

WAC 173-160-231

What are the standards for surface seals?

(1) All water wells constructed shall have a surface seal which seals the annular space between the bore hole and the permanent surface casing.

(a) The seal shall be constructed to prevent surface contaminants from reaching the groundwater.

(b) The surface seal must have a minimum diameter of four inches larger than the nominal size of the surface casing, to include the outside diameter of the bell, in bell and hub couplings.

(c) The surface seal must extend from land surface to a minimum depth of eighteen feet. Except, when the minimum surface seal requirements for driven, jetted, dewatering and some dug wells are less than eighteen feet. See the appropriate section for these wells for a detailed description of their sealing requirements.

(2) Sealing material must be placed in an open annular space that is a minimum of four inches greater in diameter than the nominal size of the permanent casing. The annular space must be kept at least one-half full of sealing material whenever the production casing is advanced.

(3) The completed surface seal must fully surround the permanent casing, must be evenly distributed, free of voids, and extend to undisturbed or recompacted soil.

(4) After the permanent casing has been set in final position, the annular space shall be filled to land surface with bentonite or neat cement grout or neat cement. Leaving voids for future installation of equipment such as a pitless adapter is prohibited.

(5) A temporary surface casing with a minimum length of eighteen feet and a minimum nominal diameter of four inches greater than the permanent casing shall be used in all unconsolidated formations such as in gravels, sands, or other unstable conditions when the use of drilling fluid or other means of keeping the bore hole open are not employed. Except driven and jetted wells shall utilize a temporary surface casing with a minimum length of six feet and a minimum nominal diameter of four inches greater than the permanent casing shall be used in all unconsolidated formations such as in gravels, sands, or other unstable conditions when the use of drilling fluid or other means of keeping the bore hole open are not employed.

(6) Whenever reconstruction involves permanent surface casing movement; or the existing surface seal is damaged; or a surface seal never existed; the driller shall repair, replace, or install a minimum of eighteen feet of surface seal around the permanent casing.

[Statutory Authority: Chapter **18.104** RCW. WSR 09-01-125 (Order 08-10), § 173-160-231, filed 12/19/08, effective 1/19/09; WSR 06-23-121 (Order 06-08), § 173-160-231, filed 11/21/06, effective 12/22/06. Statutory Authority: Chapter **18.104** RCW and RCW **43.21A.080**. WSR 98-08-032 (Order 97-08), § 173-160-231, filed 3/23/98, effective 4/23/98.]

