Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

May 18, 2020

Cedar Glen Condominiums
Jill D. Olsen
118 N Conistor Lane, Suite B290
Liberty, MO 64068

LETTER OF WARNING
RESPONSE REQUIRED

Dear Permittee:

Staff from the Department of Natural Resources conducted an inspection on the March 11, 2020, of Osage Water Company Wastewater Treatment Plant located at on Highway KK, Osage Beach, and in Camden County. The entity operates under the authority of Missouri State Operating Permit MOGD00340.

Compliance with Missouri Clean Water Law was evaluated. The enclosed report is being issued with a Letter of Warning (LOW) for the violations identified in the enclosed report.

Please direct your attention to the **Compliance Determination, Violations, and Required Actions** in the enclosed report. The report documents the findings and the actions that you must take to address the violations. **A written response documenting actions taken to correct the violations is required by the date specified in the report.**

Failure to address the required actions will result in the issuance of a Notice of Violation. If you have any questions or would like to schedule a time to meet with Department staff to discuss compliance requirements, please contact please contact Keith Forck by mail at the Missouri Department of Natural Resources, Central Field Operations, P.O. Box 176, Jefferson City, MO 65102, by phone at (573) 526-4232, or by email at keith.forck@dnr.mo.gov.

Sincerely,

CENTRAL FIELD OPERATIONS

Joe Stoops
Environmental Supervisor

c: Kristi Savage-Clarke, WPCB Compliance and Enforcement

Missouri Department of Natural Resources
Central Field Operations
Report of Inspection
Osage Water Co KK Wastewater Treatment Plant
Highway KK / Camden County
MOGD00340
May 28, 2020

Introduction

On March 11, 2020, a routine compliance inspection of the sanitary sewer collection system and the Osage Water Company KK Wastewater Treatment Plant (WWTP), located on Highway KK, Osage Beach, Camden County, Missouri, was conducted by the Missouri Department of Natural Resources (Department) Central Field Operations (CFO). The purpose of this inspection was to determine compliance with Missouri State Operating Permit (MSOP) MOGD00340, the Missouri Clean Water Commission Regulations, and Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection, including file review, site visits, and communications with entity representatives. Authority for this inspection is provided in Missouri Clean Water Law 644.026.1(21), RSMo.

The following participants were present during the inspection:

Lake Ozark Water and Sewer		
Jim Heppler	Operator	(573) 480-5250
Missouri Department of Natural Resources, Central Field Operations		
Keith Forck	Environmental Engineer	(573) 526-4232 keith.forck@dnr.mo.gov
Tom Stevens	Environmental Inspector	(573) 522-3322 tom.stevens@dnr.mo.gov

Entity Description and History

As part of the inspection, I reviewed the files for Osage Water Company KK Wastewater Treatment Plant, including previous inspection reports, correspondence, and the conditions of permit MOGD00340, for familiarization with the requirements specific to this facility.

Missouri State Operating Permit MOGD00340 was last issued on July 1, 2019, and expires on June 30, 2024. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility was previously permitted with a site specific permit MO0123170.

The facility consists of septic tanks, recirculating sand filters, chlorination, dechlorination, and sludge hauled by a contract hauler with a design flow of 13,875 gallons per day for the purpose of treating wastewater from the Eagle Woods and Golden Glade Subdivisions. The receiving

stream for this facility is a tributary to Lake of the Ozarks, which is located in the Lake of the Ozarks watershed (HUC 10290109).

The previous compliance inspection of the facility was on June 10, 2014. The inspection report noted the facility in non-compliance with a letter of warning for failure to submit the annual sludge report. This issue was resolved by September 7, 2014. I reviewed the facility's Form S Annual Sludge Report for 2019.

I reviewed the Discharge Monitoring Reports for the previous five-year period. The wastewater treatment facility had one effluent violation for ammonia in March 2016.

Discussion of Inspection and Observations

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Directly off of Highway KK, the facility is located down a long driveway between Eagle Woods and Golden Glade subdivisions (Figure #1). At the bottom of the big hill and about half way to the treatment plant, the driveway was partially washed out **(Recommendation #1)**. If deterioration of the access road continues a future violation could be issued due to the facility not being readily accessible from the public right-of-way.

Upon arrival at the wastewater treatment facility (Figure #2), we met with Mr. Heppler and outlined the purpose and scope of the inspection. Mr. Heppler granted permission to access the site and accompanied us throughout the inspection. The gate appears unused and the fence does not surround the facility (Photo #1) **(Letter of Warning #1)**.

The filter beds were mostly free of vegetation (Photo #2). There was a large patch of obvious ponding in the southeast corner of Sand Filter Bed A (Photo #3) **(Letter of Warning #2)**. Also in the southeast corner of Sand Filter Bed A at the seam between the sand filter beds, the wall has cracked (Photo #4). With the sand filter plugged, Mr. Heppler believes the water was overflowing the liner and leaking out of this crack and causing a bypass before the filter bed was shut down. Therefore the system is operating with Sand Filter Bed B in service (Photo #5) **(Recommendation #2)**. This sand filter bed is also showing signs of plugging as water is surfacing and beginning to pond (Photo #6). A large crack was observed in the southeast corner of this filter bed (Photo #7). This crack is significant and is potentially a structural issue (Photo #8 & #9) **(Recommendation #3)**. It appears that the crack may be leaking a small amount of water **(Recommendation #4)**. Water from the recirculating sand filter beds flows to the recirculation flow splitter where flow is split between discharge and recirculation (Photo #11 & #12). Part of the water going to the flow splitter is being bypassed as the water is splashing onto the ground **(Letter of Warning #3)**.

In the recirculation tank (Photo #13), the recirculated water mixes with the influent flow from the septic tanks located in the collection system at individual houses or larger ones for a cluster of houses. The mixed water in the recirculation tank is pumped to the sand filter beds. The system

operates with two pairs of pumps with each pair plumbed for a filter bed. One pair is turned off as Sand Filter A is offline (Photo #14). One of the pumps for Filter Bed B appears to have a loose fitting as water is being sprayed back into the tank (Photo #15) **(Recommendation #4)**. Mr. Heppler fixed this fitting during the inspection. The alarm was functional.

Just south of the end of the recirculation tank is a sump pump pit (Photo #16). According to Mr. Heppler, this pump is to keep groundwater from floating the recirculation tank. The recirculation tank has floated a few times since construction and has rotated the cylindrical tank a few degrees **(Recommendation #6)**. This water is pumped to the nearby stream (Photo #17), where green algae is noted below the pipe. Looking upstream of the pipe, no green algae is observed (Photo #18). Looking downstream of the pipe, green algae is observed (Photo #19) **(Letter of Warning #4)**. A sample was collected of this sump pump discharge and is to be analyzed for ammonia **(Sample #194690)**. The analysis of this sample was 13.7 mg/L for Ammonia as N. The full report is available as Attachment #3.

The homemade chlorine feeder was not in use and is next to the chlorine contact tank (Photo #20). Mr. Heppler stated that during the recreational season that they drop a couple tablets in the pipe when filling the feeder **(Recommendation #7)**. The homemade chlorine contact had some grayish colored water and floating solids **(Recommendation #8)**. Mr. Heppler stated that this tank was to be pumped out soon. The dechlorination dispenser was empty (Photo #22). The facility had no flow measurement device **(Letter of Warning #5)**. The discharge appeared to discolor the ditch (Photo #23) **(Letter of Warning #6)**. The outfall was marked with a sign.

There were some housecleaning issues of old pumps (Photo #13), piping, buckets (Photo #20), etc. observed around the treatment facility with a significant pile of materials located at the west end of the wastewater treatment facility (Photo #24) that could easily be cleaned up **(Recommendation #9)**.

Following the sample collection, a brief post meeting was held at the trucks summarizing the issues at the wastewater treatment facility. Mr. Heppler said that they were going to try to unplug Recirculating Sand Filter Bed A and shift the recirculation splitter piping. Mr. Heppler was concerned that Golden Glade hooked up another house and the system does not have capacity. He also said that the houses remove the septic tank filters when plugged; thus putting an additional load on the wastewater treatment facility **(Recommendation #10)**.

Sampling and Monitoring

I took the appropriate sampling materials on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures, as well as instruments for field monitoring that were capable of testing pH, temperature, conductivity, and dissolved oxygen. The field monitoring equipment had been properly calibrated and/or compared to standards in accordance with the Department's Quality Assurance/Quality Control procedures.

I conducted on-site water quality monitoring and collected the grab sample at Outfall #001. After collection, I packed the samples into a cooler with ice. I hand delivered the samples to the Department's Environmental Services Program for analyses of five-day Biochemical Oxygen Demand, Total Suspended Solids, and Ammonia as N (Nitrogen). The sample analysis results are summarized in the table below **(Letter of Warning #7)**. The full report is available as Attachment #3.

Outfall #001 for OWC KK WWTF						
Results of Sample Analyses			**Permitted Effluent Limitations**			
Parameter	**Sample Result**	**Units**	**Daily Maximum**	**Weekly Average**	**Monthly Average**	**Units**
Grab Sample; Sample #194646						
Flow	8,000	gpd	*		*	gpd
pH[1]	7.29	SU	*		*	SU
Temperature[1]	12.7	ºC				
Dissolved Oxygen[1]	1.03	mg/L				
Conductivity[1]	2650	µS/cm				
Ammonia as N[2]	38.9	mg/L	4.9		1.3	mg/L
Biochemical Oxygen Demand$_5$[2]	44.9	mg/L		45	30	mg/L
Total Suspended Solids[2]	29.0	mg/L		45	30	mg/L

[1]On-Site Water Quality Monitoring.
[2]Sample analysis conducted by Environmental Services Program.
*pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
Abbreviations: SU (Standard pH Units)

Compliance Determination, Violations, and Required Actions

The facility was found to be **out of compliance** with the Missouri Clean Water Law, the Missouri Clean Water Commission regulations, and Missouri State Operating Permit MO0, based upon observations made during the inspection, and a Letter of Warning (LOW) is being issued for the violations identified below.

Letter of Warning (LOW)

Please submit your responses to the following violations **by June 29, 2020**, to the to the Missouri Department of Natural Resources, Central Field Operations, P.O. Box 176, Jefferson City, MO 65102, by phone at (573) 522-3322, or by email at DNRCFO.WPC@dnr.mo.gov.

1. The facility must be enclosed with a fence designed to discourage the entrance of unauthorized persons and animals in accordance with 10 CSR 20-8.140(8)(A) and Requirement #9 of the Missouri State Operating Permit MOGD00340.

   REQUIRED ACTION: Construct a fence around the perimeter of the facility. Include access gates (Requirement #10 of MSOP) and warning signs as necessary.

2. The surface of the recirculating sand filter had free liquid standing (ponding) indicating the filter is beginning to plug. The most common causes of premature plugging are failure to routinely pump sludge from the septic tank(s) upstream of the filter and failure to keep vegetation pulled from the surface of the filter bed. Even when properly operated and maintained, most fixed film treatment systems with relatively small media size tend to plug with biological growth over time. Once the filter is plugged, the media normally has to be replaced. It is essential that wastewater treatment facilities be properly operated and maintained in good working order so that permit limits can be met under all conditions. Failure to operate and maintain the facility is a violation of Missouri Clean Water Law Sections 644.051.1(3) and 644.076.1, RSMo.

   REQUIRED ACTION: Develop and submit a plan to correct this violation and implement the plan before overtopping of the filter bed(s) occur. You may contact your consulting engineer to determine if your filter media requires replacement and for recommended specifications for the new media.

3. The facility failed to report the bypass in accordance with the Requirement 8 of the MSOP. Failure to comply with MSOP Requirements is a violation of MCWL Sections 644.076.1, RSMo. Requirement 8 of the MSOP requires the facility to report to the appropriate Department regional office or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: http://dnr.mo.gov/mogem/ or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours.
   REQUIRED ACTION: Provide a short summary of the recent bypasses with dates, locations, causes, actions, and volumes.

4. Placed or caused or permitted to be placed a water contaminant, sump pump discharge, in a location where it is reasonably certain to cause pollution of waters of the state [Sections 644.051.1(1) and 644.076.1, RSMo].

   REQUIRED ACTION: The sample analysis shows that this discharge includes partially treated wastewater. The source of this bypass must be found and necessary repairs conducted to eliminate this bypass.

5. In accordance with 10 CSR 20-8.140(7)(E), a means of flow measurement shall be provided at all wastewater treatment facilities.

   REQUIRED ACTION: Provide the department with the proposed method of flow measurement. Some examples include a weir, parshall flume, or bucket and stop watch.

6. The outfall water shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly, or harmful bottom deposits in the receiving stream in accordance with 10 CSR 20-7.031(4).

REQUIRED ACTION: Complete the operational and maintenance necessary to improve the water quality of the outfall and therefore the receiving stream. Work may include pumping sludge from the chlorine contact tank and recirculation tank and unplugging the filter beds.

7. An effluent sample collected by Department staff on March 11, 2020 revealed a violation of permitted effluent limits for both Ammonia as N_2 and Biochemical Oxygen Demand$_5$ as shown in the table in the Sampling and Monitoring Section of the Report. Failure to comply with permitted effluent limits is a violation of Missouri Clean Water Law Sections 644.051.1(3) and 644.076.1, RSMo and Missouri Clean Water Commission Regulation 10 CSR 20-7.015.

   REQUIRED ACTION: Submit a written response detailing actions to prevent any future occurrences.

Recommendations

1. If deterioration of the access road continues the facility could be in violation of Requirement #11 of the MSOP and Missouri Clean Water Commission Regulation 10 CSR 20-8.140(2)(D) as the facility needs to be readily accessible from a public right-of-way. It is recommended that the facility continue to make repairs to the road as necessary.

2. The wastewater treatment facility is designed for both recirculating sand filter beds to be in service. With the facility near the design flow and the second filter showing signs of plugging, operation of both filter beds should be restored as quickly as reasonably possible.

3. Consideration should be given for having an evaluation conducted on the structural stability of the filter bed walls as the concrete has a major crack in the southeast corner of Sand Filter Bed B. Any suggested stabilization repairs should then be completed.

4. Even a small bypass from the wastewater treatment facility should be stopped upon discovery and reported to the department in accordance with Requirement 8 of the MSOP.

5. The wastewater treatment facility should be thoroughly checked on a routine basis to verify the entire system is operating properly.

6. The recirculation tank and associated piping need to be watertight. When the tank was moved by flotation, stress is placed on the tank and fittings, potentially causing a stress crack, which may be leaking. The sump pump may be pumping partially treated wastewater in addition to stormwater. The recirculation tank and connecting pipes should be evaluated and verified to be watertight.

7. Consider increasing the capacity of the tablet feeder to provide a more controlled dosage of chlorine than dropping tablets into the pipe.

8. The water in the chlorine contact tank should look clear and be free of floating solids. Excessive solids should be removed from the recirculation tank and chlorine contact tank. Consider checking the chlorine contact tank and cleaning as necessary.

9. For the safety of all employees, ensure that all equipment and parts are stored properly away to reduce trip hazards. All obsolete equipment should be disposed of in a proper way; chlorine/dechlor buckets should be disposed of along with old pumps.

10. If the facility is exceeding its design capacity, the facility should be expanded to serve the additional load or possibly connect to a regional facility. If the excessive loading is only organic, the facility may consider putting in a solids trap before the recirculation tank to keep the solids out of the recirculation tank and recirculating sand filter.

Additional Comments/Conclusion

If you have any questions or would like to schedule a time to meet with Department staff to discuss compliance requirements, please contact Keith Forck by mail at Missouri Department of Natural Resources, Central Field Operations, P.O. Box 176, Jefferson City, MO 65102; by phone at (573) 522-3322; or by email at keith.forck@dnr.mo.gov.

Signatures

SUBMITTED BY:

Keith Forck, PE
Environmental Inspector
Central Field Operations

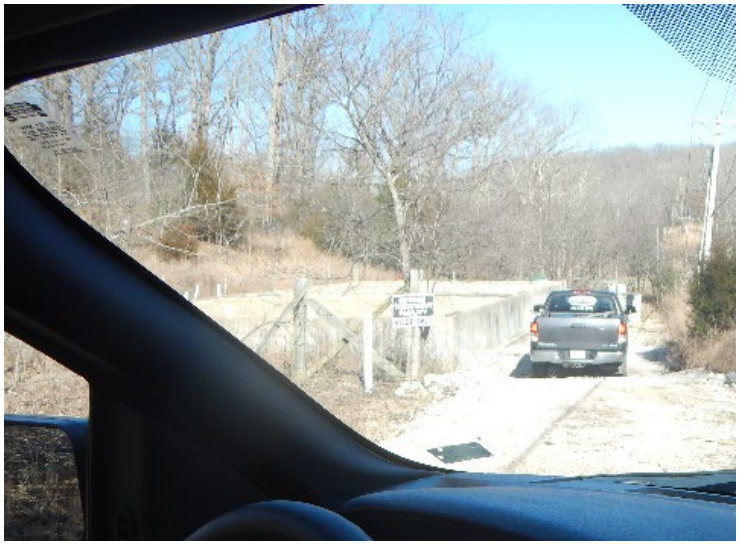
REVIEWED BY:

Joe Stoops
Environmental Supervisor
Central Field Operations

Attachments

Attachment # 1 – Photographs (#1 through #24)
Attachment # 2 – Aerial Map
Attachment # 3 – Discharge Monitoring Report Results

Attachment #1 – Photographs
Osage Water Co KK WWTF
May 28, 2020

	Photograph: #1 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Entrance to treatment plant. Gate does not appear to have been closed recently. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #2 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking east across Sand Filter Bed A. Notice the ponding on the southeast corner of the filter bed. Sand Filter Bed B in the background. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #3 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking northwest at ponding area of Sand Filter Bed A. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #4 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking northwest at the seam between the sand filter beds. Sand Filter Bed A has recently been shut down due to the leak bypassing treatment. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #5 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking east across Sand Filter Bed B. See the ponding stain in the far center part of the filter bed. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #6 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Close-up of the ponding area in Sand Filter Bed B. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #7 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking northwest at the southeast corner of Sand Filter Bed B. Note the large crack for the entire height of the wall. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #8 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Close-up of the crack at the top of the wall in the southeast corner of Sand Filter Bed B. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #9 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Description: Close-up of the crack at the middle of the wall in the southeast corner of Sand Filter Bed B. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #10 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Close-up of the crack at the bottom of the wall in the southeast corner of Sand Filter Bed B. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #11 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking north at the recirculating piping and recirculation tank riser. Note the wet area around the riser from recirculating splitter falling outside the tank riser. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #12 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Close-up of the recirculating flow splitter valve and wet area outside of the riser. Note the piping supports of concrete blocks. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #13 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking north at the recirculation tank. The pumps are in the two closest risers and the recirculation piping and riser in the background. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #14 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking down at into the southern riser. These pumps are for Filter Bed A and are turned off. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #15 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking down at into the northern pump riser. These pumps are for Filter Bed B and one of the pumps is failing as it is just stirring the water in the screen vault. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #16 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Sump pump at the south end of the recirculation tank. Used to pump water to keep the tank from floating. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #17 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking west at the discharge line from the sump pump. Note the green algae at the bottom of the picture, which is downstream of the pipe. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #18 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking northwest at the stream immediately upstream of the sump discharge. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #19 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking down at the green algae in the stream immediately below the sump pump discharge. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #20 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking west at the custom chlorinator and contact tank. Only one tablet feeder for chlorine. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #21 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking down into the chlorine contact tank. See the algae and floating scum in the tank. Date Taken: 3/11/20 Program: WPC Unit

Attachment #1 – Photographs
Osage Water Co KK WWTF
May 28, 2020

	Photograph: #22 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking down at the dechlorinator and discharge ditch. Note the discoloration of the ditch. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #23 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Picture of the discharge ditch below the outfall. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #24 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00340 Location: OWC KK WWTP Description: Looking north at the scrap pile at the west end of the wastewater treatment facility. Date Taken: 3/11/20 Program: WPC Unit

Attachment #2 – Aerial Map
Osage Water Co KK WWTP
May 28, 2020

Figure 1: Aerial map view of the Eagle Woods and Golden Glade Subdivisions courtesy of Google Maps.

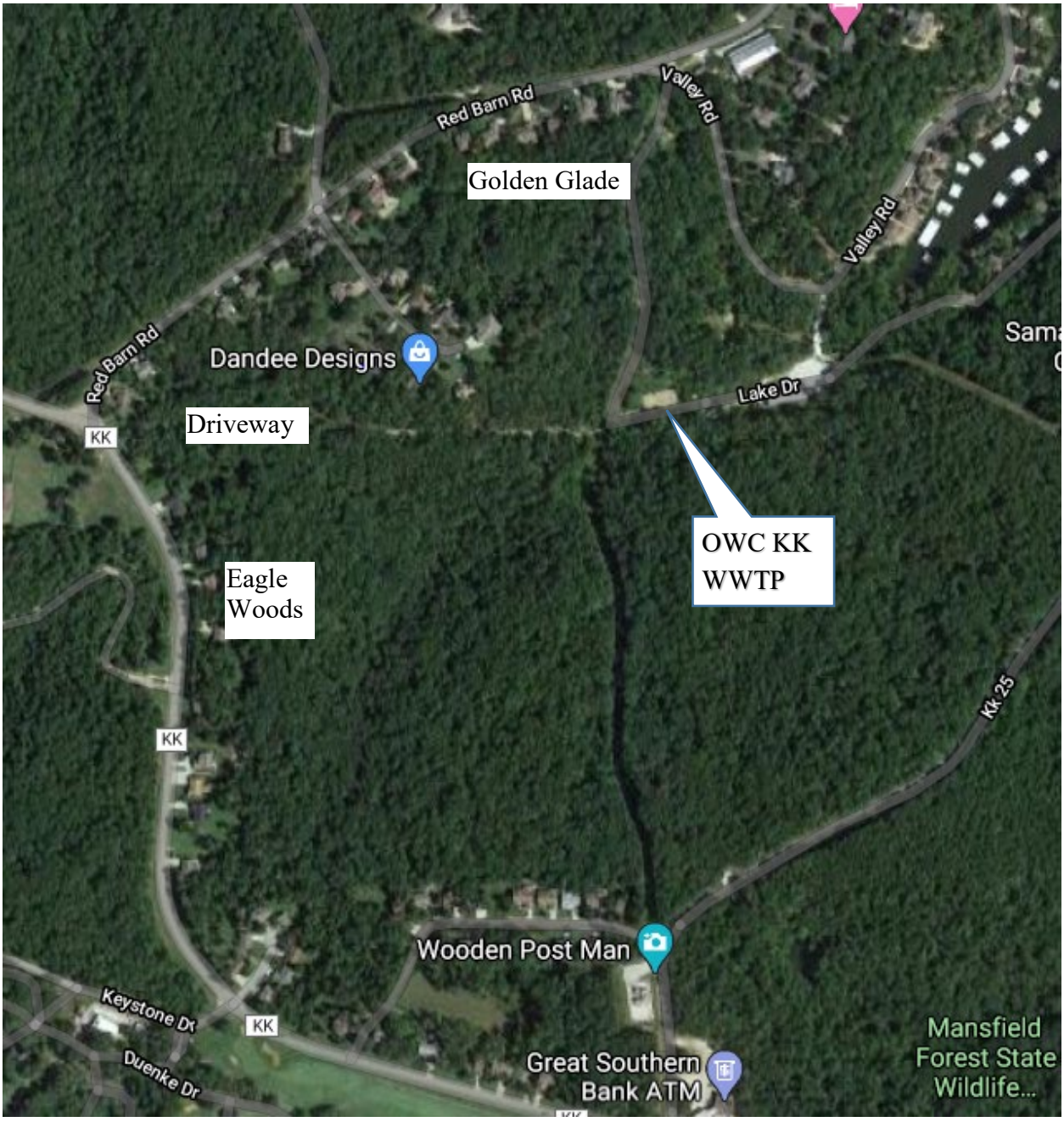


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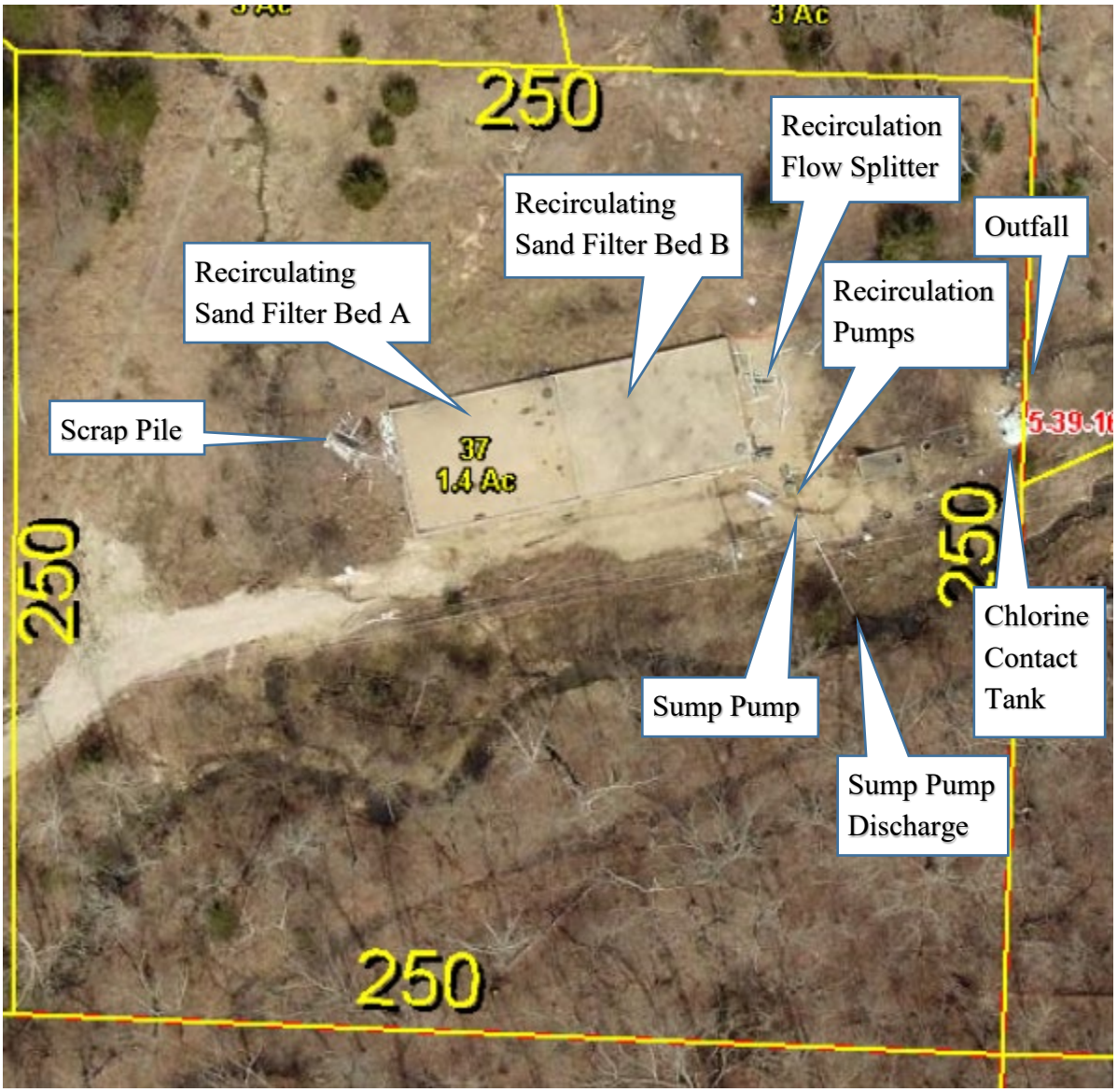
Figure 2: Aerial map of Osage Water Company KK WWTP courtesy of Camden County GIS System.



MISSOURI DEPARTMENT OF NATURAL RESOURCES

Environmental Services Program
PO Box 176 Jefferson City MO 65102-0176

EXHIBIT 1
Report Date: 4/6/2020

Results of Sample Analyses

Order ID: WO200312004

ADS-NRGODDM-2

LDPR Code: FEINS

Water Pollution Control Branch
FEINS
Non project-specific sampling under FEINS

Comment:

Sample C: MO# added per Keith Forck via email 03/12/2020

Chelsey Distler
PO BOX 176
JEFFERSON CITY MO 65102-0176

Sample:2003692

Site: FEINS OWC, KK Treatment Plant
Site Number: MOGD00340

Customer #: 194646
County: Camden

Collected 03/11/20 15:20 by Keith Forck (CFO)

Nonpotable Water; Grab

Sample Location and Type: Outfall #001 (Outfall)

Analyte	Result	Qualifier(s)
Analysis: Ammonia as N by Lachat L 10-107-06-1-J		
Ammonia as N	38.9 mg/L	09
Analysis: Biochemical Oxygen Demand by Standard Methods 5210-B		
Biochemical Oxygen Demand	44.9 mg/L	
Analysis: Field Conductivity by Standard Methods 2510		
Specific Conductivity (field)	2650 µS/cm	
Analysis: Field Dissolved Oxygen by Standard Methods 4500-O-G		
Dissolved Oxygen (field)	1.03 mg/L	
Analysis: Field pH by EPA 150.1		
pH (field)	7.29 pH	
Analysis: Field Temperature by EPA 170.1		
Temperature (field)	12.7 °C	
Analysis: Total Suspended Solids (TSS) / NFR by Standard Methods 2540-D		
Total Suspended Solids (TSS) / NFR	29.0 mg/L	

Sample:2003696

Site: FEINS OWC, KK Treatment Plant
Site Number: MOGD00340

Customer #: 194690
County: Camden

Collected 03/11/20 15:45 by Keith Forck (CFO)

Nonpotable Water; Grab

Sample Location and Type: Sump pump discharge at recirculation tank (Other)

Analyte	Result	Qualifier(s)
Analysis: Ammonia as N by Lachat L 10-107-06-1-J		
Ammonia as N	13.7 mg/L	

The analysis of this sample was performed in accordance with procedures approved or recognized by the U. S. Environmental Protection Agency.

Kevin Thoeven

Units used in this report:

°C	degrees Celsius
µS/cm	microsiemens per centimeter
mg/L	milligrams per liter
pH	pH units

Kevin Thoenen
Laboratory Manager
Environmental Services Program
Division of Environmental Quality

Data qualifiers applied to one or more results:

09 Sample diluted during analysis

EXHIBIT 1