



August 7, 2017

POLICY 2017-3

WELLS CONSTRUCTED INTO TYPE II AQUIFERS WITHIN THE BOUNDARIES OF THE SOUTHERN HIGH PLAINS DESIGNATED BASIN

INTRODUCTION

Rule 10.4.6 in the Well Construction Rules (Rules) (2 CCR 402-2, 9/1/2016) requires wells completed in a Type II aquifer (unconfined bedrock aquifer) to have at least 40 feet of solid casing and 30 feet of continuous grout, with the uppermost 20 feet of casing being steel. Rule 10.4.6.3 provides that in the event the unconfined bedrock aquifer (Type II) is overlain by an unconsolidated aquifer (Type III), the unconsolidated aquifer must be fully isolated with grout or driven steel casing:

10.4.6.3 **Grouting Requirements for Type II Aquifer Overlain by a Type III Aquifer (Alluvial/Colluvial)** - Wells completed in a Type II aquifer (unconfined bedrock aquifer) that penetrate through a Type III aquifer (unconsolidated aquifer) must fully isolate the entire Type III aquifer interval with grout or driven steel casing.

In the Rules and Regulations for the Management and Control of Designated Ground Water (Designated Basin Rules) (2 CCR 410-1, 4/14/2017), the Southern High Plains Designated Groundwater Basin includes the alluvium, Cheyenne, Dakota, Dockum and Ogallala Aquifers. Designated Basin Rule 5.2.3.2 provides that those aquifers “shall be administered as a single geo-hydraulic system”. The inclusion of the alluvial aquifer with the multiple bedrock aquifers as a single geo-hydraulic system is inconsistent with Rule 10.4.6.3, which treats the alluvium as a separate Type III aquifer to be isolated from the bedrock aquifers.

DISCUSSION

Wells completed in Type II aquifers must only produce water from the unconfined bedrock aquifer, such as an uppermost Denver Basin aquifer or fractured granite aquifer. The intermingling of water between unconfined bedrock aquifers and overlying alluvial aquifers creates water administration difficulties, particularly in the Denver Basin where water allocation is based on saturated bedrock aquifer thickness, land area, and 100-year aquifer life span.

In 2009, the Colorado Ground Water Commission amended their Designated Basin Rules to allow aquifers within the Southern High Plains Designated Basin to be administered as a single geo-hydraulic system. These include the alluvium, Cheyenne, Dakota, Dockum and Ogallala aquifers.



The Rules (10.4.6.3) would ordinarily require the alluvium to be fully isolated when completing a well in one of the bedrock aquifers. This is inconsistent with the Designated Basin Rules that include the alluvium aquifer as part of the same geo-hydraulic system as the bedrock aquifers. This policy resolves that inconsistency by making an exception only for wells constructed in the Southern High Plains Designated Basin and acknowledging this distinct and administratively-defined geo-hydraulic system.

POLICY

In order to provide consistency and adequacy in the construction of water wells within the Southern High Plains Designated Groundwater Basin, and to acknowledge that these wells may produce water from the alluvium, Cheyenne, Dakota, Dockum, and Ogallala Aquifers which are administered as a single geo-hydraulic system, the Board hereby adopts the following policy:

Water wells constructed within the Southern High Plains Designated Groundwater Basin must be constructed in accordance with the construction standards for Type II aquifers (unconfined bedrock) found in Rule 10.4.6. To allow water well construction to be consistent with the Rules and Regulations for the Management and Control of Designated Ground Water (Designated Basin Rules, 2 CCR 410-1), the requirements of Rule 10.4.6.3 will not be enforced within the Southern High Plains Designated Basin. This policy does not supersede any construction requirements specified in the conditions of approval of a valid well permit. Any deviation from the requirements of Rules 10.4.6, 10.4.6.1, or 10.4.6.2 or other applicable standards of the Water Well Construction Rules must comply with the requirements of Rule 18, Variances.

Dated this 7 day of August 2017



Theresa Jehn-Dellaport, Chairperson
Board of Examiners of Water Well Construction
and Pump Installation Contractors

