**Section 671.APPENDIX A Volumetric Flow Equation**

For unconfined unconsolidated, or unconfined non-fractured bedrock aquifers the lateral radius of influence can be calculated as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| r | = | the square root of | Qt |
| 4524nH |

Where

|  |  |  |
| --- | --- | --- |
| r | = | radius of influence (feet) |
| Q | = | daily flow from the well under normal operational conditions (cubic feet per day) |
| t | = | time that the well is pumped under normal operational conditions (minutes) |
| H | = | open interval or length of well screen (feet) |
| n | = | aquifer porosity (see Figure A-1) unless more site specific information is available |

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Sand | 0.21 | Sandstone | 0.06 |
| Gravel | 0.19 | Limestones: |  |
| Sand & Gravel | 0.15 | Primary dolomites | 0.18 |
|  |  | Secondary dolomites | 0.18 |
| Figure A-1 | | | |