				REQUEST	FOR	ANA		, ,		•	Time: 08/3
		Valu	e Unit	s F	M.	Analyst Name	•				PM = PR	ESERVAT	TION METHOD:
\	DO		n	2/L			L	ab 🔾	Field C]	A –lced	, 4°°C. Q₄ tọ pH<	.
N	Conductivity		րայ	ios			L	ab 🗅	Field C			∪₄ to pri<. ∂₃ fo pH<2	
Ì	pH		S.	U.			L	ab 🗆	Field □			H to pH>l	
	BOD₃		mg	/Ĺ			ĪΣ		Analyte	Valu	e Unit	з РМ	Analyst Name
	CBOD₃		mg	/L				Aı	senic	+		16.60	Analyst Name
_	TSS		mg	T.				Ca	dmium	 -			
	COD		mg/	'L				Ch	romium	 			
Q L	TKN		mg/	L			1	Co	ррег	 	- -	+	
$\backslash \backslash L$	NH ₃ -N		mg/	L			1	Lea		 			
V	Total-P		mg/l				1	+-	гсигу	 			
	ortho-P		mg/l		1		1-		lybdenum	 	 	++	
L	TOC		mg/I				1	Nici		<u> </u>	+	┨	
	Nitrate+ Nitrite		mg/L				1	-	nium	 -	 		
L	Turbidity		N.T.U.		1-		1	Silve			 	+	
L	Hardness		mg/L		1		1	Zinc			 	-	
	Oil & Grease		mg/L			i.	_	Cyar			<u> </u>	┤	
X	Fecal Coliform	5.22XA	CONTOGOT		0	1/2 4		Sulfa			ļ — —	- -	
	E. Coli		Col/100mL		الحدد	Yaufit on		TRC			/		
											mg/L		

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		1	es Cree	k		Jeffers	on Count	у Соп	miss	sion Envir	onmental	Services I	Departm	ent–Barton La	borat
			WTP			Sample	Colle	ctios	1 / C	Chain d	of Cus	tody / R	eque	st for Ana	alvs
		Sample ID:		CP Zwari	EEK	"Biosalis	15"	P	rima	ry Meast	ring Dev	ice:			
		Sample Set-u				Time:		s	ampl	ler Type:		-			
		First/Start Sa		e:		Time:		F	low l	Meter Ty	pe:				
		Last Sample				Time:		S	ampl	e Interva	l:				
0000		Collection Da Sample Split?		2-13-11		Time:	0313	S	ampl	е Туре:	Gra	b Con	posite l]	
_	_	Sample Spit?	I CS	□ No	1 Minneson	MARKET CHECK CONTRACTOR	Sampagiananii ross		A-CONTRACTOR	Za COR X - U D CONTRACA D	/T·}	/VC/TC\	C/TC	VV}	
\mathcal{C}	ر (13.14	Ļ	12-13	-11		HAIN	OF C	UST	cody,	/	200 200 201 (119)		Market Control of the	ADGS MARCHAN
	}	Sample College	d by		ate		13	- 5	<u> </u>	2.59 - 10	<u> </u>	12-13		0848	
		La Ma	<u> </u>	s ·	Ca			I.C.		ished by			Date	Time	ند
		Received by	1//		# ate	Tin		Ře	ــدرد inaui	ished by		121	13/11		25
\int		9/6 >	Ken-	-17/	3/	1109	15		1			•	Date	Time	
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\sim	` '	MUST BE COM	Krië1#Dî	Preservați	on Me		BLC	$\Box D$		by WV	VTP X	by Barton	Lab∏'	Time: 08/3	OPPRESSOR
(-	1	図 Analyte	Valu	ie Units	lis.		UEST	FOR /	MA	Lysis		DES - DD	CCDVAT		
_	- -	DO	1 1 1 1			Analys	t Name					A Iced		TON METHOD:	
_	\ <i>\</i>	Conductivity		mg/				La	ЬΩ	Field []		4° C.), to pH<	2	- }
1) -	рН	- 	μmho		 	·	Lai	ьО	Field []	C-HNC	to pH<2		
****	_	BOD ₅		S.L	╂	ļ		Lal	o O	Field [D-MaO	H to pH>1	.1	
	-	-		mg/I	┨—			X		Analyte	Valu	e Units	P.M.	Analyst Na	me
Walles and Market Street	$oldsymbol{+}$	CBOD ₅		mg/I	1_		· · · · · · · · · · · · · · · · · · ·		Ars	enic				· · · · · · · · · · · · · · · · · · ·	
	╊	TSS	- 	mg/L	_				Cad	lmium					
λ	\vdash	COD		mg/L					Chro	omium			1-1		
Q	-	TKN	ļ	mg/L					Cop	per			1 1	 	
~ 1	\vdash	NH ₃ -N		mg/L					Lead			 	 		
,	L	Total-P		mg/L					Мего	шу		 	+ +		\dashv
	_	ortho-P		mg/L					Moly	bdenum	 		+		
		TOC	1	mg/L					Nicke		 	 	╂╌╌╂╌	· · · · · · · · · · · · · · · · · · ·	-
į		Nitrate+ Nitrite	3	mg/L					Selen		 	 	├		_
		Turbidity		N.T.U.					Silver			 	-		_
		Hardness		mg/L					Zinc			 	-		_
		Oil & Grease	1	mg/L				·		de		 			_
	X	Fecal Coliform	9.74vm	Col/100gaL	-	001.	4		ulfate			 			_
	,	E. Coli		Col/150mL	-16	R. Claurje	MON!		RC		···		_		
					+				AC			mg/L			4

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	Prude: WV	s Cree VTP	k	ş	Je Sam	efferson Cou	ity Con	nmis:	sion Enviro	nmental	Services De	epartm	ent-Barton Labo	ога
	Sample ID:	PR	unus ('RE	\L	"R.	bic cous						eque	st for Anal	уs
	Sample Set-up	Date:	isis, Che	<u>en</u>	•	ime:			ary Measui der Type:	ing Devi	ce:			
	First/Start San	aple Date	:	<u> </u>		ime:								
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Trans.	Collection Dat	e:	2-13-11			ime: 0313			le Type:				·	
	Sample Split?	Yes	□ No	-		<u> (1313</u>	10	arnh.	ic rype.	Grad	·	osite		
7	RA	1	AT HATCH SHARE SHARE ON	mineral an	**********	CHAIN	OF C	ÜŚ	TODY		VC/TCV	J/10	V V }	-
J	den late	<u>-</u>	12-13-	H.		_ <i>i</i> 6l3		1	3.74	,	12-13	. 10	* A010	
	Sample Collegee	l by	Da			Time	R	linq	uished by			ate	0848 Time	
1	Da Ma	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	12/13/			848		SL	Hr.		12/1	3/1	•	25
200	Received by	///	Da	e 7 /	11	Time	Ŕε	linqu	ished by			ate	Time	<u>~</u>
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ŧ. I	MUST BE COMP	TELEDI	Preservation	lacterous.	renomme Hook	A UB U	-	inqu	ished by by WW	·	Da by Barton L	Service Marie Marie	Time	dan v
)	DO Conductivity pH	Valu	e Units mg/L µmhos S.U.	PM	I A	REQUEST nalyst Name	La La	.b 🗆 b 🗅 b С	Field □	1	PM = PRES AIced, 4 BH ₂ SO ₄ CH _N O ₃ DN ₃ OH	°C. to pH< to pH<	!	
L	BOD₅		mg/L			-	X		Analyte	Value	Units	РМ	Analyst Nam	
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	TOC		mg/L	+			1		ybdenum					
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	Turbidity		N.T.U.	+			-		กเขา					
-	Hardness		mg/L	+			1 - 1	Silve				[_		
	Oil & Grease			- -				Zinc						
V		-	mg/L	-	1			Суап						7
Д.	E. Coli	7.8 KM	Col/100px	10	K. G	laufet on		Sulfa	te					7
	L. COH		Col/100mL	1		0	ſ	rc	1		mg/L			1

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<u> </u>		Ĭ	s Cree NTP	k		Jefferson Coun	ty Comi ction	missi 1 / C	ion Enviro. Shaire o	nmental f Cuef	Services De	epartm	nent-Barton Labo
		Sample ID:	PR	indez Çi	EEK	"Brosalida"			y Measur			que	st for Analy
		Sample Set-u	p Date:			Time:			er Type:	IIIE DOT			
		First/Start Sar	nple Date	:		Time:			leter Typ	e:			·
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~	-	Collection Da		2-13-11		Time: 0213			Туре:	Gral	Comp	ncite	
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	3	8 1	!			CHAIN	OF C	ŪŠŢ	ODY,		THE RESERVE AND ADDRESS OF THE PARTY OF THE	- Training	The state of the s
	·	Sample College	J 1	<u> 12-i3</u>		<u> </u>		<u> 19</u>	n I to		12-13-	-11	0848
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	ı	Received by	7/11		3//1 Pate	Eyy Time		<u> </u>	dr		12/1	3/1	, 090
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		MUST BE COM	LETED!	Preserval	on Μ	ethod: A B C	D		by WW	TP X /	by Barton L	UKON/Ajeskupu,	CONTRACTOR OF STREET,
($^{\sim}$					REQUEST				11 21	nà pairoù 1	ايا 20	Time: 08/3
				ie Units	įΡ						PM = PRES	SERVA	TION METHOD:
·	\	X- All efor	0 38	%mg	Æ,	O Chill	Lal	ьΩ	Field 🖸	٦	AIced, 4		
ſ		Conductivity		umh		Jo. Cugaro	Lat		Field 🖸	4	B −H ₂ SO ₄ C −HNO ₃	to pH<	2
•		pН		S.1	J.				Field 🗆	-	D –Ņ ^g OH	to pH>	11
`\ -	-[BOD₅		mg/		1	X	عبيد فرت	Analyte	Valu		E)ESHROR	420 E TALL THE PARTY OF THE PAR
2	ı	CBOD ₅		mg/				Arse		Value		В₩	Analyst Name
-	-	TSS		mg/l	+-	 	1 -	 -		1 4	Malky	<u> </u>	Penue
منح	-	COD	 	mg/l	-	 	1	 	mium	10	<u> </u>)
0	\	TKN	3300			1-2	<u> </u>	 	mium	35	1/		
(\setminus	NH ₃ -N	مامرحا	hg/L	_	Twee	1	Copp		230	//		. (
\cap	リー	Total-P	 -				24	Lead		25	<u> </u>		}
Į.	\vdash	ortho-P	 	mg/L	-			Мегс	шу	0	1		Enersolu
	-	TOC	 	mg/L				Moly	bdenum	0			Parcie
	\vdash		 	mg/L				Nicke	el l	25			7
	-	Nitrate+ Nitrite	<u> </u>	mg/L				Seleni	ium	0			/
		Turbidity		N.T.U.	·			Silver			1/	1	(
	1	Hardness		mg/L			Z	Zinc		1200	11	\dashv	
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M.	X	Fecal Coliform	7800	Collagar	\Box	R. Clautton		ulfate				+	
	L	E. Coli		Col/180mL	\neg	R. Claufton		RC			Fra/F	+	
					+						mg/L		

ANALYTICAL METHODS: R2=EPA-600/4-79-020; R3=EPA Method 1664; BR4=EPA SW846; all others ref. Standard Methods, 21st Ed. or later. DO, 4500-O C; Conductivity, 2510-B; pH, 4500-H*-B; BOD5, 5210-B; CBOD5, 5210-B; TSS, 2540-D; COD, 5220-D; TKN, R2 351.2; NH3-N, 4500-NH3-G; Total-P, 4500-P F; ortho-P, 4500-P F; TCC, 5310 B; Nitrate, 4500-NO3 H; Nitrite, 4500-NO2 H; Turbidity, 2130 B; Hardness, 2340 C; Oil & Grease, R3, 1664; Arsenic, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7060 A); Cadmium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7130); Chromium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7190); Copper, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7210); Lead, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7420); Mercury, 3112,B (BR4 7471 B); Molybdenum, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7481); Nickel, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7520); Selenium, 3030,E, 3111,B, 3113 B (BR4 3050 B, 740); Silver, 3030,E, 3111,B, 3113 B; Zinc, 3030,E, 3111,B, 3113 B (BR4 3050 B, 7950); Cyanide 4500-CN E; Volatile Organics, 6210 D; Semi-Volatile

12/14/1 Prides

Barton Laboratory

BIOSOLIDS BACTERIAL ANALYSIS

			بوداد والمراجع	
Analysis Date: 12/13/	4	Sample ID:	Prides	
Date / Time In: 12/13	1/200	Sample Date / Time: /2/	13/11 1	0012
Read: 17/14	1 1245	Lab Analyst:	5/sn	
T 10 m	TEST(S) PE	RFORMED:		
Fecal Coliform [X] Total Coliform []		Fecal Strep [] Other []	æ	

Summary of Geometric Mean Calculations:

6. M.= 7,800 colonies per gram of dry
Solids.

	The I	*		•	
. 1	Dilution Used or mL of Sample	Colonies Counted	J	Hq	Colonies Counted X 100 mL Sample X % Dry Solid Geometric Mean $\sqrt[N]{(X_{\rm P})(X_2)(X_N)}$
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B	.6/	35	67		3500 3.06
0	.0011	6	56		101x67 = 5.22x/0 3.72.
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	4,006	Elids:	100		X=3.89
10	1 101	, [20%		
ank	101	leidwer	38%		G.M 7800 colonies per from of dia solids.
		<u>V.</u>			Per San of de 110

Barton Laboratory

BIOSOLIDS

Coliform Colonies Counted

	Sample ID: Prodes
Date / Time	Sample Date / Time: 12/13/11 / 0813
Counted: 12/14 /1245	Lab Analyst: CS/SM

COLIFORM COLONIES COUNTED

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SECTION 5 AGRONOMIC RATE INFORMATION AND CALCULATIONS

AGRONOMIC RATE BELTONA LAND RECLAMATION SITE

Summary:

The Beltona Land Reclamation Site is a former strip mine site located in northwestern Jefferson County. The Environmental Services Department is assisting the property owner in the reclamation of this site through the land application of biosolids. In the areas that have not received any biosolids applications, no vegetation other than "scrub" vegetation is present and growing. In the areas that have received biosolids applications, Tifton Bermuda and Rye grass has been planted for nitrogen uptake.

The local Agricultural Cooperative Extension Service has recommended a fertilizer rate of 600 lb Nitrogen/Ac/year for the mine reclamation site. These calculations are based on six cuttings of hay each year (four harvests of Bermuda grass and two harvests of Rye grass each year), with 100 lb Nitrogen per acre needed for each cutting.

Agronomic Rate Considerations:

- The Agronomic Calculations presented in this report are based on an extension bulletin worksheet entitled "Calculating Biosolids Application Rates in Agriculture" (1998), developed by Craig Cogger and Dan Sullivan for the Pacific Northwest. This bulletin uses widely accepted procedures for nitrogen budgeting which are applicable across the United States.
- 2) During analysis, NH₄⁺ -N is often converted to NH₃-N and analytical results are then reported as NH₃-N. Both forms are plant available and this combined analysis does not diminish the quality of the result.
- 3) There is no additional nitrogen applied to the reclamation site by Jefferson County (no fertilizer or irrigation water).
- Biosolids from the Valley and Village WWTP's are applied to each plot on an annual basis throughout the winter months. These biosolids are anaerobically digested, mechanically dewatered, and lime stabilized, and are not incorporated into the soil following land application.
- 5) Biosolids are applied at a rate of 21 dry tons/acre.

AGRONOMIC RATE CALCULATIONS – BELTONA LAND RECLAMATION SITE

FORMULA:

Plant Available Nitrogen (PAN) = Available Organic Nitrogen + Inorganic Nitrogen = [(Organic Nitrogen)(Organic Mineralization Rate)] + [(NH₄)(%NH₄ Retained) + Nitrate]

GIVEN:

- During analysis, NH₄⁺ -N is converted to NH₃-N and analytical results are then reported as NH₃-N. This combined analysis does not diminish the quality of the result.
- The TKN, NH₃ and NO₃ results are averages of data available during 2012. All results are reported on a dry-weight basis.

 $TKN_{(average)} = 32,417$ mg/Kg x 0.002 (converts mg/Kg to lb/dry ton) = 64.8 lb/dry ton $NH_{3(average)} = 1,076$ mg/Kg x 0.002 = 2.2 lb/dry ton $NO_{3(average)} = 160$ mg/Kg x 0.002 = 0.3 lb/dry ton

Organic Nitrogen = TKN - NH₃ - NO₃ = 64.8 - 2.2 - 0.3 = 62.3 lb N/dry ton

 Calculations for the Beltona site are performed considering anaerobically digested, dewatered, and lime stabilized biosolids.

NITROGEN CREDITS FOR PREVIOUS BIOSOLIDS APPLICATIONS:

• Biosolids that were applied from 2008 through 2011 had an average Organic Nitrogen content of 30,095 mg/kg. These biosolids were applied at an average rate of 22 dry tons per acre. Using Table 1 of the Worksheet:

Nitrogen Credit for 30,095 mg/kg:

= 7.8 lb PAN per dry ton (years 2-5) x 22 dry tons per acre

= 172 lb PAN per acre Nitrogen credit

Tifton Bermuda/Rye grass nitrogen requirements = 600 lb N/Ac/Yr (based on Agricultural Cooperative Extension Service recommendation of six cuttings of hay each year with 100 lb N/Ac needed for each cutting). With a Nitrogen Credit of 172 lb/acre, approximately 428 lb N/Ac/year is needed from the current applications of biosolids.

AGRONOMIC RATE CALCULATIONS – BELTONA LAND RECLAMATION SITE

CALCULATIONS:

Anaerobically Digested, Dewatered, Lime Stabilized, Not Incorporated

 $TKN_{(average)} = 32,417 \text{ mg/Kg} \times 0.002 \text{ (converts mg/Kg to lb/dry ton)} = 64.8 \text{ lb/dry ton}$ $NH_{3(average)} = 1,076 \text{ mg/Kg} \times 0.002 = 2.2 \text{ lb/dry ton}$

 $NO_{3(average)} = 160 \text{ mg/Kg} \times 0.002 = 0.3 \text{ lb/dry ton}$

Organic Nitrogen = TKN - NH₃ - NO₃ = 64.8 - 2.2 - 0.3 = 62.3 lb N/dry ton

Organic Nitrogen:

Mineralization Rate (Worksheet, Table 3): Anaerobic Digestion, Dewatered = 20% - 40%

Percent of Organic N available in the first year = 30% (average)

Total Organic Nitrogen available in the first year = $62.3 \times 30\% = 18.7 \text{ lb/dry ton}$

Ammonium Nitrogen:

% NH₄ Retained (Worksheet, Table 2): Not Incorporated, Lime Stabilized = 10%

Percent of Ammonia retained after application = 10%

Ammonium Nitrogen retained after application = $2.2 \text{ lb/dry ton } \times 10\% = \underline{0.2 \text{ lb /dry ton}}$

Estimated Plant Available Nitrogen (PAN):

PAN = Available Organic Nitrogen + Inorganic Nitrogen = 18.7 + 0.2 + 0.3 = 19.2 lb N/dt

Agronomic Rate:

428 lb N/Ac/year \div 19.2 lb N/dry ton = 22 dry tons/Acre/year

Biosolids were applied at the Beltona site throughout 2012 at a rate of 21 dry tons per acre. As can be seen from the above calculations, and as required by the 40 CFR Part 503 regulations, the anaerobically digested biosolids are being applied at a rate equal to or less than the agronomic rate for the crops grown.

AGRONOMIC RATE FLAT TOP/BESSIE MINES LAND RECLAMATION SITE

Summary:

The Flat Top/Bessie Mines Land Reclamation Site is also a former strip mine site located in northwestern Jefferson County. The Environmental Services Department is assisting the property owner in the reclamation of this site through the land application of biosolids. At this site there is currently no soil mass present for growing vegetation, and in order to build soil mass, biosolids are being applied at a rate of 600 lb Nitrogen/Ac/year. When soil mass becomes adequate to sustain crop growth, Tifton Bermuda and Rye grass will be planted for nitrogen uptake.

Agronomic Rate Considerations:

- 1) There is no additional nitrogen applied to the reclamation site by Jefferson County (no fertilizer or irrigation water) and there is very little to no plant available nitrogen currently present at the site.
- 2) Approximately 50% of the land applied biosolids are anaerobically digested, followed by either mechanical dewatering or drying beds. The remaining biosolids are aerobically digested, followed by either mechanical dewatering or drying beds. Calculations will be performed considering both biosolids scenarios.
- 3) Typically, the anaerobically digested biosolids are lime stabilized.
- 4) Biosolids from all plants are incorporated into the soil within six (6) hours of application.
- 5) Biosolids applications currently occur on a year-round basis at a rate of 28 dry tons/acre.

AGRONOMIC RATE CALCULATIONS – FLAT TOP/BESSIE MINES LAND RECLAMATION SITE

FORMULA:

Plant Available Nitrogen (PAN) = Available Organic Nitrogen + Inorganic Nitrogen = [(Organic Nitrogen)(Organic Mineralization Rate)] + [(NH₄)(%NH₄ Retained) + Nitrate]

GIVEN:

- During analysis, NH₄⁺ -N is converted to NH₃-N and analytical results are then reported as NH₃-N. This combined analysis does not diminish the quality of the result.
- The TKN, NH₃ and NO₃ results are averages of data available during 2012. All results are reported on a dry-weight basis.

 $TKN_{(average)} = 32,417 \text{ mg/Kg x } 0.002 \text{ (converts mg/Kg to lb/dry ton)} = 64.8 \text{ lb/dry ton} \\ NH_{3(average)} = 1,076 \text{ mg/Kg x } 0.002 = 2.2 \text{ lb/dry ton} \\ NO_{3(average)} = 160 \text{ mg/Kg x } 0.002 = 0.3 \text{ lb/dry ton} \\$

Organic Nitrogen = TKN - NH₃ - NO₃ = 64.8 - 2.2 - 0.3 = 62.3 lb N/dry ton

- Being a reclamation site, biosolids are applied at a rate of 600 lb N/Ac/Yr to build soil mass. When soil mass becomes adequate to sustain crop growth, Tifton Bermuda and Rye grass will be planted for nitrogen uptake.
- Calculations will be performed considering both biosolids scenarios: (1) anaerobically digested, dewatered, and lime stabilized, and (2) aerobically digested, mechanically dewatered or drying beds, and incorporated into the soil within six hours of application.

AGRONOMIC RATE CALCULATIONS – FLAT TOP/BESSIE MINES LAND RECLAMATION SITE

CALCULATIONS:

Anaerobically Digested, Dewatered, Lime Stabilized, Incorporated within Six Hours

-and-

<u>Aerobically Digested, Mechanically Dewatered or Drying Beds, Incorporated within Six Hours</u>

 $TKN_{(average)} = 32,417 \text{ mg/Kg} \times 0.002 \text{ (converts mg/Kg to lb/dry ton)} = 64.8 \text{ lb/dry ton}$ $NH_{3(average)} = 1,076 \text{ mg/Kg} \times 0.002 = 2.2 \text{ lb/dry ton}$

 $NO_{3(average)} = 160 \text{ mg/Kg} \times 0.002 = 0.3 \text{ lb/dry ton}$

Organic Nitrogen = TKN - NH₃ - NO₃ = 64.8 - 2.2 - 0.3 = 62.3 lb N/dry ton

Organic Nitrogen:

Mineralization Rate (Worksheet, Table 3): Anaerobic Digestion, Dewatered = 20%-40%

Aerobic Digestion = 30% - 45%

Drying Beds = 15%-30%

Percent of Organic N available in the first year = 30% (average)

Total Organic Nitrogen available in the first year = $62.3 \times 30\% = 18.7 \text{ lb/dry ton}$

Ammonium Nitrogen:

% NH₄ Retained (Worksheet, Table 2): Incorporated (0-2 Days), Dewatered = 60%, Incorporated (0-2 Days), Drying Bed = 100%

Percent of Ammonia retained after application = 100% (worst case)

Ammonium Nitrogen retained after application = 2.2 lb/dry ton x 100% = 2.2 lb/dry ton

Estimated Plant Available Nitrogen (PAN):

PAN = Available Organic Nitrogen + Inorganic Nitrogen = 18.7 + 2.2 + 0.3 = 21.2 lb N/dt

Agronomic Rate:

600 lb N/Ac/year \div 21.2 lb N/dry ton = 28 dry tons/Acre/year

As can be seen from the above calculations, the current biosolids application rate of 28 dry tons per acre is equal to the calculated Agronomic Rate for the anaerobically digested biosolids. Therefore, as required by the 40 CFR Part 503 regulations, the anaerobically digested biosolids are being applied at a rate equal to or less than the agronomic rate for the crops grown.

APPENDIX A

AGRONOMIC RATE SUPPORTING DOCUMENTATION



Your Experts for Life

Jefferson County Extension Office 2121 Building, Suite 1700 2121 8th Avenue North Birmingham, AL 35203-2387 Telephone: (205) 325-5342 FAX: (205) 325-5690

November 19, 2003

Mr. David Denard A-300 Courthouse Annex 716 Richard Arrington Jr. Blvd. Birmingham, Al 35203

David:

Enclosed is a fact sheet that we based our 6001b/N/ACRE recommendation related to the county's hay production/Bio-solid project.

The reasoning behind the high rate of nitrogen is to maximize forage tonnage which in turn will increase sludge uptake and breakdown.

The yearly fertilization schedule is based on six cuttings using 100lb/N/ac/cutting. The extra cuttings comes from over seeding the Bermudagrass with ryegrass in the fall. The ryegrass can be cut twice, while Bermudagrass is normally cut four times each year.

If you have questions or comments related to this schedule, feel free to give me a call.

Sincerely,

David Hubbard

County Extension Agent

DH/fb

Worksheet for Calculating Biosolids Application Rates in Agriculture

By Craig Cogger, Extension Soil Scientist, WSU-Puyallup and Dan Sullivan, Extension Soil Scientist, Oregon State University

Overview

This bulletin will walk you through the calculations that yield the biosolids agronomic rate. This rate is based on biosolids quality (determined by analytical results), site and crop nitrogen requirements, and regulatory limits for trace element application. In almost all cases, nitrogen controls the biosolids application rate. By calculating the agronomic rate, managers can match the plant-available N supplied by biosolids to crop N needs.

The calculations consist of 6 steps:

- 1. Collect information on the site and crop, including crop N requirement.
- 2. Estimate the plant-available N needed from the biosolids application.
- 3. Collect biosolids nutrient data.
- 4. Estimate plant-available N per dry ton of biosolids.
- 5. Calculate the agronomic biosolids application rate on a dry ton basis.
- 6. Convert the application rate to an "as is" basis.

This bulletin consists of:

- A worksheet with instructions for completing the application rate calculations.
- The same calculations in equation form for those who prefer using equations.
- Tables for calculating trace element loading.

To learn more about the use and management of biosolids as a fertilizer, refer to *Fertilizing with Biosolids*, PNW508, which is the companion to this bulletin.

Worksheet

Step 1. Collect Site Information.

Soil and crop information:

Line No.		Your Information	Example
1.1	Soil series and texture (NRCS soil survey)		Puyallup sandy loam
1.2	Yield goal (grower, agronomist) (units/acre*)		5 tons/acre/yr
1.3	Crop rotation (grower; e.g., wheat/fallow/wheat)		perennial grass
1.4	Plant-available N needed to produce yield goal (fertilizer guide; agronomist) (lb N/acre/yr)		200

Plant-available N provided by other sources:

	the state of the s		
	Your Calculation	Example	Units
Pre-application testing			
Nitrate-N applied in irrigation water		10	lb N/acre
Preplant nitrate-N in root zone (east of Cascades)**			lb N/acre
Adjustments to typical soil N mineralization			
Plowdown of cover or green manure crop**		_	lb N/acre
Previous biosolids applications (Table 1)		30	lb N/acre
Previous manure applications		_	lb N/acre
Grower information	<u> </u>		<u></u>
N applied at seeding (starter fertilizer)			lb N/acre
		- <u>-</u>	
Total plant-available N from other sources (sum of lines 1.5 through 1.10)		40	lb N/acre
	Nitrate-N applied in irrigation water Preplant nitrate-N in root zone (east of Cascades)** Adjustments to typical soil N mineralization Plowdown of cover or green manure crop** Previous biosolids applications (Table 1) Previous manure applications Grower information N applied at seeding (starter fertilizer) Total plant-available N from other sources	Pre-application testing Nitrate-N applied in irrigation water Preplant nitrate-N in root zone (east of Cascades)** Adjustments to typical soil N mineralization Plowdown of cover or green manure crop** Previous biosolids applications (Table 1) Previous manure applications Grower information N applied at seeding (starter fertilizer) Total plant-available N from other sources	Pre-application testing Nitrate-N applied in irrigation water 10 Preplant nitrate-N in root zone (east of Cascades)** — Adjustments to typical soil N mineralization Plowdown of cover or green manure crop** — Previous biosolids applications (Table 1) 30 Previous manure applications — Grower information N applied at seeding (starter fertilizer) — Total plant-available N from other sources 40

^{*}Yield goals may be expressed as a weight (tons, lb, etc.) or as a volume (bushels).

^{**}Do not list here if these N sources were accounted for in the nitrogen fertilizer recommendation from a university fertilizer guide.

Step 2. Estimate the Amount of Plant-Available N Needed from Biosolids.

Line No.		Your Calculation	Example	Units
2.1	Plant-available N needed to produce yield goal (from line 1.4)		200	lb N/acre
2.2	Plant-available N from other sources (from line 1.11)		40	lb N/acre
2.3	Amount of plant-available N needed from biosolids (line 2.1 – line 2.2)		160	lb N/acre

Step 3. Collect Biosolids Data.

Application Information:

Line No.		Your Information	Example
3.1	Moisture content of biosolids (liquid or solid; see Table 3, pg. 8)		liquid
3.2	Biosolids processing method (see Table 3, pg. 8)	·	anaerobic
3.3	Method of application (surface or injected)		surface
3.4	Number of days to incorporation of biosolids		no incorporation
3.5	Expected application season		MarSept.

Laboratory Biosolids Analysis (dry weight basis):

If your biosolids analysis is on an "as is" or wet weight basis, you will need to divide your analysis by the percent solids (line 3.10) and multiply the result by 100 to convert to a dry weight basis.

Line No.		Your Calculation	Example	Units
3.6	Total Kjeldahl N (TKN)*	,	50,000	mg/kg
3.7	Ammonium N*		10,000	mg/kg
3.8	Nitrate N *, **		not analyzed	mg/kg
3.9	Organic N*** (line 3.6 - line 3.7)		40,000	mg/kg
3.10	Total solids		2.5	percent

^{*}If your analysis is in percent, multiply by 10,000 to convert to mg/kg.

^{**}Nitrate-N analysis required for composted or aerobically-digested biosolids, but not for anaerobically-digested biosolids.

^{***}Organic N = total Kjeldahl N - ammonium N.

Step 4. Estimate Plant-Available N Per Dry Ton of Biosolids.

Convert biosolids N analysis to lb per dry ton:

Line No.		Your Calculation	Example	Units
4.1	Total Kjeldahl N (TKN) (line 3.6 x 0.002)		100	lb N/dry ton
4.2	Ammonium N (line 3.7 x 0.002)		20	lb N/dry ton
4.3	Nitrate N (line 3.8 x 0.002)		not analyzed	lb N/dry ton
4.4	Organic N (line 4.1 – 4.2)		80	lb N/dry ton

Estimate Inorganic N Retained:

4.5	Percent of ammonium-N retained after application (Table 2, pg. 7)	60	percent
4.6	Ammonium-N retained after application (line 4.2 x line 4.5/100)	12	lb N/dry ton
4.7	Calculate biosolids inorganic N retained (line 4.3 + line 4.6)	12	lb N/dry ton

Estimate Organic N Mineralized:

4.8	Percent of organic N that is plant-available in Year 1 (Table 3, pg. 8)	30	percent
4.9	First year plant-available organic N (line 4.4 x line 4.8/100)	24	lb N/dry ton

Plant-available N:

4.10	Estimated plant-available N		36	lb N/dry ton
	Add available inorganic N and available organic N (line 4.7 + line 4.9)	÷		

Step 5. Calculate the Agronomic Biosolids Application Rate.

Line No.		Your Calculation	Example	Units
5.1	Amount of plant-available N needed from biosolids (from line 2.3)		160	lb N/acre
5.2	Estimated plant-available N in biosolids (from line 4.10)	·	36	lb N/dry ton
5.3	Agronomic biosolids application rate (line 5.1/line 5.2)		4.4	dry ton/acre

Step 6. Convert to "As Is" Biosolids Basis.

Desired Units		Your Calculation	Example
Gallons per acre =	(line 5.3/line 3.10) x 24,000		42,240
Acre inches per acre =	(line 5.3/line 3.10) x 0.88		1.55
Wet tons per acre =	(line 5.3/line 3.10) x 100		176

How to Use the Worksheet

Step 1. Collect Site Information.

Soil Series and Surface Soil Texture (Line 1.1)

Find the location on the county NRCS soil survey. Record the series name and surface texture of the predominant soil.

Crop Yield Goal (Line 1.2)

Field records are the best source for crop yield estimates. You can find proven yields for most grain farms from the local Farm Service Agency office. For most other cropping systems, grower records are the only source available. Be sure to note whether the yield records are on an "as is" or dry matter basis. Where field records are not available, you can make first-year estimates for a project using NRCS soil surveys, county production averages, or other local data sources.

A site used repeatedly for biosolids application should have yield data collected each year. Use this accumulated data for determining crop nitrogen requirement. If crop yield data is not kept, you may need to conduct additional monitoring (e.g., post-harvest soil nitrate testing) to be sure biosolids are applied at an agronomic rate.

Yield data is typically not available for grazed pastures because grazing animals consume the crop directly in the field. In these cases omit the yield goal, and go directly to Line 1.4. Estimate plant nitrogen needs from the appropriate pasture fertilizer guide recommendation, based on the level of pasture management.

Crop Rotation (Line 1.3)

Consult with the grower and discuss the range of possible crop rotations. Rotations that include root crops or other crops with a long post-application waiting period are not suitable for Class B biosolids applications.

Plant-Available N Needed to Produce Yield Goal (Line 1.4)

You can estimate plant-available-N needs by referring to university fertilizer guides or consulting a qualified agronomist.

University Fertilizer Guides

Land grant universities (Washington State University, Oregon State University, University of Idaho) publish fertilizer guides that estimate crop nitrogen requirements. Use the fertilizer guide most appropriate for the site and crop. For major crops, guides may cover irrigated or rainfed (dryland) cropping and different geographic areas. Don't use guides produced for irrigated sites when evalu-

ating dryland sites. When appropriate guides do not exist, consult the local Cooperative Extension or Natural Resources Conservation Service office, or a qualified agronomist for assistance.

Nitrogen fertilizer application rates listed in the fertilizer guides are based on field growth trials under the specified climate and cultural conditions. Growth trial results are averaged over a variety of soil types and years. Note that fertilizer guide recommendations are not the same as crop uptake. This is because the fertilizer guides account for N available from mineralization of soil organic matter and the efficiency of N removal by the crop.

The N rate recommended in fertilizer guides assumes average yields, good management practices, and removal of N from the field through crop harvest or grazing. In terms of satisfying crop N needs, plant-available N from biosolids application is considered equal to fertilizer N.

Agronomist Calculations

Because of the general nature of university fertilizer guides, it may be worthwhile to have a qualified agronomist calculate how much plant-available N is needed for a specific field. Always use the same method to calculate the N requirements. You will need to document your reasons for using agronomist calculations instead of the university fertilizer guide.

Plant-available N provided by other sources (Lines 1.5-1.11)

To make sure there isn't too much nitrogen applied to a crop, you must determine how much nitrogen comes from sources other than biosolids and soil organic matter. These sources of N are grouped into three categories in the worksheet:

- Plant-available N estimated by pre-application testing
- Adjustments to typical soil organic N mineralization (usually obtained from an agronomist)
- Information supplied by the grower

N estimated by pre-application testing (Lines 1.5-1.6)

Irrigation Water

Since the amount of nitrate-N in irrigation water varies, it should be determined by water testing. Irrigation water containing 5 mg nitrate-N per liter will contribute 1.1 pounds of nitrogen per acre inch applied; irrigation water containing 10 mg nitrate-N per liter will contribute 2.3 pounds of N per acre inch.

Preplant Nitrate-N in the Root Zone (east of Cascades)

You can estimate the preplant nitrate-N in the root zone by testing the soil in early spring. Sample in one-foot increments to a depth of at least two feet. University of Idaho Cooperative Extension Service Bulletin No. 704, Soil Sampling, is a good reference for soil sampling procedures.

Some fertilizer guides use preplant soil nitrate-N when calculating N fertilizer application rates. If you use these guides, don't count soil test nitrate-N in our worksheet. It has already been accounted for in the recommended fertilizer N rate prescribed in the guide.

Adjustments to typical soil N mineralization (Lines 1.7-1.9)

Nitrogen mineralization is the release of nitrogen from organic forms to plant-available inorganic forms (ammonium and nitrate). Soil organic matter supplies plant-available N through mineralization, but this is accounted for in the fertilizer guides. Sites with a history of cover crops, biosolids applications, or manure applications supply more plant-available N than do sites without a history of these inputs, and biosolids recommendations must be adjusted based on this additional supply of N.

Plowdown of Cover or Green Manure Crops

Green manures and cover crops are not removed from the field, but are recycled back into the soil by tillage. You can get an estimate of the N contributed from this plowdown by referring to the university fertilizer guides, or by estimating the yield and nitrogen concentration of the cover crop. Recovery of green manure N by the next crop ranges from 10–50% of the total N added to the soil by the cover crop. Estimates of plant-available N contributed by green manure crops should be made by a qualified agronomist.

Previous Biosolids Applications

Previous biosolids applications contribute to plant-available nitrogen in the years after the initial application. In the worksheet, they are considered as "N from other sources." We estimate that 8, 3, 1 and 1 percent of the organic N originally applied mineralizes in Years 2, 3, 4 and 5 after application. After Year 5, biosolids N is considered part of stable soil organic matter and is not included in calculations.

Table 1. Estimated nitrogen credits for previous biosolids applications at a site.

	Ye	ars After Biosolids	Application	
	Year 2	Year 3	Years 4 and 5	Cumulative Years 2, 3, 4 and 5
Biosolids Organic N as applied	Percent of Organic N Applied First Year			
	8	3	1	13
mg/kg (dry wt basis)	Ī	lant-available N r	eleased, lb N per dry t	on
10000	1.6	0.6	0.2	2.6
20000	3.2	1.2	0.4	5.2
30000	4.8	1.8	0.6	7.8
40000	6.4	2.4	0.8	10.4
50000	8.0	3.0	1.0	13.0
60000	9.6	3.6	1.2	15.6

In using Table 1, consider the following example. Suppose:

- You applied biosolids with an average organic N content of 30,000 mg/kg
- Applications were made the previous 2 years
- The application rate was 4 dry tons per acre

Table 1 gives estimates of nitrogen credits *in terms of the organic N originally applied*. Look up 30,000 mg/kg under Year 2 and Year 3 columns in the table. The table estimates 4.8 lb plant-available N per dry ton for year 2, and 1.8 lb plant-available N for year 3 (two-year credit of 6.6 lb N per dry ton). To calculate the N credit in units of lb/acre, multiply your application rate (4 dry ton/acre) by the N credit per ton (6.6 lb N/dry ton). The N credit is 26.4 lb plant-available N per acre.

Previous Manure Applications

Previous manure applications contribute to plant-available nitrogen in a similar manner to previous biosolids applications. To estimate this contribution, consult an agronomist.

Information supplied by the grower (Line 1.10)

N Applied at Seeding

For best growth, some crops depend on starter fertilizers (N applied at seeding). These fertilizers usually supply N, P and S. Examples are 16-20-0, 10-34-0. Starters are usually applied at rates that supply 10-30 lb N per acre. Enter all of the N supplied by starter fertilizer on line 1.10 in the worksheet.

Step 2. Estimate Plant-Available N Needed from Biosolids.

Next you will estimate the amount of plant-available N the biosolids must provide. This is the difference between the total plant-available N needed to produce the yield goal (line 1.4) and the plant-available N from other sources (line 1.11).

Step 3. Collect Biosolids Data.

To make the calculation, managers will need the following analyses:

- Total Kjeldahl N (TKN)
- Ammonium-N (NH₄-N)
- Nitrate-N (NO₃-N; composted or aerobically digested biosolids only)
- Percent total solids

If your laboratory results are on an "as is" or wet weight basis, you must convert them to a dry weight basis. To convert from an "as-is" to a dry weight basis, divide your analysis by the percent solids in the biosolids and multiply the result by 100.

Total Kjeldahl N includes over 95% of the total nitrogen in biosolids. In using the worksheet, we will assume that total Kjeldahl N equals total N.

Ammonium-N usually makes up over 95% of the total inorganic N in most biosolids. Ammonium-N includes both ammonia (NH_3) and ammonium (NH_4^+). Depending on your laboratory, results for ammonium-N may be expressed as either ammonia-N or ammonium-N.

Nitrate-N analyses also include small amounts of nitrite. Nitrite concentrations are negligible in biosolids. There may be significant amounts of nitrate in aerobically-digested biosolids or in composts. There is little nitrate in anaerobically-digested biosolids; therefore, nitrate analysis is not needed for these materials.

Determine biosolids organic N by subtracting ammonium-N from total Kjeldahl N (line 3.6 - line 3.7). Percent total solids analyses are used to calculate application rates. Biosolids applications are calculated as the dry weight of solids applied per acre (e.g., dry tons per acre).

Step 4. Estimate Plant-Available N Per Dry Ton of Biosolids.

The estimate of plant-available N per dry ton of biosolids includes:

- Some of the ammonium-N
- · All of the nitrate-N
- Some of the organic N

Inorganic N Retained (Lines 4.5-4.7)

Ammonium-N (Lines 4.5-4.6)

Under some conditions, ammonium is readily transformed to ammonia and lost as a gas. This gaseous ammonia loss reduces the amount of plant-available N supplied by biosolids. The following section explains the factors used to estimate ammonia-N retained in plant-available form after application.

Biosolids processing

Some types of biosolids processing cause most of the ammonia-N to be lost as ammonia gas or converted to organic forms before application:

- · Drying beds
- Alkaline stabilization at pH 12
- Composting

Application method

Ammonia loss occurs only with surface application. Injecting liquid biosolids eliminates ammonia loss, since the injected liquid is not exposed to the air. Surface applications of liquid biosolids lose less ammonia than do dewatered biosolids. For liquid biosolids, the ammonia is less concentrated and is held as NH₄* on negatively-charged soil surfaces after the liquid contacts the soil.

Ammonia loss is fastest just after application to the field. As ammonia is lost, the remaining biosolids are acidified—that is, each molecule of NH₃ loss generates one molecule of H* (acidity). Acidification gradually slows ammonia loss. Biosolids that remain on the soil surface will eventu-

ally reach a pH near 7, and further ammonia losses will be small. Losses of ammonia after six days on the soil surface are very close to zero.

Days to soil incorporation

Tillage to cover biosolids can reduce ammonia loss by adsorption of ammonium-N onto soil particles.

Table 2 estimates the amount of ammonium-N retained after field application. To use this table, you will need information on biosolids stabilization processes, method of application (surface or injected), and the number of days to soil incorporation.

Table 2. Estimates of ammonium-N retained after biosolids application.

		Surfa	ce-applied		Injected
Days to incorporation by tillage	Liquid Biosolids	Dewatered Biosolids	Alkaline- stabilized Biosolids*	Composted or Drying Bed Biosolids	All Biosolid
15.00	 	Ammoniu	ım-N retained, perc	ent of applied	
0 to 2	80	60	10	100	100 .
3 to 6	70	50	10	100	100
over 6†	60	40	10	100	100

^{*}For alkaline-stabilized biosolids analyzed for ammonium-N before lime addition.

†If biosolids will not be incorporated by tillage, use over 6 days to incorporation.

Nitrate-N (Line 4.3)

We assume 100% availability of biosolids nitrate-N.

Organic N Mineralized (Lines 4,8-4,9)

Biosolids organic N, which includes proteins, amino acids and other organic N compounds, is not available to plants at the time of application. Plant-available N is released from organic N through microbial activity in soil—called mineralization. Mineralization is more rapid in soils that are warm and moist, and is slower in soils that are cold or dry. Biosolids organic N mineralization rates in soil also depend on the treatment plant processes that produced the biosolids.

Use Table 3 to estimate biosolids mineralization rates based on processing. Use the middle of the range presented, unless you have information specific to the site or biosolids that justifies using higher or lower values within the range.

Table 3. First-year mineralization estimates for organic N in biosolids.

Processing	Moisture Content	First-year organic-N mineralization rate
'		percent of organic N
Anaerobic digestion	liquid	20-40
Aerobic digestion	liquid	30-45
Aerobic or anaerobic digestion and	·	•
storage in lagoon > 6 months	liquid	15-30
Anaerobic digestion and dewatering	semi-solid	20-40
Drying bed	solid	15-30
Heat-drying	solid	20-40
Composting	solid	. 0–20

Step 5. Calculate the Agronomic Biosolids Application Rate.

Perform this calculation using the results of the previous sections, as shown in lines 5.1 through 5.3.

Step 6. Convert Agronomic Biosolids Application Rate to "As Is" Basis.

Use the appropriate conversion factors (given in Table 6) to convert to gallons, acre-inches, or wet tons per acre.

Other considerations for calculations

- Small acreage sites without a reliable yield history. Some communities apply biosolids to small acreages managed by "hobby farmers." In many of these cases, there is no reliable yield history for the site, and the goal of management is not to make the highest economic returns. You can be sure of maintaining agronomic use of biosolids nitrogen on these sites by applying at a rate substantially below that estimated for maximum yield.
- Equipment limitations at low application rates. At some low-rainfall dryland cropping locations east of the Cascades, the agronomic rate calculated with the worksheet will be lower than can be spread with manure spreaders (usually about 3 dry tons per acre). At these locations, you may be able to apply the dewatered biosolids at the equipment limit, but check with your permitting agency for local requirements.

• Unavailable soil nitrate (dryland cropping, east of Cascades). Not all of the nitrate-N determined by testing dryland soils (line 1.6) is available to the crop because chemical extraction of nitrate is more efficient than plant root extraction. This difference becomes significant when soil nitrate concentrations are low (less than 10 mg nitrate N/kg soil) and sampling is done to greater than two feet.

Recent research has shown that the amount of "unavailable nitrate-N" increases with soil clay content. Use the following formula if you estimate "unavailable nitrate-N" based on soil clay content.

Unavailable nitrate-N (mg/kg) = percent clay x 0.1

- Denitrification and immobilization. Denitrification (the loss of nitrate as gaseous N₂ or N₂O) and immobilization (the loss of nitrate or ammonium by incorporation into organic compounds) can occur following biosolids application. At agricultural sites these losses usually are not included in biosolids loading rate calculations because university fertilizer guides account for average losses due to these processes. Check with your local permitting agency before including denitrification or immobilization losses in the loading rate calculations.
- **Site Specific Inputs.** Biosolids application rates can also be calculated using a more detailed N budget method found in Washington State Department of Ecology publication, "Managing Nitrogen from Biosolids." The N budget method allows for more site-specific inputs into the calculation. It will be most valuable when budget components are based on actual site monitoring data. If you do not have detailed site nitrogen data, use the worksheet presented above.

Cumulative Loading of Trace Elements

Under EPA regulations (40 CFR Part 503.13), managers must maintain records on cumulative loading of trace elements *only* when bulk biosolids do not meet EPA Exceptional Quality Standards for trace elements (Table 4).

When required, the steps in tracking trace metals are:

- Obtain biosolids trace element analyses from the wastewater treatment plant database.
- Compute pounds of element per dry ton of biosolids. Multiply mg/kg (dry weight basis) by 0.002.
- Keep records of the amount of biosolids applied to the site each year (in dry tons per acre).
- Compute pounds of element applied per acre. Multiply pounds of element per dry ton by dry tons applied.
- Compare cumulative pounds of element applied with the cumulative loading rate limit (Table 5).

Table 4. Biosolids concentration limits for land application. Source: EPA 40 CFR Part 503.

		Concentration Limit		
Element	Symbol	Exceptional Quality Standard (EPA Table 3)* mg/kg	Ceiling Limit (EPA Table 1) mg/kg	
Arsenic	As	41	75	
Cadmium	Cd	39	. 85	
Copper	Cu	1500	4300	
Lead	Pb	300	840	
Mercury	Hg	17	57	
Molybdenum	Мо	**	75	
Nickel	Ni	420	420	
Selenium	Se -	100	100	
Zinc	Zn	2800	7500	

^{*}EPA Table 3 and Table 1 refer to tables in EPA biosolids rule (40 CFR Part 503).

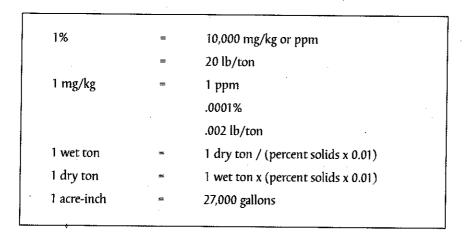
Table 5. Cumulative loading rate limits for bulk biosolids that do not meet EPA-Table 3 criteria and are applied to agricultural land. Source: EPA 40 CFR Part 503.13.

Element	Cumulative Limit (lb/acre)	
Arsenic	37	
Cadmium	35	
Copper	1340	
Lead	268	
Mercury	15	
Molybdenum	*	
Nickel	375	
Selenium	89	
Zinc	2500	

^{*}Molybdenum limit is under review by the EPA.

^{**}Molybdenum Table 3 level is under review by the EPA.

Table 6. Conversion Factors



The following equations summarize the calculations in the worksheet. You can use them in place of the worksheet. These equations do the same calculation as the worksheet, so you do not have to use both. These equations will give results in dry tons of biosolids per acre. You will still need an additional calculation (Step 6 in the worksheet) to convert to an "as is" basis.

Equations for Calculating Application Rates

$$B_{app} = (N_{need} - N_{other})/B_{pan}$$
 [1]

$$B_{pan} = [(TN - AN) * M/100 + AN * R/100 + NN] * C$$
 [2]

$$N_{\text{other}} = (0.225N_w * W) + \sum (N_{ppi} * 2.8 * D_i) + N_{gm} + N_{bs} + N_{man} + N_{start}$$
 [3]

Where:

B_{app} is the biosolids application rate in dry tons/acre

 N_{need} is the plant-available N needed to produce the crop yield goal in lb/acre

 N_{other} is the plant-available N provided by other sources in lb/acre

 $\mathbf{B}_{\mathtt{pan}}$ is plant-available N in the biosolids in lb/dry ton

TN is biosolids total N in mg/kg or percent

AN is biosolids ammonium N in mg/kg or percent

NN is biosolids nitrate N in mg/kg or percent

M is the biosolids organic N mineralization rate in percent (Table 3)

 ${f R}$ is the proportion of ammonium N retained in available form in percent (Table 2)

C is the conversion to lb/dry ton for biosolids N. For analyses in mg/kg, C = 0.002; for analyses in percent, C = 20.

 $N_{\rm w}$ is the nitrogen content of irrigation water in mg/kg

W is the irrigation water applied in inches

 N_{ppi} is preplant nitrogen in layer i in mg/kg. (Layers must be sampled in 12-inch increments)

 $\mathbf{D}_{_{i}}$ is soil bulk density in layer i in g/cm3

 $N_{\rm gm}$ is nitrogen from the plowdown of a green manure or cover crop in lb/acre

 N_{bs} is nitrogen released from previous biosolids applications in lb/acre (Table 1)

 N_{man} is nitrogen released from previous manure applications in lb/acre

 N_{start} is nitrogen supplied by starter fertilizer in lb/acre

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APPENDIX B VECTOR ATTRACTION REDUCTION STATISTICS

VECTOR ATTRACTION REDUCTION STATISTICS

A summary of the total amount of biosolids land applied from each wastewater treatment plant (WWTP) and the typical vector attraction reduction method used for those biosolids is provided in Tables 1 and 2 below.

Table 1

Flat Top/Bessie Mines Land Reclamation Site

Summary of 2012 Vector Attraction Reduction (VAR) Methods

Jefferson County WWTP	Amount of Biosolids Land Applied (dry tons)	Vector Attraction Reduction Method
Cahaba River	1,336	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Five Mile Creek	1,522	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Leeds	255	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Trussville	531	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Turkey Creek	219	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Valley Creek	2,336	*Option 6: Addition of Alkaline Material [503.33(b)(6)]
Village Creek	2,108	*Option 6: Addition of Alkaline Material [503.33(b)(6)]
Prudes Creek	0	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Warrior	13	Option 10: Incorporation of Biosolids into the Soil [503.33(b)(10)(i)]
Total Amount of Biosolids Applied at Flat Top:	8,320 dry tons	50.8% = Option 6, Lime Addition 49.2% = Option 10, Incorporation

^{*} The biosolids from the Valley Creek and Village Creek WWTPs are typically incorporated into the soil after application to the land as well.

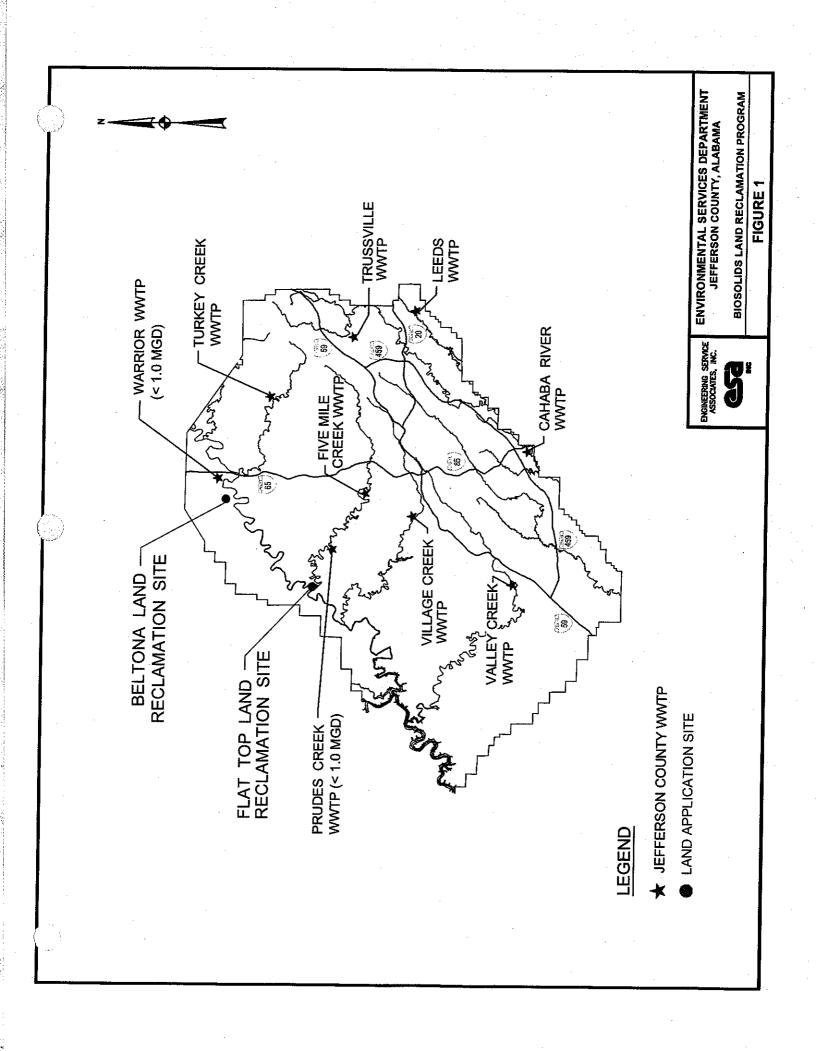
Table 2

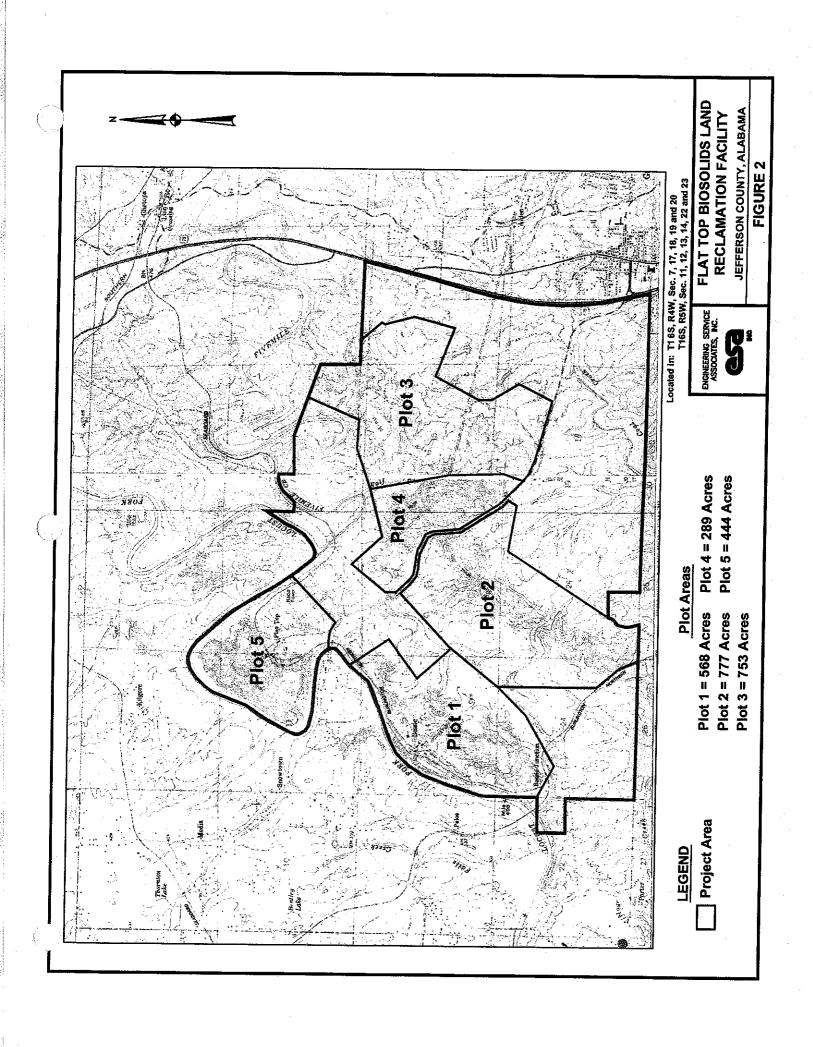
Beltona Land Reclamation Site

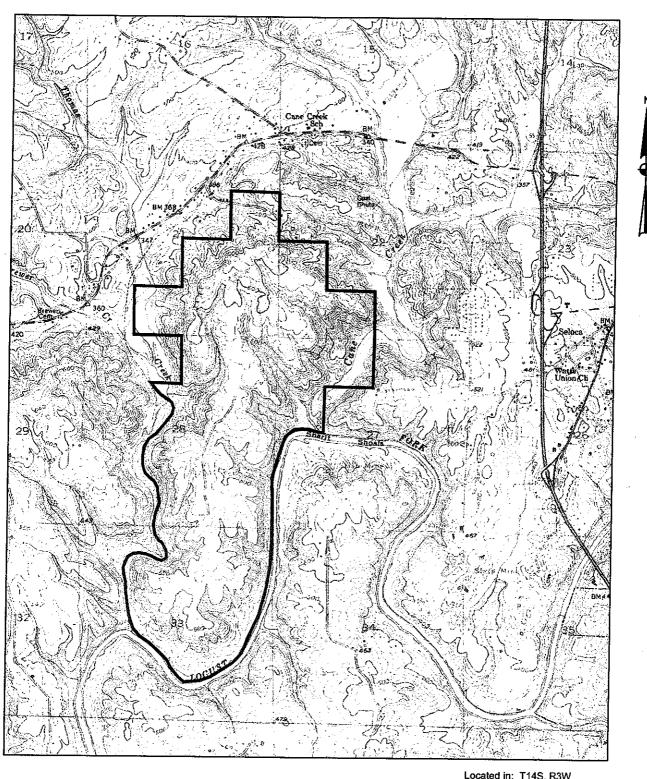
Summary of 2012 Vector Attraction Reduction (VAR) Methods

Jefferson County WWTP	Amount of Biosolids Land Applied (dry tons)	Vector Attraction Reduction Method
Valley Creek	1,860	Option 6: Addition of Alkaline Material [503.33(b)(6)]
Village Creek	1,160	Option 6: Addition of Alkaline Material [503.33(b)(6)]
Total Amount of Biosolids Applied at Beltona:	3,020 dry tons	100% = Option 6, Lime Addition

APPENDIX C SITE MAPS







LEGEND

Project Area

Located in: T14S, R3W Sections 21, 22, 27, 28 and 33



BELTONA BIOSOLIDS LAND RECLAMATION FACILITY

JEFFERSON COUNTY, ALABAMA

FIGURE 3

Jefferson County Environmental Services Department 716 Richard Arrington, Jr. Blvd. N., Suite A300 Birmingham, Alabama 35203 Phone (205) 325-5801 www.jeffcointouch.com