

TITLE 179 PUBLIC WATER SYSTEMS

CHAPTER 18 FILTER BACKWASH RECYCLING

18-001 SCOPE AND AUTHORITY: These regulations apply to all public water systems that use surface water or ground water under the direct influence of surface water that employ conventional filtration or direct filtration treatment and that recycle spent filter backwash water, thickener supernatant, or liquids from dewatering processes. The authority is found in Neb. Rev. Stat. §§ 71-5301 through 71-5313.

18-002 DEFINITIONS

Conventional filtration treatment means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

Direct filtration means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

Director means the Director of Regulation and Licensure or his/or her authorized representative.

18-003 REPORTING: A system must notify the Director in writing by December 8, 2003, if the system recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes. This notification must include, at a minimum, the information specified in 18-003.01 and 18-003.02.

18-003.01 A plant schematic showing the origin of all flows which are recycled (including, but not limited to, spent filter backwash water, thickener supernatant, and liquids from dewatering processes), the hydraulic conveyance used to transport them, and the location where they are re-introduced back into the treatment plant.

18-003.02 Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experienced in the previous year (gpm), design flow for the treatment plant (gpm), and the Director-approved operating capacity for the plant where the Director has made such determinations.

18-004 TREATMENT TECHNIQUE REQUIREMENT: Any system that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes must return these

flows through the processes of a system's existing conventional or direct filtration system as defined in 179 NAC 18-002 or at an alternate location approved by the Director by June 8, 2004. If capital improvements are required to modify the recycle location to meet this requirement, all capital improvements must be completed no later than June 8, 2006.

18-005 RECORDKEEPING: The system must collect and retain on file recycle flow information specified in 179 NAC 18-005 items 1 through 6 for review and evaluation by the Director beginning June 8, 2004.

1. Copy of the recycle notification and information submitted to the Department under 179 NAC 18-003.
2. List of all recycle flows and the frequency with which they are returned.
3. Average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes.
4. Typical filter run length and a written summary of how filter run length is determined.
5. The type of treatment provided for the recycle flow.
6. Data on the physical dimensions of the equalization and/or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.