

**WAC 173-351-480 Groundwater modeling.** All groundwater and contaminant fate and transport modeling must meet the following performance standards:

(1) The model must have supporting documentation that establishes its ability to represent groundwater flow and contaminant transport and any history of previous applications;

(2) The set of equations representing groundwater movement and contaminant transport must be theoretically sound and well documented;

(3) The numerical solution methods must be based upon sound mathematical principles and be supported by verification and checking techniques;

(4) The model must be calibrated and verified against site-specific field data;

(5) A sensitivity analysis must be conducted to measure the model's responses to changes in the values assigned to major parameters, specified tolerances, and numerically assigned space and time discretizations;

(6) Mass balance calculations on selected elements in the model must be performed to verify physical validity. Where the model does not prescribe the amount of mass entering the system as a boundary condition, this step may be ignored;

(7) The values of the model's parameters requiring site specific data must be based upon actual field or laboratory measurements; and

(8) The values of the model's parameters which do not require site specific data must be supported by laboratory test results or equivalent methods documenting the validity of the chosen parameter values.

[Statutory Authority: RCW 70.95.020(3), 70.95.060(1), and 70.95.260(1), (6). WSR 12-23-009 (Order 07-15), § 173-351-480, filed 11/8/12, effective 12/9/12. Statutory Authority: Chapter 70.95 RCW and 40 C.F.R. 258. WSR 93-22-016, § 173-351-480, filed 10/26/93, effective 11/26/93.]