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918-323-0001

City of Coweta
P.O. Box 850
Coweta, Ok 74429

Attn: Lisa Taylor
Re: Septic Disposal
November 8, 2023

Dear Lisa,

This recommendation letter will advise on the impact of allowing septic servicers to discharge raw sewage into the heavily compromised Wastewater Treatment Facility directly or via the Sewer Collection Infrastructure.

It is common practice in Oklahoma for Septic Servicers to discharge into Municipal, Township and Private Wastewater Treatment Facilities either by contract or other agreement provisions as a revenue source. This availability for the Wastewater Treatment Facility is not required by the Oklahoma Department of Environmental Quality (*DEQ*) by Legal Statute.

As your Professional Consultants in this industry, we will list the areas of concern that have been identified affecting our recommendation.

- 1) All Oklahoma Municipal, Township and Private Wastewater Treatment Systems are subject to Discharge Permit Limitations set forth by DEQ. These limitations include daily flow and loading concentrations for Biological Oxygen Demand (*BOD*) and Total Suspended Solids (*TSS*). These are the two areas of concern for the City of Coweta as it affects the Wastewater Treatment Facility.

Flow:

The NPDES Permit for the City of Coweta Wastewater Treatment System sets all limitations for a Daily Flow of .76 MDG. We have collected the last 12 months of data from the Discharge Monitoring Report (*DMR*) that is submitted to the DEQ each month and determined that the Average Daily Flow was .75625 MGD. That allows 3,750 gallons of excess or .49% available, meaning a single light rain event has the potential to put the city out of flow limitation compliance by permit. For a Wastewater Treatment System to be adequately prepared to receive additional sewage from sources outside of its own infrastructure it should have 30% or more available of its permitted flow limitations in excess to allow for high flow weather events along with residential and commercial growth.

Loading and Concentration:

Coweta is Permitted for a Loading Average for Biological Oxygen Demand (*BOD*) at 190.2 lbs/day. From the last Daily Monitoring Report to DEQ, Coweta reported a 548.26 lbs/day. The Permit Limitation for Total Suspended Solids (*TSS*) is 570.5 lbd/day, Coweta reported an 830.99 lbs/day on that same DMR.

What has caused these elevated compliance testing results?

The Wastewater Treatment Lagoon System at Coweta is suffering 70% effective treatment volume loss due to severe overloading of present solids. There has been no solids management at this facility. The current Facility design depends on Biological Treatment using naturally present bacteria to process the waste. With 70% of the Treatment Volume overrun with Solids the “bugs” do not have the detention time to effectively process waste material. These Lagoons are further suffering the loss of “Freeboard”, which is a factor of safety usually expressed in feet above flood level. The design requirement for Lagoons is to be 36” of “Freeboard” available to allow high loading from weather events and Inflow and Infiltration (*I&I*) from the collection infrastructure. These Lagoons currently have 18” of “Freeboard available”.

The EPA has expressed disadvantages to allowing Raw Sewage Loading from Septic Servicers that we will list here.

- 1) Potential for Facility upset if septage addition is not properly controlled.
- 2) Increased residuals handling and disposal requirements.

On average according to the EPA a Septage Load can add on average 12,862 mg/l (*TSS*) and 6,480 mg/l (*BOD*).

I have only listed the 2 factors that are of high concern for the City of Coweta at the Wastewater Treatment Facility.

Recommendation:

At this time we recommend that the City of Coweta discontinue the allowance of Septage Disposal Contractors to deposit into the Treatment Facility or the Collection Infrastructure.

After proper repairs are completed and a solids management program is in place, it is recommended that the City of Coweta re-visit allowing Contractual Controlled introduction of Septage Service Contractors, including testing and fee schedules.

“Service, Support and Solutions”

Charles Schneider
Managing Consultant, R&D Chemist
918-323-0001

Charles Schneider

11/8/2023 @ 10:46 am