

NPDES PERMITTING: SIGNIFICANT CHANGES ON THE HORIZON FOR MISSOURI MUNICIPALITIES

by Shawna Bligh, Chris Wendelbo and Mike Millius

This article discusses the significant impact that certain forthcoming regulations related to Missouri's triennial revision of its water quality standards, effluent limitations, and ongoing National Pollution Discharge Elimination System (NPDES) permit renewals will have on Missouri municipalities. This article also will address what Missouri municipalities can do to minimize and plan for the regulatory and financial impact of these forthcoming regulations. Additionally, this article also discusses the Environmental Protection Agency's (EPA) recent response to Missouri's 2009 triennial review of its water quality standards, as well as the resulting impact on Missouri municipalities. Needless to say, EPA's response adds another layer of complexity to Missouri municipalities' negotiation of future NPDES permits.

The federal Clean Water Act requires that states review their water quality standards at least once every three years in order to determine whether these standards should be revised. This is commonly called a triennial review. On August 16, 2011, the EPA responded to Missouri's 2009 triennial review. A component of this process is the assignment of use designations for waters of the state and concurrent review, and possible, revision of water quality standards to ensure maintenance of these use designations. In instances where a use designation is not attainable, the state performs a Use Attainability Analysis (UAA). A UAA is a tool used to support modification of water quality standards to more accurately designate uses for water bodies. In responding to Missouri's 2009 triennial review, EPA approved some of the use designations while disapproving others.

However, this article discusses certain proactive steps Missouri municipalities can take, at the permitting renewal stage, to minimize the financial burden these controls might otherwise present. Specifically, each Missouri municipality that operates a sewage treatment facility, including sewage lagoons that discharge, must receive a NPDES permit. This permit is renewed every five years. As part of the renewal process, Missouri municipalities have the opportunity to review and comment on the draft NPDES permit. This review and comment period allows an opportunity for Missouri municipalities to work with the state to establish the controls required of them to comply with revised water quality standards.

As many of you are aware, Missouri Department of Natural Resources (MDNR) has, and continues to, implement a number of changes to its Water Protection Program. These include anti-degradation requirements, ammonia limits, stricter disinfection requirements, as well as more stringent metals limits.

CHANGES IN STANDARDS

The anti-degradation requirement primarily affects only plants needing to expand their flow capacity. These new rules require completion of upfront planning and financial feasibility analysis regarding expansion of treatment facilities to ensure protection of downstream aquatic life. It is important to note, however, that EPA disapproved some portions of the anti-degradation rules proposed by Missouri in its 2009 triennial review. Thus, Missouri will likely revisit its previously promulgated rules to address issues related to EPA's disapproval. In the meantime, permittees are at a disadvantage with respect to negotiation of the anti-degradation requirements of their future NPDES permits.

The changes implemented to establish ammonia limits to protect aquatic life will continue to move forward and will affect future discharge



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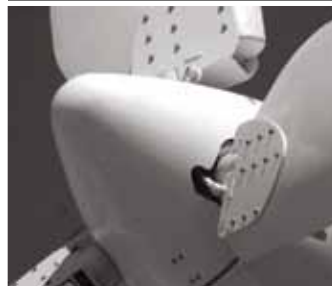
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permits. For some facilities the addition of an ammonia limit may have limited impact, but for some plants, especially lagoon based systems, they can have significant impacts.

The disinfection changes continue to evolve. While the disinfection regulations are well established, the facilities subject to these regulations may likely increase. Disinfection requirements are driven by stream classification and downstream water uses. The associated stream classification and downstream water uses determine if disinfection is required. As noted later in this article, some current litigation may have a significant impact regarding the classification of the receiving streams and consequently, the number of facilities subject to disinfection requirements. Also, EPA approved Missouri's change from using fecal coliform as an indication of sufficient disinfection to E. Coli as the new indicator of choice for disinfection. This too, will likely result in a greater number of facilities having to comply with the disinfection regulations.

The modifications to regulations governing metals effluent limits will

primarily affect facilities that have significant industrial customers. The types of industrial processes and the water quality of the municipality and receiving stream significantly impact the required metals limits. These changes will impact pre-treatment programs that municipalities currently have in place.

PERMIT RENEWAL

As NPDES permits go through the renewal process, there are a number of things municipalities can do to minimize the regulatory impact. The routine for the permit renewal is fairly straightforward. This includes a draft permit review by the permittee, public notice and comment on the draft permit, and issuance of the new permit.

When the permittee receives the draft permit, it is imperative that the permittee review the draft permit to determine whether there are changes to the allowable discharge levels and if there are new regulated constituents. Typically, there is a fact sheet that accompanies the draft permit that will discuss any proposed changes. The

municipality's public works department, legal counsel and other pertinent staff should review these changes, and the resultant impacts these changes will have on facility operations. It is important to note that the failure to comment on the draft permit within the statutorily prescribed time, results in the permit and the conditions imposed within the permit final. Once final, the conditions outlined in the permit are not subject to revision.

If there are changes that will affect operations, be sure to inquire with the regulators the justification for the proposed changes, and determine if the data used for calculations of the discharge levels is accurate. This may require some additional testing, such as in-stream testing to verify the data. MDNR will accept site-specific data, but the testing protocol must be presented and accepted by the Department before the start of the testing.

Permittees should also ensure that they are able to meet the compliance schedules set forth within the draft permit. The failure to meet these compliance schedules could result in a notice

of violation with assessment of civil penalties. If the permittee is unsure of whether they are able to meet the compliance schedule, they should prepare comments to this effect and also attempt to negotiate a more feasible compliance schedule. The permittee should also be sure to negotiate for contingencies, such as certain unforeseen circumstances that may arise and hence delay or impede the compliance schedule set forth within the draft permit.

NEW TWIST

In addition to these forthcoming regulations, recent litigation is also driving tougher NPDES permitting requirements. On August 4, 2010, the Missouri Coalition for the Environment (MCE) filed a lawsuit against the Environmental Protection Agency seeking to compel the state of Missouri to assign use designations to otherwise "unclassified" streams or waters of the state. The MCE claims that to-date there exists 159,000 miles of unclassified streams in the state of Missouri and that this number does not include several lakes within the state of Missouri for which no use designation exists. MCE alleges because no use designation exists for the unclassified streams, there exists no water quality standards in place to ensure that discharges into these streams are disinfected to protect against dangerous levels of bacteria including, but not limited, to fecal coliform and E. coli.

Assignment of use designations to previously unclassified streams and other waters of the state, will most likely result in more stringent water quality standards for point source dischargers including, but not limited to, sewage treatment plants. Missouri communities will likely be required to implement enhanced or new technology controls aimed at ensuring regulatory compliance with these more stringent water quality standards, including controls designed to ensure greater disinfection of bacteria contained within sewage. Implementation of such controls, however, may impose a substantial financial burden on Missouri communities and municipalities. It is important to note that in responding to Missouri's 2009 triennial review, EPA approved a use designation of Whole Body Contact Recreation-Category B for seventy-seven (77) Missouri waters, Secondary Contact Recreation use designation for one hundred sixty-two (162) Missouri water bodies, and assigned no Recreational use to five (5) Missouri waters.



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Municipalities will want to review these changes to determine if they discharge effluent to any waters with a new use designation, as these changes will potentially result in more costly treatment technology.

FUTURE ISSUES

There also will be a continued push for nutrient requirements, including total nitrogen and phosphorus that will be implemented into discharge permits in the near future. These nutrient requirements will impact all facilities that discharge. These changes will have a very significant impact on plants that are currently addressing the ammonia limits. The normal approach in addressing ammonia limits (i.e. complete nitrification versus change ammonia to nitrate/nitrite) does not address the total nitrogen requirements and these requirements can have significant facility upgrade costs associated with them. EPA partially approved Missouri's proposed numeric nutrient criteria. Specifically, EPA approved numeric nutrient criteria for 25 Missouri lakes, while disapproving numeric nutrient criteria for other water bodies.

Additionally, there are discussions regarding other items associated with wastewater that are beyond the current constituents that we reviewed. Pharmaceuticals are one of the major items on the horizon. With the amount

of drugs being consumed, and the fact that some of the drugs pass through our bodies and directly into the waste stream, there is an affect being noticed in our streams. These affects will continue to be monitored, and it is anticipated that there will be future regulations to address these issues, as well as a host of other emerging water pollutants.

CONCLUSION

As you can see, the discharge of wastewater back into our streams and environment is becoming increasingly more complicated and dynamic. Therefore, it is essential for municipalities to be forward thinking and continue to look at possible future regulations that will affect facility operations. □

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