Figure: 30 TAC §331.42(b)

$$r = (2.25\ KHt / S10^{x})^{½}$$

Where:

$$x = 4\ \pi\ KH\ (h_w - h_{bo}\ x\ S_pG_b\ ) / 2.3\ Q$$

r = radius of endangering influence from injection well (length)
K = hydraulic conductivity of the injection zone (length/time)
H = thickness of the injection zone (length)
t = time of injection (time)
S = storage coefficient (dimensionless)
Q = injection rate (volume/time)
h_{bo} = observed original hydrostatic head of injection zone (length) measured from the base of the lowermost underground source of drinking water
h_w = hydrostatic head of underground source of drinking water (length) measured from the base of the lowest underground source of drinking water
S_pG_b = specific gravity of fluid in the injection zone (dimensionless)
π = 3.142 (dimensionless)

The above equation is based on the following assumptions:
(1) the injection zone is homogenous and isotropic;
(2) the injection zone has infinite area extent;
(3) the injection well penetrates the entire thickness of the injection zone;
(4) the well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and
(5) the emplacement of fluid into the injection zone creates instantaneous increase in pressure.