

***Oregon Health Authority, Drinking Water Services*****Plan Review requirements for Master Plans at existing or new public water systems.**

The requirements apply to master plans for existing and new Community water systems with 300 or more connections. Other water systems (Community with less than 300 connections), Non-Transient Non-Community, Transient Non-Community, and Oregon Very Small water systems, which are defined on page 5, may also prepare a master plan and submit the document for review. Two sets of information are provided below, 'short' and 'long' instructions. The short instructions are abbreviated. If you are unfamiliar with the plan review process, it is strongly recommended you read the long instructions.

For assistance, call (971) 673-0405, fax (971) 673-0694, or email [dws.planreview@state.or.us](mailto:dws.planreview@state.or.us).

**SHORT INSTRUCTIONS:**

The following shall be submitted to OHA-DWS for review and approval:

1. One digital copy of a final master plan prepared by an Oregon Professional Engineer. The document must be electronically stamped by the engineer.
2. The appropriate plan review fee. For a current fee schedule, check <http://healthoregon.org/pwsplanreview>. Note that the fee payment can be made online at that link or a check can be mailed to OHA-DWS.

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

**Specific Requirements**

1. The master plan shall evaluate the needs to the water system for at least a 20-year period and shall include at a minimum all of the required elements outlined in Oregon Administrative Rule [\(OAR\) 333-061-0060 \(5\)](#).
2. Based on the submitted information, OHA-DWS may send a letter to the water system indicating that OHA-DWS concurs with the master plan. If the master plan is missing required elements outlined above, then OHA-DWS will notify the water system, or engineer, as appropriate. The water system, or engineer, will need to submit a revised document with the required missing elements in order for OHA-DWS to be able to concur with the master plan.

**END OF SHORT INSTRUCTIONS**



## **LONG INSTRUCTIONS:**

These requirements apply to master plans for existing or new Community water systems with 300 or more connections. Other water systems (Community with less than 300 connections), Non-Transient Non-Community, Transient Non-Community and Oregon Very Small water systems may also prepare a master plan and submit the document for review.

For assistance, call (971) 673-0405, fax (971) 673-0694, or email [dws.planreview@state.or.us](mailto:dws.planreview@state.or.us).

The responsibilities associated with this process include:

- I. Submittal Requirements
- II. Specific Requirements
- III. Plan Review

They are addressed in detail as follows. Additional detail may exist in the [Oregon Administrative Rules](#).

### I. Submittal requirements:

The following shall be submitted to OHA-DWS for review and approval:

- A. One digital copy of a final master plan prepared by an Oregon Professional Engineer. The document must be electronically stamped by the engineer.
- B. The appropriate plan review fee.

Please email the digital copy of the master plan to [DWS.PlanReview@dhsosha.state.or.us](mailto:DWS.PlanReview@dhsosha.state.or.us).

The plan review fee can be mailed to:

Attn: Plan Review  
OHA Drinking Water Services  
800 NE Oregon St., Ste 640  
Portland, OR 97232-2162

The plan review fee may also be made online at <http://healthoregon.org/pwsplanreview>.

(Materials may be sent electronically to the relevant regional engineer, though the fee payment should be sent to the address above or paid online. Sending the fee to a regional engineer may slow processing time.)

### II. Specific Requirements:

- A. The master plan shall evaluate the needs to the water system for at least a 20-year period and shall include at a minimum:



1. A summary of the overall plan including:
  - a. Water quality and service goals;
  - b. Present and future water system deficiencies;
  - c. The engineer's recommended alternative for achieving the goals and correcting the deficiencies;
  - d. The recommended implementation schedule; and
  - e. A financing program for constructing improvements.

*The summary includes various metrics or parameters that the water system will be evaluated against, how the system matches up to these parameters both currently and at the end of the planning period, a brief description of the recommendations to address any deficiencies identified, a schedule or timeframe for improvements to address deficiencies, and any financing strategies.*

2. A description of the existing water system including:
  - a. The service area;
  - b. The source(s) of supply;
  - c. Status of water rights;
  - d. Current status of drinking water quality and compliance with regulatory standards;
  - e. Maps or schematics of the water system showing size and location of facilities;
  - f. Estimates of water use; and
  - g. Operation and maintenance requirements.

*The description includes a narrative discussion and schematic describing the source, storage, pumping, distribution system, and treatment features of the water system. Current status includes a discussion of compliance with OAR 333-061 [public water system rules]. The water use estimate typically involves a multi-year evaluation of water use data in which average day demand, maximum day demand, or peak hour demand are determined. Operation and maintenance (O & M) requirements and approximate expenses should be defined for the existing system to which improvements with the associated O & M requirements and expense can be compared.*

3. A description of water quality and level of service goals for the water system, considering, as appropriate:
  - a. Existing and future (near term) regulatory requirements;
  - b. Non-regulatory water quality needs of water users;
  - c. Flow and pressure requirements; and
  - d. Capacity needs related to water use and fire flow needs.

*Water quality of the water system with respect to current and future health-based standards (e.g., Maximum Contaminant Levels) or applicable drinking water rules, in addition to level of service goals (e.g., minimum system flow/ pressure requirements), to meet water system user demands and fire suppression requirements..*

4. An estimate of the projected growth of the water system during the master plan period and the impacts on:
  - a. The service area boundaries;
  - b. The water supply source(s) and availability; and
  - c. Customer water use.

*This section typically incorporates population projections generated from modeling or other statistical*



*projections to estimate the population throughout the planning period. Given this projected growth, water use is projected, and the adequacy of current source(s) is determined as well as impacts on service areas boundaries.*

5. An engineering evaluation of the ability of the existing water system to meet the water quality and service goals, identification of existing water system deficiencies, and deficiencies likely to develop within the master plan period. The evaluation shall include:
  - a. The water supply source;
  - b. Water treatment, storage and distribution facilities;
  - c. O & M requirements;
  - d. A description of the water rights with a determination of additional water availability; and
  - e. The impacts of present and probable future drinking water quality regulations.

*This section should include an evaluation of the water system's ability to meet the water quality and service goals during the planning period, factoring in anticipated future customer usage and any near-term drinking water quality regulations. The evaluation should include source, treatment, storage and distribution infrastructure needs, and changes to O & M requirements that may be necessary.*

6. The master plan shall include an identification of the following which may be needed to correct water system deficiencies and achieve system expansion to meet anticipated growth:
  - a. Alternative engineering solutions;
  - b. Environmental impacts;
  - c. Associated capital costs;
  - d. Operational and maintenance costs; and
  - e. Identification of available options for cooperative or coordinated water system improvements with other local water suppliers.

*This section should identify alternatives for each of the identified water system deficiencies along with consideration of changes to existing O & M requirements and costs.*

7. A description of alternatives to finance water system improvements including local financing (such as user rates and system development charges) and financing assistance programs.

*This section includes a review of options to finance the infrastructure improvements outlined above, including both local water system-generated financing, and supplemental assistance programs that are available to the water system at the federal, state and local levels.*

8. A recommended water system improvement program including:
  - a. The recommended engineering alternative and associated costs;
  - b. Maps or schematics showing size and location of proposed facilities;
  - c. The recommended financing alternative; and
  - d. A recommended schedule for water system design and construction.

*This section presents the recommended water system improvements, rationale for selection of the improvements, and estimates or opinions of cost of each of the recommendations (i.e. Capital Improvement Plan). Typically, the recommended improvements are also prioritized and a schedule developed to assist the system planning efforts. Finally, recommendations are made relating to financing each of the improvements.*

9. If required as a condition of a water use permit issued by the Oregon Water Resources Department, the master plan shall address the requirements of [OAR 690-086-0120](#) (Water Management and Conservation Plans).



10. A seismic risk assessment and mitigation plan for water systems fully or partially located in areas identified as VII to X, inclusive, for moderate to very heavy damage potential using the [Map of Earthquake and Tsunami Damage Potential for a Simulated Magnitude 9 Cascadia Earthquake](#), Open File Report 0-13-06, Plate 7 published by the State of Oregon, Department of Geology and Mineral Industries.
- The seismic risk assessment must identify critical facilities capable of supplying key community needs, including fire suppression, health and emergency response and community drinking water supply points.
  - The seismic risk assessment must identify and evaluate the likelihood and consequences of seismic failures for each critical facility.
  - The mitigation plan may encompass a 50-year planning horizon and include recommendations to minimize water loss from each critical facility, capital improvements or recommendations for further study or analysis.

*Note that a seismic risk assessment and mitigation plan is not required if the water system is located further east than what is shown on the map.*

- B. A plan review fee is required for all master plans submitted 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'.

### III. Plan Review:

The plan review process begins after both the master plan and appropriate plan review fee are received. OHA-DWS will:

- Assign a plan review number (e.g., PR 1000-2011);
- A plan review engineer will review submitted master plan for conformance with OAR 333-061-0060 (5); and
- Based on the submitted information, OHA-DWS may send a letter to the water system indicating that OHA-DWS concurs with the master plan. If the master plan is required missing elements outlined above, then OHA-DWS will notify the water system. The water system will need to submit a revised document with the required missing elements in order for OHA-DWS to be able to concur with the master plan.
- OHA-DWS will note in the concurrence letter that approval of the master plan does not constitute plan review approval for major water system improvements. The water system must seek plan review approval prior to beginning construction of any major improvement. Plan review requirements are outlined at: <http://healthoregon.org/pwsplanreview>. Note, water system suppliers may request plan review exemption for water main extension projects, such that plans and fees would not need to be submitted for each individual water main project. See <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/PlanReview/Pages/exemption.aspx>, for further information and requirements for requesting and maintaining a water main plan review extension.

**END OF LONG INSTRUCTIONS**



**Definitions:**

"*Community (C) Water System*" means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.

"*Non-Transient Non-Community (NTNC) Water System*" means a public water system that is not a Community Water System and that regularly serves at least 25 of the same persons over 6 months per year.

"*Transient Non-Community (TNC) Water System*" means a public water system that serves a transient population of 25 or more persons.

"*Oregon Very Small (OVS) Water System*" (formerly named "*Non-EPA (NP)*" or "*State Regulated Water System*") means a public water system, which serves 4 to 14 service connections or serves 10 to 24 people.