

The Urban Farmer Store® Guide to Water Features



A water feature is a wonderful addition to almost any landscape. The beauty and sound of water delight and calm the senses. Water features can be as simple as a ceramic pot, an oak barrel cut in half, or be more elaborate constructions with ponds, waterfalls, and fountains. A fountain must have a basin, or reservoir, and a pump to recirculate the water. Ponds require a flexible or preformed liner, a pump to recirculate the water to keep it from stagnating, and in most cases, some form of filtration. All planning and purchasing decisions for your water feature will be based on the volume in gallons and how many fish it will hold.

To calculate the number of gallons you must first find the volume of the pond in cubic feet. There are approximately 7.5 gallons of water in a cubic foot.

Volume of rectangular/square pond

For a rectangular feature, multiply width x length x depth to get cubic feet (feet³).

$$\text{Length} \times \text{Width} \times \text{Depth} = \text{Volume (feet}^3\text{)} \\ \times 7.5 = \text{Gallons}$$

Volume of a round pond

Surface area is radius squared, then multiply π (3.1416) x (radius squared r^2) x depth to get cubic feet. There are 7.5 gallons per cubic foot of water.

$$3.1416 \times (r^2) \times \text{Depth} = \text{Volume (feet}^3\text{)} \\ \times 7.5 = \text{Gallons}$$

Volume of a irregularly shaped pond

For organic pond forms, think of the shape in terms of intersecting squares, rectangles or circles, calculating the volumes of each shape using the formulas above.

How much water can tubing/pipe carry?

- 1/2" (ID)=240 GPH max
- 3/4" (ID)= 480 GPH max
- 1" (ID)= 720 GPH max
- 1 1/4" (ID)=1320 GPH max
- 1 1/2" (ID)=1800 GPH max
- 2" (ID)= 3000 GPH max
- 2 1/2" (ID)=4200 GPH max
- 3" (ID)= 6600 GPH max

Note: Water always seeks its own level.

It takes no pressure for a submerged pump to raise water from the bottom of a pond to the top of the reservoir waterline.



Water lilies need sun (5-6 hours min) and warm water (65-68 °f) to bloom. Lily pads shade the pond's water from the sun's rays, keeping it from overheating and reducing the growth of algae.

A word about Koi

Keeping Koi requires special planning and care. Before you build your first Koi pond, we encourage you join the San Francisco Bay Area Koi Club, attend their excellent events, and learn from the experts how best to get started in this hobby.

A Koi pond needs to be at least 3' deep, have a bottom drain, have good circulation, and extensive filtration. Mention your SFBAC membership for a 10% discount on purchases at any of our locations. For more information visit www.sfbakc.org.

Safety

To eliminate drowning dangers, households with toddlers and puppies should not have open-reservoir ponds. Fountains and waterfalls with enclosed reservoirs can be safely enjoyed by these households.

To reduce the possibility of electrocution, pumps, underwater lights, and transformers should be plugged into a circuit protected with a ground fault circuit interrupter (GFCI). A GFCI shuts off power when it senses moisture or an electrical surge. A wet-location in-use outlet cover is also needed.

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Planning and construction:

These guidelines apply to all ponds, waterfalls, watergardens, or fountains.

Safety: Fountains and waterfalls can be designed with concealed reservoirs that are child safe.

Site Considerations: Carefully choose a site avoiding areas directly under plants or trees so you don't disturb the roots when excavating, which will also keep large quantities of leaves from falling directly into the reservoir.

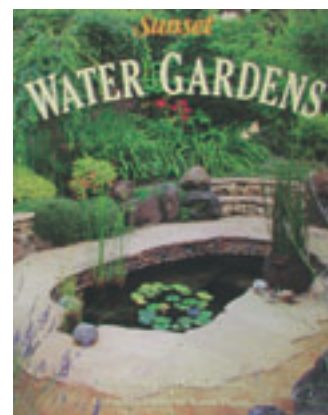
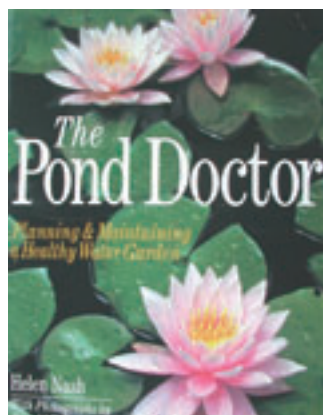
Design Considerations: Plan for a way to hide electrical cords, pipe, and tubing running in and out of the water. This can be accomplished by using stones to cover them as they come up over the edge or by using tank adapters for running through the reservoir wall.

Electrical Requirements: Electricity must be located nearby, but at least 6' away to reduce the risk of accidental electrocution. Most pumps and UVC-equipped filters only have 10', 18' or 20' cords. Allow for at least two GFCI protected plugs. The plugs, if outdoors, need an in-use waterproof cover. If you plan on having underwater lights, have a low-voltage transformer or another GFCI protected outlet available. 12-volt pumps connected to a transformer may be an option in areas without convenient line voltage.

Sunlight and Wind Considerations: Sun and wind play a role in how much maintenance your water feature will require. More than 5 or 6 hours of sunlight will cause algae to bloom, and the wind blows debris and leaves into the pond which can choke the filter. Use edging at least 2" above ground surface around the reservoirs to act as a barrier to windborne debris. Plant dense perennials or evergreen shrubs around low edges to keep wind from blowing debris into raceways or reservoir and provide a built-up rim around the edges. Most water plants, like water lilies, require a minimum of 5 hours of sunlight per day to bloom, so select a level spot with the appropriate amount of sun, realizing that more sun can mean more algae. Wind and sun also help determine how rapidly water will evaporate from your pond, and how often you need to refill it.

Water supply requirements: Plan for a convenient way to fill, drain, and refill your water feature.

Watergardens are ponds with plants. Plants are used to achieve a balance between sunlight and nutrients to control algae, naturally. Algae needs sunlight and nutrients to thrive. By using carefully selected plants, it is possible to create an environment where the plants compete for, and win the war for food and sunlight from the algae, keeping your pond clear. Two universal rules govern the world of watergardens. 1) Cover 50% or more of the pond's surface with floating plants like water lily pads, water lettuce, or other suitable, non-invasive plants, and 2), keep in mind that although a watergarden may maintain clarity for months at a time by itself, it is a dynamic environment, changing all the time. Observe the actions and processes going on in your watergarden. Look for any changes for better or for worse and try to determine what might be causing the changes like a change of seasons (temperature), or too many decaying leaves in the bottom ("brown water" and toxic build-up), or whatever factors may be at work. For more information please consult these books available at the Urban Farmer Store.



Ortho's All About Water Gardening

- Tips for potting, propagating and growing water plants
- Selecting and caring for fish
- Solutions for pests and predators
- Designs and plans to get you started
- The best plants for water gardens

OR4625.....\$11.95

Sunset Garden Pools, Fountains & Waterfalls

- Design ideas
- Installation techniques
- Projects
- Fish & plants
- Shows the latest products and how to use them

SUPOOLS.....\$15.98

The Pond Doctor, by Helen Nash

- Planning & maintaining a healthy water garden
- Identifying Plant Problems
- Curing Fish Diseases
- Good color photos throughout
- How to maintain a water garden, and more

Doctor.....\$19.98

Sunset Water Gardens

- Start to finish design and construction techniques
- Plant selection & fish care
- Historical overview
- 300+ color photos
- All techniques required for maintaining a water garden

SUWATER.....\$23.98

Pond Liner is the first step in building your pond, fountain, and waterfall. Currently, the best material available is EPDM, a rubber product which is watertight, UV resistant, and does not become brittle over time. To determine the size of flexible liner needed, take the maximum length and width of the pool and add the depth twice to each measurement. Provide enough overlap for edging by adding two additional feet to both the length and width. Before installing the liner, it is best to line the hole with 2-3" of sand, landscape fabric, burlap, or even old carpet to prevent any rocks or sharp objects from puncturing the liner once the weight of water is added. As the pond fills, smooth out wrinkles and fold curves and corners. Edge the pond with stone, EdgeKeeper, decking, or plant material.

Calculating dimensions of pond liner required

Measure size after excavation and preparation. For a square or rectangular pond (edge to edge measurements):

Length + 2X depth + 2 feet (for lap over top edge) = length of pond liner

Width + 2X depth + 2 feet (for lap over top edge) = width of pond liner

Dimensions of pond liner required (use length and width from above) Pond liner is sold only in 15 and 20-foot widths, by up to 100-foot lengths.

Length X width = square feet of pond liner required

6BEPLEPDM...40 mil pond liner per square foot.....\$1.00

Site Considerations: A flat or nearly flat site is recommended.

Design Considerations: Fish, sunlight, and plants increase the bioload of your pond. The more

the bioload, the more critical the filtration design. See the filtration (p.8) section for more information. See "Wildlife" (p.10) for ways to address pest problems.



1. Lay out a rope or garden hose with the shape and size of the pond you want. Sprinkle inside line with chalk, flour, or sand.



2. Excavate shape and prepare hole making sure it's level from side to side. Soil can be piled up to create watercourse or falls.



3. Lay pond liner out over excavated shape. Temporarily place rocks to weight down edges.



4. Begin filling slowly, using the water's weight to sink liner in hole—adjust edging weights as it fills.



5. Continue filling and adjusting edging weights as pond fills to the final desired water line.



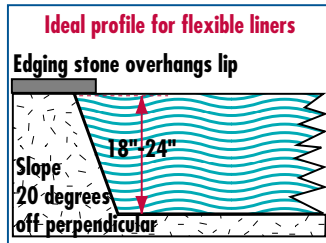
6. Place final edging stones or stake EdgeKeeper pond edging around the perimeter of pond.



Float Switch

Turns pump off when water level drops. For all submersible pumps up to 1/3 HP.

6RS5.....\$65.00



This cross section is the best plan for keeping raccoons out of the pond.



Pond Edge Keeper

A great way to secure pond liner that lets you plant, lay sod, or put gravel right up to the edge of a pond. Comes in 7.5' lengths. Stakes included. Easily bends to make inside or outside curves.

OOPE...Per 7.5' length.....\$43.00



Pond Liner Patch

Self-stick, no primer required to fix small holes or tears.

6belp1.....6"x18" \$14.00



Pond liner primer and seaming tape

Use these products to permanently join two pieces of EDPM pond liner together. Clean surfaces to be joined, apply primer, apply tape, and firmly burnish seam. Allow 24 hours to cure.

6primep...primer (per pint).....\$12.00
6seam1...Seam Tape...(by the foot).....\$1.50

Required on outdoor electrical outlets for pumps, lights, transformers & UV's.



Latch keeps box closed. Cords exit downward while plugged in.

Taymac® in-use wet-location outlet covers come in duplex & quad, GFCI or regular, and horizontal & vertical configurations. Meets national electrical code.

Shown: Duplex GFCI. TA20310.....\$18.75

Ponds, like most water features, require circulation and filtration to keep water from stagnating. Just how much of each is determined by the bioload.

Site Considerations: A flat or nearly flat site is recommended.

Design Considerations: Fish, sunlight, and plants increase the bioload of your pond. The more the bioload, the more critical the filtration design. See filtration (p.9) section for more information. See "Wildlife" (p.10) for ways to ameliorate pest problems by design.

Electrical Connections: Allow for at least one nearby GFCI protected plug for the pump and enough plugs for other accessories like a UV clarifier, a second pump, or low-voltage lighting transformer. Design the electrical circuits so they can be turned on and off conveniently with switches at the house.

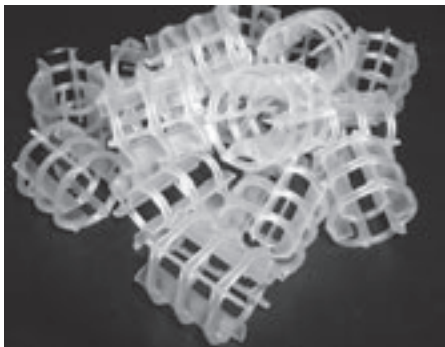
Sun & Wind: Sun and wind play a role in how much maintenance your water feature will require. More than 5 or 6 hours of sunlight will cause algae to bloom, and the wind blows debris and leaves into the pond, which can choke the filter. Use stone edging at least 2" above ground surface around the reservoirs to act as a barrier to windborne debris. Plant dense perennials or evergreen shrubs around low edges to keep wind from blowing debris into raceways or reservoir. Wind and sun also help determine how rapidly water will evaporate from your pond, and how often you need to refill it.

Bioload	Circulation Requirements	Pump Type	Filter Type
No Bioload: (i.e. Fountain Reservoir) no fish or plants	100% Pond Volume every hour	Supreme Mag-Drive with provided prefilter	No filtration needed (use water treatments)
Low Bioload: a few goldfish no plants	100% Pond Volume every hour	Supreme Mag-Drive with provided prefilter	Supreme 1000 or 2000 In-water Filter
Medium Bioload: a few goldfish and a few plants	150% Pond Volume every hour	Solids Handling Pump	Out-of-water pressurized filter
Heavy Bioload: a few Koi and plants	200% Pond Volume every hour	Solids Handling Pump	Out-of-water pressurized filter-Include UV for algae



Diagram showing ideal set-up for small pond. 1-Out-of-water filter, 2-Solids handling pump. Out of water filters are easier to clean and maintain. If you use a pump requiring a prefilter, the prefilter ends up doing all the work and frequently clogs, requiring extra maintenance. The correct pump for this situation is one that does not require a prefilter and comes in flow rates appropriate for the capacity of the out-of-water filter.

Accessories to help keep your pond clean and your water clear without chemicals.



Bio Elements

Computer designed for maximum surface area. Injection molded thermoplastic shapes give beneficial bacteria a place to live in your pond, pump sock, or filter. Use MicrobeLift or Nature Clear to colonize bio elements with beneficial bacteria.
 BIOBALL (each).....20¢
 BIOBALL50 (bag of 50).....\$8.00



Pump Sock

This versatile non-woven mesh bag lined with heavy black filter media is great for holding pumps of all sorts, and for holding bio elements. Closes with drawstring and reduces the amount of debris that gets into the pump. Dark color makes pump disappear underwater.
 6PS10.....\$39.80



Floating Fish Feeding Ring

Uneaten fish food causes cloudy water and clogs filters. This keeps all kinds of floating fish food from ending up in the skimmer. Saves food and money by helping you gauge how much food fish will eat before it sinks to the bottom and is wasted.
 6FISHRING.....\$5.99



Cyprivac

Those pond vacuums that connect to a garden hose just make a mess. This British-made "Cyprivac" works like a manual bilge pump to get the debris and sludge off the bottom and out of the pond. Use the sludge to fertilize your garden,
 6CYPQ102.....\$59.98



Add-on UV Clarifier

Add this UV Clarifier to any existing system. Install them in or out of the water. It's especially useful for addressing algae issues with submersible filters.
 SMPM02910...10watt...1500 gallons.....\$160.00
 SMPM02920...20watt...3000 gallons.....\$199.99



Oase BioSkimmer

Works with Oase Aquamax submersible pumps with up to 1 1/2" inlets. Connecting pump inlet to skimmer draws water and floating debris from surface into basket for easy removal. Adjusts from 24.2" to 29.2" pond depths; cut cylinder for shallower, or elevate on blocks for deeper. Use cobbles to weight.
 OA55650.....\$67.50

Fountains can be as simple as a frog spitting into a bowl on your table top, a container on your deck, or be spectacular surprises in your formal garden. A fountain requires a pump, filter, and fountain head (or nozzle). Each fountain nozzle produces a pattern with a height and diameter dependent on the power of the pump. Follow manufacturers recommendation for pump size and piping for the nozzle you select. See the wide selection of Supreme Mag-Drive Pumps on page 7.

Site Considerations: It is critical for multi-tier and weir-type fountains to be absolutely level for the desired result to be achieved.

Design Considerations: To "fine tune" the ideal pattern height, diameter, and sound of a fountain, use a gate valve. All fountain pumps require an intake prefilter that is maintained regularly.

Electrical Connections: Allow for at least two nearby GFCI protected electrical outlets; one for the pump, and one for the lights, if desired.

Sun & Wind: Fountains are usually placed where they sparkle in the sunshine, but algae can be a problem there. Use chemical algaecides to keep the water clear, only when fish are not present. Many delightful decorative fountain nozzles are not wind-stable. In high-wind zones, select a sturdy "frothy" type fountain nozzle pattern that has a minimal height and a sturdy column of water to keep the water from blowing out of the basin.

Water Supply: Fountains cause significant evaporation and thus fill valves are recommended (see page 6).



1/2" Blossom (above)
1" Frothy (left)

Blossom OA88106.....\$25.90
1" Frothy OA88154.....\$65.90



Solid brass 3-tier

Sturdy, popular, elegant 1/2" pipe thread-requires 250-950 gph pump.
CPFH3.....\$26.50



Frothy (ABS)

Mixes air with water for a wind-stable frothy plume. 1/2" pipe thread-requires 250-700 gph pump.
OA88107.....\$25.99



Oase German-engineered fountain heads

Come in to any store to view hundreds of nozzles in the catalog. A few of our in-stock favorite fountain nozzles are shown. Frothy 1" shown above with 1200 gph pump.



Actual equipment for fountain shown in photo above.

Underwater filters are excellent for fountains and for ponds with manageable levels of debris. These are our most popular and affordable filters for general use. They last for years and replacement pads are available in-stock.



Supreme 190 Fountain/Filter Pump Kit

All-in-one kit with filter, pump, and fountain nozzle. This kit is perfect for small wine-barrel fountains and ponds up to 400 gallons. The 190 GPH mag-drive pump has plenty of lift while using only half the power of a regular pump. Filter unit has replaceable, easy to clean media and the fountain nozzle creates a perfect bell pattern. All for one low price. Makes a great gift.

SMPMK190...Supreme Pondmaster 190.....\$63.00
SM190PAD...Replacement media.....\$5.20



Pump and fountain nozzle not included

**For ponds or fountains from 200-1000 gallons-
no or low bioload & up to a 500 GPH pump**

Ideal for fountain reservoir or small low-debris, low-bioload water features. This is just enough filter to keep the pump from clogging up and clear-up cloudy water. Connect two filters together for pumps between 700 and 950 GPH. If algae becomes a problem, add on the Supreme submersible UV Clarifier. Measures 1' x 1'.

SMPM1000...Supreme Pondmaster 1000.....\$45.00
SM1000WHT...Coarse White Media.....\$6.30
SM1000PAD...Fine Polyester Media, 3 pads.....\$7.00
SM1000CARB...Carbon Filter Pad.....\$5.00



Pump and fountain nozzle not included

**For ponds or fountains from 1000-2000 gallons-
low bioload & up to an 1800 GPH pump**

Ideal for fountain reservoir or small low-debris, low-bioload water features. This is just enough filter to keep the pump from clogging up and clearing up cloudy water. Ideal for 1200 and 1800 GPH Supreme Mag-Drive Pumps. If algae becomes a problem, add on the Supreme submersible UV Clarifier. Measures 1' x 2'.

SMPM2000...Supreme Pondmaster 2000.....\$77.00
For replacement filter media use the same products as for the Supreme Pondmaster 1000, only purchase two units each to accommodate the larger size.

Waterfalls are nature's most dramatic display; they cause the heart to race and take your breath away. Many hillside home sites in the Bay Area make a great place to build a waterfall. Waterfalls require more engineering and planning than a simple pond or fountain, but the result is well worth the effort. To prevent excessive water loss, EDPM pond liner should be used to line the raceways and the face of the walls over which the water falls. Use rocks and plants to hide the liner. Strategically placed underwater lights can make your waterfall a stunning nighttime garden feature.

Very large pipe or tubing is essential.

Water flowing in high volume at low velocity is what makes a waterfall look natural. The best way to achieve this is by using very large diameter pipe or tubing. At the pump outlet, after the diverter control tee, immediately use fittings to increase the size of the pipe or tubing up to the largest recommended diameter for your pump.

Pump GPH	Pipe/Tubing Diameter
2000	= 1 1/2" - 2"
3000	= 2" - 2 1/2"
4000	= 2 1/2" - 3"
5000	= 3" - 4"

Keeping your waterfall topped off is easy when you install an automatic fill valve, also known as a float valve. Bright sun and wind can cause significant daily evaporation leaving your waterline well below where it should be. Waterfalls and fountains can cause water loss and should always have auto-fill valves. Without one, someone needs to top it off regularly with a garden hose.



Copper & Brass Automatic Fill Valve

Adjustable copper float, brass mechanism. 1/2" pipe thread.....FLOAT05.....20.00

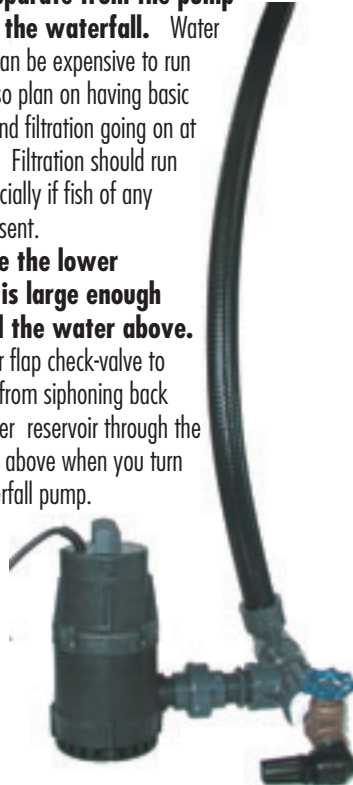
Is it better to run a pump all the time or turn it on and off? Many pumps "designed for continuous use" run best and last longest when they are left on all the time, thus it is important to select an energy efficient pump.

It's a good idea to have a filtration system separate from the pump powering the waterfall.

Waterfall pumps can be expensive to run constantly, so plan on having basic circulation and filtration going on at other times. Filtration should run 24/7, especially if fish of any kind are present.

Make sure the lower reservoir is large enough to hold all the water above.

Use a ball or flap check-valve to keep water from siphoning back into the lower reservoir through the pipe/tubing above when you turn off the waterfall pump.



Simple waterfall set-up. Make sure to include a gate valve to "tune" the flow of your waterfall and a union to connect the pump to the pipe.



Foam Seal, black expanding foam

Ideal for sealing the edges and margins of waterfall and raceways. Foam expands (just like foam insulation) to seal hard to reach areas. Trim with sharp knife when dry, black color makes it disappear! 6BLACK.....\$14.98



The sound of rushing and falling water dampens the sound of auto traffic, airplane noise, and neighbors in urban and suburban areas. Plan for a way to turn off the falls without turning off the filtration in the reservoir. A waterfall reservoir benefits from having a skimmer.

It takes 1200 gph for a shallow "sheet" of water to fall over a 1' wide waterfall or weir. Make sure the pump's "head" delivers the flow you want at the height you need.

Typical waterfall equipment configurations— Some waterfall installations, because of electricity costs and evaporation, run only when they are being enjoyed. Depending on conditions, waterfall reservoirs may need a separate filtration system which runs all the time. Select a filtration system appropriate to your installation from the systems shown on page 8, in addition to equipment necessary for the waterfall. When planning a waterfall, know how high the waterfall will be from the waterline of the reservoir, then using the pump chart, below, select a pump that provides the appropriate amount of water at that height. It takes a minimum of 20 GPM (gallons per minute) for a shallow "sheet" of water over a one foot wide waterfall or weir.

High Volume Waterfall Pumps are used when a large volume of water is needed.

- Designed for continuous use
- High pressure output maintains flow uphill
- 1" or 1 1/4" female pipe thread (NPT) outlet
- High volume output ideal for waterfalls
- Use with Pump Sock
- Always use a union to connect pump to pipe/tube

Model Name	GPH @ 1'	GPH @ 5'	GPH @ 10'	GPH @ 15'	GPH @ 20'	GPH @ 25'	GPH @ 30'	GPH @ 35'	GPH @ 40'	Max Head	List Price	Maker Name
SMWF2000	1750	1550	1250	900	575	—	—	—	—	20'	\$213.75	Supreme
Atlantis 150	2400	1880	1400	1180	740	325	—	—	—	28'	\$99.99	Oase
SMWF4000	4000	3500	3100	2500	2000	1200	550	—	—	25'	\$273.60	Supreme
SMWF5000	5000	4700	4200	3900	3300	3000	2350	1100	250	40'	\$356.25	Supreme

Supreme Submersible Mag-Drive Pumps are designed to be used with underwater filters and for recirculating fountains. They are *not* solids handling pumps and require intake pre-filtration. The power unit is encased in waterproof epoxy which creates a magnetic field; this drives a ceramic magnetic impeller. This makes for an extremely energy-efficient unit, operating at a fraction of the cost for electricity as mechanical-drive pumps. Fish safe, these pumps will operate in fresh or salt water. Use models 250 -2500 in-line – or out of the water— so long as water is gravity-fed through a pipe or tube into the pump's inlet. We also stock replacement impellers and impeller housings for most models to keep your pump running for years. One year manufacturer's warranty. Always in stock!

Model Number	Watts Used	Full GPH Open	2 ft.	4 ft.	6 ft.	8 ft.	10 ft.	12 ft.	Max Head	Outlet-male	Cord Length	List Price
SMPM65	5	65	–	–	–	–	–	–	1.66 ft	1/4"	6 feet	\$19.50
SMPM80	6	75	25	–	–	–	–	–	2 feet	1/4"	6 feet	27.50
SMPM140	9	140	135	20	–	–	–	–	4 feet	1/4"	6 feet	34.75
SMPM190	19	190	160	135	60	–	–	–	7 feet	3/8" NPT	10 feet	52.75
SMPM250	24	250	210	125	35	–	–	–	6 feet	1/2" NPT	18 feet	75.75
SMPM350	35	350	320	260	175	75	–	–	9 feet	1/2" NPT	18 feet	85.75
SMPM500	45	500	410	320	180	85	25	–	10 feet	1/2" NPT	18 feet	95.75
SMPM700	70	700	550	475	400	300	120	–	12 feet	1/2" NPT	18 feet	105.75
SMPM950	93	950	900	800	720	600	400	220	13 feet	3/4" NPT	18 feet	145.75
SMPM1200	110	1200	1150	1125	1050	825	700	525	14 feet	3/4" NPT	18 feet	185.75
SMPM1800	145	1800	1630	1375	1125	950	850	750	19 feet	3/4" NPT	18 feet	225.75
SMPM2400	265	2400	2200	1900	1650	1500	1250	1050	20 feet	1" NPT	18 feet	250.00

To determine the size of pump needed for a project, you should know two things: the overall height you need to pump from the top of the bottom reservoir to the top of the water feature and the desired flow. Take a garden hose and find the volume that seems pleasing to you and then take a 5-gallon bucket and measure how long it takes to fill it. You then can figure how many gallons per hour at what height you need for the desired effect. With the introduction of fish and plants, water clarity may be partially dependent upon how much water is circulated per hour.

Most fountain nozzles and filters have pressure and flow requirements that are specified in *gallons per minute (GPM)* or *gallons per hour (GPH)*. Most pumps are rated in GPH and thus, it may be necessary to convert from GPH to GPM. To do so, simply divide GPH by 60.

Fine-tune it to make the sound and sight of your fountain more appealing. It is often necessary to control a pump's output, especially when the pump is used to power decorative fountain nozzles. A pipe's inside diameter limits the amount of water that can flow through a pipe without excessive friction loss. This means that pipe must be sized according to the pump's flow. It is important to select the correct nozzles, pipe and fittings so pump output flows without more than 30% restriction. Use the table to select the correct diameter of pipe, and fittings based on the capacity of your pump and the requirements of your fountain nozzle or filter.

12 Volt AC Pumps

Low-voltage pumps make sense in places that already have a low-voltage landscape lighting system. They connect to the transformer using standard low-voltage lighting cable just as a lighting fixture does. These are efficient submersible mag-drive pumps suitable for small fountains. Both models come with a 6' cord. Use with GFCI protected outlet only. A plug-in transformer is available for the 170 gph model.

170 gph—12 watts/ 0.23 amp—max head 63"	
FPAWA170.....	\$39.00
FPTRANS20..12VAC/20W Transformer....	44.00
345 gph—30 watts/ 0.4 amp—max head 98"	
FPAWA345.....	59.00

TABLE: FLOW AND PIPE SIZE SIZE IT RIGHT FOR YOUR PUMP

PUMP GPH	PUMP GPM	PIPE DIA	PIPE FLOW
80	1.3	1/2"	0-5 GPM
140	2.3	1/2"	0-5 GPM
250	4.1	1/2"	0-5 GPM
350	5.8	3/4"	6-10 GPM
500	8.3	3/4"	6-10 GPM
700	11.6	1"	10-15 GPM
800	13.3	1"	10-15 GPM
1200	20.0	1 1/4"	15-22 GPM
1800	30.0	1 1/2"	22-30 GPM
2400	40.0	2"	30-45 GPM
3000	50.0	2 1/2"	40-65 GPM
4000	66.6	2 1/2"	40-65 GPM

Gate valves give precise flow control

The metal handle on the standard brass gate valve provides initial service but corrodes after about a year underwater.

2GV05HD	1/2"	\$8.78
2GV07HD	3/4"	\$9.49
2GV10HD	1"	\$13.96

Dark gray schedule 80 PVC Gate Valves last for years underwater.

2GVP805	1/2"	\$7.66
2GVP807	3/4"	\$9.51
2GVP810	1"	\$12.08

Heavy-duty all brass straight valves provide the most precise control and long life underwater

LL75SV	3/4"	\$19.64
LL100SV	1"	\$26.08



Filtration We sell two kinds of filters; *in-water* filters for water features with low-medium bioloads, and *pressurized out-of-water* filters for medium to high bioloads. The in-water filters use Mag-Drive submersible pumps and are shown on page 6 with fountains, while the out-of-water filters use special solids handling pumps so the pond filth can be pumped up to and removed by the filter. The out-of-water filters are easier to clean and maintain and all shown with UV Clarifiers and include a Clear Water Guarantee, when sized properly for your pond. Upgrade to the next larger capacity system and it will cut maintenance frequency in half. Filtration systems should run constantly. These systems provide value well beyond their costs — because they are the best solution to assure clear, algae-free water and easy maintenance.

Pressurized Filters can be used above ground or hidden in-ground. Both filters we sell are Old World engineered — the FiltoClear from Germany and the Bioforce from England, where ponds and fountains grace gardens and courtyards everywhere. We recommend filter models with ultra-violet clarifiers. These remarkable filters, because they are pressurized, can be located at the top or bottom of a waterfall. Both have large foam surface areas to provide increased filtration and good bacterial growth and inlet-outlet hoses accommodate 3/4" to 1 1/2" tubing.



FiltoClear with UVC

NEW!

Pressurized filter with 9w ultra-violet clarifier and exclusive backflush feature. Pull handle to compress foam media and eject filth through dedicated port for easy cleaning. A wide range of flow capacities for all 3 models let you select the most efficient pump for the circulation and bioload needs of your pond. 2 year warranty. 15' cord.




Backflushing is easy!








Ponds up to 800 gal. 330 min-800 max gph flow OAF800.....\$395.	Ponds up to 1600 gal. 400 min-1600 max gph flow OAF1600.....\$469.	Ponds up to 3000 gal. 800 min-3000 max gph flow OAF3000.....\$625.
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The Bioforce is back!

The Bioforce is better than ever because its been re-engineered for less frequent maintenance and more biological action. Comes in 4 capacities with 9w UVC for the 500 & 1000 gallon sizes, and a 20w UVC on the 2000 & 4000 gallon sizes. Replacement filter media and UVC lamps available in-stock. Bioforce models without UV clarifiers can be special ordered for about \$100 less. 4000 gallon unit by special order only. 1 year warranty.

Ponds up to 500 gal. 250 gph max flow CYUVC500.....\$279.98	Ponds up to 1000 gal. 500 gph max flow CYUVC1000.....\$329.98	Ponds up to 2000 gal. 1000 gph max flow CYUVC2000.....\$449.98
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Use submersible solids handling pumps with these pressurized out-of-water filters. The difference between a fountain pump and a solids handling pump is that the solids handling pump can pump debris up to 3/8" in diameter without clogging. These pumps push the fish waste, uneaten fish food, seed pods, sand, silt, and sludge up into the pressurized filter that then removes it. An intake prefilter is not necessary with these pumps. Select a pump with a flow rate close to the recommended filter flow capacity. Extra flow provided by a larger pump can be diverted back into the reservoir to provide needed circulation or "teed off" for use by some other feature like a fountain or waterfall.

Titan 550 & 880 475/739 GPH	Oase Aquamax 1000 GPH	Oase Aquamax 1500 GPH	Oase Atlantis 150 2400 GPH	Supreme Waterfall 4000 GPH
TP500/800.....\$159.98/179.98 Made in England. Voltage.....120V/60Hz Power Consumption.....70W Cord Length.....15 ft. Gallons per hour.....475/739 Max Head.....5'3"/7' Outlet Size.....1/2"-1" Warranty.....1 year	OA55880.....\$270.00 Made in Germany. Voltage.....120V/60Hz Power Consumption.....65W Cord Length.....20 ft. Gallons per hour.....1000 max Max Head.....5 ft. Outlet Size.....3/4"-1 1/2" Warranty.....3 + 2 years	OA55646.....\$360.00 Made in Germany. Voltage.....120V/60Hz Power Consumption.....70W Cord Length.....20 ft. Gallons per hour.....1500 max Max Head.....7 ft. Outlet Size.....3/4"-1 1/2" Warranty.....3 + 2 years	OA88275.....\$599.99 Made in Germany. Voltage.....120V/60Hz Power Consumption.....260W Cord Length.....20 ft. Gallons per hour.....2400 max Max Head.....28 ft. Outlet Size.....1" Warranty.....3 + 2 years	SMWF4000.....\$273.60 Made in USA. Voltage.....120V/60Hz Power Consumption.....670W Cord Length.....16 ft. Gallons per hour.....4000 max Max Head.....31 ft. Outlet Size.....1 1/4" Warranty.....1 year

Tubing and Fittings connect it all together. Unlike white Schedule 40 PVC, dark gray Schedule 80 PVC fittings almost disappear under the water surface and are not degraded by sunlight over time. Schedule 40 pipes and fittings are fine when buried in the rocks and earth behind a waterfall.

Unions—Use a union whenever you may need to connect, disconnect, and reconnect pipe or tubing from a pump, filter, or fitting. Make sure you use one where the tubing connects to the pump; otherwise it is difficult to remove the pump for cleaning and servicing. They make it easy, saving you time and money.

Schedule 80 PVC Slip X Slip Unions

Part #	Size	List
897003	3/8"	\$13.15
897005	1/2"	7.03
897007	3/4"	8.95
897010	1"	9.51
897012	1 1/4"	20.28
897015	1 1/2"	22.96
897020	2"	31.14
897030	3"	57.95
897040	4"	80.15

Schedule 80 PVC Thread X Thread Unions

Part #	Size	List
898003	3/8"	\$14.17
898005	1/2"	8.16
898007	3/4"	11.42
898010	1"	15.20
898012	1 1/4"	29.01
898015	1 1/2"	35.91
898020	2"	55.27
898030	3"	140.19

Tank Adapters—let you put a water-tight port in a plastic, fiberglass, rubber-lined reservoir or container for running tubes and pipes in and out of it. Can also be used for electrical cords with plastic or brass cord seals.

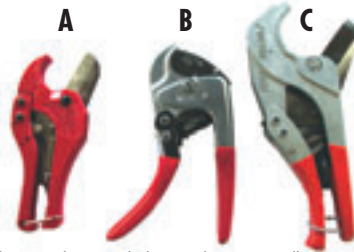
Schedule 80 PVC Slip X Thread Tank Adapters

Part #	Size	List
871005	1/2"	\$18.56
871007	3/4"	21.16
871010	1"	23.51
871012	1 1/4"	28.33
871015	1 1/2"	31.09
871020	2"	46.07
871030	2 1/2"	74.00

Schedule 80 PVC Thread X Thread Tank Adapters

Part #	Size	List
872005	1/2"	\$24.93
872007	3/4"	27.34
872010	1"	29.92
872012	1 1/4"	39.88
872015	1 1/2"	43.47
872020	2"	57.23

PVC pipe & tubing cutters



Get clean, quick cuts with these tools. Fast installation saves time and money.

- A—5PCO Olympia Tool...(cuts up to 1").....\$13.95
- B—5PCBK1 Victor Tool...(cuts up to 1").....\$49.98
- C—5PCBK2 Victor Tool...(cuts up to 2").....\$142.10



PVC glue for flex tubing and pipe

PVC glue is not "glue" at all. It's actually specially formulated solvent that fuses Tiger Flex tubing and Schedules 40 & 80 PVC pipe to fittings. This formula is a little "hotter" so flex tubing holds tight.

- IP2795QP...Quarter Pint.....\$4.00
- IP2795HP...Half Pint.....\$5.65

TigerFlex® Flexible Tubing

Comes in 6 diameters: 3", 2", 1 1/2", 1 1/4", 1" and 3/4". It's made of UV resistant PVC, and it's reinforced with coils so that it will not collapse or kink, even under extreme force. Its flexibility

Schedule 80 PVC Barbed Fittings—

Connect pipe thread to flexible vinyl tubing and flexible tubing to flexible tubing. Not for use with Tiger Flex tubing, which requires glued fittings. These are the most commonly used; other models/sizes available.



A. Barbed Elbows

- 1406005...1/2" id tubing to 1/2" id tubing.....\$1.04
- 1406007...3/4" id tubing to 3/4" id tubing.....\$1.27
- 1406010...1" id tubing to 1" id tubing.....\$1.40
- 1406012...1 1/4" id tubing to 1 1/4" id tubing.....\$1.57
- 1406015...1 1/2" id tubing to 1 1/2" id tubing.....\$1.86
- 1406020...2" id tubing to 2" id tubing.....\$2.60

B. Barbed Female Adapters

- 1435005...1/2" id tubing to 1/2" female pipe thread.....\$2.32
- 1435007...3/4" id tubing to 3/4" female pipe thread.....\$2.52
- 1435010...1" id tubing to 1" female pipe thread.....\$2.80

C. Barbed Male Adapters

- 1436005...1/2" id tubing to 1/2" male pipe thread.....53¢
- 1436007...3/4" id tubing to 3/4" male pipe thread.....63¢
- 1436010...1" id tubing to 1" male pipe thread.....66¢
- 1436012...1 1/4" id tubing to 1 1/4" male pipe thread.....\$1.04
- 1436015...1 1/2" id tubing to 1 1/2" male pipe thread.....\$1.17
- 1436020...2" id tubing to 2" male pipe thread.....\$2.23

makes working in tight spots a snap, and it cuts with PVC pipe cutters or with a saw. The best thing though, is that it's designed to glue into all standard PVC fittings—just like PVC pipe, and lasts just as long, too. Use an elbow fitting for 90 degree turns. Not for use with insert barb fittings. Made in the USA.

- PTPH34.....3/4" Diameter...(per foot).....\$1.30
- PTPH100.....1" Diameter...(per foot).....\$1.50
- PTPH114.....1 1/4" Diameter...(per foot).....\$1.75
- PTPH112.....1 1/2" Diameter...(per foot).....\$2.10
- PTPH200.....2" Diameter...(per foot).....\$2.75
- PTPH300.....3" Diameter...(per foot).....\$7.98



Wildlife Your waterfall will likely attract visitors to your garden. Some, like birds, will be welcome, while others may need to be managed.

Mosquitoes can be a problem in the Bay Area all year because water here never freezes and they use water to multiply. A female mosquito will land on the tranquil surface of any puddle or water feature to lay her eggs. The eggs hatch into larvae and then emerge from the body of water as blood-hungry adults. Use one, all, or any combination of these solutions.

The best way to stop the breeding cycle from happening in your water feature is to create **surface turbulence** by using the splash from a fountain nozzle; mosquitoes will not lay eggs on a turbulent surface. The fountain nozzle can be powered with a small pump that recirculates water 24 hours, 7 days a week.

Fish control mosquitoes naturally by feeding on mosquito larvae.

Another way to interrupt the breeding cycle is to use **Mosquito Dunks**. These dunks contain a bacteria that is fatal only to mosquito larvae—not to humans, birds, pets, or fish.

Heron are a good-news-bad-news story. The good news is that they are no longer an endangered species because of successful San Francisco Bay wetlands restoration over the past couple of decades. The bad news is that these beautiful birds have come back in such great numbers that they now hunt for fish in our backyard ponds and water features, and in so doing can damage rubber pond liners with their sharp claws.

It's against federal law to harm heron in any way and doing so brings large fines. Some pond owners stock their ponds with feeder fish to attract these graceful beauties, while others correctly fear that heron will eat their pet koi.

One way to protect rubber pond liners from being claw punctured is to pour a thin layer of concrete or lay flat smooth stones on the pond's bottom.

To catch fish, heron put their heads under water, and thus feel vulnerable to attack as they feed. A new invention, the **Heron Scarem** is a floating pyramid with mirrored sides that reflect the sun and the heron's own image as it rotates in the water. The reflected images delude the heron into thinking it is not alone, and thus, the theory goes, it will leave the pond without eating your fish.

Raccoons are attracted to the sound and presence of water. They feast on tender bulbs of waterlilies and other aquatic plants and fish.

To discourage raccoons, design and build the pond a minimum of 18-24 inches deep with no more than a 20 degree slope and overhanging edges (see planning and building section). Raccoons, skunks, and most other mammals will not venture into a pond if they cannot touch the bottom. A swimming animal has a much tougher time catching fish than one that can wade along the pond's bottom with its head above water.

Providing a safe spot for fish to hide also helps. Construction of a screened-off "cave" that allows fish access, but not animals, can help eliminate midnight fish slaughters.

The **Fido-Shock Electric Fence** is a sure way to keep raccoons away from your pond. When a raccoon touches it, it receives an uncomfortable but non-lethal shock. The fence consists of a small transformer, insulated stakes, and a single strand of wire surrounding the pond, about 6" to 8" above grade. By placing the charged wire at this height, the raccoons can't crawl under it or over it without receiving a jolt.

The **Scarecrow**, a battery operated infra-red and motion sensor activated water spray, targets any animal, wild or domesticated. Simply connect the device to a garden hose or water supply, set the sensitivity, and place it in the yard or above the area to be protected and it will do the rest. It's great for scaring off deer but only marginally effective for raccoons.



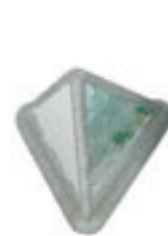
Raccoons love fish and tender water plants and can make a mess of your pond if undeterred.

Mosquito Dunks-Biological Mosquito Control



Kills mosquitoes before they're old enough to bite. While floating, the dunks slowly release biological larvicide at the water surface where mosquito larvae grow. The larvicide gradually settles in the water where it is eaten by the larvae and kills them, and only them. Each dunk kills mosquito larvae for 30-days or more, and will not harm humans, fish, plants, birds, or pets.

Use one per 100 square feet of pond surface, or break into pieces for fractions thereof.
6DUNK...6 pack.....\$13.11



Heron Scarem brilliant reflecting pyramid

Scares away herons, protects valuable fish. Covers 64 square feet of pond surface per pyramid—use several in larger ponds. The floating pyramid shines, sparkles and reflects—making the daylight so extensive that the heron are scared off.

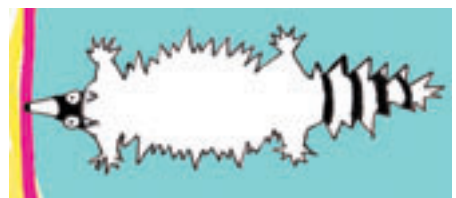
6HERON...each.....\$7.98

Scarecrow motion activated sprinkler



Senses animals the same way security lights detect people with movement and heat. When an animal is seen, a valve opens instantly, releasing a 3-second pulsating spray of water. The combination of sudden noise, movement, and water frightens animals away. Extremely effective for deer & pigeons, not so effective for heron or raccoons. Works best at 50-60 psi water pressure. 30-day money back satisfaction guarantee and a 2-year limited warranty. 9-v battery required.

6SCCR.....\$83.98



Fido Shock Electric Fence

Will enclose and protect up to one mile of perimeter. Includes 100 feet of wire, insulated stakes, and transformer. Turn it on at night manually or automatically with an optional timer and raccoons will stay away from your pond, guaranteed!

FIDOSHOCK.....\$74.98

Underwater Lights make water features come alive at night! Lighting provides safety and spectacular, shimmering sparkle for the crown jewel of your garden! You get these high quality fixtures when you connect these select models to a low-voltage outdoor lighting system. Make sure the transformer is plugged in to a GFCI protected outlet.



Oase Lunaqua 2 Variable Beam Spot (10-40°)
 Engineered and produced in Germany. 20w MR-16 (included). 15-foot connection cable with stainless-steel cord seals. Comes with mounting stake for use in underwater plant pots or edge installations and with mounting bracket for securing to concrete or other sub-surfaces. Includes 5 color-gels in yellow, orange, red, green, and blue. 3-year warranty.
 OA88422.....\$89.90



Lumiere Solid Brass MR-16 Spots
 Engineered and produced in the USA. MR-16 (not included). 15-foot connection cable with brass cord seals. Use partially or fully submerged. 75 watt max.
 LR1409...Compact Accent (above).....\$166.84
 LR1407...Atlantis (brass base/yoke mount)..\$333.50



Focus Brass Par 36 with Aiming Bracket
 Sealed beam PAR 36 25 watt (included). Par 36 lamps are available in very narrow to wide flood beam spreads in 25, 50 & 75 watts. 15-foot connection cable. Solid brass construction. Use underwater only. 75w max.
 FOSL11AB.....\$131.00



Hadco NightLife 10w Spread Light
 A great way to add shimmer to the surface, even in very shallow reservoirs. Not a spot light. 10w T3 Halogen, included (20w max.), 15' connection cable, with clear polycarbonate prismatic lens. Includes intensity reflector for optional use.
 HOUWL1A.....\$65.56



Hadco NightLife Rockguard Flood
 Ideal for large fountains in high-end residential, commercial, and municipal applications. Solid bronze base, fixture, fully adjustable yoke, and rockguard. 15' connection cable. 100w maximum, T3 Halogen lamp, included. A special order item.
 HOUWL1100-N.....\$528.74



Hadco NightLife MR-16 Spot
 It's pre-mounted on heavy concrete base and adjustable knuckle that stays where you put it. 50w max, lamp not included. Includes 15' connection cable. Composite body. Bronze only. Swivels up to 90 degrees for aiming.
 HOUWL516H.....\$88.34

Underwater Lights with plug-in transformers—Just plug in to light up your water feature, if you don't already have a low voltage transformer.



Cal Pump 10w MR-11 EggLight
 Use dry or wet, indoors or out!
 Suitable for garden statuary, fountains, garden pools, ponds, waterfalls, potted plants, and water-gardens. OK in fresh, salt, or chlorinated water. Buy one complete unit, then add up to two extra EggLights and the 3-Way Adapter. 90-day warranty.

A-Complete EggLight
 With 75w plug-in transformer includes 10w covered MR-11, stand, & 4 micro-color lenses & 10' cord.
 CPEGG12V.....\$66.00

B-Extra EggLight-without transformer
 Includes 10w covered MR-11, stand, & 4 micro-color lenses & 10' cord. Requires Complete Egglight and 3-way adapter.
 CPXEGG.....\$49.99

C-3-Way Adapter
 Connect up to three EggLights with one transformer.
 CPEGG3WAY.....\$7.50



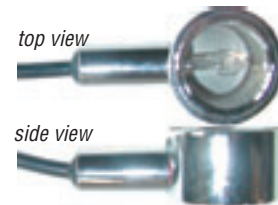
Supreme 20w Pondmaster MR-16 Adjustable Spot
 Includes 12-volt transformer, 20w lamp, 18'-power cord. Can be used in or out of water. Interchangeable lenses in green, blue, yellow, and red. Add pebbles to tray to sink base. 1 year warranty.
 SMO2155.....\$60.00



Pontec 70 GPH Pump & 10 W Light
 Made in Italy. Includes 12-volt transformer. Great for tabletop and small fountains. Suction cups hold it in place.
 OASP70L.....\$60.00



Cal Pump Par-36 Pond Flood
 Includes 12-volt transformer, 25w lamp and 20-foot power cord. Sits on pond bottom to add highlights and sparkle to pools, fountain jets, and waterfalls. 90-day warranty.
 CP725.....\$64.00



10w Statuary Light with Transformer
 Includes 12-volt transformer, T3-10w halogen lamp, 10' power cord. Silicone o-ring sealed. Great for table-top fountains, and smaller water features. Must be submerged to prevent overheating. 1 year warranty.
 SMSS.....\$49.98

Important chlorine/chloramine changes for San Francisco water in 2003!

Water quality and clarity are always a factor when dealing with ponds. The first thing to consider is the quality of the water that comes out of the tap. Chloramine is chlorine bonded with ammonia, and starting in the fall of 2003, will be used instead of chlorine to sanitize drinking water supplied by San Francisco. Most major utilities in California already use chloramine as the disinfectant for drinking water supplies. Within the Bay Area, chloraminated drinking water is supplied by Santa Clara Valley Water District, Contra Costa Water District, Alameda County Water District, Marin Municipal Water District, and the East Bay Municipal Utility District. Fish, shellfish, and reptile keepers must remove chloramine from water used in tanks and ponds, or the creatures will die. Home remedies such as boiling water, using salts, and having water remain still are not effective in removing chloramine. You must use an active dechlorinating product to do the job; otherwise chloramine persists in the water for several weeks or more.

Interpet Pond Test

Tablet kit to monitor pond health. For pH and harmful fish waste (ammonia, nitrate and nitrite).



6TEST.....\$29.98

Oase Microbe Balance

Adds beneficial bacteria to reduce Ammonia and Nitrates and control algae. Add it to the water or bioelements in a filter. Fish safe.



OA88739 16oz.....\$11.50

Microbe Lift Beneficial Bacteria

A natural bacteria blend that creates a healthy water feature environment, reduces cloudy water, digests organic sludge, and breaks down dead algae. Highly effective and recommended. Foul smell dissipates quickly. Fish safe.



6ELMIP 16oz..(Shipping not available on this product).....\$14.96

Oase Water Prep Plus

Removes chlorine, chloramine, and ammonia in tap water. Detoxifies some heavy metals. Essential for starting ponds anywhere in the Bay Area that will have fish of any kind.



Removes Chloramine

OA88748 16oz.....\$10.50

Protec Removes Scale Deposits

White scale deposit preventative and remover, maintains fountain beauty, controls water buildup damage, controls soft water metal stains. Not fish safe.

Not for fish



6PROTEC 8oz.....\$7.98

Fountec Kills Algae

Kills and prevents black, yellow, green algae. Good for fountains, birdbaths, or water features without filtration. Safe for birds, plants, and animals. Not fish safe. 8oz treats over 1000 gallons.

Not for fish



6FOUNTEC 8oz.....\$12.98

Oase Clean Pond

Sludge remover breaks down organic matter, promotes nitrification, helps control odors. pH buffered. Fish and plant safe. See visible results in about a week.



OA88743 16oz.....\$10.50

Tip: "String" algae can be a problem when it clogs pumps or filters but can also help clarify water. If you want to slow its growth or eliminate it, use a handful of aquarium salt per 500 gallons once per month until results are visible. Use only aquarium salt—no other kind will do.

Physan Disinfectant

Physan 20 Plant pathogen control. Great for greenhouses and for disinfecting and killing algae on the sides and bottom of an empty pond.



RFPHYPT 16oz.....\$9.50

Interpet Anti Foam

Removes foam on the pond and around fountains and waterfalls, acts against surfactants, which cause foam to form. Fish and plant safe.



6DEFOAMER.....\$28.98

Pond Shade

A black dye for water. Adds visual depth to water features. Reduces sunlight transmission into the water to prevent algae growth. Fish and plant safe. 16 oz. treats 1200 gallons.



6BKSHADE.....\$25.00

Oase Clarity

Aids in precipitating out small particles that make water appear cloudy. Small particles clump together so they can be removed by the filtration system. Plant and fish safe. See results in hours.



OA88740 16oz.....\$10.50

The Urban Farmer Store®

San Francisco

2833 Vicente Street
(@ 40th Ave in the Sunset)
San Francisco, CA 94116
(415) 661-2204



Richmond

2121 San Joaquin Street
(exit Central Ave off
I-80 & I-580 by
American Soil Products)
Richmond, CA 94804
(510) 524-1604

Mill Valley

653 E. Blithedale
(next to Sloat Garden Center)
Mill Valley, CA 94941
(415) 380-3840

4 ways to Order

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800-753-DRIP
FAX Orders: (415) 661-7826
E-mail Orders:
shop@urbanfarmerstore.com
By Mail:

The Urban Farmer Store
2833 Vicente Street
San Francisco, CA 94116

For more information, driving
directions, and to register for
e-mail updates, visit
www.urbanfarmerstore.com