



Fact Sheet: Long Term 1 Enhanced Surface Water Treatment and Filter Backwash Proposed Rule

The U.S. Environmental Protection Agency (EPA) is proposing the Long Term 1 Enhanced Surface Water Treatment Rule and Filter Backwash Rule (LT1FBR) to increase protection of finished drinking water supplies from contamination by *Cryptosporidium* and other microbial pathogens. The proposed rule will apply to public water systems using surface water or ground water under the direct influence of surface water. This rule proposes to extend protections against *Cryptosporidium* and other disease-causing microbes to the 11,500 small water systems which serve fewer than 10,000 people annually. The proposed rule also establishes filter backwash requirements for certain public water systems of all sizes. The filter backwash requirements will reduce the potential risks associated with recycling contaminants removed during the filtration process. This rule is scheduled to be final by November 2000.

Background

The Safe Drinking Water Act (SDWA) requires EPA to set enforceable standards to protect public health from contaminants which may occur in drinking water. EPA has determined that the presence of microbiological contaminants are a health concern. If finished water supplies contain microbiological contaminants, disease outbreaks may result. Disease symptoms may include diarrhea, cramps, nausea, possibly jaundice, and headaches and fatigue. EPA has set enforceable drinking water treatment requirements to reduce the risk of waterborne disease outbreaks. Treatment technologies such as filtration and disinfection can remove or inactivate microbiological contaminants.

Physical removal is critical to the control of *Cryptosporidium* because it is highly resistant to standard disinfection practice. Cryptosporidiosis may manifest itself as a severe infection that can last several weeks and may cause the death of individuals with compromised immune systems. In 1993, *Cryptosporidium* caused over 400,000 people in Milwaukee to experience intestinal illness. More than 4,000 were hospitalized, and at least 50 deaths were attributed to the cryptosporidiosis outbreak. There have also been cryptosporidiosis outbreaks in Nevada, Oregon, and Georgia over the past several years.

The 1996 Amendments to SDWA require EPA to promulgate an Interim Enhanced Surface Water Treatment Rule (IESWTR) and a Stage 1 Disinfection Byproducts Rule (announced in December 1998). The IESWTR set the first drinking water standards to control *Cryptosporidium* in large water systems, by establishing filtration and monitoring requirements for systems serving more than 10,000 people each. The LT1FBR proposal builds on those standards by extending the requirements to small systems.

The 1996 Amendments also require EPA to promulgate a Long Term 1 Enhanced Surface Water Treatment Rule (for systems serving less than 10,000 people) by November, 2000 ((1412(b)(2)(C))) and also require EPA to "promulgate a regulation to govern the recycling of filter backwash water within the treatment process of a public water system" by August, 2000 ((1412(b)(14))). The current proposed rule includes provisions addressing both of these requirements.

EPA began outreach efforts to develop the LT1FBR in the summer of 1998. In addition to two public meetings, EPA has held several formal and informal meetings with stakeholders, trade associations, and environmental groups. EPA also received valuable input from small entity representatives as part of the Small Business Regulatory Enforcement Fairness Act (SBREFA) panel. The LT1FBR panel was initiated in April of 1998 and officially convened in August of 1998. Many of the panel's recommendations will be incorporated into the proposed rule.

In early June, 1999, EPA mailed an informal draft of the LT1FBR preamble to the approximately 100 stakeholders who attended either of the public stakeholder meetings. Members of trade associations and the SBREFA panel also received the draft preamble. EPA received valuable comments and stakeholder input from 15 state representatives, trade associations, environmental interest groups, and individual stakeholders.

What will the LT1FBR require?

The LT1FBR provisions will apply to public water systems using surface water or ground water under the direct influence of surface water systems.

LT1 Provisions - Apply to systems serving fewer than 10,000 people, and fall into the three following categories:

Turbidity

- Conventional and direct filtration systems must comply with specific combined filter effluent turbidity requirements;
- Conventional and direct filtration systems must comply with individual filter turbidity requirements;

Disinfection Benchmarking

- Public water systems will be required to develop a disinfection profile unless they perform applicability monitoring which demonstrates their disinfection byproduct levels are less than 80% of the maximum contaminant levels;
- If a system considers making a significant change to their disinfection practice they must develop a disinfection benchmark and receive State approval for implementing the change;

Other Requirements

- Finished water reservoirs for which construction begins after the effective date of the rule must be covered; and
- Unfiltered systems must comply with updated watershed control requirements that add *Cryptosporidium* as a pathogen of concern.

FBR Provisions - Apply to all systems which recycle regardless of population served:

- Recycle systems will be required to return spent filter backwash water, thickener supernatant, and liquids from dewatering process prior to the point of primary coagulant addition unless the State specifies an alternative location;
- Direct filtration systems recycling to the treatment process must provide detailed recycle treatment information to the State, which may require that modifications to recycle practice be made, and;
- Conventional systems that practice direct recycle, employ 20 or fewer filters to meet production requirements during a selected month, and recycle spent filter backwash water, thickener supernatant, and/or liquids from dewatering process within the treatment process must perform a one month, one-time recycle self assessment. The self assessment requires hydraulic flow monitoring and that certain data be reported to the State, which may require modifications to recycle practice be made to protect public health.

For general information, please contact the Safe Drinking Water Hotline at (800) 426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding Federal holidays, from 9:00 am to 5:30 pm Eastern Time. For specific information on LT1FBR proposed rule, contact Jeffery Robichaud, U.S. Environmental Protection Agency, Office of Ground Water and Drinking Water (MC 4607), 401 M Street SW, Washington, DC 20460. Telephone (202) 260-2568.