

STATE OF MISSOURI Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES

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OCT 27 2006

Mr. John DeLashmit
U.S. Environmental Protection Agency
Region VII
901 North Fifth Street
Kansas City, KS 66101

RE: Permit for Lebanon Wastewater Treatment Plant in Lieu of a Total Maximum Daily Load for Dry Auglaize Creek (Water Body Identification No. 1145)

Dear Mr. DeLashmit:

Dry Auglaize Creek near Lebanon, in Laclede County, is on Missouri's 2002 303(d) List for "unknown pollutant" and the source is listed as the Lebanon Wastewater Treatment Plant (WWTP), Missouri State Operating Permit Number MO-0089010. The original pollutants listed on the 1998 303(d) List were Biological Oxygen Demand (BOD) and Non-Filterable Residue (NFR) because of algae and reduced aquatic invertebrate populations downstream of the WWTP. The Department of Natural Resources (department) believes that the original designation of pollutants is correct, however, the source is not the Lebanon WWTP itself, but rather the *bypassing* of the plant. Bypassing from manholes results in wastewater being released before it can be treated.

The city has a history of violations for sanitary sewer overflows (SSOs), particularly at Manhole #1, located 100 yards upstream (south) of the WWTP. In lieu of a Total Maximum Daily Load (TMDL), the department has opted to correct these impairments through permit limits and a schedule for completion of system upgrades and improvements (see enclosed consent decree).

The WWTP outfall and Manhole #1, where significant bypassing occurs, are both located in the upper reaches of Dry Auglaize Creek. There is no visible flow in the creek upstream of the WWTP outfall, except in wet weather, and the impaired section of the creek is considered effluent-dominated in most seasons. Although there are no other permitted facilities upstream of the WWTP, there is a small, unregulated dairy farm. The operation has a storage structure designed for 140 dairy cows (equal to 200 animal units), well below the 700-cow threshold to require a Concentrated Animal Feeding Operation (CAFO) State Operating Permit.

In the past, the department issued Letters of Approval (LOAs) to small, unregulated CAFOs who requested a review of their waste handling systems. On March 19, 2003, the department issued a LOA to this small facility in which it described acceptable procedures for them to store, treat and land apply dairy wastes.



The Lebanon WWTP monitors Dry Auglaize Creek downstream from the dairy farm but upstream of their own outfall. Based on that monitoring, the city's wastewater superintendent believes that improvements in the dairy farm's waste handling methods are positively impacting the stream. There have been no discharges, no complaints about the facility and no violations cited since the new waste handling methods were implemented. The department has addressed the dairy as a possible source of stream impairment from nutrients, BOD and Total Suspended Solids (TSS) a term also used to reference NFR.

The department analyzed 34 water quality samples collected from Dry Auglaize Creek from September 1999 to August 2000 (see enclosed data). The analyses revealed that the stream met water quality standards for Dissolved Oxygen (DO) and that Carbonaceous Biological Oxygen Demand (CBOD) and Ammonia were not detectable. The discharge monitoring reports (DMRs) indicated that the WWTP met monthly limits of 10 mg/L for BOD and 15 mg/L for NFR in 1999 and 2000. However, the March and September 2000 biological assessment data (see enclosed report) collected by the department's Environmental Services Program (ESP), indicated that nutrients were high in the effluent-dominated stream and full protection of aquatic life was impaired when compared to reference streams.

Prior to the September 25, 2000 biological assessment sampling, the city was issued a Notice of Violation (NOV) for wastewater system bypasses that occurred on September 9, 10, 11, 12, 13 and 17, 2000. The significant impairment to aquatic life documented by the biological assessment likely resulted from the numerous bypasses of untreated wastewater two weeks prior to the biological sampling.

The August 17, 2000 report entitled "EPA Compliance Evaluation Inspection (Sanitary Sewer Overflows) at Lebanon WWTP," was completed in 2000 near the time of the water quality sampling. It identifies the impairment of aquatic life and the occurrences of excessive bypassing of untreated wastewater, particularly at Manhole #1 directly above the WWTP. The department's Water Protection Program observed bypassing at Manhole #1 on February 23, 2005, after only 0.3 inches of precipitation. The department's Southwest Regional Office (SWRO) collected, and had ESP test, numerous samples of bypassing flow at Manhole #1 and other system bypasses. Of the 13 samples analyzed from 1997 to 2002, BOD levels ranged from 211 mg/L to 48 mg/L, and NFR levels from 148 mg/L to 57 mg/L. In summary, the habitual bypassing of untreated wastewater to the creek from the collection system is well documented and appears to have an adverse effect on aquatic life.

The City of Lebanon is party to a consent decree (CD), signed in late 2003 and early 2004, with the Environmental Protection Agency (EPA) and the State of Missouri Civil Action No. 04-3125-CV-S-RED (copy enclosed). The CD requires elimination of bypassing from their collection system and construction of adequate system capacity by July 1, 2007. Elimination of bypassing should allow for wastewater to be treated at the WWTP before it is released to the Dry Auglaize Creek. Construction of corrective measures is currently underway. The CD has enforcement authority to ensure that the city will correct the bypassing and meet standards.

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The city's state operating permit, issued September 29, 2006 (enclosed), has enforceable limits that address the WWTP discharge. The water quality standards for DO will be achieved by limiting the BOD to a weekly average of 15 mg/L and a monthly average of 10 mg/L. TSS limits are 20 mg/L weekly and 15 mg/L monthly. The interim Ammonia (NH₃ as N) daily maximum is 2.0 mg/L in summer and 3.0 daily maximum in winter. Final Ammonia limits that must be met in three years are 3.1 mg/L daily (1.6 mg/L monthly) in summer and 7.5 mg/L daily (3.7 mg/L monthly) in winter. Additional final permit limits include:

- Fecal Coliform daily maximum of 1,000 colonies per 100 ml (400 col/100ml average monthly),
- Bis (2-ethylhexyl phthalate) limit of 0.006 mg/L monthly,
- Oil and Grease limit is 15 mg/L daily and 10 mg/L monthly,
- Copper limit is 0.021 mg/L daily and 0.01 mg/L monthly,
- Zinc limit is 0.192 mg/L daily and 0.089 mg/L monthly, and
- Phenols- monitoring only.

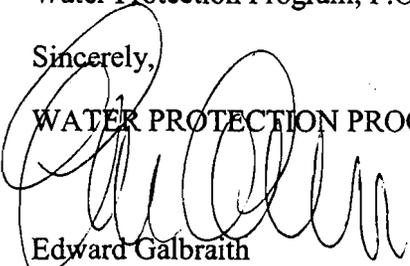
In-stream monitoring is required for NH₃ as N, Temperature, pH and DO.

The CD requires the city to complete construction of improvements to the wastewater collection system and provide adequate capacity in the system. This will improve the water quality for aquatic life in Dry Auglaize Creek. The CD gives EPA the authority to ensure the city will correct problems in the wastewater system. The department plans to conduct biological and water quality monitoring as deemed appropriate subsequent to completion of construction. The city's required WET tests and in-stream monitoring on Dry Auglaize Creek are delineated in their permit. In addition, a reopener clause was included to allow for stricter limits if future monitoring shows violations of Missouri's Water Quality Standards.

With this letter, the department submits the CD and the city's permit for concurrence that these documents will adequately serve in lieu of a TMDL on Dry Auglaize Creek. We appreciate EPA taking prompt action on this submittal. If you have any questions, please contact Ms. Donna Menown by telephone at (573) 526-1595, via e-mail at donna.menown@dnr.mo.gov, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102.

Sincerely,

WATER PROTECTION PROGRAM



Edward Galbraith
Director

EG:dml

Enclosures

c: Mr. Daniel R. Schuette, Director, DEQ
Mr. Earl Pabst, Deputy Director, DEQ
Missouri Clean Water Commission