

2.2.7.2 Facility Planning Capacity

Discussion

A POTW treatment capacity trigger is included in draft Section 2.2.7 Special Conditions in Subsection 2.2.7.2 Facility Planning. The edits proposed below are intended to provide more specific guidance to permit writers on the requirements of this section to prevent facility overloading in advance of reaching the maximum facility capacity. It is proposed that the capacity trigger be increased from 80% to 85% percent of the facility design capacity. Since developing an entire facility plan may entail more planning issues and a longer time frame than necessary to address an impending capacity limitation, it is recommended that the analysis required provide more options than an entire facility plan or facility plan update. A project specific engineering report (preliminary engineering report) targeted on specific capacity issues provides another option for wastewater utilities to consider that may be more expeditious to prepare and easier for DEQ to review such that capacity limitations are alleviated as soon as possible.

Consideration should be given to (1) whether the facility is serving a growing population or customer base, and (2) whether or not the criteria for exceeding the 85% of the maximum design capacity should be for any two months or more during a 12 month is adequate, or two consecutive months, or whether exceeding 85% for any month is a more appropriate trigger for capacity analysis. Selection of two months for the trigger may suggest that compliance with monthly permit limits are somehow less stringent than they are intended to be. In addition, monthly maximum design criteria are more appropriate and applicable to current engineering practice for facility design and capacity evaluations, rather than daily values.

2.2.7 Special Conditions

2.2.7.2 Facility Planning Capacity

Each POTW is designed for adequate capacity to effectively treat a defined BOD₅ and TSS load, wastewater flows, as well as BOD and TSS loadings and other parameter loadings necessary to satisfy water quality based effluent limits, such as ammonia, nitrate, nutrients, metals, organic compounds, etc. This flow and load capacity is defined as the design capacity and is dependent on the facility treatment processes and capacity volume. For facilities that serve a growing population and customer base, the facility capacity planning special condition is may be included to require the development of evaluations or plans to prevent facility overloading in advance of reaching flow and load capacity and when the actual flow or waste load reaches 85 percent of any one of the design criteria the facility reaches or has exceeded 80% of the maximum daily flow identified in their the current permit facility plan. Each month the permittee must record and report on DMRs the influent flow, BOD₅ and TSS loading averaged over the month. These are compared to the maximum month flow, BOD₅ and TSS loading, and other facility design capacity ratings identified in the facility plan.

When the actual maximum monthly flow or influent BOD₅ or TSS waste load, or load for any other design capacity parameter, exceeds the maximum design capacity for any two consecutive months or more during a 12 month period, exceeds the facility planning values; the permittee should will require the facility to should develop or update a facility plan or project specific engineering report according to IDAPA 58.01.16, to address the capacity requirements and prevent facility overloading. The facility plan or project specific engineering report shall address specific portions of the system approaching capacity limitations, as well as the broader system wide flows and loadings as needed associated with capacity limitations. The engineering analysis shall include hydraulic calculations, hydraulic modeling, treatment process calculations, process modeling, pilot studies, demonstration testing, stress testing, or other studies necessary to justify the basis for demonstration of adequate capacity. The facility plan or project specific engineering report must identify the actions and a schedule necessary to maintain adequate capacity for the expected population growth, flows, and loadings to meet the effluent limits and requirements of the permit. The facility plan or project specific engineering report shall be prepared by an Idaho licensed professional engineer should and be submitted to DEQ for approval within 18 months of the second consecutive exceedance and in advance of exceeding the maximum design capacity of the facility.

All municipal facility plans, or project specific engineering reports, must be submitted to and approved by DEQ.