**Section 570.APPENDIX D Procedure to Determine Slopes**

Slope must be determined at the site of the runoff field application area to use Appendix E. Many methods are available to determine slope but all methods are based on the fact:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Slope | = | change in elevation | = | rise | = | Δ у |
| change in distance | run | Δ x |

where Δ means "the change in."

The following procedure can be used to determine slope.

1. Obtain a 40 foot length of string or wire with a 25 foot section marked off (if you use nylon, measure the 25 feet with a steel tape because nylon stretches when pulled taut); carpenter's line level from a hardware store; a stake; a rod about 8 feet long (an 8 ft. 2 x 4 works well); a tape measure; a notebook and an assistant.

2. Set up your notes as follows:

|  |  |  |
| --- | --- | --- |
| Site | run (ft) | rise (ft) |
| 1 | 0 | 0 |
| 1-2 | 25 |  |
| 2-3 | 25 |  |
| 3-4 | 25 |  |
| etc. |  |  |

Refer to Figure 1.

3. Stake one end of the string at point 1 and attach the other end to the rod so that there is 25 feet between the stake and rod, and the string can slide up and down the rod. With the string taut, level the string in the center using the line level and record the rise at point 2 in your notes by measuring the string height at the rod.

4. Repeat step 3 all the way down the field and calculate the slope by:

|  |  |  |  |
| --- | --- | --- | --- |
| Slope | = | A(100) | (% or ft/100ft) |
| B |

5. Use the % slope for Appendix E.

Figure 1: Field set-up for determining slope

