Irrigation Design Basics


## 1. Size Individual Sprinkler Suppy Pipe (Lateral)

| Pipe Size | Max GPM |
| :--- | :--- |
| 16 mm | 1.7 |
| 20 mm | 4.0 |
| $1 / 2^{\prime \prime}$ | 6.0 |
| $3 / 4 \prime$ | 8.0 |
| $1 "$ | 14.0 |

(Total No. Sprinklers or Drip Tubes) $x($ Capacity in GPH $)=$ Total GPH

Total GPH Ö $60=$ Capacity in GPM (Gallons Per Minute)
Example: (40) Sprinklers @ 19.0 GPH x $760=$ Total GPH
Example: 760 GPH Ö $60=12.7$ Total GPM
Select supply pipe size from Chart No. 1

## 2. Size Distributor Pipe

| Pipe Size | Max GPM |
| :--- | :--- |
| $3 / 4 "$ | 10.0 |
| $1 "$ | 14.0 |
| $1-1 / 4 "$ | 20.0 |

Add Total GPM for all sprinkler supply pipes.
Example: (2) Drip Line @ 2.5 GPM = 5.0 GPM
Example: (1) Sprinkler Line @ 4.0 GPM = 4.0 GPM
Example: Total GPM $=9.0$ GPM
Select supply pipe size from Chart No. 2
3. Size Main Line Pipe

| Pipe Size | Max GPM |
| :--- | :--- |
| $3 / 4 "$ | 10.0 |
| $1 "$ | 14.0 |
| $1-1 / 4 "$ | 20.0 |

Add Total GPM for all distributor lines
Example: (1) Distributor Line @ 9.0 GPM = 9.0 GPM
Example: (1) Distributor Line @ 7.5 GPM = 7.5 GPM
Example: Total GPM = 16.5 GPM
Select supply pipe size from Chart No. 3

## 4. Select Pressure Regulators, Filters and Fertilizer Inkectors based on total system GPM in Main Line Pipe

