**Section 671.APPENDIX C Todd Uniform Flow Equation**

If hydrogeologic information (e.g., transmissivity, porosity, hydraulic gradient, hydraulic conductivity, and saturated thickness of the aquifer) is available the lateral area of influence can be calculated for unconfined/confined unconsolidated or non-fractured bedrock aquifers as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| X | = | 1.19 Q |  | Y | = | 7.48 Q |
| Ti | Ti |

where

|  |  |  |
| --- | --- | --- |
| Q | = | daily flow from the well under normal operational conditions (cubic feet per day) |
| i | = | hydraulic gradient of the water table or potentiometric surface |
| T | = | aquifer transmissivity (gallons per day per foot) |
| X | = | Lateral area of influence or down gradient divide (feet) |
| Y | = | Maximum width of the lateral area of influence or the maximum width of the influx zone (feet) |

The distance to the upgradient divide is established as the distance to the upgradient regional groundwater divide.