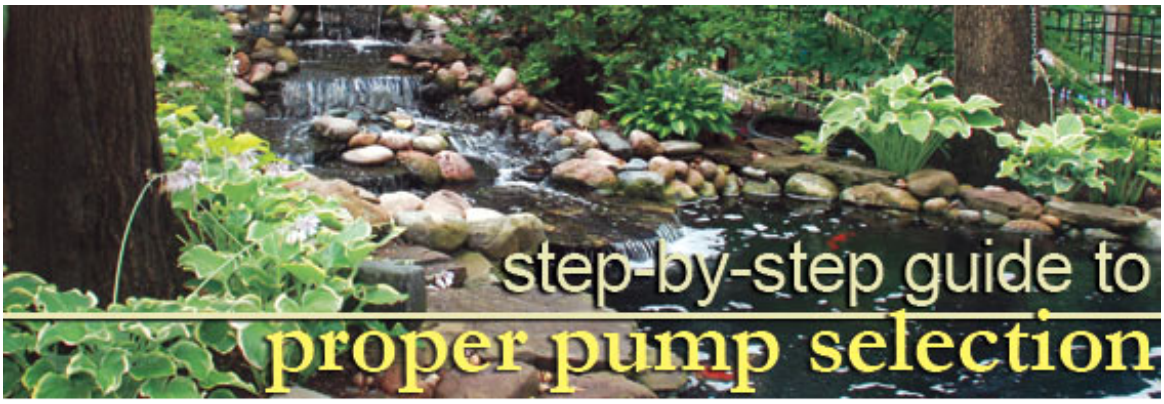
How to Select Your Pond Water Pump

Drs. Foster & Smith Educational Staff

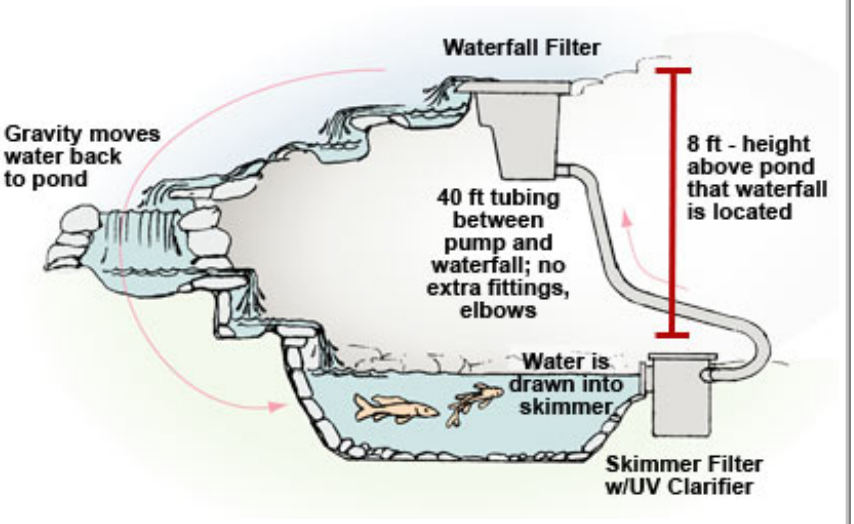


The proper pump can save you money by consuming less energy, and save you time spent on maintenance. The two most important factors to consider when choosing a pond pump are:

1 **Gallons Per Hour (gph).** It is important to know the volume of water in your pond to be sure that sufficient circulation occurs. You also need to make sure the pump is adequate to run your filtration, waterfall or any other added components. As a general rule, circulate pond water a minimum of once every hour. Insufficient circulation can cause areas of stagnant water, low oxygen levels, and many other problems, which eventually lead to an unhealthy pond.

2 **Max Head Height** is the maximum height that a pump is capable of pushing water. This is useful if you will use the pump to move water to a waterfall or through a filtration system. So, before purchasing a pump, you need to consider elements of your pond design that affect head height.

EXAMPLE POND: 2,000 gallon pond with a waterfall 40 feet away and 8 feet high with a skimmer filter & UV clarifier. Water should circulate once every hour.



head needed	reason
4 ft	40 ft tubing between pump and waterfall,

CONCLUSION: Need pump capable of

A. **HOW HIGH** are you pumping water? Pump must be capable of pushing water to that height.

B. **HOW FAR** are you pumping water? How many feet of tubing are you laying between your skimmer and waterfall?

C. **HOW MANY** elbows, bends and other plumbing fittings are needed? These add to the pressure needed to push water to the desired destination.

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	straight with no fittings (calculate 1 ft head per 10 ft tubing; add additional 1 ft head for each elbow).
8 ft	Waterfall is located approximately 8 ft higher than pump
4 ft	Filter and UV slow down water flow; need more pressure to push water
16 ft	Total head height needed

capable of pumping a minimum of 2,000 gph at 16 feet head.

WATER PUMP COMPARISON GUIDE ▸

D. HOW MUCH equipment are you pumping through and what is it? Filter systems and UV clarifiers all add head height to the overall system.

Expert Tip: Once you have selected the perfect pump, consider purchasing two. Having an extra pump on hand is a real time saver in the event your existing pump should fail.

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