

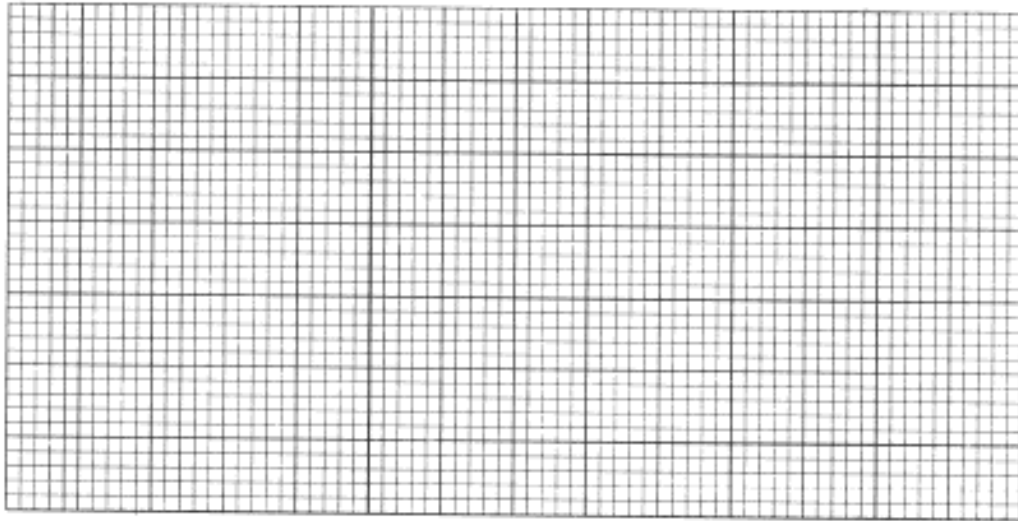
Worksheet 4: Detention basin storage computation

Project \_\_\_\_\_ By \_\_\_\_\_ Date \_\_\_\_\_

Location \_\_\_\_\_ Checked \_\_\_\_\_ Date \_\_\_\_\_

Circle one: Present Developed \_\_\_\_\_

Elevation or Stage



Detention basin storage (acre-ft)

- |   |  |           |  |
|---|--|-----------|--|
| <p>1. Data:<br/>                 Drainage area.....<math>A_m</math> = _____ acre<br/>                 Rainfall distribution<br/>                 Type II, III = _____</p> | <p>5. Compute <math>q_0/q_i</math>. <input type="text"/></p>   |           |  |
| <table border="1" style="margin-left: 100px;"> <tr> <td style="padding: 5px;">1st stage</td> <td style="padding: 5px;">2nd stage</td> </tr> </table>                      | 1st stage  | 2nd stage | <p>6. <math>V_s/V_r</math> ratio...<br/>                 (Use <math>q_0/q_i</math> with figure 6-2) <input type="text"/></p> |
| 1st stage   | 2nd stage  |           |  |
| <p>2. Frequency.....yr <input type="text"/></p>   | <p>7. Runoff volume,<br/> <math>V_r</math>.....ac-ft<br/>                 (<math>V_r = Q \times 12 \times A_m</math>) <input type="text"/></p>                 |           |  |
| <p>3. Peak inflow discharge,<br/> <math>q_0 = q_i</math>.....cfs <input type="text"/></p>   | <p>8. Storage volume,<br/> <math>V_s</math>.....ac-ft<br/>                 (<math>V_s = V_r \times</math> Ratio <math>V_s/V_r</math>) <input type="text"/></p> |           |  |
| <p>4. Peak outflow discharge,<br/> <math>q_0</math>.....cfs <input type="text"/></p>  | <p>9. Storage elev. (From plot) <input type="text"/></p>   |           |  |

1/ 2nd stage  $q_0$  includes 1st stage  $q_0$ .