

## HELP FILES AND GENERAL INFORMATION

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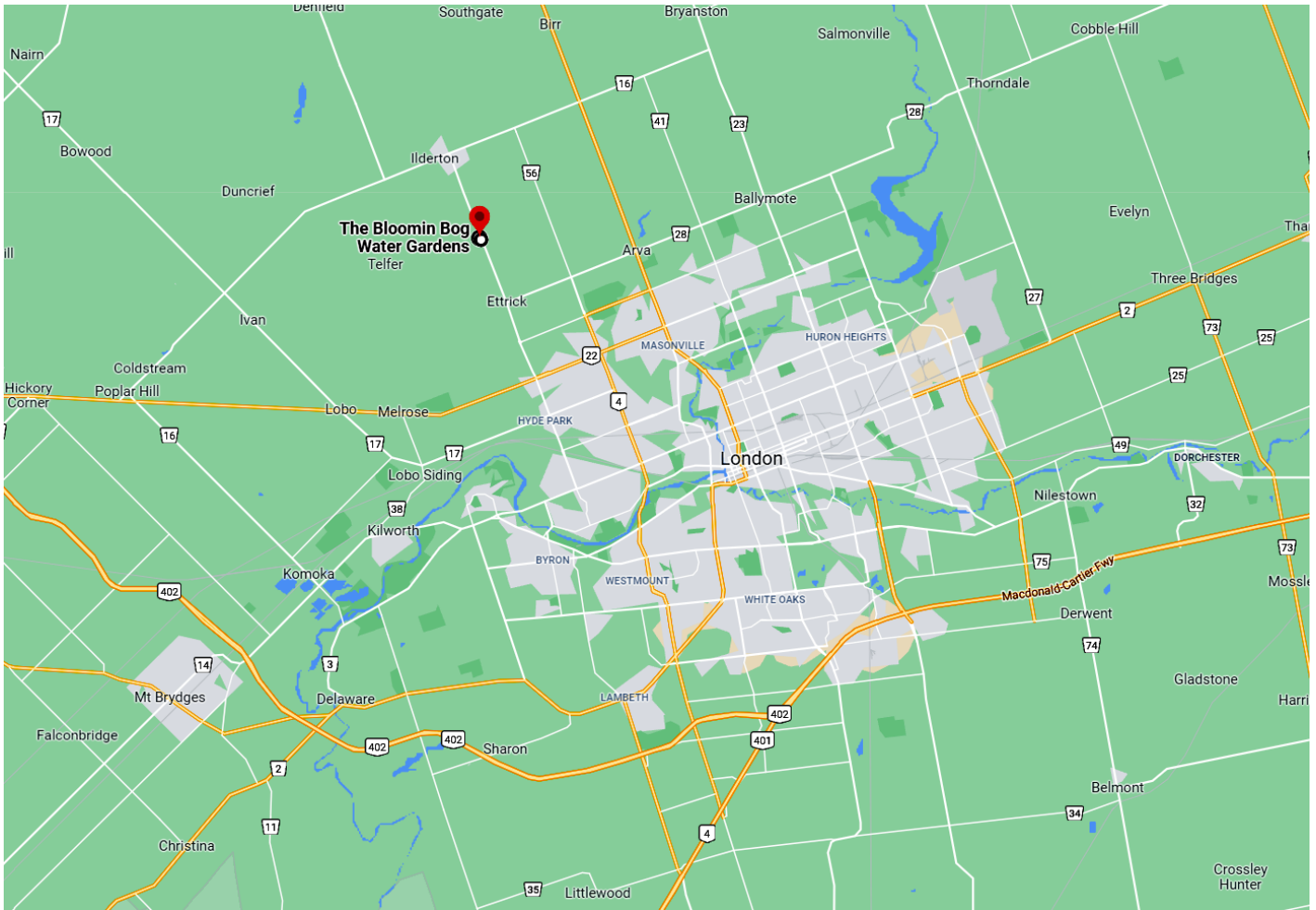
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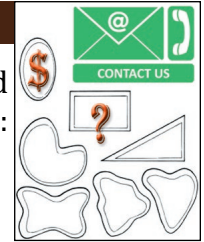
## INTRODUCTION

The Bloomin Bog is a water garden center founded in 1981. It is owned and operated by Nick & Isa Webb. Located on Hyde Park Road, just three miles north of Fanshawe Park Road, our business occupies an acre of property, part of which is devoted to the propagation of water lilies, lotus and many other aquatic perennials. We pride ourselves on being a destination place for ponders and their families.

We are devoted to stocking quality industry recognized pond products, providing excellent customer service, and delivering competitive pricing. Our business has been proudly caring for customers from London and surrounding areas for 40 years. We believe we have done so responsibly, with passion and with integrity.



## PREPARING TO BUILD A POND



**B**uilding a pond can be a satisfying and enjoyable job. A little forward planning and research will ensure trouble-free installation. Before digging, consider the following:

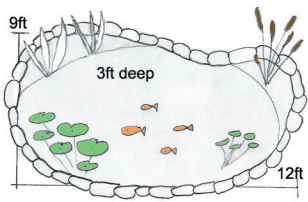
- Where will the pond be located, and what type of design do I want?
- What will the overall size, shape and depth be?
- How much am I prepared to spend?

### POND LOCATION

- **Select a site near the outdoor hydro outlet** – electricity for a pump, lighting, etc.
- **Select a site that receives at least six hours of full sun** – flowering aquatics require sunlight to bloom and grow to their potential.
- **Select a sheltered site** – wind may play havoc with fountains and waterfalls.
- **Select a level site** – the run-off from seasonal rain and spring thaw could wash into the pond and create water quality issues.
- **Avoid heavily treed areas** – tree roots and leaf litter will cause water quality issues. Too much shade will reduce the blooming of aquatic plants.

### POND DESIGN

There are many design options for a pond. A formal pond is a mix of art, nature, and innovation; an informal pond is natural and blends into the existing garden.



Rubber liner offers flexibility regarding shape, size and depth. Pre-formed ponds are limited by depth and size.

The type of pond you build will be determined by the amount of available space you have.

### SIZE, SHAPE AND DEPTH

The size, shape and depth of the pond will be determined by its location. Make a sketch of the desired location; pencil in the pond dimensions, landscaping, surrounding gardens, and features such as a waterfall or a stream.

A pond should have as much surface area and depth as possible. As a guide, an average-sized pond is about 8ft x 7ft; average depth of 2.5ft; maximum depth of 3ft; with a volume of about 1,000 US gallons.

### THE COST

The cost of installing a pond will vary depending upon its size, depth, the hardware used, and whether you do the work yourself or hire a landscaper. Before undertaking a large or complex project, consult a landscaper or water garden expert. A trained professional will help with your design and give you a price estimate. **Take the time to get estimates, compare prices, and work within a budget.**



The expected materials cost of an average-sized pond (8ft x 7ft x 3ft) (rubber liner, underlay, UV filter, pump, spillway, hose) is about **\$1,500**. This estimate does not include the cost of installation, other hardware, fish, plants or stone.

## PRE-FORMED POND SHELLS

Pre-formed pond shells are appealing because they are convenient for small areas and rather easy to install. Manufactured from a rigid black polyethylene material, they range in size, shape and depth. Rigid ponds are durable and come with a 15 year warranty.





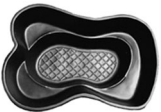

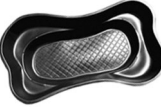


On the down-side, pre-formed ponds tend to lack good depth. During summer the pond water may overheat, and in winter the pond water may freeze solid. Special care is required during these times of the year (e.g. regular water changes during summer, and fish removal before winter).

### INSTALLATION

1. Turn the pond shell upside down, and with a spade mark around the rim adding an extra 12ins around the perimeter for excavation. Remove the turf.
2. Dig a hole sufficient in depth, allowing an extra 2ins at the bottom for a layer of sand. Ensure the base of the hole is level and that the pond shell will sit flat.
3. Fill 2ins of sand into the hole and compact it. Fit the pond shell and backfill where necessary. Check for levelness.
4. Fill the pond with water. The weight of the water may cause a little expansion, but if properly installed the pond shell will not move.
5. Allow a day for settling before edging with flagstone. Flagstone should protrude about 2ins over the water.



### SIZES AND SHAPES

<p><b>Avonlea</b> – 39”x28”x15” 33 gallons Integrated plant shelves</p>		<p><b>Hampton Corner</b> – 26”x24”x20” charcoal or brown 35 gallons</p>	
<p><b>Brighton</b> – 62”x44”x18” 90 gallons Integrated plant shelves</p>		<p><b>Manhattan</b> – 40”x20”x18” charcoal or brown 50 gallons</p>	
<p><b>Chelsea</b> – 64”x48”x18” 150 gallons Integrated plant shelves</p>		<p><b>Poly Decorative Rocks</b> <b>Small:</b> 21”x18”x16” Sandstone Warm Gray &amp; Charcoal</p> <p><b>Large:</b> 35”x26”x22” Sandstone Warm Gray &amp; Charcoal</p>	
<p><b>Edgewater</b> – 94”x58”x18” 264 gallons Integrated plant shelves</p>			
<p><b>Half Whiskey Barrel Liner</b> <b>Half Whiskey Barrel Liner + Spillway</b></p>		<p><b>Tranquility Falls</b> – 34”x17”x24” 8.8lbs; warm gray sandstone &amp; charcoalstone 3/4” hose fitting</p>	



## RUBBER LINER

The most popular choice for pond construction is rubber liner. Flexible liner allows you to build a pond in almost any size and shape you desire. Liner is typically 45mil, UV-protected, non-toxic to plants and fish, comes with a 20 year warranty, can be easily patched, and is guaranteed against cold cracking in winter.



During liner installation, folds and creases can be a little tricky, but overall it is the best choice for a unique pond design. Installing underlayment before the liner is also important because it provides an extra barrier between the liner and rocks or tree roots. It also protects the liner against frost heave, and helps wick water away.

Use the following formula to **determine the size of liner** and/or underlayment you'll need. Measure the longest, widest and deepest points of the pond (**without allowing for overlay**):

**Add Liner length + (2 x depth) + (2 x 1ft overlay)**  
**Add Liner width + (2 x depth) + (2 x 1ft overlay)**

*Example: (liner for a pond 8ft long x 7ft wide x 3ft deep):*

*Liner length is: 8ft + (2 x 3ft) + 2ft = 16ft*

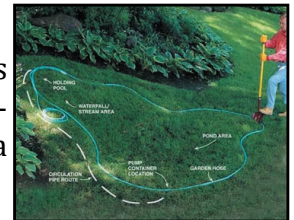
*Liner width is: 7ft + (2 x 3ft) + 2ft = 15ft*



**You'll require extra liner for a pond with special edging, an island, stream or waterfall.**

## INSTALLATION

1. Mark out your pond area using a rope or hose. Use a spade to remove the turf. Dig an edging shelf about twice the thickness of your stone.
2. Dig a ledge 12ins deep and wide around the inside perimeter. Do not dig this shallow ledge underneath a waterfall. Mark and dig a second ledge about 24-30ins deep for about two-thirds of the pond. Do not dig this ledge underneath a waterfall.
3. Lastly dig the remaining one-third area to a depth of 36ins (or as near as possible). If installing a waterfall, dig the deepest point at its base.
4. Check with a spirit level that the top of the pond is level. Remove all stones and tree roots.
5. Line the base and ledges with underlayment or 2ins of sand. Do not use carpet or newspaper, as this may encourage rodents to burrow and nest under your pond.
6. Lift the folded liner to the middle of the pond, unfold it and spread it over the pond hole. Always remove your shoes before walking on the liner. While fitting, carefully adjust the overlay, trying not to damage your ledges. Make as many creases and folds as necessary to conform to the shape of the pond. Hold the liner in place with weights, but allow plenty of room for the liner to pull inwards with the weight of water.



- Use a hose to carefully fill the pond. The weight of the water will “iron out” some of the creases in the liner. As the pond fills, remove the weights. The liner will contour to the shape of the pond.
- Allow the pond to settle for a day before trimming the excess liner, and edging with stone. Allow at least 8-12ins excess liner when trimming. Stone edgings should protrude about 2ins over the water.



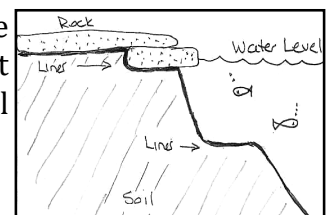
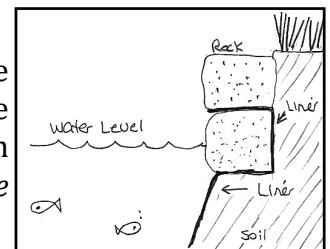
	<b>FIRESTONE FACTORY STANDARD ROLL WIDTHS</b>
	Firestone EPDM - 10ft, 15ft, 20ft, 25ft, 30ft, 40ft, 50ft
	Underlayment - 7.5ft and 15ft

<b>FIRESTONE LINER PRODUCTS</b>	
Single-sided Cover Tape - 6ins wide Double-sided Splice Tape - 3ins wide Double-sided Splice Tape - 3ins wide x 25ft Firestone Liner Repair Kit Firestone QuickPrime Plus - 1qt Firestone Spray Adhesive Primer Geocel Liner Adhesive 10oz	

### EDGING TIP

To prevent the liner from showing once water is in the pond (between the water level and stone), choose from the following two edging finishes:

- Dig an edging shelf **twice the depth** of your stone. Make sure the liner is large enough to cover the additional ledge. Place the first layer of stone, wrap the liner behind and over this layer, trim, and place the second layer of stone on top. The water level can go as high as the middle of the first layer of stone (*see right*).
- Dig an edging shelf **the depth** and width of the stone you want to use. Make sure the liner is large enough to allow for this additional ledge. Place the first layer of stone, and then place the second layer of stone above it. The water level can go as high as the middle of the first layer of stone (*see right*).



## WATERFALLS

Most back yards are not blessed with a natural slope. In most cases, a waterfall needs to be excavated and constructed. Adding a waterfall raises certain design considerations. The following tips may be helpful:

- Balance the size of the waterfall to the pond (don't have a gushing waterfall emptying into a small bottom pond).
- Use larger stones to frame the sides of the waterfall; this is an excellent place to put your favorite stones; where they'll be highlighted by the waterfall.
- Don't stack smaller flat rocks together to create the waterfall; use large, irregular stones to build the waterfall.
- Tilt the stones forward so the water moves off the rock, not behind it.
- Experiment with the types of waterfalls that you have; play with sheeting effects, splashing effects, and the width and depth of the waterfall. Different waterfalls have different sounds.
- A sheer descent requires a minimum water thickness of  $\frac{1}{2}$ ". This is achieved by having a clean, straight edge along the drop.
- A tumbling, rocky waterfall requires a minimum water thickness of  $\frac{1}{4}$ ", and is achieved by placing suitable rocks along the edge of the drop.
- Size the pump according to the desired water thickness.
- Splashing water from a waterfall contributes considerably to evaporation.



All waterfalls (other than pre-formed rigid units) require a rubber liner. Underlayment or sand should be used for cushioning and liner protection. Use just one piece of liner for the waterfall. To determine the size of the liner, measure the length, depth and width of the excavation, and allow about 12ins overlay around the perimeter. The edge of the liner must be buried or covered with stone, and to prevent leakage make sure the liner will be above the water level. Liner can be concealed with stone or pebbles, and black waterfall foam sealant or liner adhesive is excellent for adhering and sealing stone to stone or liner.

Typically, a pump will sit at the bottom of the pond and pump water through hose to the top of the waterfall (header pond). Use a garden hose to test the waterfall prior to completion. Remember to leave spaces in the stone edging for pump hose and power cords.

## STREAMS

A stream can flow anywhere you want and may contain planting niches, or just stone. Streams are often used to join two ponds together or to take water from a bottom pond to the top of a waterfall.

A stream requires a rubber liner, underlay, and sand for cushioning and liner protection. Try to use just one piece of liner for the stream, but if you have to make joins, start at the bottom of the water course and generously overlap each piece in the direction of the water flow. To prevent leakage, seal all joins using EPDM primer and rubber seaming tape.

The liner must be secured at the edges with soil or rocks, and must always be higher than the water level.

The following tips may be helpful:

- Mark out the run of a stream using wooden pegs and knock them into the ground so that all tops are level. Use a spirit level to confirm the level of the land.
- For the best effect, a stream should be laid to a gradient of between 10 and 30 degrees.
- A stream bed needs a drop of about 2ins every 10ft to ensure a downhill flow.
- The careful position of rocks in a stream bed can create interesting flow patterns.
- Size the pump according to the pond's volume, the length of the stream and the desired flow rate.
- Splashing water from a stream will contribute to evaporation.



## FILLING THE POND

The easiest way to determine the volume of a pond is to record the water meter before and after filling it. If possible, avoid using household water during the filling process.

Once you have added fresh water to a newly built pond, allow it to sit for 24-48 hours before adding plants or fish. During this time, the water will undergo an “aging” process whereby healthy bacteria begin to colonize, the water warms up, the pH (acidity/alkalinity) of the water balances, and the chlorine, chloramines and heavy metals present in fresh water have evaporated. **Use this time to place stone and rock around the pond.**



## POND PUMPS

At the heart of most ponds lies a submersible pump that typically operates 24 hours a day throughout the water gardening season. The pump aerates and circulates water and powers such features as a fountain, stream, waterfall, filter and ultra violet clarifier.

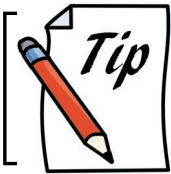


Submersible pumps are either **direct** or **magnetic** drive. A direct-drive pump is more powerful in terms of the height and length it can push water. This type of pump costs a little more to operate, but is the best choice for a large pond, waterfall, filter system, or stream.

A magnetic-drive pump is lower wattage and more energy efficient. It is well suited to a small or medium sized pond, fountain, waterfall, or simple water circulation and aeration.

There are two methods used to determine the right sized pump for a pond: (a) one is based on **circulation** and the number of fish in the pond; and (b) the other is based on the **power** required for a water feature.

In both cases, the volume of the pond needs to be calculated. Use the following formula to calculate **pond volume in US gallons**. For all shapes, the dimensions should be in feet.



Rectangular pond = length x width x average depth x 7.48 x 80%  
Circular pond = diameter x diameter x average depth x 5.9 x 80%  
Irregular pond = length x width x average depth x 6.9 x 80%

1. If the only pump function is to **circulate** and **aerate** water for a large number of fish, then select a pump that will circulate **100%** of the pond's volume per hour.

### *Example:*

**VOLUME of a rectangular pond (9ft x 8ft x 2.5ft):**

$9 \times 8 \times 2.5 \times 7.48 \times 80\%$  (rectangular multiplier) = 1,077 US gallons

**CORRECT PUMP SIZE (allow 100% circulation) = 1,100gph**

2. If the pump function is to **power a waterfall, filter, skimmer**, then select a pump powerful enough to give the desired flow rate at a calculated height (vertical lift or head). In this case, select a pump that can circulate **up to 250%** of the volume per hour.

To determine the correct size of pump for a waterfall or stream:

- measure the **width** at the top of the waterfall and/or stream in inches;
- select the desired water **thickness** from the chart below; and
- apply the appropriate formula.



THICKNESS	FORMULA
<b>Trickle</b> ¼" thick water	allow 63gph per inch of waterfall width; calculate tubing friction; calculate pressure friction; and add vertical and friction heads together to find total dynamic head (TDH)
<b>Sheet</b> ½" thick water	allow 125gph per inch of waterfall width; calculate tubing friction; calculate pressure friction; and add vertical and friction heads together to find total dynamic head (TDH)
<b>Niagara</b> 1" thick water	allow 186gph per inch of waterfall width; calculate tubing friction; calculate pressure friction; and add vertical and friction heads together to find total dynamic head (TDH)
<b>Standard Stream</b>	allow 125gph per inch of stream width, calculate tubing friction; calculate pressure friction; and add vertical and friction heads together to find total dynamic head (TDH)



Try not to circulate more than 2.5 times the pond's volume in one hour.

● **Example 1:** Pond volume is 2,500 US gal, 3' waterfall, 20' x 1.5" hose (trickle and sheet), 20' x 2" hose (Niagara), a biofilter, a 24" spillway. (Friction loss AND pressure loss) = Total Dynamic Head (TDH).

			TDH for Water Thickness		
Pond Volume	Waterfall	TDH	Trickle	Sheet	Niagara
2,500 US gallons	24ins wide	11.5ft	6ft	9ft	22ft
<b>AquaForce Pump Sizes</b>			<b>1,800gph</b>	<b>3,600gph</b>	<b>5,200gph</b>

● **Example 2:** Pond volume is 2,500gph, stream is 15' long x 2' wide x 3" deep, water thickness is Niagara @ 3' high, a biofilter, 24" spillway and 25' x 2" hose.

Waterfall = 24ins wide x 186gph = 4,464gph (desired flow rate)  
 Static Friction = 3ft (vertical lift of waterfall)  
 Pressure Friction = 10ft (pump + biofilter + spillway fittings)  
 Tubing Friction = 25ft (hose) + 10ft (fittings) x 0.09 = 3.15ft  
 Static Friction + Tubing Friction = 7ft (round up)



**The correct Atlantic pump size 4,500gph @ 7ft = TT6000 (6,600gph)**

**The correct Aquascape pump size 4,500gph @ 7ft = Aquaforce 5200 (5,400gph)**

## Algreen Statuary Pump

Model	Sug. Hose	gph	Lift
30	½"	30	1ft



## Aquascape AquaForce Solids-Handling Pond Pumps

*Solids handling; extremely energy efficient; asynchronous motor; easy maintenance; durable pre-filter cage; oil free; plumber adapter fittings included; 1.5" discharge; 25ft power cord.*

Model	Watts	Hose	gph	Lift	Cost/Mnth
1000	55	1¼"	1070	10ft	\$5.50
1800	160	1½"	2149	16.5ft	\$16.00
2700	147	1½"	2695	14ft	\$14.70
3600	215	1½"	3868	18ft	\$21.50
5200	360	1½"-2"	5284	24ft	\$36.00



## Aquascape AquaForce 4000-8000 Adjustable Flow Solids Handling Pond Pump

*Solids handling; energy efficient; adjustable flow rate; wireless remote and receiver (paired); adapter fittings included; pre-filter cage; oil free; 20ft power cord.*

Model	Watts	Hose	gph	Lift	Cost/Mnth
PRO 4000-8000	500-660	2"	7793	28ft	\$50.00-\$66.00



## Aquascape AquaSurge Skimmer and Pondless Waterfall Pumps

*Energy efficient; asynchronous motor; oil free; vertical or horizontal operation; adapter fittings included; 20ft power cord. Use only in skimmer or pondless installations.*

Model	Watts	Hose	gph	Lift	Cost/Mnth
2000	160	1½"	2193	12.5ft	\$16.00
3000	165	1½"	3196	15ft	\$16.50
4000	215	1½"	3947	18.5ft	\$21.50
5000	360	1½"-2"	5284	24ft	\$36.00



## Aquascape AquaSurge PRO Adjustable Flow Pumps

*Energy efficient; adjustable flow; paired wireless remote control and receiver; fittings included; 20ft power cord. Use only in skimmer or pondless installations.*

Model	Watts	Hose	gph	Lift	Cost/Month
PRO 2000-4000	180-215	1½"	3947	18.5ft	\$18.00-\$21.50
PRO 4000-8000	500-660	2"	7793	28ft	\$50.00-\$66.00



**Aquascape AquaSurge Low Suction Intake Attachment**  
(not compatible with 4000-8000) - \$29.99



## EcoWave Pond Pumps

Extremely energy efficient; magnetically driven; quiet; compact; 2" pump discharge; pre-filter; oil-free; fittings included; 20ft power cord.

Model	Watts	Hose	gph	Lift	Cost/Mnth
4000	130	1½"-2"	4000	20ft	\$13.00



## Pond Powerhead

Circulation pump; compact; no pipe or plumbing required; energy efficient; 12-volt 40w motor powered by a \*60w transformer (sold separately).

Watts	Cost/Mnth
40	\$4.00



## SLD Adjustable Flow Pump

Professional grade; solids handling; adjustable flow; pump flow can be controlled via a smart phone or tablet; threaded 2" outlet; asynchronous motor; 20ft power cord.

Model	Watts	Hose	gph	Lift	Cost/Mnth
SLD 2000-5000	340	2"	5144	16.7ft	\$34.00



## Atlantic Tidalwave TT-Series Pumps

30% more energy efficient than competitors; asynchronous motor; compact; replaceable impeller; large threaded inlet and outlet; heavy duty pre-filter; 20ft power cord.

Model	Watts	Hose	gph	Lift	Cost/Mnth
TT1500	101	1"-1½"	1640	15ft	\$10.10
TT2000	115	1"-1½"	2640	17ft	\$11.50
TT3000	173	1"-1½"	3000	20ft	\$17.30
TT4000	250	1"-1½"	4490	21ft	\$25.00
TT5000	310	2"	5150	22ft	\$31.00
TT6000	334	2"	6600	23ft	\$33.40
TT7500	520	2"	7500	25ft	\$52.00



## OASE Fountain Pumps

Energy efficient; compact design; flow control; suction cups on feet; 3yr warranty upon product registration; 6ft-16ft power cord.

Model	Watts	Hose	gph	Lift	Cost/Mnth
90	4	½"	90	2.8ft	40c
150	7	½"	150	3.6ft	70c
320	23	½"	320	6.2ft	\$2.30
525	42	½"-¾"	525	7.9ft	\$4.20



## OASE Aquarius Fountain Set Eco

Energy efficient; compact design; three spray heads; adjustable diverter; telescopic pipe extension 10"-24"; integrated swivel head; diverter valve; 3yr warranty upon product registration; 20ft power cord.

Model	Watts	Hose	gph	Lift	Cost/Mnth
550	16	½"-¾"	550	6.9ft	\$1.60
825	27	½"-1"	825	8.5ft	\$2.70



## OASE Filtral UVC Filter Pump Kits

Compact; all-in-one system (integrated UVC, pump, filter & fountain); flow control; diverter valve; 16ft power cord.

Model	With Goldfish	With Koi	UVC	Lift	Flow Rate
400	<200 gal	N/A	5w	4ft	195gph
800	<400 gal	N/A	9w	4ft	235gph





## AIR PUMPS

Fish health depends upon abundant oxygen. Oxygen levels in pond water fluctuate depending on fish numbers, temperature, algae, sludge, and the time of day. Aeration creates a huge column of bubbles at the pond bottom that bring oxygen-depleted water to the surface.

### Aquascape Pond Air 2-Outlet and 4-Outlet Aerator Kits

*Includes airline, air stones, check valves, air discs; 6ft power cord.*



Model	Watts	Pressure	Volume	Cost/Mnth
Pond Air 2	6	0.3cfm	1000gal	65c
Pond Air 4	11	0.5cfm	2000gal	\$1.10



### Aquascape Pro Air Aeration

*Outdoor rated compressor; 30' airline; 10" diffuser; 6ft cord.*



Model	Watts	Pressure	Volume	Cost/Mnth
Pro Air 20 Kit	15	0.71cfm	5000gal	\$1.50
Pro Air 20 Compressor	15	0.71cfm	5000gal	\$1.50
Pro Air 60 Kit	45	2.1cfm	15000gal	\$4.50
Pro Air 60 Compressor	45	2.1cfm	15000gal	\$4.50



### OASE Aquaoxy Aeration Kits

*Quiet; low-voltage (12V); cover during winter; two adjustable air flow outlets (450 model); includes airline, air stones; transformer (450 model); 2yr warranty.*



Model	Watts	Pressure	Volume	Cost/Mnth
450	25	1.0cfm	5000gal	\$2.50



A biological filter is installed to compensate for the unnatural conditions in a backyard pond (i.e. low oxygen, and high pollution). Fish waste, uneaten fish food, sludge, and algae contribute to low oxygen and high pollution problems. A biological filter allows large colonies of purifying bacteria to operate effectively in small volumes of water. The secret to successful filtration is agitation and oxygen. To keep bacteria alive, both pressure and gravity assisted models require a submersible pump to run the unit 24 hours per day. The addition of an air pump to a pond will increase filter efficiency.

### Aquascape Submersible Pond Filter

*Provides additional filtration; pre filters pumps for reduced maintenance; removable cage for easy cleaning; replacement media available.*

Model	Pump Size	Hose
Submersible	up to 1,300 gal	3/4" - 1 1/4"

Aquascape™  
Consumer Products  
Produits grand public



### OASE FiltoClear UVC Pressure Filters

*Built-in UVC; easy to hide, can be buried to the lid; multiple tubing sizes up to 1 1/2 ins; 15ft power cord.*

Model	Goldfish Load	Koi Load	UVC	Flow Rate
3000	1500 gal	750 gal	18w	2000gph
4000	2100 gal	1000 gal	24w	3000gph
8000	3950 gal	2000 gal	55w	4000gph

Oase®  
LIVING WATER



### OASE Biosmart Gravity Filters

*External gravity filter; temperature and pollution indicators and sponges; 3" discharge; 2" backwash.*

Model	Goldfish Load	Koi Load	Intake	Flow Rate
5000	2500 gal	1200 gal	3/4" - 1 1/2"	1600-3000gph
10000	5000gal	2500 gal	3/4" - 1 1/2"	1600-3500gph



## PondMax Ultra Series Pressure Filters



*Spin-to-clean backwash; compact; cleaning indicator; double-action sponges. Available in non-UVC and UVC models.*

Model	Goldfish Load	Koi Load	Hose	Flow Rate	UVC
PF750	325 gal	175 gal	¾" - 1¼"	1000gph	-
PF1200	600 gal	300 gal	¾" - 1½"	1200gph	-
PF2400	1200 gal	600 gal	¾" - 1½"	1800gph	-
PF3600	1800 gal	900 gal	¾" - 1½"	3200gph	-
PF750UVC	325 gal	175 gal	¾" - 1¼"	1000gph	9w
PF1200UVC	600 gal	300 gal	¾" - 1½"	1200gph	13w
PF2400UVC	1200 gal	600 gal	¾" - 1½"	2400gph	18w
PF3600UVC	1800 gal	900 gal	¾" - 1½"	3200gph	24w
PF4800UVC	2400 gal	1200 gal	¾" - 1½"	3600gph	36w
PF7200UVC	3600 gal	1800 gal	¾" - 1½"	4000gph	55w



## SKIMMERS

A skimmer can remove up to 85% of floating debris before it settles in the pond. It not only collects debris, but cleans the water and hides submersible pumps. A skimmer cleans the pond in three ways: (a) skimming action - pulls debris from the surface of the water, capturing it in a rigid leaf basket; (b) biological filtration - filter media provides a surface for beneficial bacteria to colonize on; and (c) mechanical filtration - protects and extends the life of the pump. Provides a place to conceal equipment and plumbing.

### Signature Series Pond Skimmers

Aquascape  
Consumer Products  
Produits grand public



**200:** black lid; leaf net; optional filter brush and overflow kit available

**400:** faux rock-lid; rigid leaf basket; overflow kit; filter mat

**1000:** faux rock-lid; adjustable faceplate; rigid leaf basket; overflow kit; filter mat

Model	Pond Size	Flow Rate	Weir Size	Dimensions
200	200 sq.ft.	up to 3000gph	6"	20"L x 17.5"W x 17.5"H
400	400 sq.ft.	up to 4000gph	6"	21.5"L x 18"W x 21"H
1000	1000sq.ft.	up to 10000gph	8"	21"L x 22"W x 26.5"H



## SPILLWAYS, BIOFALLS, WEIRS & FILTER FALLS

Waterfall weirs, reservoirs and spillways are compact units that are used to produce very realistic looking waterfalls. Some units are combination filters and spillways meaning that they contain filtering media. When selecting a waterfall spillway, consider the width of the unit, size of the waterfall, volume of the pond and gph of the pump.

### Aquascape Pond Waterfall Filter



Mechanical and biological filtration up to 1000 gallons; compact; economical; includes rigid filter mat, filter rack, and filter media net (media sold separately).

Dimensions	Width	Max. Flow	Fittings	Volume
20" L x 15" W x 12" H	12"	5000gph	1" - 1.5"	1000gal



### Aquascape Waterfall Spillway

Compact; strong design allows stone, rocks and logs to be set directly on top of the unit; watertight connection on back accepts 1.5" or 2" tubing; 2" bulkhead fitting; and internal baffles diffuse the flow.

Dimensions	Width	Max. Flow	Fittings
10.5"L x 14"W x 5"H	12"	4000gph	2" PVC; 1.5" Barb
17.5" L x 24" W x 5" H	22"	7500gph	2" PVC; 1.5" Barb



### Aquascape Signature Series 1000 BioFalls Filter

Provides the most filtration and highest water flows on the market; durable; molded polyethylene for maximum strength; easy to install; comes with fish safe silicone and hardware; 2" bulkhead; and includes filter mats and bioballs.

Dimensions	Volume	Max. Flow	Spillway
17.5" L x 20" W x 17" H	1000 gal	3000gph	15"



### Aquascape Signature Series 2500 BioFalls Filter

Durable; molded polyethylene for maximum strength; reversible waterfall lip; removable upper rock tray; includes filter media net (media sold separately), hardware, and two filter mats; two 2" bulkhead ports; and 2 x 2" bulkhead ports.

Dimensions	Volume	Max. Flow	Spillway
24.5" L x 29.5" W x 20" H	2500 gal	5000gph	21.5"





## Atlantic Fastfalls

*Includes 1.5" bulkhead, liner attachment flange, splash reduction foam, and top grate.*

Model	Dimensions	Width	Max. Flow
SP1400	18"W x 11"D x 9"H	14"	2000gph
Oasis SP1600	16.5"L x 9.5"W x 7.25"H	16"	3000gph



## ULTRA VIOLET CLARIFIERS

An Ultra Violet Clarifier destroys algae, bacteria, viruses, and some fish parasites by exposing pond water to ultra violet light. It must be used together with a biofilter for guaranteed water clarity. **A UVC will not eliminate blanket weed or filamentous algae (string algae).**

### Algreen ClearFlo UVC

Model	Goldfish Load	Koi Load	Inlet/Outlet	Watts	Flow
13W	500 gal	250 gal	¾" to 1½"	13w	1000gph



### OASE Vitronic UVC

Model	Goldfish Load	Koi Load	Inlet/Outlet	Watts	Flow
9W	1250 gal	625 gal	¾" to 1½"	9w	500gph
18W	2640 gal	1320 gal	1" to 1½"	18w	925gph
36W	3300 gal	2200 gal	1" to 1½"	36w	1585gph



The IonGen™ system is simple to install, safe for fish and plants, and eliminates string algae. The probe can be installed directly into the pond's plumbing or into a skimmer. Complete with electronic control panel, transformer, flow chamber, probe, fittings, test kits and manual. Results can be expected within 4-6 weeks.



## Aquascape IonGen G2

Model	Volume	Inlet/Outlet	Flow Rate
IonGen™ G2	up to 25000gal	1" - 2"	any



## PONDLESS & DECORATIVE WATER FEATURES

Pondless water features provide home-owners with unique and creative ways to decorate their outdoor living space; whether it's a balcony or small back yard. Pondless simply means recirculating a waterfall or stream without the presence of a pond or fish.

### Aquascape AquaBasin™



*Black high-density polyethylene; large access corner panel; flat deck design; drainage slots; structural deck cylinders; internal plumbing support.*

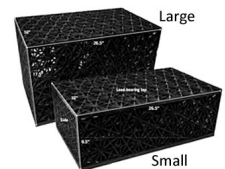
Model	Description	Max. Weight	Pump
Deco	22" diameter, 14.25" deep, 15gal	100lbs	up to 1500gph
30	30" diameter, 10" deep, 27 gal	500lbs	up to 2000gph
45	44.5" diameter, 16" deep, 98 gal	1500lbs	up to 4000gph



### Aquascape Aquablox™ Water Storage Module

*A lightweight water matrix structure that maximizes water storage capacity in reservoirs. Holds 7.4 gallons per cubic foot.*

Model	Dimensions	Volume	Max. Weight
Small	26.5"L x 16"W x 9.5"H	17 gal	5472lb/sq.ft.
Large	26.5"L x 16"W x 17.5"H	32 gal	5472lb/sq.ft.



### Aquascape Pondless® Waterfall Vault

*Fits a wide range of pumps; expandable height; for use with Aquablox®; simple to install; made from durable molded polyethylene; extension available.*

Model	Dimensions	Pump Size
Pondless Vault	23L" x 25.5H" x 17W"	up to 12500gph

**\*Extension available - \$113.99**



### Aquascape Backyard Waterfall Landscape Fountain Kit

*Kit includes waterfall spillway; Aquabasin 45; 7.5' x 7.5' rubber liner; 1.5" x 15' PVC pipe; Aquasurge 2000 pump; low suction intake attachment; and installation and welcome kits.*

Spillway	Pump Size
23"	2000gph



### Aquascape DIY Backyard Waterfall Kit

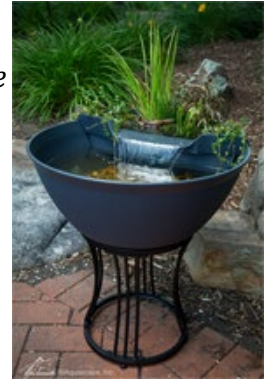
*Kit includes waterfall spillway; Aquablox (small x 2); pump vault; 10' x 12' rubber liner; underlay (105sq.ft.); 1.5" x 25' PVC pipe; Ecowave 2000 pump; and Automatic Dosing System.*

Spillway	Pump Size
23"	2000gph



## Aquascape AquaGarden Mini Pond Kit

Kit includes a durable injection-molded container; the pump; waterfall light; and decorative gravel.



Colour	Weight	Dimensions
Mocha	19 lbs	24"D x 14"H
Steel Gray	19 lbs	24"D x 14"H

## Aquascape AquaGarden Stand

8.8 lbs; designed to elevate the Mini Pond Kit; Measures 13.25"D x 16"H; durable powder coated iron construction.

## Atlantic Oasis Fountain Basin

Black polyethylene; durable; easy access chambers; recessed plumbing channels; one piece.

Model	Dimensions	Capacity	Max. Weight	Pump
Economy	24" x 24" x 10"	20 gal	200lb	750gph



Atlantic  
Discover the Difference



## Atlantic Oasis Pump Vault

Black polyethylene; heavy duty; easy access chambers; durable; recessed plumbing channels; one piece.

Model	Dimensions	Flow Rate	Fittings
PV1700	17"W x 12"D x 22.5"H	3900gph	1½" & 2"





## POND LIGHTING

Busy lifestyles often make it difficult to enjoy ponds during daylight. Add new dimension to your water feature or pond by bringing it to life at night with low wattage LED lighting that can be used in or out of the water.

### LED Garden and Pond Lighting

*Use in or out of the water; 12 volt; 15ft power cable plus quick connect plug; 40,000 hour bulb life; natural warm color (3000K).*

Model	Description
Garden & Pond 1W LED Spotlight	Equivalent to 10W halogen; features single natural warm white LED bulb; (transformer sold separately)
Garden & Pond 1W LED Waterfall and Uplight	Equivalent to 10W halogen; features single natural warm white LED bulb; (transformer sold separately)
Garden & Pond 3W LED Spotlight	Equivalent to 20W halogen; features three single natural warm white LED bulbs; (transformer sold separately)
Garden & Pond LED Spotlight Kit	Kit includes: 3 pre-wired 1 Watt LED lights; 6W transformer; automatic photocell with integrated timer
LED Fountain Accent Light	Equivalent to 10W halogen; includes transformer
LED Fountain Accent Light	Equivalent to 10W halogen; NO transformer



### Aquascape Color-Changing LED Lights

*Low-profile, compact design ideal for small spaces; high-output color changing diodes provide a wide array of color options; optical lens; includes warm white setting.*

Model	Description
2-Watt LED Color-Changing Waterfall and Uplight	Requires color-changing lighting control hub and 6W transformer (sold separately)
4.5-Watt LED Color-Changing Spotlight	Requires color-changing lighting control hub and 6W transformer (sold separately)
LED Color-Changing Fountain Light	Requires color-changing lighting control hub and 6W transformer (sold separately)
LED Color-Changing Fountain Light Kit	Includes remote control and transformer
Color-Changing Lighting Control Hub	Turns lights on and off; includes remote control; 150-Watt capacity; requires a 6W transformer



## Aquascape Path and Area LED Landscape Lights


Brass construction; 3-Watt LED bulb; heavy duty stake.

Model
3w LED Hat Top Landscape Light
3w LED Dome Top Landscape Light



## Aquascape Lighting Accessories

Simple plug-in style; transformers; photocell; splitters

Model	Description
6W Manual	Manual 12v quick-connect plug in transformer
20W Manual	Manual 12v quick-connect plug in transformer
60W Manual	Manual 12v quick-connect plug in transformer
Photocell with Digital Timer 	Automatically turns on at dusk and off at dawn; 3ft cord; built-in memory setting; programmable
3-Way Splitter	Simple connect for three lights to one transformer
6-Way Splitter	Simple connect for six lights to one transformer
25' Extension Cable	Quick connect for lighting and IonGen



## POND & LAKE MANAGEMENT

The way in which lakes and natural bottom ponds are managed depends upon their use. Tackling water quality issues means utilizing a four-pronged approach: adequate aeration, controlling algae and weeds, reducing sludge and adding beneficial bacteria.

### AERATION

Air Pump Kit	Diffuser	Weighted Airline	CFM	PSI	HP
Thomas 617 Kit	7"	50ft x 3/8in	1.16	5	1/7
Thomas 2680 Kit	2 x 7"	50 or 100ft x 3/8in	4.4	30	1/3



### FLOATING FOUNTAINS

Fountain Kit	Nozzles	Electric Cord	HP
Olympus Floating Fountain	Aphrodite	50ft	1/3
	Artemis	100ft	3/4
	Athena	150ft	1
	Aurora	200ft	1.5
	Bounty		3
	Poseidon		



### WINDMILL

Windmill Kit	Size	Diffuser	Weighted Airline
Koenders Windmill Kit	16ft tower	7"	50 or 100ft x 3/8in



### ALGAE AND WEED CONTROL - dye, weed razors and cutters

Product	Size
True Blue (liquid/powder) - environmentally friendly natural blue water dye. It helps block out sunlight to reduce growth of weeds and algae in ponds and golf courses. One packet covers a pond 50ft x 100ft.	1 packet 6 packets 1gal
Weed Roller - aquatic weed, algae, sludge reduction	24in



### SLUDGE REDUCTION PELLETS

Product	Size
Control the organic material in your pond or around your boat dock or beach area. Sludge Reduction Pellets are broadcast over the surface and fall to the bottom of the pond. They will eat and decompose the sludge resulting in cleaner ponds. Reduces sludge that feeds weeds and algae. Use over the whole pond regularly.	5lb 10lb 25lb 50lb



## BENEFICIAL BACTERIA (ORB-3)

Product	Size
Orb-3 is a special blend of good bacteria for Canadian climates. The bacteria work to speed up and decompose sludge. Other bacteria work to break down particles that are in the water column. This will clean the water, remove nutrients and raise the oxygen levels. Water soluble packets.	1.5lb 5lb 10lb 25lb





## PLANT DESCRIPTIONS

**O**ur greenhouses offer a wide range of Canadian grown perennial and annual aquatic plants. Southwestern Ontario is classified Winter Hardiness Zone 6a (-5°F to -10°F). Zone classification is an important factor when purchasing water plants.

There are four general planting depths in a pond:

**Shallow marginal** – means 2 to 3 inches of water over the top of the pot

**Medium** – means 10 to 12 inches of water over the top of the pot

**Submerged** – means the bottom of the pond (no deeper than 30-36 inches)

**Deep** – means the bottom of the pond (no deeper than 36 inches)



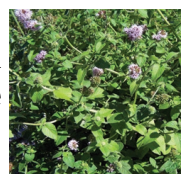
**P** denotes plants are **Perennial (winter hardy)**

**A** denotes plants are strictly **Annual (tropical)**

The following plant descriptions are arranged **alphabetically** by common name. Botanical names are in *(italics)*.

### **P** Aquatic Mint (*Mentha aquatica*)

Shallow marginal. Creeping plant used to cover edges. Round leaves are hairy, and often take on a maroon tinge. Foliage emits a mint scent when crushed. Lavender flowers in late summer. Can grow 18" tall in full sun or part shade. Perennial.





**P** ▶ **Arrowhead (*Sagittaria latifolia*)**

Shallow marginal. Leaves are arrow-shaped and protrude above water. 1" white flowers during summer. Can grow 18"-32" tall in full sun or partial shade. Perennial.



**P** ▶ **Bog Bean (*Menyanthes trifoliata*)**

Shallow marginal. Thick spongy roots tend to creep out of the pot and grow across the water. Olive-green oval shaped leaves. Can grow 12" tall in sun or partial shade. Long flower stalks contain short-lived white flowers from pink buds. May take two years to establish. Perennial.



**P** ▶ **Brooklime (*Veronica beccabunga*)**

Shallow marginal. Low creeping olive-green ground cover. Abundant blue flowers all summer. Groom regularly to keep neat. Can grow 6"-9" tall in sun or partial shade. Perennial.



**A** ▶ **Canna (*Canna sp*)**

Shallow marginal. Sword-like stems can reach up to 70" in height, though usually grow to 55". Stunning flowers in red, yellow and orange. Grow in full sun. Excellent indoor plant in winter. Annual.



**P** ▶ **Cattail (*Typha sp*)**

Deep. Slender green leaves with brown pokers. Common variety can grow 72" tall in sun or part shade. Mini variety can grow 36" tall in sun or part shade. Vigorous grower. Perennial.



**P** ▶ **Duck Weed (*Lemna minor*)**

Floater. Provides rapid surface cover. Each tiny plant has its own root system. Fish readily eat it, and frogs love to hide beneath it. Grows best in full sun to part shade. Perennial.



**P** ▶ **Elodea (*Elodea canadensis*)**

Submerged. Small bright green plant with tiny leaves and multiple stems. Very hardy, vigorous grower that prefers shade. Beneficial plant for water quality. Plant one bunch per 4ft<sup>2</sup>. Perennial.



**P** ▶ **Floating Heart (*Nymphoides peltata*)**

Medium. 3" round green and maroon variegated leaves that trail water and send out runners. Bright yellow five-petaled flowers from late spring through fall. Grows in full sun or part shade. Perennial.



**P** ▶ **Flowering Rush (*Butomus umbellatus*)**

Shallow marginal. Long dark-green and narrow pointed leaves with reddish white flowers during late spring and early summer. Can grow 36" tall in full sun or part shade. Perennial.





**P Forget-Me-Not (*Myosotis scorpioides*)**

Shallow marginal. Dense plant which creeps in its pot. Sky-blue yellow-centered flowers during spring and summer. Can grow 20" tall in sun or part shade. Perennial.



**P Frogbit (*Hydrocharis morsus-ranae*)**

Floater. Buoyant plant that resembles a tiny water lily. Olive-green leaves are oval. Spreads via runners across the water. Tiny white flowers in summer. Perennial.



**P Hornwort (*Ceratophyllum demersum*)**

Submerged. Green, wiry, fern-like plant. Stems thicken in fall, break apart and sink to the bottom for winter. Floats freely, or may be sunk using a stone. Thrives in shade. One bunch per 4ft<sup>2</sup>. Perennial.



**P Horsetail (*Equisetum hyemale*)**

Shallow marginal. Common variety forms clumps of slender, jointed, reed-like green stems that grow up to 48" tall in full sun or part shade. The dwarf variety grows to 8" tall. Perennial.



**P Iris (*Iris versicolor*)**

Shallow marginal. Dark green slender leaves with purple flowers in early to mid-summer. Can grow 32" tall in sun or part shade. Perennial.



**P Iris (*Iris pseudoacorus*)**

Medium. Dark green slender leaves with yellow 4" flowers early summer. May flower again in September. Can grow 60" high in sun or partial shade. Perennial.



**A Japanese Umbrella Palm (*Cyperus longus*)**

Shallow marginal. Green lance-shaped leaves that radiate from tops of stems. Brown flower seed heads. Can grow 48" tall in sun or partial shade. Excellent indoor plant in winter. Annual.



**P Lizard's Tail (*Saururus cernuus*)**

Shallow marginal. Bright green foliage with fragrant, graceful tail of white flowers in mid-summer. Can grow up to 24" tall in full sun or full shade. Will flower in the shade. Perennial.



**P Lotus (*Nelumbo*)**

Deep. Large round green leaves up to 30" across. Large blooms are spectacular and fragrant and last four days. Requires full sun for good blooming, and a large pond. Fertilize for bloom/ foliage enhancement. Range of colours; white, yellow, pink, and changeable. Perennial.



**P ▶ Manna Grass (*Glyceria maxima variegata*)**

Shallow marginal. Green leaves are variegated with yellow/white stripes. Insignificant flowers. Loses variegation when flowering and during summer. Grows vigorously to 24" tall in part sun. Prefers shade. Perennial.



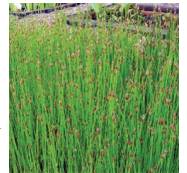
**P ▶ Marsh Marigold (*Caltha palustris*)**

Shallow marginal. Prolific bright yellow 2" flowers in mid spring; one of the first aquatic plants to flower. Can grow 12"-18" tall in sun or shade; will thrive in shade. Often goes dormant in summer if left in the sun. Perennial.



**P ▶ Needle Rush (*Eleocharis montevidensis*)**

Shallow marginal. A low, densely growing plant with tiny brown cup-shaped flowers on narrow quill-like leaves. Can grow to a height of 18" in sun or partial shade. Perennial.



**P ▶ Hardy Pampas Grass (*Saccharum ravennae*)**

Shallow marginal. Clump forming grass with one inch thick stems. Foliage is grey-green and 3/4" wide. Flowers are light brown, turning silver. Blooms late August or September. Can grow 40"-60" tall in full sun. Perennial.



**A ▶ Papyrus (King Tut Little Giant) (*Cyperus haspan*)**

Shallow marginal. Green stems with green feathery tops that turn to a wheat-colour in summer. Can grow to 24" tall in full sun or partial shade. Excellent indoor plant in winter. Annual.



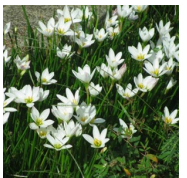
**A ▶ Parrot Feather (Dwarf Red Stem) (*Myriophyllum spp.*)**

Shallow marginal or floater. Pale green feather-like and compact foliage with brilliant red stems. Can grow to 10" tall in full sun or partial shade. Annual.



**A ▶ Rain Lily (*Zephyranthes candida*)**

Shallow marginal. Clump forming plant that grows from a bulb. Summer-blooming, especially following a big rain storm. Can grow to 8"-10" tall in full sun. Store bulbs from season to season. Annual.



**P ▶ Pickerel Rush (*Pontederia cordata*)**

Medium. Shiny green lance-shaped foliage, with purple blooms from summer through fall. Can grow 36" tall in full sun or part shade. Perennial.



**P ▶ Ribbon Grass (*Phalaris arundinacea*)**

Shallow marginal. Variegated green and cream (more cream than green) foliage. Can grow 32"- 40" tall in full sun or part shade. Blooms June - August. Perennial.



**P** **Sagittaria (*Sagittaria lancifolia*)**

Shallow marginal. Dark green spear-shaped foliage. White flowers with yellow centers. Can grow 20" tall in full sun or part shade. Perennial.



**A** **Salvinia (*Salvinia natans*)**

Floater. Also known water fern. Resembles a sponge-like, ruffled, hairy fern that floats freely, and spreads prolifically. Forms dense mats during hot weather, and may need thinning out late summer. Annual.



**P** **Spearwort (*Ranunculus flammula*)**

Shallow marginal. Bright 1"-2" flowers held above narrow leaves on long stems. Can grow 28" tall in sun or part shade. Perennial.



**P** **Sweet Flag (*Acorus calamus*)**

Shallow marginal. Sword-shaped leaves are entirely green, emit a sweet fragrance, and are crinkled on one side. Flowers mid-summer; brown and cone-shaped. Can grow 24"-50" tall in sun or part shade. Perennial.



**P** **Sweet Flag Variegated (*Acorus calamus variegatus*)**

Shallow marginal. Sword-shaped leaves are green with variegated cream stripes. Leaves emit a sweet fragrance. Can grow 24"-36" tall in sun or part shade. Perennial.



**A** **Sweet Flag (Dwarf) (*Acorus gramineus*)**

Shallow marginal. Sword-shaped leaves grow in fan-shape and are variegated with cream stripes. Can grow 10"-14" tall in sun or part shade. Winter indoors. Annual.



**A** **Taro (*Colocasia esculenta*)**

Shallow marginal. Arrow-shaped leaves resemble "elephant ears". Red-stem taro has green leaves and red stems; black magic taro has burgundy leaves and stems, imperial taro has variegated green/ burgundy leaves and green stems. Grows 24"-36" tall in part to full shade. Annual.



**P** **Water Bamboo (Dwarf) (*Dulichium arundinaceum*)**

Shallow marginal. Not in the bamboo family, although it resembles bamboo. Can grow 18"-24" tall in sun or partial shade. Tiny insignificant flowers in summer. Perennial.



**P** **Water Celery (*Oenanthe javanica*)**

Shallow marginal. Bright green foliage resembles that of a tomato plant. White flower heads appear in early summer to late fall. Can grow 24" tall in sun or partial shade. Perennial.





**A ▶ Water Hyacinth (*Eichhornia crassipes*)**

Floater. Dark green bulbous leaves with purple/blue flowers during spring and summer. Flowers often, but blooms only last a day. Long root systems. Reproduces rapidly. Break off small plantlets. Grows in shade, but with few blooms. Annual.



**A ▶ Water Hyacinth (Dwarf) (*Eichhornia crassipes*)**

Floater. Description as above, but miniature bulbs and blooms. Annual.



**A ▶ Water Lettuce (*Pistia stratiotes*)**

Floater. Bright-green plant resembling a lettuce or cabbage. Feathery long roots. Definitely prefers shade, will yellow in the sun. Reproduces rapidly. Break small plantlets from the main plant. Annual.



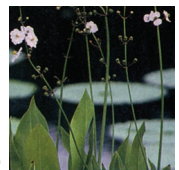
**P ▶ Water Lily (Hardy) (*Nymphaea*)**

Deep. Lightly scented star or cup-shaped blooms rest on the water, and last 3-4 days. They require full sun to bloom. Available in white, yellow, pink, red, and peach. Perennial.



**P ▶ Water Plantain (*Alisma plantago-aquatica*)**

Shallow marginal. Oval-shaped green leaves, with tiny three-petalled pale-pink flowers on long stalks during summer. Can grow 24"-36" tall in sun or part shade. Trim spent blooms. Perennial.



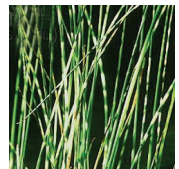
**P ▶ Wood Rush (*Luzula sylvatica*)**

Shallow marginal. Long flowing green leaves. Stems produce clumps of brown seed heads. Insignificant flowers. Can grow 36" tall in sun or partial shade. Perennial.



**P ▶ Zebra Rush (*Scirpus zebrinus*)**

Shallow marginal. Striking horizontal cream bands on round green stems. Can grow 36"-60" tall in sun or partial shade. Will lose variegation if green stems are not removed. Perennial.



***We carry other annual and perennial plant varieties available in small quantities only.***

## HARDY WATER LILIES

Hardy water lilies are true **perennials**. As long as their **rhizomes** do not freeze over winter, they will survive dormancy in the pond. They over-winter best at a depth of 2ft or more. If the pond is too shallow, they can be successfully over-wintered indoors in a cool, dark, frost-free place.



Typically, hardy lilies are reliable bloomers with cup or star-shaped flowers that float on the water. Lily blooms usually appear by late spring, opening by mid-morning and closing by mid to late afternoon. They come in a variety of shades including white, pink, yellow, red, and salmon/peach. Petals may be stellate (star-like) or cup-shaped, and vary in number according to the variety.

Hardy water lilies require 8-10 hours full sun in order to bloom, however, a few varieties will bloom with less than five. They require 12" of water over their crowns - they may be deeper, but should not be shallower.

It is important to take note of a water lily's potential to spread:


















**small: 3ft-4ft in diameter**  
**medium: 5ft-7ft in diameter**  
**large: 8ft or more in diameter**



Hardy water lilies must be **fertilized each year** at the start of spring with slow releasing fertilizer.

The table below describes our **most popular** hardy water lily varieties. They are available in (2gal) pots. Please enquire about our many other varieties.

Photo	Name	Description	Comments
	Pink Sensation	Smooth, rich pink. 20 petals. Cup-shaped 5"-6" blooms rest on water. 10" green leaves open purplish.	4ft spread. Blooms stay open until late afternoon.
	Pink Opal	Coral pink. 26 petals. Cup-shaped 3"-4" blooms held high above the water. 9" green leaves open bronzy.	3ft spread.
	Hollandia	Frosty pink. 35-35 petals. 6"-7" stellate double petaled flowers. 10"-11" green leaves.	5ft-6ft spread.
	Charles de Meurville	Dark-crimson red with pink outer petals. 22 petals. Stellate 6"-7" blooms rest on water. 8" leaves.	5ft-6ft spread.
	Attraction	Deep garnet red; some flecking. 26 petals. Stellate 6"-7" blooms rest on water. 10"-12" leaves open bronzy.	4ft-5ft spread. Blooms with as little as 3hrs sun.
	Black Princess	Dark red to almost black. Stellate 6" blooms rest on water. 7"-8" green leaves.	4ft to 5ft spread.

	Charlene Strawn	Rich yellow with lighter outer petals. 27 petals. Stellate 6"-8" blooms held high above water. 9" mottled leaves.	3ft-5ft spread. Most fragrant hardy lily.
	Chromatella	Creamy yellow. 22 petals. Cup-shaped 4"-5" blooms rest on water. 6" leaves blotched with burgundy.	3ft spread.
	Colonel AJ Welch	Lemon yellow. Stellate 5"-6" blooms. 8"-9" speckled leaves.	4ft-5ft spread. Abundant foliage.
	Marliacea Albida	White. 23 petals. Cup-shaped 5"-6" blooms rest on water. 9" leaves open slightly bronzed.	3ft-4ft spread. Abundant bloomer.
	Odorata	White; outer petals pinkish. 24 petals. Stellate 4" blooms rest on water. 6"-7" leaves.	5ft-6ft spread.
	Virginalis	Pure white. 20-22 petals. Stellate 5" blooms. Dark green foliage with purple cast.	3ft-4ft.
	Comanche	Yellow-apricot-gold-orange-red changeable. 22 petals. Cup-shaped 5" blooms rest on water. 11" green leaves.	5ft-6ft spread. Showiest of the changeables.
	Georgia Peach	Rich peach. 4"-6" stellate blooms are held high above the water. 6"-7" green and purple leaves.	4ft-5ft spread.
	Colorado	Salmon-apricot. Prolific bloomer. Stellate blooms held high above water. 11" leaves.	6ft-7ft spread.

### **PLANTING HARDY WATER LILIES**

Hardy water lilies are usually sold potted, and vary in age from two to three years. Containerizing them keeps their invasive roots restrained. For maximum growth and blooming, transplant lilies into a 15in tub at the start of their second season in a pond.

Mature hardy water lilies can produce up to two or three crowns every few years. Divide them regularly between May and August. Start new crowns in 2gal pots.



To plant a hardy lily, you will need a tub, fertilizer, aquatic soil mix, and a spade.

1. Fill the tub with an inch of soil and put the fertilizer sticks on top (prevents leeching into the water).
2. Continue to fill the tub to about the half-way point.
3. The rhizomes of most hardy lilies grow sideways, so position the rhizome at the edge of the tub, with the growing tip (crown) towards the center.



4. Backfill with soil, being careful not to get any on the lily's crown (where the stems meet the roots). Shake the tub to settle the soil and lily.
5. Spread about an inch of pea gravel over the top to hold everything in place, and to prevent the soil from clouding the water. The crown should still be visible.







It will take 3-4 weeks to see new growth. It is completely normal for some of the outer leaves to turn yellow – simply remove them.

## LOTUSES

Lotuses are relatives of water lilies, and revered for their spectacularly large blooms and musky fragrance. The large round leaves may reach 24-36 inches in diameter, and may lie on the water or stand tall on long stems. Leafy growth doesn't appear until late spring, and blooms not until mid to late summer. Lotuses are **perennial**, as long as their **tubers** do not freeze.



All lotuses are day bloomers. Flowers open for three consecutive days early in the morning and close by mid to late afternoon. Large buds form on long stems, and open to reveal heavily fragrant 8 - 10 inch flowers. Although sun-loving, lotus will bloom in partial shade. A good blooming season requires temperatures of more than 23°C (75°F) for 10 to 12 weeks. Of special interest is the unusual center seed-pod, which when dried, is often featured in flower arrangements.

Photo	Name	Description	Comments
	Alba Grandiflora	White flowers; green center. 22 petals. Fragrant. 12"-18" leaves. 8"-9" flowers. Grows 4ft-5ft tall.	Medium - large sized pond.
	Charles Thomas	Lavender-pink flowers; yellow center. 21 petals. Fragrant. 14"-21" leaves. 6"-8" flowers. Grows 2ft-3ft tall.	Medium sized pond.
	Chewan Basu	Deep pink margins and veins mark the ivory petals. Fragrant. 14"-17" leaves. 5"-7" flowers. Grows 2ft-3ft tall.	Small-medium sized pond.
	Mrs Perry D Slocum	Deep pink, changes to pink-yellow, and then cream with dabs of pink. 86 petals. Fragrant. 18"-24" leaves. 9"-12" flowers. Grows 4ft-5ft tall.	Large sized pond.



Due to their vigorous growth and blooming, lotuses must be **fertilized** each year at the start of summer with slow release fertilizer.

### PLANTING LOTUSES

Varieties sold as a "**bare-root**" must be potted in a 24"-30" round tub to keep their invasive roots restrained. Since a large tub can be difficult to manage, many ponders opt to plant a lotus in a container independent of the pond. A suitable container is water-tight and deep enough to allow 3"-5" of water over the soil. The tuber is very fragile, and requires special care when transporting and planting. It should be planted during early June. In most cases, a lotus will not flower until well established in its second year.

To plant a lotus, you will need a **round tub**, fertilizer, aquatic soil mix, and a spade.

1. Fill tub with an inch of soil. Lay the fertilizer sticks in (prevents leeching into the water).
2. Fill the tub with soil mix to within 4" of the top of the tub.
3. Lay the lotus **tuber** flat at the edge of the tub, with the growing tip pointing towards the middle, and the leaf standing up. Do not bury the tuber! Cover the tuber with a couple of half bricks, and stake the leaf if necessary.



4. Do not attempt to divide the tuber. Do not cover the leaf with soil.
5. Spread about an inch of pea gravel over the top to hold everything in place, and to prevent the soil from clouding the water. Most of the tuber should still be visible.
6. Submerge the tub in the pond so it is about 6" below the surface. You may need to use bricks to elevate the tub to the correct height.

## NUMBER OF PLANTS

To prevent overstocking the pond with plants, use the following table as a guide:

PLANT GROUP	SURFACE AREA IN SQ. FT.						
	15	25	40	60	90	120	150
Submerged	1	2	3	4	6	9	10
Floating	2	3	5	8	10	12	18
Marginal	4	8	10	12	14	16	18
Water Lilies	1	1	2	3	4	5	6

It is worth noting, that at no time should the surface of the pond be covered more than 70% by plants. Too much coverage lessens the amount of air exchange and traps poisonous carbon dioxide and other gases in the water.

## PLANTING, RE-POTTING AND DIVIDING

Plant, re-pot and divide aquatic plants from spring through fall. Plastic garden pots are ideal planting containers. The ideal planting medium is our Canadian Aquatic Soil. This mix contains heavy topsoil that not only settles in the pond quickly, but gives stability to taller, bulky plants.

Dividing marginal plants is not difficult – in almost all cases, you can simply remove the plant from its pot and divide it into two or three pieces with a sharp serrated knife. Each piece needs an equally good amount of root system and top growth.

### PLANTING AND DIVIDING

**FREE** During the season bring your water lilies to us for **free dividing**.

There is a **service charge for repotting and planting** water lilies, lotus and other aquatic marginal plants.



## FERTILIZING WATER PLANTS

All aquatic plants will benefit from being fertilized. Water lilies and lotuses in particular are heavy feeders, and require a lot of fertilizer each year in order to grow and bloom to their full potential.

To fertilize established plants, simply bury a Spike™ 2"-3" deep into the soil, and about 3"-4" away from the plant crown. Cover soil over any fertilizer hole. No other fertilizer is necessary until the following season.

Type	Description
CrystalClear® Thrive™	Use 2 tablets every 3 weeks during growing season. <b>10% nitrogen, 14% phosphoric acid, 8% potassium</b> 30 Tabs 60 Tabs
Organics Fertilizer Spikes	Use 2 spikes per gallon once per year. <b>4% nitrogen, 4% phosphoric acid, 4% potassium</b> Available in packs of 4 spikes, 12 spikes and 50 spikes



## AQUATIC SOIL

**O**ur aquatic soil is a blend of heavy top soil with screened clay. It contains no peat moss, sand, compost or fertilizer. The clay content is about 50%. We have it made locally.



## FLOATING ISLANDS

**F**loating islands are a great way to grow annual and perennial moisture-loving aquatic and terrestrial plants in your pond. Not only do they provide shade, cover and a safe-haven for fish, but they help control algae. **They are a great option for keeping koi and plants together!**



Floating islands perform the total filtration job - mechanical, bacterial and photosynthetic. They allow plant roots to grow in the water, and foliage to trail on the surface. As a result, the plants help remove nutrients, nitrogen and phosphates from the water.

Aquascape Floating Plant Island  
16" Sundial  
Centerpiece Raft



**Centerpiece Raft**  
48" x 27" x 2"





## A WORD ABOUT ALGAE

There are numerous kinds of algae that form in a pond. They can be divided into two groups – suspended (tiny single-celled organisms responsible for green water), and filamentous (stringy strands such as blanket-weed and silkweed).

**SUSPENDED** algae are usually most prevalent in a pond during spring when the nutrient level is high, plants are still small, and the water is warming up. An algae bloom (green water) generally lasts until the submerged plants have proliferated, and the surface plants have multiplied enough to shade the pond (about 70% coverage). Plants use nutrients as fertilizer, and once plants are well established, the nutrient level is lowered and the green water disappears. Whatever you do, **resist the temptation to drain the pond**. Brand new water is only a temporary fix - it is very high in minerals and will quickly turn green. Installing an **Ultra Violet Clarifier (UVC)** will remove green water.



**FILAMENTOUS** algae are usually found in otherwise clear pond water. Blanket-weed tends to form large floating, and partly submerged mats. It can be easily removed from the pond with a net or stiff brush. In sunlight, filamentous algae produce a lot of oxygen. The oxygen is trapped in little bubbles between the tangles of algae. This type of algae reproduces by not only dropping spores to the bottom of the pond, but by single filaments touching each other. The installation of an **IonGen** will remove string algae. The clumps of dead algae must be removed from the pond to prevent pollution and oxygen depletion. A biological filter should be installed together with an IonGen. If available, add extra aeration to the pond water.

Many water treatments are available to control algae.

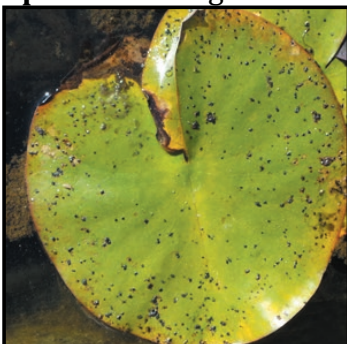
## PLANT PESTS

Water plants are more vulnerable to pests than to disease. Pests are common on all plants, and in the surrounding garden it is quite common to reach for the chemical sprays. However, water plant pests must be treated in the most natural way possible to avoid water contamination, and a detrimental impact on fish and other pond life.

In most cases, pests can be forcibly sprayed from foliage where they are readily eaten by pond fish. Some other forms of control include removing leaves, removing plants, or submerging plants to drown the pests.

The most common pests are water lily **aphids**, and **leaf-mining midges**.

**Aphids:** During hot and dry spells in the summer, the leaves, stems and flowers of particular aquatics may become infested with aphids (resembling poppy seeds). Large attacks often result in deformed flowers, damaged buds and leaves, and occasionally in the death of a plant.



A non-toxic, solution that kills aphids, and is safe for ponds requires the mixing of one cup of vegetable oil together with 1TB of Dawn dish detergent. This is a concentrate. It must be diluted before use. When you need to make up some spray, mix 25ml of the concentrate with two cups of water. Fill into a spray bottle and spray aphids in the late afternoon. Rinse off in the morning.

**False Leaf-Mining Midge:** Occasionally in the early evening, swarms of tiny gnat-like insects may be seen flying around the surface of the pond. It is very likely that these are midges laying eggs on the water.

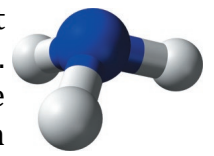
The false leaf-mining midge is quite a common pest of water lilies. Tiny larvae eat meandering channels through the surface of floating lily leaves. These trails turn brown and rot through the leaves, resulting in unsightly, tattered foliage. Light infestations can be reduced by spraying jets of water onto the leaves. This knocks the midges into the water for fish to eat. Another method often used involves hand picking the larvae from the leaves, or removing the affected leaves altogether.



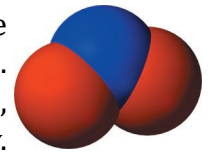
**W**ater is the most important element in a pond, and its quality is vital to the living creatures that depend on it. Pond water must carry oxygen to fish, be able to remove carbon dioxide, and break down toxic waste. Excess solids accumulate in a pond and create sediment deficient in oxygen. This sediment releases toxic pollutants into the water, causes noxious odors, and algae. Low oxygen levels are detrimental to fish health, and the stress may reduce their growth and make them more susceptible to disease. Chlorine, chloramines, heavy metals, pH, ammonia, nitrites, and phosphates also contribute to poor water quality.

The measure of water alkalinity or acidity is called **pH**. A pH reading of 7.0 (neutral) indicates a perfectly balanced pond. A pH reading between 6.0 (acidic) and 9.0 (alkaline) is acceptable for both plants and fish. A pH reading above 9.0 is not harmful in itself, however, if you have a high ammonia reading combined with a high pH reading, the ammonia is much more toxic.

**Ammonia** is the toxic waste excreted into the pond by fish, birds, and other pond life. It is also the result of decaying plant material and the decomposition of uneaten fish food. The natural way to control ammonia is to use a biofilter. The ammonia level needs to be maintained at 0 ppm. If levels are consistently above 0.5 ppm, you need to decrease fish stocking density, reduce fish feeding, and increase filtration.



Even a low level of **nitrite** can cause stress to fish, leading to disease or death. Nitrite affects the ability of the blood to carry oxygen throughout the body, leading to suffocation. Aim for 0 ppm. Anything above 0.15 ppm is stressful to fish. To correct high nitrite levels, increase water changes and filtration, decrease feeding, and decrease fish stocking density.











**Phosphates** are produced not only by fish and plants, but also by dying algae, decaying plants, and fish waste. External sources include: leaves, twigs, dead insects and even pollutants in the air itself. Phosphate readings are not detrimental to pond life. Phosphates become an issue because they trigger algae blooms in pond water.

Test kits are available to determine the levels of certain harmful chemicals in your pond. They generally require you to add specific testing liquids to pond water samples, and to compare the results with colours on a chart.

## POND WATER TREATMENTS

Treatments are available to treat ammonia, nitrite, chlorine, sludge, algae, odour, discoloration, phosphates, cloudy, murky and dirty water.










Product	Description & Price	
<b>Master Liquid Test Kit</b> 	Complete kit for testing the pH, ammonia, nitrite, and phosphate levels in pond water. The kit contains six bottles of liquid testing solution, instruction book, colour cards, and four test tubes.	
	Ammonia Test - 75 tests pH Test - 160 tests	Nitrite Test - 160 tests
<b>Nature's Blue &amp; Twilight Pond Dye</b> 	Maintains either a blue tint, or blackish-blue tint that is ideal for shading the pond and reducing algae, and protecting your pond from predators.	
	True Blue - 1gal treats 1 acre (4-6ft. deep) Twilight - 1gal treats 1 acre (4-6ft. deep)	
<b>Quick Fix Pond Gummy</b> 	An all-in-one quick and easy treatment solution for ammonia, nitrite, and phosphate while helping to control organic waste and debris.	
	Pond Gummy treats 3000gal	
<b>Patio Pond Maintenance Tabs</b> 	Beneficial bacteria optimize water quality in container water gardens. Safe for fish, plants and animals.	
	36 Tabs (1 tab treats 100gal)	
<b>Rock and Fountain Cleaner</b> 	Quickly eliminates debris from waterfalls, fountains or streams. Easy to use spray. Safe for fish, plants and animals.	
	32oz bottle treats up to 300sq.ft.	
<b>Barley Extract</b> 	Barley Extract was fermented under ideal conditions capturing the powerful all-natural barley extract, allowing it to work immediately out of the bottle, with no mess.	
	16oz - 1000gal 4mnths 32oz - 2000gal 4mnths	64oz - 4000gal 4mnths 1gal - 8000gal 4 mnths
<b>Bio-Clarifier</b> 	Naturally clears water, removes odors and breaks down suspended debris and decaying leaves. The result is a cleaner pond, healthier fish, improved dissolved oxygen levels and reduced ammonia levels.	
	12pkts treats 12000gal	24pkts treats 24000gal
<b>Clarity Max</b> 	Breaks down organic material that creates problems in and around waterfalls, rocks, stream beds, plant pots, pumps and filtration systems. Reduces sludge in the pond and filtration devices. Contains activated barley.	
	1lb treats 8000gal	2.5lb treats 20000gal




<p>D-Solv</p> 	<p>Removes pond owners' worst pond problems. Cleans in seconds of application to remove debris and add oxygen. Use on waterfalls, plant pots and streams, and in minutes your rocks will look brand new.</p>
<p>2lb treats 800sqft   10lb treats 4000sqft</p>	
<p>Muck Off</p> 	<p>Tablets are designed to sink to the pond bottom to quickly reduce muck and sludge caused from dead algae, leaves and twigs. Natural bacteria and enzymes remove excess nutrients and reduce sediment.</p>
<p>24 tab, 1000gal 4mnth   96 tab, 4000gal 4mnth 48 tab, 2000gal 4mnth</p>	
<p>Nature's Choice Barley Straw Pellets</p> 	<p>Utilizes barley degradation technology to help manage string algae in ponds. When placed in an area of steady water flow, Nature's Choice™ will slowly degrade and emit a natural chemical that cleans and polishes pond water naturally. Includes mesh bag.</p>
<p>2lb treats 2000gal   5lb treats 5000gal</p>	
<p>OneFix</p> 	<p>Utilizes natural bacteria to digest suspended dead organics to help keep the pond balanced and the water crystal clear. Specifically designed to start working the second it hits the water. Use when water temperatures are above 50°F.</p>
<p>32oz treats 1500gal   64oz treats 3000gal</p>	
<p>Pond Tint Blue &amp; Nite</p> 	<p>Non-toxic pond dye designed to help keep water sparkling clean and cool. Provides UV protection, so water naturally stays clearer than full-sun pond water. Perfect for ponds in the hot summer months. Available in two colors; blue and nite (dark blue).</p>
<p>16oz blue 16000gal   16oz nite 16000gal</p>	
<p>Pro-Fix</p> 	<p>Designed to clear pond water in ponds, fountains, bubblers and streams. Contains a 9% solution of active product that is double that of competing brands.</p>
<p>16oz treats 9600gal   1gal treats 76800gal 32oz treats 19200gal</p>	
<p>RapiClear</p> 	<p>Clears cloudy, muddied pond water quickly (within 3 hours) depending on the size of the pond. Suspended particles in water flocculate and fall to the bottom of the pond where they can be filtered out.</p>
<p>16oz treats 8000gal   1gal treats 64000gal 32oz treats 16000gal</p>	
<p>Sparkle</p> 	<p>A fountain cleaner that is a revolutionary product designed specifically to keep fountains, bubblers and disappearing waterfall features clean and clear all year long. Helps prevent stains, sludge, mineral deposits and organic contaminants from forming in basins.</p>
<p>8oz treats 80gal</p>	
<p>Spring &amp; Fall Prep</p> 	<p>Cold water natural bacteria accelerate the decomposition of leaves, twigs, muck and other sediment during the fall and winter months, while replenishing winter bacteria loss during the spring.</p>
<p>12pkts 2000gal 6wks   24pkts 4000gal 6wks</p>	






Vanish		Will immediately remove chlorine present in city water.	
		8oz treats 24000 gal	
Vanish PLUS		Removes chlorine, chloramines and heavy metals present in city water. Will also add a slime coat protectant to the water to help heal fish wounds and abrasions while protecting them in times of stress.	
		16oz treats 3200gal	32oz treats 6400gal
Fritz Complete		All-in-one water conditioner. Removes chlorine and chloramine; detoxifies ammonia, nitrite and nitrate; does not affect pH; safe for all plants and aquatic life.	
		16oz treats 4800gal	32oz treats 9600gal 1gal treats 38400gal
Fritz ACCR		Instantly removes ammonia, chlorine and chloramine. Concentrated dry formula that is non-toxic to fish, invertebrates, aquatic plants, humans and pets. Won't disrupt biological filters or dissolved oxygen levels in pond water.	
		1.25lb treats 4700gal	4lb treats 15,040gal
Interpet Pond Balance		Removes string algae and slime on rocks. Water will go milky for a few days following treatment. Use once every ten days for the first month, and then once a month thereafter.	
		Treats 1800gal Treats 3600gal	Treats 10800gal Treats 67250gal
MicrobeLift Autumn/Winter Prep		Accelerates the decomposition of leaves, sediment and other organic matter during the fall and winter months. Will also jump start your pond to a healthier environment in the spring.	
		1qt	1gal
Dry Ammonia Remover		Removes and detoxifies ammonia, chlorine and chloramines; treatment holds for 72 hours; is completely water soluble; won't disrupt biological filters; can be combined with antibiotics and anesthetics. 1oz will treat 235 gals of water with 1ppm total ammonia.	
		1lb treats 3760gal	5lb treats 18800gal
Bird Bath Clear		Prevents organic and inorganic contaminants from forming (i.e. crusty white scale deposits, iron, copper and hard water stains).	
		4oz does 17 treatments	
PL		Creates a cleaner environment for the pond; reduces ammonia and nitrogen levels; dissolves away organic sludge; seeds and maintains biological filters; significantly reduces noxious odors caused by dead algae and fish waste; breaks down dead algae; improves dissolved oxygen levels; and reduces cloudy water.	
		1 quart treats 1000gal	1 gal treats 5000gal



PBL		Keeps pond clean and clear; reduces ammonia and nitrogen levels; seeds and maintains biological filters; reduces build-up of bird droppings, fish feed, and dead leaves; reduces noxious odors; and improves dissolved oxygen levels.	
		32oz treats 5000gal	1gal treats 20000gal

Nualgi		Nualgi is an all-natural product that increases diatom levels in pond water. One ml of Nualgi is applied to 1,000 gallons of water once a week.	
		60ml treats 60,000gal 125ml treats 100,000gal	250ml treats 250,000gal

# GOLDFISH

Goldfish are a member of the carp family (*Carassius auratus*) and originated in China. They are the hardiest of pond fish and come in hundreds of varieties around the world including comets, fantails, black moors, shubunkins and sarassas. For most people, a pond is incomplete without featuring fish. Fish form part of the pond scenery and are actually beneficial within the pond environment. They use little oxygen, school nicely, fertilize plants, feed on algae, and control mosquito larvae and other insect pests.

## Goldfish facts:

- Goldfish have teeth in their throats that help them crush their food.
- Goldfish don't have stomachs - feed them easily digested food.
- Goldfish can tell different faces apart and are able to distinguish between different shapes, colors and sounds.
- Goldfish have a memory span of at least three months.
- Goldfish can see more colours than humans.
- In a newly planted pond, wait a few days before adding fish. Plants alter the pH in water, and fish don't like sudden changes.
- Treat all fish in the pond if you suspect illness. Salt is the only medication available at this time. For serious illness or disease, consult your vet.
- Newly purchased fish must be acclimatized in the plastic bag before being released into the pond. Float the bag in the pond (out of direct sunlight) for about 30 minutes, slowly mixing your pond water with the water in the bag.
- Don't over-feed fish. Give them no more than they can eat in about two minutes.
- Don't overstock, as this will result in a lack of oxygen (fish gulping at the surface in hot weather), poor water quality, and high pollution from their waste.



The recommended number of fish in a pond depends on the amount of oxygen in the water (this is linked to water surface area in sq.ft.) and the amount of filtration.



**Maximum load: 1 inch of fish per 10 gallons of pond water.** If a pond is aerated by a fountain, waterfall or air pump, or you have increased filtration, you can increase the number of fish.

We sell a carefully selected range of pond fish as follows:

Variety	Sizes	
Red Comets		4"-5"
Sarassa (red and white) Comets	3"-4"	4"-5"
Shubunkins	2"-3"	4"-5"



**\*\*Specialty fantails (Black Moors, Orandas, Ranchu, Calicos, Ryukin, etc.) are sometimes available. Please enquire as to their availability and pricing.**

# KOI

Koi, like goldfish, are also members of the Cyprinidae family, but are not the same genus or species. They originated in China, but were first bred in Japan. Koi are the largest of pond fish.

Koi come in over 200 varieties. They are hearty feeders at all levels of the pond. They should only be fed as much as they can consume within a five-minute period. Koi are renowned for eating snails and fish fry, destroying plants, upsetting pots, and churning sludge at the bottom of the pond.

Although koi are rather expensive compared to goldfish, they are increasingly popular with ponders. If you do decide to keep Koi in a pond, you will need a depth of 3ft or more, a strong pump, and a biological filter system to dispose of their considerable waste. Plants should be kept to a minimum.

Koi facts:

- The normal lifespan of Koi is between 25-35 years.
- Koi don't have stomachs - feed them with easily digested 2-3 times a day.
- The value of Koi is in their blood lines, size, pattern and colour.
- Given the right conditions, Koi can grow from 2-6 inches a year.
- **Typical colours:** **Kohaku** (white, with red appearing in varying patterns), **Sanke** (red and sumi (black) markings on a white base), **Showa** (black with red and white markings), **Goshiki** (white, red, black, light blue, and dark blue), **Asagi** (red on cheeks and fins; blue dorsal fin net pattern), **Ogon** (solid colour; Yamabuki is yellow, Platinum is white and the Orenji is orange), **Ai Goromo** (white base with a red Kohaku pattern that has blue edged scales on top of the red pattern, and blue netting), and **Kujaku** (solid white base, accented by a black net pattern along with patterns of red/orange/yellow).




We sell carefully selected koi varieties as follows:

Variety	Type	Sizes
Asian	Standard Koi	3"-5"
	Butterfly Koi	3"-5"
Japanese	Standard Koi	4"-5"



Our standard Japanese koi come directly from Maruhiro & Otsuka Koi Farms in Japan. Some standard varieties include: Kohaku, Sanke, Showa, Shiro Utsuri, Kujaku, Shusui, Benigoi, Ki and Hi Utsuri, Goromo, Goshiki, Asagi, Karashi, Ogon, and Ginrin varieties.



Conservatively, a stocking density of **one koi per 250gal** of well circulated and well filtered water is recommended.

## JAPANESE TAMASABA

Japanese Tamasaba goldfish are a rare ornamental from Japan bred by Niigata breeders. They are hardy and can grow up to 10 inches in length. Their bodies are round with arched backs and long, flowing tail fins. They have solid red and white skin patterns.

Tamasabas make great companions for their much bigger distant Koi relatives. They may not be big, but they are highly confident, and will compete with the bigger koi for food. Their care is the same as for any active single tail goldfish. Good clean water with frequent water changes, excellent filtration, high quality food, and frequent monitoring of the water conditions.

Our Tamasaba stock comes directly from Kanenko Koi Farm in Japan.

**CALL FOR PRICING.**

Variety	Size
Tamasaba	4"



## COMMON DISEASES OF GOLDFISH AND KOI:

The most common goldfish and koi ailments result from over-stocking, over-feeding, lack of filtration, and poor water quality.



Ailment	Description
<b>Anchor Worms</b>	Tiny, white thread-like worms that hang from red spots on the body of fish
<b>Black Spot</b>	Small, black, sooty specks on the skin
<b>Cloudy Eye</b>	White or grey film over the eyes
<b>Dropsy</b>	Bloated; bulging eyes; protruding scales
<b>Ick (white spot)</b>	Thousands of tiny white spots all over fins, tail and body of fish
<b>Fin Rot</b>	Fuzzy patches or white edges on fins, mouth or fin decay, frayed or jagged fins, red sores
<b>Fish Lice</b>	Flat, disk-shaped parasites on skin and fins
<b>Flukes</b>	Small red spots on body, fish scrape on objects, gills hang partially open and pump fast
<b>Fungus</b>	Cottony growth on fins, mouth, tail or body; fish sit on the pond bottom
<b>Parasites</b>	Irritation on skin causes fish to scrape against objects in the pond
<b>Red Streaks</b>	Red bloody streaks or blotches on fins or body of fish
<b>Ulcers</b>	Open red sores on body of fish




**Medicines should only be used as a last resort. It's very important to first test pond water before administering medicine. Sometimes, fish develop disease symptoms because the water quality is poor (high ammonia and nitrite). Perform a 25% water change. Finally, medicate the fish.**

## FISH MEDICINES AND TREATMENTS

Fish medications previously available in retail stores were never approved by Health Canada. These products were not evaluated for quality, efficacy or animal and human safety. Drugs that have been evaluated and approved by Health Canada possess a Drug Identification Number. Due to regulations imposed in December 2019 by the Veterinary Drugs Directorate of Health Canada, fish medicines may only be purchased from a Vet specialising in pet fish.



The only treatment currently available for fish is Pond Salt.

Product	Description & Price
Crystal Clear ParaSalt 	Formulated to increase koi and goldfish electrolytic intake. Electrolytes are critical in building and maintaining a healthy slime coat, in wound repair and in times of heavy stress. Salt is excellent for bacterial infections, fin rot and fungus.
	10lb   20lb

# FISH FOOD

## AQUASCAPE

<b>Koi Krunchies (2" elongated)</b>	1.1lb jar
<b>Wheatgerm 3mm</b>	500g bag 1kg bag



## CRYSTALCLEAR® FLOATING PELLETS

<b>Staple Summer 3mm</b> <i>(no large pellet available)</i>	0.75L jar 1L jar 2L jar 4L jar 8.8lb bucket 17.6lb bucket 40lb box
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## HIKARI

<b>Wheatgerm Mini &amp; Medium</b>	1L jar 2L jar
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## JPD (JAPANESE PET DESIGN)

<b>Akafuji 3mm, 4mm, 7mm</b> <i>(Color Booster)</i>	1kg 2kg 5kg
<b>Fujzakura 3mm, 4mm &amp; 7mm</b> <i>(Health Diet)</i>	1kg 2kg 5kg
<b>Shogun 3mm, 4mm &amp; 7mm</b> <i>(Wheatgerm)</i>	1kg 2kg 5kg
<b>Shori 3mm, 4mm &amp; 7mm</b> <i>(High Growth)</i>	1kg 2kg 5kg
<b>Yamato 4mm &amp; 7mm</b> <i>(Colour &amp; Whitener)</i> <i>(no small pellet available)</i>	1kg 2kg 5kg



## MICROBE LIFT FLOATING PELLETS

<b>Legacy Mini 2mm</b> <i>(Staple)</i>	0.75L jar 1L jar 2L jar 4L jar
<b>Legacy Variety 5mm-7mm</b> <i>(Summer)</i>	0.75L jar 1L jar 2L jar 4L jar





<b>Legacy Cold Weather 5mm</b> (Wheatgerm)	1L jar 2L jar
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<b>SERA POND FLAKES</b>	
<b>Staple</b>	1L 3.8L 10L



## FISH NETS

**Aquascape Professional Fish Net** – 22" x 22" x 36" handle (extends to 69")

**Aquascape Heavy Duty Pond Net** – 36" handle (extends to 69")

**Aquascape Heavy Duty Pond Skimmer Net** – 36" handle (extends to 63")

**Aquascape Pond Net** – 12" x 7" x 32" handle (extends to 63")

**Aquascape Pond Skimmer Net** – 12" x 7" x 32" handle (extends to 63")

**Aquascape Pond Explorer Net** – 10" x 7" with 12" twisted handle

**OASE Fish Net** – 14.9" diameter (extends to 5.2')

**Pond Shark** – 13" x 4.5" x 41" (extends to 60")

**Pond Shark Pro** – 13" x 4.5" x 59" (extends to 90")



## SNAILS

Snails are scavengers that consume algae and clean up plant debris in the pond. There are a number of varieties that are suitable for the pond: \*\*Trapdoor, Melanther, Ramshorn and Great Pond Snail.



Snails are rapid multipliers: Melanther, Ramshorn and Great Pond snails leave trails of eggs on plants; and Trapdoor snails bear live young. Melanther snails are cone-shaped and grow to about 1" in length; Ramshorn snails are flat and curled around (like a ram's horn) and grow to a diameter of 1"; Trapdoor snails are large and round and grow to golf ball size.

**\*\* Please note that by law (CFIA), it is illegal to sell Trapdoor snails in Canada.\*\***

Variety
Melanther, Ramshorn and Great Pond Snails



## PREDATORS

The **raccoon** is a nocturnal mammal. It is unusual because of its "opposable thumb". It is an omnivore with a reputation for being clever and mischievous. The raccoon will destroy a pond as it removes fish, snails, frogs and plants. Keeping raccoons from your pond can prove challenging. Some fish saving tips include: do not have shallow ledges around the pond (raccoons do not like to swim and shallow ledges give them access to the pond); cover the pond with netting at night; and build fish caves at the bottom of the pond.



The **great blue heron** has blue-grey wings and back, and a white head with a black cap and a long black plume. It has a long neck, streaked with white, rust-brown, and black, and a short tail. The beak is long and yellow and tapers to a point. Legs are long, and greenish-yellow. The blue heron is a wading bird. It will only access shallow ponds. It is a stealthy hunter going after fish and frogs. Keeping the blue heron out of the pond can be difficult. Some fish saving tips include: make the pond deep (herons are waders and will not wade into deep water); criss-cross the pond with clear fishing line; cover the pond with netting; use an alligator decoy; and build fish caves at the bottom of the pond.

The **mink** (*Mustela vison*) is a member of the weasel family. It can be found in streams, lakes, and ponds. A mink has a thick, soft lustrous coat that varies from dark brown to black; oily guard hairs giving fur a glossy appearance; pale underside; white patch on lower lip; short legs; long neck and body; partially webbed feet; pointed face and small ears. A mink is a solitary, nocturnal animal that usually hunts at dawn and dusk. It is primarily carnivorous eating small mammals, rodents, frogs, fish, crayfish, birds, and eggs. A mink will willingly swim under water, and can dive to depths of 15ft to 18ft. Detecting and deterring mink is very difficult. Some solutions include: dyeing the water black; covering the pond with wire mesh; and finally trapping. Trapping may not be what you want to do or would prefer to do but it WILL work. Bait a raccoon trap with fish and place it right beside the pond...and wait!



## SEASONAL CARE AND MAINTENANCE

**SPRING** signals the start of the pond season, and there are a number of important jobs to do.



- **Fish** are susceptible to bacterial infection, disease and stress as the water warms up. Check for closed fins, huddling, awkward swimming, or body sores. Treat fish with ParaSalt as soon as you notice a change in their behaviour. Perform a 25% water change.
- Until the water temperature reaches 12°C (55°F), you cannot use **fish medicines**. ParaSalt is the only treatment that works in cold water.
- **Feed** goldfish and koi with **wheatgerm** whilst the water warms up to 12°C (55°F), then change to summer food.
- Filamentous and suspended **algae** are able to grow in much cooler water than aquatic plants. Use barley in April to help minimize string algae and blanket-weed problems, and use Microbe Lift or CrystalClear® OneFix™ to help clear green water.
- If there is more than ½” of **sludge** at the bottom of the pond, remove as much of it as possible. Half day or full day hires available.
- Perform a partial **(25%) water change**. Treat fresh water with CrystalClear® Vanish PLUS™ to neutralize chlorine and chloramines.
- **Inspect the pond** – check the water level, patch small liner tears and punctures, ensure that hoses are not kinked or ruptured, and examine the edging stones for cracking or movement.
- **Check all electrical** wiring, and test each piece of electrical equipment. Pay particular attention to electrical cords that may be frayed or cracked.
- **Start the pump and biological filter** around mid-April. To activate and kick-start filter media use CrystalClear® Spring & Fall Prep.
- Some **hardy marginals** may have filled their containers so fully that they need dividing and repotting.
- Raise **hardy water lilies** to a warmer sunnier position in the pond and fertilize them. If you need a hand dividing your lilies, just drop them in to us and we'll do it for you.
- **Tropical water plants** can be safely put in the pond once the danger of frost has passed. Prior to 31st May, you do so at your own risk.



**SUMMER** is typically the season to relax and enjoy the pond. There are only a few jobs, and they involve monitoring and maintaining the pond.



- Keep pond water topped up. **Evaporation** is natural in a pond; even more-so if a waterfall or fountain is present. It accounts for up to an inch of water loss per week.
- Monitor **water chemistry and quality**. Hot weather, a high number of fish, and decaying plants can quickly alter the pond's pH, phosphate, ammonia and nitrite levels. Make a partial water change if necessary. No more than 25% at one time.
- Remove **filamentous algae** by hand, or use Interpet Pond Balance.
- **Prune** vigorously growing marginal plants, but resist pruning back submerged plants until fall. The submerged weeds provide shelter for baby fish, spawning fish, snails and tadpoles.



- Continue to **feed fish**, and monitor their behaviour. Check for spawning fish, new fry, or any indications of disease.
- **Stormy weather** (thunder and lightning) is problematic to a pond. Oxygen levels are quickly depleted. Add extra oxygen to the pond during these times.

**FALL** signals the end of the planting season in a pond. It is perhaps the most important season for pond care and maintenance. Neglect can result in serious pollution problems over winter, and fish viruses in spring.



- Lay protective **netting** over the pond to keep leaves out and allow for sunlight and air to enter.
- Pay attention to **netting** quality, durability, warranty, UV resistance, sizes available, and the price.
- Place **beach balls** on the water and stretch the netting over them. This will stop leaves collecting in the center of the net and weighing it down.
- Netting can remain on the pond until spring thaw to **protect fish from predators**.
- Remove as much **sludge** as possible from the bottom of the pond.
- Partial **(25%) water changes** can be performed up until the end of October.
- **Prune** and thin out submerged plants. Potted varieties should be cut back to water level. Hornwort can be easily pulled out.
- **Prune** back rushes, grasses, flags, and other shallow marginals.
- Cut back **cattails** leaving 12 inch stems above the water. Their hollow stems feed oxygen to their roots over winter.
- **Frogbit** and **duckweed** sink to the bottom of the pond to over-winter.
- Remove old blooms and browned leaves from **water lilies**. Hardy lilies will over-winter in ponds 18 inches or more deep.
- Following first frost, remove and discard **hyacinths, lettuce** and **salvinia**.
- To over-winter **potted annuals** indoors, remove the plants from the pond prior to first frost. Treat as tender houseplants (good light and warmth). Stand pots in shallow water so they have “wet feet” at all times.
- To over-winter **cannas** indoors, either remove the rhizomes from the soil, wash and store them in slightly damp peat moss in the basement; or place the plants in a sunny room in the house and continue to grow them (they must have “wet feet” at all times).
- When the water temperature drops to 57°F (13°C) start feeding fish **wheatgerm**. Wheatgerm can be fed in water temperatures between 40°F - 57°F (4°C - 13°C).
- If moving **fish indoors**, it should be done prior to the first week of November.
- Switch off the **pump** and discontinue running the **filter** mid-October
- The **pump** may be left in the pond if it is 2ft or more deep. To store the pump indoors, clean it and place it in a bucket of water somewhere it won't freeze.
- Some **gravity assisted biological filters** may be left outdoors during winter. Others must be disconnected from the pump, cleaned, dried and stored indoors.
- A **pressurized filter** is best disconnected from the pump, cleaned, dried and stored indoors.
- An **ultra-violet clarifier** (UVC) must be stored indoors over winter.
- An **IonGen** must be stored indoors over winter.



### Pond Netting

**Loose Netting:** 30% density blocks out 30% of light; constructed of high density polyethylene; the tough lock-stitch design of this knitted material resists rips, tears and fraying; UV resistant; 12' standard width.

Fabric	Hole Size	Width
30% TK Premium Knit	¼" x 1/8"	12ft



**Atlantic Pond & Garden Protector:** Domed design covers taller plants; light weight; easy to remove; black; heavy duty netting; UV treated (not for use over winter).

Hole Size	Width
½" x ½"	7ft x 9ft (15ft x 20ft net)
½" x ½"	9ft x 12ft (20ft x 20ft net)





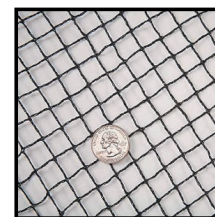
**Ultra Pond Netting:** Pre-packaged, heavy duty; UV treated; includes 12 ground stakes.

Hole Size	Width
½" x ½"	10ft x 15ft



**Aquascape Pro Pond Netting:** Black heavy duty; sold by the ft; UV treated; (stakes sold separately).

Fabric	Hole Size	Width
Bulk Netting	3/8"	10ft
Bulk Netting	3/8"	20ft
Bulk Netting	3/8"	30ft



**Aquascape Pond Netting:** Pre-packaged, heavy duty; UV treated; includes ground stakes.

Hole Size	Width
½" x ½"	7ft x 10ft
½" x ½"	14ft x 20ft
½" x ½"	28ft x 30ft



**U-Shaped Ground Stakes are available.**

### Pond Vacuum Cleaner

**OASE Pondovac 4:** Features a two-chamber system that enables continuous suction. Its 1800W motor allows for robust suction. Maximum suction depth of 7ft. Its ergonomic handle, transport rollers and suction tube receptacle allow for easy portability.



**WINTER** is the dormancy period for a pond. Provided you carried out the fall preparations, there is little to do over the winter.



- The **fish are dormant outdoors** and do not require feeding. Fish that are brought indoors for winter require feeding.
- **Ponds may be covered** with plywood, styrofoam, etc. for short periods. Ensure these materials do not touch the water and only cover 75% of the pond. Prolonged darkness may be fatal to both fish and plants.
- **Do not allow a sheet of ice** to form completely over the pond for longer than a few days. Carbon dioxide will be trapped under the ice, and combined with a lack of air will kill fish. Maintain an air hole using one of the methods listed below.
- **Never use a hammer** to smash thick ice; the shock waves could harm the fish. Instead use an electric drill, ice auger, or hot water.



### Maintaining an Air Hole in the Ice

**DE-ICER:**

**Aquascape 300W Pond De-icer:** 3 year warranty; 300 watts; keeps a small hole in the ice; stainless steel construction prevents corrosion and cracking; integrated thermostat saves electricity; built-in LED light indicates when heater is in use; 22ft power cord.

**AERATION KITS:**

*Aquascape Pond Aeration Kits: 2 outlet and 4 outlet*

*Aquascape Pro Air Aeration Kits: ProAir 20 and ProAir 60*

***Aquascape Pro Air Compressors ONLY: ProAir 20 and ProAir 60***

*OASE AquaOxy 450*

