

WAC 246-290-636 Determination of disinfectant contact time (T).

(1) The purveyor shall calculate T at peak hourly flow for each surface or GWI source.

(2) For pipelines, the purveyor shall calculate T by dividing the internal volume of the pipe by the peak hourly flow rate through that pipe.

(3) For all other system components used for inactivation of *Giardia lamblia* cysts, viruses, and other microorganisms of public health concern, the purveyor shall use tracer studies or empirical methods to determine T.

(4) The purveyor shall use the T10 value determined by tracer studies or other methods acceptable to the department as T in all CT calculations.

(5) Tracer studies.

(a) The purveyor shall conduct field tracer studies on all system components with configurations (geometry and/or baffling) for which analogous contact times are not documented.

(b) Before conducting tracer studies, the purveyor shall obtain the department's approval of a tracer study plan. The plan shall identify at a minimum:

(i) How the purveyor will conduct the study;

(ii) The tracer material to be used;

(iii) Flow rates to be used; and

(iv) The names, titles, and qualifications of the persons conducting the study.

(c) A professional engineer registered in the state of Washington shall direct the conduct of all tracer studies.

(d) Tracer studies shall be conducted in accordance with good engineering practices using methods acceptable to the department such as those described in department guidance on surface water treatment.

(e) The department may require the purveyor to conduct additional tracer studies when:

(i) Modifications impacting flow distribution or T are made; or

(ii) Increases in flow exceed the conditions of the previous tracer studies.

(6) Empirical methods.

(a) Empirical methods may be used to calculate T10, if the purveyor demonstrates to the department's satisfaction that system components have configurations analogous to components on which tracer studies have been conducted and results have been documented.

(b) The purveyor shall submit to the department for review and approval engineering justification for determining T10 using empirical methods. As-built drawings of system components in their current configurations shall be submitted with the engineering justification.

(c) A professional engineer registered in the state of Washington shall prepare the engineering justification for determining T10 using empirical methods.

[Statutory Authority: RCW 43.02.050 [43.20.050]. WSR 99-07-021, § 246-290-636, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. WSR 93-08-011 (Order 352B), § 246-290-636, filed 3/25/93, effective 4/25/93.]