

# Operations of Small Water Systems

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Small water systems fall under the same requirements as the larger systems when it comes to proper operations and maintenance. Oregon Administrative Rules, Chapter 333, detail the minimum requirements needed to stay in compliance with the regulations dealing with water systems.

My article in the spring issue talked about ERPs requirement, I followed the same format this time. I cut the section out of the 333 regs. and would ask that you read them to stay ahead of the game. Now that the small system certification rules are in effect, all systems should know what this section contains. If you follow all the requirements, your next Sanitary Survey should be less stressful and quite a bit smoother.

I hope you all have a good construction season and all goes well. I'll see you at the Summer Classic and if you can't make it, I'll see you down the road.

## **333-061-0065 Operation and Maintenance**

- (1) Public water systems shall be operated and maintained in a manner that assures continuous production and delivery of potable water by:
  - (a) Operating all phases and components of the system effectively in the manner for which they were designed;
  - (b) Assuring that all leaks are promptly repaired and, broken or malfunctioning equipment is promptly repaired or replaced;
  - (c) Making readily available and in good condition the proper equipment, tools and parts to make repairs to the system. When possible, notice shall be given to the water users of impending repairs that will effect the quality of the water or the continuity of the water service. All repairs must meet the construction standards of these rules and comply with

disinfection requirements of OAR 333-061-0050 prior to reestablishing use of the repaired portion of the system;

- (d) Implementing actions to assure safe drinking water during emergencies. Water systems wishing to have a state certified wellhead protection program shall comply with the contingency planning requirements as prescribed in OAR 333-061-0057(4).
- (2) Personnel:
    - (a) Personnel responsible for maintenance and operation of public water systems shall be competent, knowledgeable of all the functions of that particular facility and shall have the training and experience necessary to assure continuous delivery of water which does not exceed the maximum contaminant levels;
    - (b) Certification in the Oregon Water System Operator's Certification Program is required for personnel in responsible charge of operations for all Community and Non-Transient Non-Community water systems. See Certification Rules OAR 333-061-0205 through 333-061-0295.
    - (c) Personnel in responsible charge of Transient Non-Community water systems that use surface water sources or ground sources under the direct influence of surface water are required to attend the Department's Small Water System Training Course or equivalent training.
  - (3) The identity of ownership of a water system shall be filed with the Department. Notification of changes in ownership shall be filed immediately with the Department upon completion of the transaction.

(4) Documents and records:

- (a) The following documents and records shall be retained by the water supplier at the Community water system facility and shall be available when the system is inspected or upon request by the Department:
  - (A) Complete and current as-built plans and specifications of the entire system and such other documents as are necessary for the maintenance and operation of the system;
  - (B) Current operating manuals covering the general operation of each phase of the water system;
  - (C) A current master plan and/or revisions thereof;
  - (D) Data showing production capabilities of each water source and system component;
  - (E) Current records of the number, type and location of service connections;
  - (F) Current records of raw water quality, both chemical and microbiological;
  - (G) Current records of all chemicals and dosage rates used in the treatment of water;
  - (H) Reports on maintenance work performed on water treatment and delivery facilities;
  - (I) Records relating to the sampling and analysis undertaken to assure compliance with the maximum contaminant levels;
  - (J) Record of residual disinfectant measurements, where applicable;

(K) Records of cross connection control and backflow prevention device testing, where applicable;

(L) Records of customer complaints pertaining to water quality and follow-up action undertaken;

(M) Fluoridation records, where applicable;

(N) Other records as may be required by these rules.

(5) Chlorination and use of other chemicals:

(a) Chlorinators and other equipment used to apply chemicals at a public water system shall be operated and maintained in accordance with the manufacturers' specifications and recommendations for efficient operation and safety.

(b) When chlorine is used as the disinfectant, the procedures shall be as follows:

(A) Chlorine shall be applied in proportion to the flow;

(B) For reasons other than the treatment of surface water sources or groundwater sources under the direct influence of surface water, the rate of application shall be sufficient to result in a free chlorine residual of at least 0.2 mg/l after a 30-minute contact time and throughout the distribution system;

(c) When ammonia is added to the water with the chlorine to form a chloramine as the disinfectant, for reasons other than the treatment of surface water sources or groundwater sources under the direct influences of surface water, the rate of application shall result in a combined chlorine residual of at least 2.0 mg/l after a 3-hour contact time;

(d) When corrosion control chemicals are applied to achieve compliance with the lead and copper rule, the point of application shall be after all other treatment processes unless determined otherwise by the Department.

(6) When an emergency arises within a water system which affects the quality of water produced by the system, the water supplier shall notify the Department immediately.