



Kiefer

**Landscaping
Garden Center
& Nursery**

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NC Certified Nursery—Member NC Assoc. of Nurserymen
NC Registered Landscape Contractors #841
Interlocking Concrete Paver Institute Certified Installers
Rainbird Irrigation Certified Installers

General Guidelines:

Ponds containing Fish should be at least 18” Deep

Planting shelves of 12” deep or less should be left for marginal plantings.

A smaller pond is not necessarily easier to maintain.

Achieving an ecological balance (plants, scavengers and fish) will reduce the maintenance of a pond.

The pump should have a capacity equal to 100%-200% of the pond volume.

Definitions

Head = Height measured from the surface of the pond to the water discharge at the waterfall.

[Note: Further increases in head occur in piping from pump to waterfall due to friction within the pipe and turbulence at the fittings]

Volume of a Pond:

Average Width(ft) x Average Length(ft) x Average Depth(ft) x 7.8=Gallons

Liner size:

Maximum Width (ft) + (2 x Maximum Depth)(ft) + 1 ft = Total Width (ft)

Maximum Length (ft)+ (2 x Maximum Depth)(ft) + 1 ft = Total Length (ft)

Stone Sizes:

Water features should incorporate a ratio of 1:2:1 of the following sizes

1 part 6”-12”, 2 parts 12” –18”, 1 part 18” –24”

Large boulders can be used in addition to these recommendations for additional interest.

Quantity of Stone for a pond:

$(\text{Length}(\text{ft}) \times \text{width}(\text{ft}))/40 = \text{Tons needed to cover liner with 6” rock shelf}$

$(\text{Length}(\text{ft}) \times \text{width}(\text{ft}))/ 15 = \text{Tons needed to cover entire liner area of pond}$

Quantity of stone for a stream:

$\text{Length} \times .15 = \text{Tons needed to cover liner and create spills}$

Quantity of gravel used for stream or pond:

$\text{Tons of Stone used} \times .3 = \text{Tons of gravel needed to fill voids in rock bed}$

