

**4720.3930 WATER CLARIFICATION PROCEDURES.**

Subpart 1. **Duplicate systems.** Facilities designed to process surface water must provide duplicate systems for flocculation and sedimentation and be constructed to permit a system to be taken out of service without disrupting operation.

Subp. 2. **Pretreatment.** Water containing high turbidity or having unusual treatment requirements shall be pretreated, usually by sedimentation or detention either with or without the addition of chemicals.

A. Sedimentation basins must have a means for sludge removal.

B. Inlets for incoming water must disperse water across the full width of the line of travel as quickly as possible; short circuiting must be prevented.

C. Means for bypassing sedimentation basins must be provided.

D. Three hours detention is the minimum period required for sedimentation. In individual cases where chemical pretreatment is required because of unusual water quality characteristics, a greater detention time shall be required.

Subp. 3. **Flash or rapid mixing.** Mixing means the rapid dispersion of chemicals throughout the water to be treated, usually by vigorous agitation.

A. Basins must be equipped with mechanical mixing devices unless other methods, such as baffling or injection of chemicals at a point of high velocity, are approved by the commissioner after determining that the other requirements of this chapter are met.

B. The detention period for mechanical mixing must be as short as possible depending on the velocity gradient provided by the mixing units.

**Statutory Authority:** *MS s 144.383*

**History:** *15 SR 1842*

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