PUMP
SELECTION GUIDE

Selecting the appropriate pump for a water feature will provide ideal water flow and maximize pump life.

Use this guide to make it quick and easy to select the right pump for your Aquascape ecosystem pond or Pondless® Waterfall.

EcoWave Pond Pumps

AquaSurge® Pond Pumps

AquaForce® Pond Pumps

AquascapePRO Pond Pumps

PL and PN Pond Pumps

aquascapeinc.com/pond-pumps

PUMP SELECTION GUIDE

Recommended Flow Rate

Ecosystem Ponds

1. **Pond Volume Calculation:** To maintain proper filtration and support pond fish, we recommend selecting a pump that turns over/filters the total gallons in the pond at least once every hour. Use the following formula to calculate the total volume of water contained in your pond. Note: this calculation factors in rocks and curved edges to provide a more accurate calculation for most ecosystem ponds.

   Length (ft.) x Width (ft.) x Average Depth (ft.) x 7.48 x 0.8 = Total Gallons

   Example:
   8 ft. x 11 ft. x 1.5 ft. Avg. Depth x 7.48 x 0.8 = 790 Total Gallons

2. **Waterfall Width:** We recommend 125 gallons per hour (GPH) for every inch of waterfall width. Higher flow rates can be used to provide more dramatic water flows. Use this simple formula to calculate the minimum flow rate for the width of your waterfall.

   Waterfall Width (in.) x 125 (GPH) = Minimum Waterfall Flow Rate

   Example:
   24 in. wide waterfall x 125 (GPH) = 3,000 (GPH) Minimum Waterfall Flow Rate

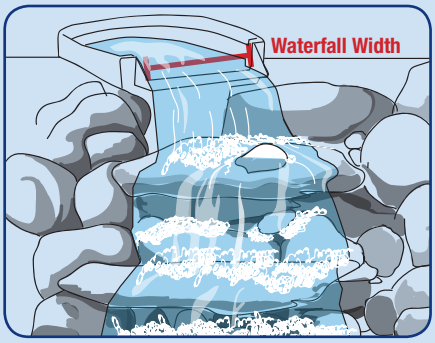
3. Choose the higher of the two numbers (Total Gallons and Minimum Waterfall Flow Rate) to determine your **recommended flow rate**.

Pondless® Waterfall

1. **Waterfall Width:** We recommend 125 gallons per hour (GPH) for every inch of waterfall width. Higher flow rates can be used to provide more dramatic water flows. Use this simple formula to calculate the minimum flow rate for the width of your waterfall.

   Waterfall Width (in.) x 125 (GPH) = **Recommended Flow Rate**

   Example:
   24 in. wide waterfall x 125 (GPH) = 3,000 (GPH) Recommended Flow Rate



After finding your recommended flow rate, it's time to calculate head height.

Head Height

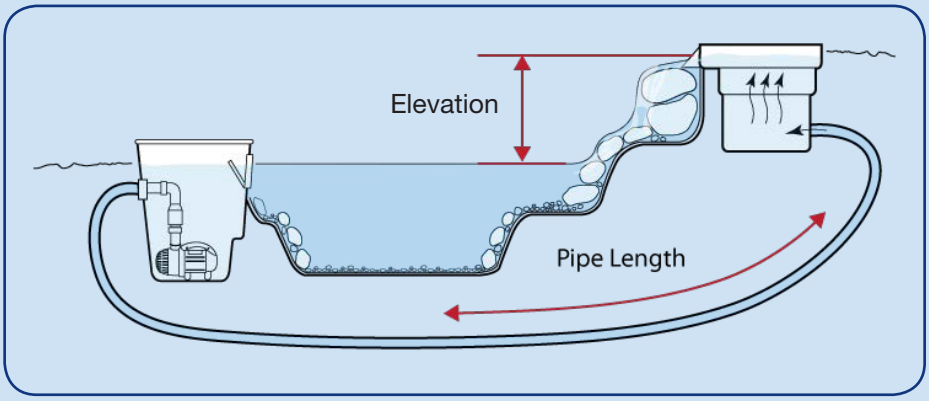
The calculation below is a simple way to estimate approximate head height and allow you to use pump performance specifications below to select the correct pump for your application.

(Elevation in feet) + (Pipe Length in feet ÷ 10) = Approximate Head Height

Elevation: Height difference from water level in the feature to the top of the waterfall

Pipe Length: Total length of pipe

Example:
Elevation: 3 feet
Pipe length: 20 feet
(3 ft.) + (20 ft. ÷ 10) = 5 ft. of head height



Pump Flow (GPH)

Refer to the following pump flow chart to select a pump that is compatible with your calculated head height.

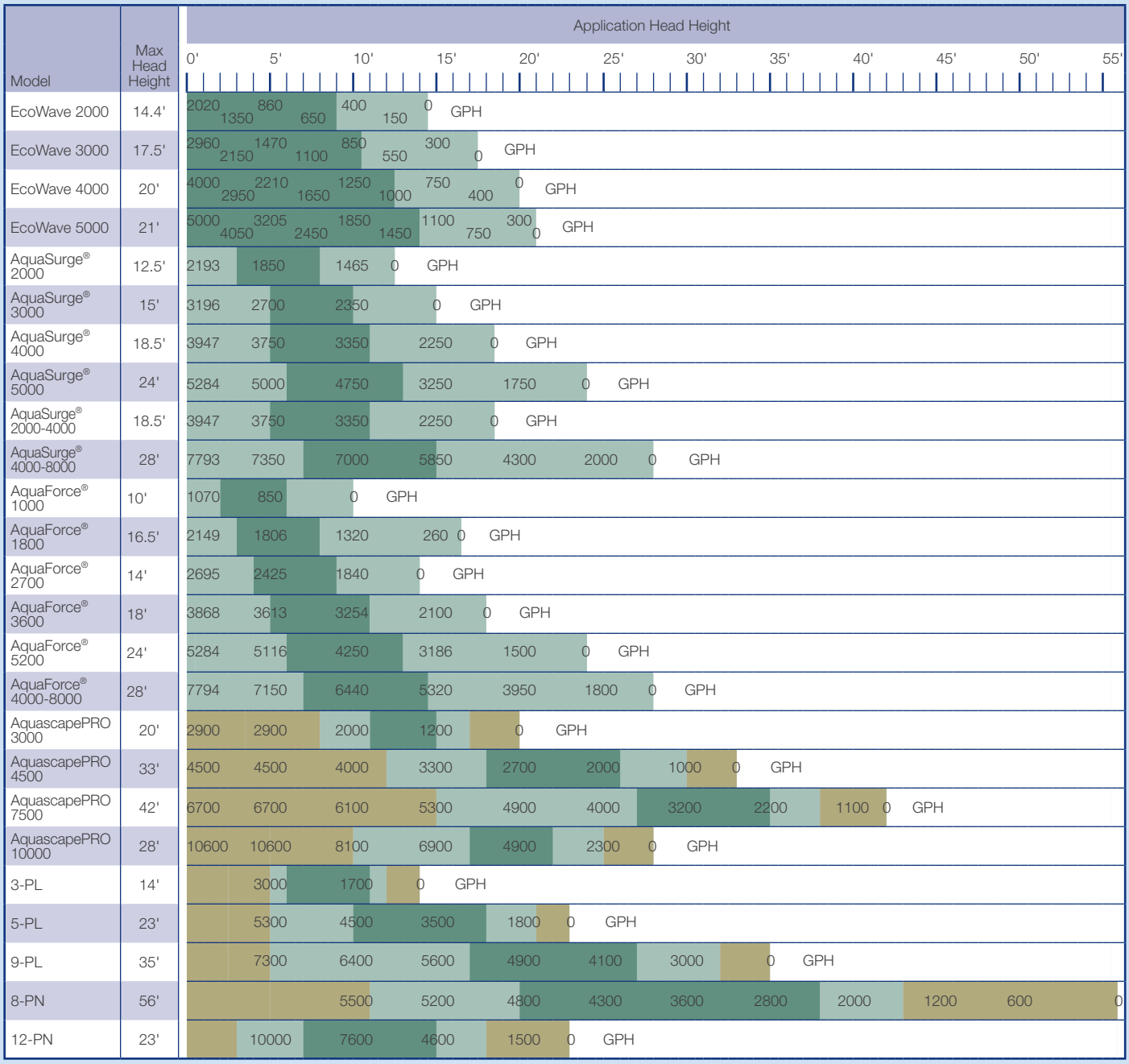
Example:

Recommended Flow Rate: 3,000 gallons per hour (GPH)

Head Height: 5' head height

Follow the 5' marker and identify pumps producing approximately 3,000 GPH. If several options are identified, please see back page.

BEST Operating Zone | **MAXIMUM** Operating Zone | **DO NOT** Operate Zone



PUMP SELECTION GUIDE

Determining the Best Pump

EcoWave Pond Pumps

Benefit: Maximum Electrical Efficiency

Location: Skimmer Filters and Pondless® Waterfall Applications

These magnetically-driven pumps provide incredible electrical efficiency and high flow rates at very low head height applications.

AquaSurge Pond Pumps

Benefit: Electrical Efficiency

Location: Skimmer Filters and Pondless® Waterfall Applications

These asynchronous pumps provide powerful flow with extreme energy-efficiency, providing significant savings throughout the year.

AquaForce Solids-Handling Pond Pumps

Benefit: Electrical Efficiency

Location: Directly in the pond

An asynchronous motor and protective pump cage makes these pumps energy-efficient and ideal for setting directly into the pond.

AquascapePRO Pond Pumps

Benefit: Solids Handling

Location: Skimmer Filters and Pondless® Waterfall Applications

These direct-drive pumps provide high flow-rates and work efficiently in higher head height applications.

PL and PN Pond Pumps

Benefit: Maximum Solids Handling

Location: Skimmer Filters and Pondless® Waterfall Applications

These direct-drive pumps provide high flow rates and handle large solids effectively, reducing clogging and maintenance.

Pipe Diameter

Pipe diameter limits the amount of flow that can travel through the piping in a water feature.
Select a pump that is compatible with the pipe diameter of the project. We recommend using flexible PVC or kink-free pipe.

Optimum Pipe Diameter **Acceptable** Pipe Diameter

Model	1/2"	3/4"	1"	1.25"	1.5"	2"	3"
EcoWave Pond Pumps 2000, 3000, 4000, 5000				A	O	O	
AquaSurge® Pond Pumps 2000, 3000, 4000, 5000				A	O	O	A
AquaSurge® 2000–4000 Adjustable Flow Pond Pump				A	O	O	A
AquaSurge® 4000–8000 Adjustable Flow Pond Pump					A	O	O
AquaForce Pond Pumps 1000, 1800, 2700, 3600, 5200			A	O	O	O	A
AquaForce 4000–8000 Adjustable Flow Pond Pumps					A	O	O
AquascapePRO Pumps 3000, 4500					O	O	A
AquascapePRO Pumps 7500					A	O	O
AquascapePRO Pumps 10000						A	O
PL Pond Pumps 3-PL 3000, 5-PL 5000					O	O	A
PL & PN Pond Pumps 8-PN 5500, 9-PL 7000					A	O	O
PN Pond Pump 12-PN 10000						A	O

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For help locating a distributor, contact Aquascape Customer Care at (866) 877-6637 US/(866) 766-3426 CAN.

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