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**DEPARTMENT OF HEALTH
DIVISION OF DRINKING WATER**

**SUBJECT: SURFACE WATER TREATMENT RULE IMPLEMENTATION POLICY -
CRITERIA TO REMAIN UNFILTERED**

PURPOSE: To define the criteria a system using an unfiltered surface supply must meet to remain unfiltered.

BACKGROUND:

The federal Surface Water Treatment Rule (SWTR) was promulgated in June, 1989. The SWTR requires all public water systems using surface water sources to provide disinfection, provide filtration unless source quality and site-specific criteria are met and be operated by qualified personnel.

DOH has the authority under current regulations to:

- * require filtration;
- * establish specific criteria that must be met to avoid filtration;
- * require back-up facilities to protect against failures of the power supply and treatment processes;
- * require higher levels of disinfection for systems using surface sources; and
- * require operation by certified personnel.

WAC 246-290-250(4) mandates filtration for all surface water supplies. However, WAC 246-290-250 (5) contains criteria under which existing systems may be allowed to remain unfiltered. These criteria include:

1. Watershed control;
2. Raw and finished water quality; and
3. Water system design and operation.

To date, the Drinking Water Program has not had a policy which specifically defines minimum watershed control program requirements or what is meant by the other criteria cited above. Instead, these decisions have been left to the professional judgement of the regional engineers.

WAC 246-290-400 refers to the requirements for public water systems to have certified operators under Chapter 70.119 RCW and Chapter 246-292 WAC. WAC 246-290-420(2) specifies that systems must be constructed, operated and maintained to protect against failures of the power supply, treatment processes and equipment with appropriate back-up facilities. Also, WAC 246-290-440(3), specifies that systems must meet minimum inactivation (CT) requirements before the first customer and maintain a 0.2 mg/L residual within all active parts of the distribution system. WAC 246-290-440(4) states that the department may require the purveyor to provide longer contact times, higher chlorine residuals, or additional treatment for surface water sources.

WAC 246-290-450 addresses watershed control for systems using surface water and specifies watershed control program requirements for unfiltered systems. This section includes a provision for updating of watershed control program reports as needed or required by the Department.

POLICY

Applicability

This policy applies to Group A systems using unfiltered surface supplies. It applies only to those systems trying to remain unfiltered. The policy will be effective until the SWTR is adopted as part of drinking water regulations, WAC 246-290, and the DOH SWTR Guidance Manual is completed.

Note: under this policy, the option of remaining unfiltered is available only to community systems, i.e. all non-community systems will be required to install filtration.

Criteria to Remain Unfiltered

Unless noted otherwise, the Drinking Water Program will use the federal SWTR source quality and site-specific criteria to avoid filtration as the DOH criteria. These criteria are cited in detail in the Federal Register, Volume 54, Number 124, dated June 29, 1989.

Highlights of the criteria are summarized below as related to WAC 246-290-250(4) and WAC 246-290-440:

1. Raw water quality

- a. Compliance with a 5 NTU turbidity limit; and
- b. Compliance with 20/100 limits for fecal coliforms (DOH will not be using total coliforms as in indicator of source quality).

2. Finished water quality

- a. Compliance with Coliform and THM Rules; and
- b. No outbreaks of waterborne disease attributable to the system in its current configuration/mode of operation.

3. Water system design and operation/disinfection -

- a. Disinfection as follows:
 1. To achieve at a minimum 3/4 log inactivation of Giardia and viruses respectively;
 2. To ensure a 0.2 mg/L disinfectant residual at entry to distribution; and
 3. To maintain detectable disinfectant residuals within the distribution system.
- b. Compliance with the redundant disinfection component requirement including auxiliary power supply and alarm criteria;
- c. Compliance with DOH operator certification requirements; and
- d. Compliance with the requirement to have an annual on-site inspection that indicates to the Department's satisfaction that the watershed control program and disinfection treatment process are adequately designed and maintained.

4. Watershed Control - the system must establish and maintain a watershed control program acceptable to the Department as outlined in the Department Policy entitled, "SWTR Implementation Policy - Minimum Watershed Control Program Requirements. At a minimum:
- a. The watershed control program must address the following minimum elements:
 - 1. Characterize watershed hydrology and land ownership;
 - 2. Identify watershed characteristics and activities which may have an adverse effect on source water quality; and
 - 3. Monitor the occurrence of activities which may have an adverse effect on source water quality.
 - b. The water system must demonstrate through ownership and/or written agreements with landowners within the watershed that it can control all human activities which may have an adverse impact on the microbiological quality of the source water.

The system must submit an annual watershed control program report to the Department for review and acceptance.

Public Notification

The Drinking Water Program will consider the above requirements (except for the operator qualifications) as prescribed treatment techniques. Thus, the public notification requirements of WAC 246-290-330 will apply to systems which violate the criteria to remain unfiltered.

Monitoring

The Drinking Water Program will use the federal SWTR monitoring specified for systems trying to remain unfiltered as the minimum monitoring requirements acceptable to DOH with one exception. Systems trying to remain unfiltered shall monitor source fecal coliform density vs. total coliform density. The SWTR monitoring requirements are identified in the Federal Register, Volume 54, Number 124, dated June 29, 1989.

Effective Date
of Policy 3/19/92

Signed 
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