

Summary of City of Osakis wastewater permitting issues

1. Brief introduction:

The City of Osakis's NPDES permit issued by the Minnesota Pollution Control Agency (MPCA) is up for renewal this year, and the City is having issues with its permit and the proposed phosphorus effluent limit MPCA has proposed for inclusion in the permit.

2. Summary of characteristics of City's discharge:

The City's WWTF discharges intermittently—typically before the growing season in the spring and after the growing season in the fall. The City discharges to a wetland, and goes through other intervening wetlands several miles to Faille Lake. Everyone agrees that a lot of the phosphorus in the city's discharge is retained in the wetlands and never reaches Faille Lake. Faille Lake is a shallow lake with a short residence time and has a lot of the same characteristics as a wetland itself. Faille Lake drains into Lake Osakis, which is a more typical deep lake with a long residence time on the order of five years.

3. Summary of MPCA position and potential impact on City:

MPCA has sought to impose a very restrictive phosphorus effluent limit on the City's discharge of 121 kg/year. Currently, the City is subject to an interim phosphorus limit of 283 kg/year. MPCA has argued that the more restrictive limit is necessary to protect both Faille Lake (the small, shallow lake that acts like a wetland) and Lake Osakis. Osakis is a small city of less than 2,000 people, and its consulting engineers looked at the City's WWTF and preliminarily determined the City would have to construct a new facility at a potential present value cost of more than \$11 million to reliably comply with the limit. This would result in drastic rate increases for Osakis's citizens.

4. Summary of scientific flaws with MPCA's reasoning:

Given the implications to the Osakis community of the MPCA's proposed permit limit, the City had consultants review the scientific rationale for the

permit limit and based on that review there appear to be numerous flaws with the agency's analysis. Just to name a few of the biggest flaws:

(1) the available data show that Faille Lake is not even impaired because it has such a short detention time that algae doesn't have time to grow, so in effect it can absorb higher amounts of phosphorus than would be the case for a more typical lake;

(2) MPCA did TMDL modeling for Lake Osakis and Faille Lake and modeled these systems under long-term average conditions, but it then took the city's allotted amount of phosphorus it could discharge and still allow the lakes to meet the water quality standards and imposed it as a never to exceed limit in the City's permit without any adjustment (as opposed to the long term average limit that was modeled that would allow for the limit to be exceeded in some years as long as it is not reached by equivalent amounts in others); and

(3) Lake Osakis is a large lake, miles downstream from the city's discharge, and the city's contribution to the phosphorus levels in Lake Osakis is not even measurable.

5. Illustration of unreasonableness of proposed limit:

Based on the City's expert's review of the MPCA's data, it appears that the reduction MPCA wants to require the City to make to the phosphorus levels in the city's discharge is significant from a cost perspective and would have a large impact to Osakis's citizens and ratepayers, it would make no difference to water quality in Lake Osakis. If the City made the reduction MPCA is seeking, it would result in a reduction in the phosphorus concentration in Lake Osakis of less than one one-thousandth of a percent.