

Essential Pond Calculation Formulas

For a square or rectangular pond (edge to edge measurements)

$$\begin{aligned} & \text{Length} + 2X \text{ depth} + 2 \text{ feet (for lap over top edge)} \\ & \text{Width} + 2X \text{ depth} + 2 \text{ feet (for lap over top edge)} \end{aligned} = \underline{\text{Dimensions of Pond Liner}}$$

Volume of a square or rectangular pond

$$\text{Length} X \text{ Width} X \text{ Depth} = \underline{\text{Volume in cubic feet}}$$

Volume of a round pond (3.1416 (pi) =)

$$\pi X \text{ radius squared} X \text{ Depth} = \underline{\text{Volume of round pond in cubic feet}}$$

Volume in Gallons of a pond-7.5 gallons per cubic foot

$$\text{Volume in cubic feet} X 7.5 = \underline{\text{Gallons}}$$

How much water can tubing/pipe carry?

- 1/2" Inside Diameter (ID)=240 GPH (Gallons Per Hour) Max*
- 3/4" Inside Diameter (ID)=480 GPH (Gallons Per Hour) Max*
- 1" Inside Diameter (ID)=720 GPH (Gallons Per Hour) Max*
- 1 1/4" Inside Diameter (ID)=1320 GPH (Gallons Per Hour) Max*
- 1 1/2" Inside Diameter (ID)=1800 GPH (Gallons Per Hour) Max*
- 2" Inside Diameter (ID)=3000 GPH (Gallons Per Hour) Max*
- 2 1/2" Inside Diameter (ID)=4200 GPH (Gallons Per Hour) Max*
- 3" Inside Diameter (ID)=6600 GPH (Gallons Per Hour) Max*

How much pressure is lost on a vertical rise?

.433 PSI (pounds per square inch) is lost for every foot of rise.

Note:

It takes zero PSI for a submerged pump to raise water from the bottom of a pond to the top of the reservoir waterline. (Water always seeks its own level)