

Oregon Health Authority, Drinking Water Services
Plan Review requirements for Surface Water Treatment at public water systems.

These plan review requirements apply to a new **Surface Water Treatment** for an existing or new Public water system using a surface water source, or ground water source under the influence of surface water.

For assistance, call (971) 673-0405 or fax (971) 673-0694.

The responsibilities associated with this process include:

- A. Water system actions [Prior to Construction](#)
- B. Drinking Water Services response for [Plan Review](#)
- C. Water system actions [After Construction](#)
- D. Drinking Water Services grants [Final Approval](#)

These are addressed in detail as follows. Additional detail may exist in the Oregon Administrative Rules under OAR 333-061-0050 and 333-061-0060.

PRIOR TO CONSTRUCTION

A water system must submit the following documents (with some exceptions) and fee, prior to construction:

- a) Project Diagram;
- b) Construction Plans and Specifications;
- c) Narrative description of the justification for treatment process/equipment selection;
- d) Land Use Compatibility Statement (LUCS); and
- e) Fee for Plan Review <http://healthoregon.org/pwsplanreview>.

The submittal materials are sent to:

ATTN: PLAN REVIEW
OHA DRINKING WATER SERVICES
800 NE OREGON ST., STE 640
PORTLAND, OR 97232-2162

(Materials may be sent directly to the relevant regional engineer, though the fee payment should be sent to the address above with a letter or memo providing the water system's identification and project description. Sending the fee to a regional engineer may slow processing time.)

a) PROJECT DIAGRAM

- A diagram showing where the proposed treatment system will be located in relation to the other elements of the public water system in proximity to the project, and may include:
 1. Water sources controlled by the water system;
 2. Pumping facilities;
 3. Disinfection and other treatment facilities;
 4. Main Transmission line;
 5. Location of connection to first user.

- *The diagram should also include the following information:*
 1. Water system ID number
 2. Water system name
 3. Name, phone number, signature of the person who completed the diagram, and, if prepared by an Oregon-registered professional engineer, their stamp.
 4. Name, phone number, and mailing address of the company who completed the diagram (if applicable).

b) CONSTRUCTION PLANS AND SPECIFICATIONS

- Plans and specifications shall include:
 1. Construction drawings with appropriate details (include flow-metering devices and locations, water quality monitoring devices and locations, other monitoring devices and locations (e.g., pressure gages, etc). Allowable surface water treatment processes include conventional rapid sand filtration, direct rapid sand filtration (no or inadequate sedimentation), diatomaceous earth filtration, slow sand filtration, and alternative filtration (membrane, cartridge/bag).
 2. Technical specifications;
 3. Challenge and/or Validation Studies – required for all membrane/cartridge or bag, or UV treatment systems, respectively, not currently verified to conform to U.S. Environmental Protection Agency Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) criteria and listed on the DWS Plan Review website as “verified Models”.
 4. Documentation showing material compliance with NSF Standard 61 for system components in contact with drinking water.
 5. If changes to disinfection are made, an estimate of CT Calculations must be presented, along with a tracer study plan, which is to be conducted once the treatment system and disinfection contact chamber are operating. See “New Disinfection Instructions” plan review package for more information on the disinfection plan review process.

- Note: Surface Water Treatment must meet the requirements set forth in OAR 333-061-0050 (4) & (5) [*Construction Standards for Surface Water Treatment*]

c) NARRATIVE OR REPORT - In which the engineer describes the rationale for the selection of the treatment equipment, the suitability of the equipment for the water system's source water, and analytical data or pilot testing used to ensure that the equipment will produce treated water meeting the requirements set forth in OAR 333-061-0050 (4) and (5). The narrative should also include a discussion of how the water system's treatment system, with the proposed improvements, will meet the treatment requirements set forth in OAR 333-061-0032, which specifies a minimum of 3-log removal/inactivation of *Giardia*, 4-log removal/inactivation of *viruses*, and 2-log removal of *Cryptosporidium*.

d) LAND USE COMPATIBILITY STATEMENT – *must be submitted unless plans are submitted by an entity with planning authority.*

<http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/PlanReview/Documents/LUCS.pdf>) or equivalent. A LUCS demonstrates that the proposed construction project is compatible with every local government entity (e.g. city and/or county) having comprehensive planning authority over the site of the proposed project.

e) PLAN REVIEW FEE

A plan review fee is required for all submittals and must be received before DWS starts the review. For a current fee schedule, check <http://healthoregon.org/pwsplanreview>.

The fee check should be made *payable to*: **OHA Drinking Water**

PLAN REVIEW

The Oregon Health Authority – Drinking Water Services (DWS) will:

- a) Assign a **plan review number** (e.g., PR 500-2013);
- b) Review all submitted information
- c) Based on the submitted information, the Program will **send a letter** to the water system and/or engineer indicating if the proposed project meets state requirements (with or without conditions), or requesting additional information about the project. Correspondence may include:

Preliminary Approval – indicating that the project adheres to OAR requirements and that construction can begin

Conditional Approval – indicating that construction can begin, but specific conditions must be addressed for the project to meet OAR requirements

Request for Additional Information- indicating that DWS plan review cannot proceed until the specified information is submitted

Note, **Final Approval** of the project is issued when the engineer has certified that construction was in accordance with approved plans and specifications, and all conditions were addressed (see below), and construction is complete.

AFTER CONSTRUCTION

UNTIL 'FINAL APPROVAL' OF THE PROJECT IS GRANTED BY DWS, THE NEW INFRASTRUCTURE SHOULD NOT BE USED TO SERVE WATER TO THE PUBLIC.

Be sure to add the following identifying information on submitted materials:

- a) Water system ID number (for example 'OR4199999');
- b) Water system name;
- c) Plan review number; and
- d) Name, phone number, and mailing address of the person who can be contacted regarding this information.

As with pre-construction, mail to:

ATTN: PLAN REVIEW
OHA – DRINKING WATER SERVICES
800 NE OREGON ST., STE 640
PORTLAND, OR 97232-2162

Water systems may mail or email the materials directly to the appropriate DWS regional engineer. For assistance, you are welcome to call (971) 673-0405, or fax (971) 673-0694.

FINAL APPROVAL

The Oregon Health Authority – Drinking Water Services will:

- a) Review all submitted information;
- b) Based on the submitted information, DWS may **send a letter** to the water system **indicating if the Surface Water Treatment has been granted Final Approval**. Water system's receipt of final approval concludes the plan review process for the project. If final approval cannot be granted, the letter will indicate what steps must be taken. Receipt of final approval of the plan review allows the water system to utilize the new infrastructure.

OAR referenced Guidance Manuals and Standards:

Recommended Standards for Water Works, 2012 or later Edition, Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers

USEPA SWTR Guidance Manual

Publications by the World Health Organization (e.g., Slow Sand Filtration, Guidelines for Drinking-water Quality)

Publications by the International Reference Center (IRC) for Community Water System and Sanitation

NSF Standard 61 (materials) and NSF Standard 60 (chemicals)