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

May 28, 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 Cimarron Bay/Harbor Bay Condominiums Wastewater Treatment Facility located at on MM-40PT (Cimmaron Bay Circle), Sunrise Beach, and in Camden County. The entity operates under the authority of Missouri State Operating Permit MOGD00297.

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 Mr. 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

Enclosure

c: Kristi Savage-Clarke, WPCB Compliance and Enforcement

Missouri Department of Natural Resources
Central Field Operations
Report of Inspection
Cimarron Bay/Harbor Bay Condominiums Wastewater Treatment Facility
MM-40PT (Cimarron Bay Circle), Sunrise Beach / Camden County
MOGD00297
May 28, 2020

Introduction

On, March 11, 2020, a routine compliance inspection of the sanitary sewer collection system and the Cimarron Bay/Harbor Bay Condominiums Wastewater Treatment Facility, located on MM-40PT (Cimarron Bay Circle), Sunrise 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) MOGD00297, 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		
Tim Ripley	Operator	(573) 480-0834
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) 522-6713 tom.stevens@dnr.mo.gov

Entity Description and History

As part of the inspection, I reviewed the files for Cimarron Bay/Harbor Bay Condominiums Wastewater Treatment Facility, including previous inspection reports, correspondence, and the conditions of permit MOGD00297, for familiarization with the requirements specific to this facility.

Missouri State Operating Permit MOGD00297 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 MO0116921.

The facility consists of septic tanks, recirculating sand filters, chlorination, dechlorination, and sludge hauled by a contract hauler with a design flow of 5,920 gallons per day for the purpose of treating wastewater from the Cimarron Bay Subdivision and Harbor Bay Condominiums. 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). I reviewed the facility's Form S Annual Sludge Report for 2019.

I reviewed the Discharge Monitoring Reports for the previous five-year period. No effluent concentration violations were noted as the facility frequently reports insufficient flow for sampling or no discharge **(Recommendation #1)**.

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.

Upon arrival at the wastewater treatment facility, we met with Mr. Tim Ripley and outlined the purpose and scope of the inspection. Mr. Ripley granted permission to access the site and accompanied us throughout the inspection. The wastewater treatment facility does not have a fence (Photo #1) **(Letter of Warning #1)**.

The filter beds were mostly free of vegetation (Photo #2). There filter beds support walls have deteriorated. A backfill around the walls has not been maintained and is not providing much support (Photo #1- #3) **(Recommendation #2)**. The facility is operating with only filter bed #2 functioning as the other two filter beds are missing piping, valves, and other appurtenances. **(Recommendation #3)**. Mr. Ripley also has concerns that recirculating sand filter beds may be leaking due to the frequency of the facility being no-discharge **(Recommendation #4)**. With the condition, age, and concerns about the facility, it may be time to consider a major repair or replacement of the wastewater treatment facility **(Recommendation #5)**.

In the recirculation tank (Photo #5 & #6); pumps force water to the recirculating sand filter bed for treatment through the media. Only one set of pumps functioned as the other control panel was off, but also did not have power to operate the second set of pumps. The alarm functioned properly.

Water from the recirculating sand filter beds flows to the recirculation flow splitter where flow is split between discharge and recirculation (Photo #7). Then the recirculation water is returned to the recirculation tank for mixing with the influent flow from the septic tanks, which are located in the collection system.

The recirculating flow splitter needs maintenance as the ball has broken off with a cap placed on the pipe, which has allowed solids to plug the piping and only one recirculation orifice is allowing recirculation **(Recommendation #6)**. Mr. Ripley was working on fixing the recirculating flow splitter as we departed the facility.

The custom chlorine feeder was not in use (Photo #8). Mr. Ripley stated that during the recreational season that the tablets in the feeder may get washed into the contact tank during peak flows **(Recommendation #7)**. The chlorine contact basin was still covered for protection

from freezing (Photo #9). The dechlorination dispenser was empty. The discharge appeared to discolor the ditch (Photo #10) **(Letter of Warning #2)**.

The outfall was marked with a small sign in the field (Photo #11). The facility had no flow measurement device **(Letter of Warning #3)**.

Following the sample collection, a brief post meeting was held at the trucks summarizing the issues at the wastewater treatment facility.

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 #4)**. The full report is available as Attachment #2.

Outfall #001 for Cimarron Bay/Harbor Bay Condominiums WWTF						
Results of Sample Analyses			**Permitted Effluent Limitations**			
Parameter	**Sample Result**	**Units**	**Daily Maximum**	**Weekly Average**	**Monthly Average**	**Units**
Grab Sample; Sample #194647						
Flow	500	gpd	*		*	gpd
pH[1]	7.55	SU	*		*	SU
Temperature[1]	13.9	ºC				
Dissolved Oxygen[1]	4.30	mg/L				
Conductivity[1]	1510	µS/cm				
Ammonia as N[2]	31.5	mg/L	4.9		1.3	mg/L
Biochemical Oxygen Demand$_5$[2]	37.0	mg/L		45	30	mg/L
Total Suspended Solids[2]	22.0	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 should 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 MOGD00297.

   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 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 issues as necessary to improve the water quality of the outfall and therefore the receiving stream. Maintenance work may include pumping sludge, repairing electrical and plumbing issues, and potentially unplugging the filter beds and distribution lines.

3. 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.

4. 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. The file review has shown that your facility has submitted 'No Discharge' or ‘Insufficient flow for Sampling’ repeatedly on the past several DMRs, although your facility routinely received and treated wastewater during at least one of these reporting periods. Even if the facility is not discharging at the time someone visits to collect samples, intermittent discharge is not a basis for reporting 'No Discharge' or ‘Insufficient flow for Sampling’ during the

entire monitoring period. It is the Permittee's responsibility to ensure that someone can be present when the facility is discharging to collect an effluent sample at least once per monitoring period.

2. The walls of the recirculating sand filter beds should be carefully backfilled to provide support to maintain the filter beds as they near the end of their design life. The backfill could also help with worker safety by reducing the potential tripping and slipping opportunities.
3. The valving, piping, and any other appurtenances for all the recirculating sand filter beds should be repaired or replaced to provide the maximize the capabilities of the wastewater treatment facility. In addition, electricity must be provided to the second control panel.
4. Should the concern about a possible leak persist, the system should be tested for water tightness.
5. The facility should be evaluated whether it is more cost effective to make the repairs required to maintain the existing wastewater treatment system, replace the system, or connect to a regional wastewater treatment facility.
6. The recirculating flow splitter should be maintained to function as designed.
7. The facility should be operated and maintained as designed. This includes verifying the custom chlorine tablet feeder are operating as designed.

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 #11)
Attachment # 2 – Aerial Map
Attachment # 3 – Discharge Monitoring Report Results

Attachment #1 - Photographs
Cimarron Bay/Harbor Bay Condominiums WWTF
May 28, 2020

	Photograph: #1 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking west at Recirculating Filter Bed 3. Note the failing walls and poor backfill support. Note no fence around the system. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #2 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking south at the Recirculating Sand Filter Bed 2 with Recirculating Sand Filter Bed 3 in the background. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #3 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Close-up of the support wall that is nearing the end of the design life. The poly liner is supported by this wood and plywood wall. Date Taken: 3/11/20 Program: WPC Unit

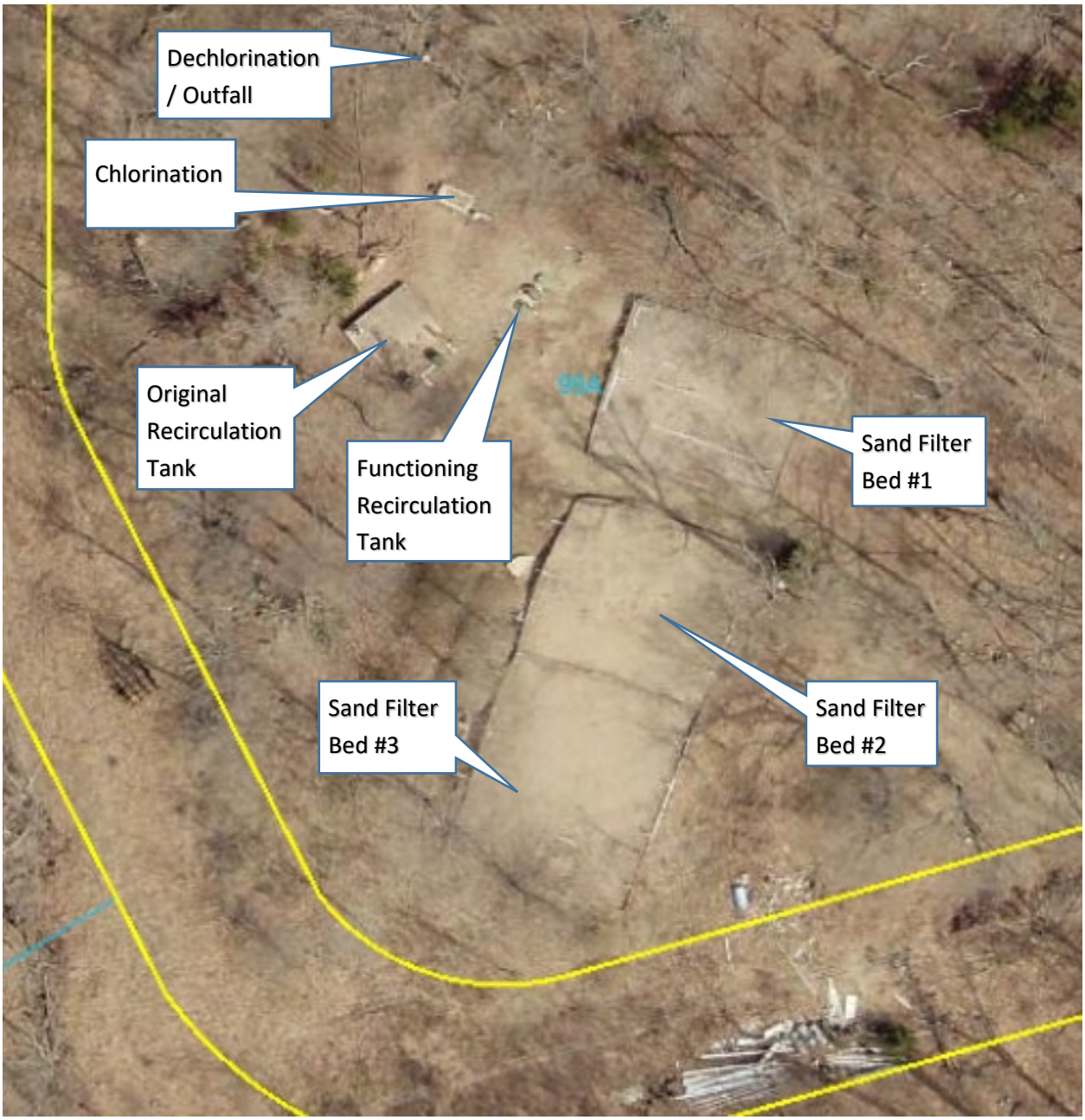
	Photograph: #4 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking down at the ratchetting distribution valve. Note the poor drainage in the bottom of the valve pit. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #5 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking north at the recirculation tank with the chlorine contact tank in the background. Additional tankage on the far left of the picture by the control panel is additional recirculation tank storage that the influent enters. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #6 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking west at both recirculation tanks. As operated, the functioning pumps and recirculation valve are in the tank in the near right. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #7 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking down at the recirculation valve. Water is only recirculating through the upper left pipe. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #8 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking down at the custom chlorinator. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #9 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking down at the chlorine contact tank. Date Taken: 3/11/20 Program: WPC Unit

	Photograph: #10 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking north at the dechlorinator and discharge flow path. Date Taken: 3/11/20 Program: WPC Unit
	Photograph: #11 Taken By: Keith Forck Entity: Central Field Operations Permit: MOGD00297 Location: Cimarron Bay/Harbor Bay Condominiums WWTF Description: Looking east at the outfall sign. Date Taken: 3/11/20 Program: WPC Unit

Attachment #2 – Aerial Map
Cimarron Bay WWTF
May 28, 2020

Figure 1: Aerial map of WWTF courtesy of Camden County GIS System.



MISSOURI DEPARTMENT OF NATURAL RESOURCES

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

EXHIBIT 2
Report Date: 4/6/2020

Results of Sample Analyses

Order ID: WO200312002

ADS-NRGODDM-1

LDPR Code: FEINS

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

Chelsey Distler
PO BOX 176
JEFFERSON CITY MO 65102-0176

Sample:2003690

Site: FEINS Cimarron Bay
Site Number: MOGD00297

Customer #: 194647
County: Camden

Collected 03/11/20 13:30 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	31.5 mg/L	09
Analysis: Biochemical Oxygen Demand by Standard Methods 5210-B		
Biochemical Oxygen Demand	37.0 mg/L	
Analysis: Field Conductivity by Standard Methods 2510		
Specific Conductivity (field)	1510 µS/cm	
Analysis: Field Dissolved Oxygen by Standard Methods 4500-O-G		
Dissolved Oxygen (field)	4.30 mg/L	
Analysis: Field pH by EPA 150.1		
pH (field)	7.55 pH	
Analysis: Field Temperature by EPA 170.1		
Temperature (field)	13.9 °C	
Analysis: Total Suspended Solids (TSS) / NFR by Standard Methods 2540-D		
Total Suspended Solids (TSS) / NFR	22.0 mg/L	

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

Kevin Thoenen

Kevin Thoenen
Laboratory Manager
Environmental Services Program
Division of Environmental Quality

Units used in this report:

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

Data qualifiers applied to one or more results:

09	Sample diluted during analysis