

Title 122 - NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

Chapter 14 - ZONE OF ENDANGERING INFLUENCE AND AREA OF REVIEW

001 The zone of endangering influence for each injection well or each field, project or area of the State shall be determined according to either Section 001.01 or 001.02 of this Chapter. The zone of endangering influence shall be that area the radius of which is the lateral distance from an injection well, field or project in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water or into an improperly constructed, plugged or abandoned well or test hole.

001.01 The radius of the zone should be calculated by using a mathematical model (e.g., modified Theis equation) and should be calculated for an injection time period at least equal to the expected life of the injection well or field. The owner or operator must demonstrate to the Director that the mathematical model used and the calculated zone of endangering influence are appropriate for the known hydrologic properties of the underlying formations.

001.02 A fixed radius around the well, or the perimeter of the field or project of not less than one-fourth mile may be used. In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground water use and dependence; and historical practices in the area.

001.03 If the zone of endangering influence is determined by a mathematical model pursuant to Section 001.01 of this Chapter, the permissible radius is the result of such calculation even if it is less than one-fourth mile.

002 The area of review for each injection well or each field, project or area of the State shall include the zone of endangering influence and that area at least two miles in radius extending beyond the zone of endangering influence.

002.01 For Class V wells authorized in Chapter 6 of this Title, the area of review for each injection well or each field shall be a radius of at least one half (1/2) mile from the point of injection.

Enabling Legislation: Neb. Rev. Stat. §§ 81-1504(2)(13);81-1505(9)

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