The Background to Your Masterpiece
Add landscaping to stop leaving money on the table p.36
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FEATURES

8 Evolution of Construction

MJ Wilson has been building ponds "across the pond" in the U.K. for decades. And on a recent project in Northamptonshire, he put all of his experience to good use when a new home inspired a couple to build a new pond. Here, MJ offers an up-close glimpse at the plans, gear and execution required to build a stunning backyard waterfall.

14 Chisel Your Way to Success

Think custom stone carvings require hours of training and tons of specialized equipment? Think again. Unique stone decorations are a fantastic way to extend the capabilities of your business, expand your offerings and create repeat customers. What's more, all you'll need are a few common tools and John Olson's instructions!

21 Yes Please!

For most pond professionals, building gorgeous water features is both a passion and a hobby. But it's also a career, which means that if you're not closing deals, you're in trouble. So how do you get them to say "Yes"? As Zack DeKuiper illustrates, it all comes down to three essential steps.

25 Protect Your Pooch

If your dog likes to lap at lakes, roll in rivers and play in ponds, beware. Your canine friend is at risk of poisoning from toxic algae, and the prognosis for such exposure is grim. In this extremely important article, Roger Tower walks you through the dangers cyanobacteria poses to your dog and teaches you how to recognize the symptoms — and how to prevent them.

29 Preparing for Polyurea

Polyurea is durable, wrinkle-free and waterproof. In short, it's the perfect sealing material to line your water features. But when it comes to applying the sticky stuff, preparation is key. Kent Wallace explains the tech specs of this popular waterproofer and outlines the best strategies for pre-poly prep.

37 The Background to Your Masterpiece

It's the end of the project. The pond is built and the customer is happy. Time to go home? Not a chance! Turn a happy client into an ecstatic one (and a good profit into a great one) by providing landscaping to go with the new pond! Max Taylor leverages the wisdom of Kenny Rogers to explain why you shouldn't fold 'em until you've sold 'em some plants!

42 Have Your Waterfall and Eat it Too!

Blur the line between pond and produce store by incorporating fruiting plants in your landscaping! There's a huge array of species that are as beautiful as they are delicious. Here, Max Phelps shows you how to make every visit to your water feature a mouth-watering affair.

49 Microclimates

You may not be able to control the weather, but if you understand microclimates, you can tweak it to your advantage! Local atmospheric zones can be as small as a few square feet in area, just like your pond. And with Paula Biles' tips, you can adjust these microclimates in your yard to greatly extend the enjoyment season of your water feature.

55 Small Water Features

Want a beautiful water feature but don't have much space? No problem. As Ed Beaulieu explains, you don't need to dig a lake to experience the soothing, refreshing effects of water. With a little imagination and a lot of know-how, even a tiny trough can be transformed into a sparkling and splashing work of art.

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LANGUAGE OF KOI

29 Koidentification

What's black and white and swims all over? If you said "sea cows," you're reading the wrong magazine! The answer is "koi," and there are two varieties that fit the bill. Can you tell the difference between Shiro Bekko and Shiro Utsuri? Ellen Kloubec will teach you how!

49 Microclimates

You may not be able to control the weather, but if you understand microclimates, you can tweak it to your advantage! Local atmospheric zones can be as small as a few square feet in area, just like your pond. And with Paula Biles' tips, you can adjust these microclimates in your yard to greatly extend the enjoyment season of your water feature.

60 Water Garden Expo

Hundreds of industry luminaries converged on Shawnee, Oklahoma in February for Pondliner’s Water Garden Expo. With over 21 seminars, a trade show and a hands-on pond build, it was the perfect opportunity to network, share wisdom and learn a thing or two.
Upcoming Events

May 5 - 7  
National Hardware Show  
Las Vegas Convention Center  
Las Vegas, Nevada  
www.nationalhardwareshow.com

August 6 - 8  
IGC East  
Baltimore Convention Center  
Baltimore, Maryland  
www.igcsow.com/2015/Public/MainHall.aspx

August 5 - 8  
PONDENOMIUM  
Q Center  
St. Charles, Illinois  
www.aquascapemie.com/pondenomium

August 13 - 15  
IWGS Symposium  
Water’s Edge  
Lawrence, Kansas  
www.iwgs.org

August 18 - 20  
IGC Chicago  
Navy Pier  
Chicago, Illinois  

August 26 - 27  
Holmes Farm Pond and Pet Trade Show  
Bear Creek Mountain Resort  
Macungie, Pennsylvania  
877/412-darm (1276)  
www.holmesfarm.com

October 21 - 23  
Hardscapes and GIE+EXPO  
Kentucky Exposition Center  
Louisville, Kentucky  
www.hardscap enam.com  
www.gie-expo.com

November 7 - 12  
Pool | Spa | Patio Expo  
Mandalay Bay Convention Center  
Las Vegas, Nevada  
www.poolsapatiexpo.com

November 11 - 12  
Irrigation Show  
Long Beach Convention Center  
Long Beach, California  
www.irrigation.org/IrrigationShow

2016  
January 6 - 8  
MANTS  
Baltimore Convention Center  
Baltimore, Maryland

January 11 - 13  
CENTS  
Greater Columbus Convention Center  
Columbus, Ohio  
www.centmarketplace.com

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Publishers' Perspective  
Put Down That Shovel and Read This!  
I hope that headline got your attention! I know that getting pond pros to take a break is no small task at this time of year. Spring has finally sprung, and the season is in full swing! I’m sure your heads are spinning between pond openings, doing bids and quotes, starting new builds, checking up on your customers and all the other exciting things that happen when nature starts to thaw out.

But while these are all vital pieces of the pond business, it’s also important to keep up with what’s going on in your trade. And believe me, there’s a lot happening. In case you didn’t notice, this issue is a little weightier than past issues. We have so many things to share with you that we had to increase our page count! For starters, check out our cover story. If your typical pond installation consists of building a pond, filling it with water and sending an invoice, Max Taylor thinks you’re leaving money on the table! Turn to pg. 37 to find out why you ought to be making landscape the next phase of your business.

If the advice of one Max isn’t enough motivation to think outside the box, I’ll give you one more. We pushed things “TWO the MAX” in this issue, with Max Phelps contributing a story about edible pond fauna! Why simply look at your landscaping when you can eat it, too? Max shows you how on pg. 42.

Of course, not all greediness is edible, as Roger Towner can attest. In fact, some of it can even kill your dog. On pg. 25, Roger outlines the dangers that toxic blue-green algae can pose to your precious pets.

If plants and algae aren’t your thing, don’t fret. There’s something for everybody in this issue! Ed Beaulieu explains why you don’t need a lot of space to install an amazing water feature on pg. 55, and on pg. 49 Paula Bills shares some magic tricks that will help you control the weather (or at least tweak the microclimates in your yard). And for those rugged types who just want to get their hands dirty, John Olson explains how to add custom rock shaping to your repertoire — and bolster your profits — on pg. 14.

Our stories are certainly an odd and interesting mix, aren’t they? Of course … some might say the same thing about us pond folks.

Happy PONDring!
The exciting pond project you see in the pictures below was built in Northamptonshire, U.K. The owners had recently moved from another property, where they had a small pond. But with a much bigger garden surrounding the new home they decided to build a more substantial pond to house their fish.

They had a good idea of the size of pond they wanted, with the husband being mainly interested in the fish whilst the wife was a keen gardener and wanted to have a planted water garden. Both owners liked the idea of having some form of moving water, so we incorporated a planted stream with a few small falls into the design to create a wetland filtration system — or a vegetable filter, as we call them in the U.K. We don’t grow vegetables, but we use this nomenclature as we are growing vegetation within the filtration system.

The Specifics

After the consultation we agreed on the construction of a new pond. Brown, hand-selected Oxfordshire ironstone was used throughout. This was chosen for its excellent longevity and “Jurassic” appearance, giving a similar finish to the local sandstone but proving much harder-wearing.

The pond was constructed in the traditional European way and is 4 meters long (14 feet) by 3 meters wide (10 feet) by 1.2 meters deep (4 feet). It was designed with both koi-keeping and water gardening in mind. There are two shelves for a couple of water lilies and a far marginal shelf away from the larger koi — of course, not forgetting...
looking at the liner. Rocks and gravel; they were quite happy with
neath the bond-beam, because the custom-
around the perimeter of the pond and set the
covered this with the 1-millimeter (0.04-
by forming the planting shelves before lining
excavated down to the required depth. Then,
we undertook the finishing with hand tools
by forming the planting shelves before lining
the pond with aquatic underlay. Finally, we
covered this with the 1-millimeter (0.04-
mechanical we also installed a wetland-style
unusual problem (which may be very local-
that is damage caused by caddis fly larvae that live on the rubber surface and
and "container-ize" all the spoil for removal
want to have to hand-dig such a large pond
via the house. We did not
an unusually high (20 feet) swimming pool handle. GoPro cameras are much easier nowadays, as you can see what you are taking and the wobble on the pole is much less.

Especially on deeper ponds with sloping,
filter to give a much larger area for biological
Fish: We create large filtration systems are full of
filters, Streams and Falls
Waterfall foam has revolutionized how we
the more traditional concrete construction.
The foam, although not structural, creates a
be altered much more easily as the foam can

This particular waterfall
Pumps, Streams and Falls
Pumps — We have a pump-fed filtration system
Because the filtration system was very hard
to disguise we planted a laurel hedge in front
of it. This was because the customer wanted the waterfall to be
constructed from smaller stones. Again, this
is something that we try to steer customers
away from now, as the use of larger stones
gives a more natural finished appearance.
Using larger stones also reduces the require-
ment for the underlying solid foundation
compared to using smaller stones, which
need to be set on a firm base.
This particular waterfall is very difficult to modify
because the stones have been permanently set in
concrete.

rock would be a case of almost ripping it all
out and starting again.

unprotected. Especially on deeper ponds with sloping,
steeper sides, there is an increased risk of
damaging an uncovered liner (as you can’t
get in or out easily without slipping over). Part of our work involves repairing leaking ponds, so I know just how susceptible to damage pond liners can be. Damage from
dogs and rodents is common, as it is from
the odd clumsy gardener. We also have an
unusual problem (which may be very local-
ized), and that is damage caused by caddis
fly larvae that live on the rubber surface and
have a habit of chewing the liner surface.

The “after” shot a few months into the summer, when the landscape was in full glory.

Cover Your Liner!

We then created a concrete bond-beam
around the perimeter of the pond and set the
ironstone in this. We had bare liner under-
neath the bond-beam, because the custom-
ers were not too worried about looking at rocks and gravel; they were quite happy with
looking at the liner.
I have quite a strong view on leaving
the liner uncovered now, and it is
something that we caution clients against
doing as the bare liner is unprotected.
Especially on deeper ponds with sloping,
steep sides, there is an increased risk of
damaging an uncovered liner (as you can’t
build ponds since it became available and has
now replaced concrete mortar almost entirely
as we seek to incorporate improved construc-
tion methods in our ponds.
The construction time was a total of six
days for three people.
The Gear
All pond equipment was supplied by
Oase. The main pond pump supplies
12,000 liters (3,170 gallons) of water per
hour to a 55-watt UVC filter and then onto
the large Biotech 36 filtration system. The
filtration system was specifically designed
with a degree of overkill to reduce the
amount of maintenance. The Biotech 36 is
designed to look after 36 cubic metres (1271
cubic feet) of water, but this figure needs to be
halved when koi are present, and then halved
again when the pond is in full sunlight. So
in effect, on this pond we worked to one-
quarter of the total stated maximum water
volume. We also installed a wetland filtra-
tion waterfall. The water exits the Biotech
filtration system and enters the wetland filter
before being returned to the pond.
These customers do now regret that
they did not have rocks and gravel over the
whole liner and do not like looking at the
pond plumbing. Unfortunately, because of
the construction technique used, adding the

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fly larvae that live on the rubber surface and
have a habit of chewing the liner surface.

The particular waterfall is very difficult to modify because the stones have been permanently set in concrete.

Pumps — We have a pump-fed filtration system
with the pump situated in the bottom of the
pond and pushing the water up to the filters.
Because the filtration system was very hard
to disguise we planted a laurel hedge in front
of it. These large filtration systems are full of
lots of koi, giving great water clarity, but they
are quite difficult to blend in with the garden
setting. Because this type of filter is primarily mechanical we also installed a wetland-style
filter to give a much larger area for biological
filtration to take place.
The stream was approximately 3.6 meters
long (12 feet) with a top pool containing
water plants to act as a vegetable filter,
which measured 1.8 meters long (6 feet) by
60 centimeters wide (2 feet) by 45 centime-
ters deep (18 inches). The stream had three
small falls which were constructed on top
of 9-inch-high and -wide block walls. The
stream was planted to give a more visually
appealing design, in line with the owners’
requirements.
As you can see from the pictures, concrete blocks were laid out and the water-
fall was built within these. This was because the customer wanted the waterfall to be
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This particular waterfall is very difficult to modify
because the stones have been permanently set in concrete.
Today, we tend to use
waterfall foam, which allows the design to
be altered much more easily as the foam can
simply be pried off the stones and then re-laid.
The foam, although not structural, creates a
waterproof seal around the stones that is much
less cumbersome and easier to work with than
the more traditional concrete construction.
Waterfall foam has revolutionized how we
would be a case of almost ripping it all
out and starting again.

the water plants within the stream itself.

Typically, in the U.K. we have small
gardens and often access is an issue. For
this job access was a major problem; we had to
remove a fence panel, as the only other
access was through the house. We did not
want to have to hand-dig such a large pond and "container-ize" all the spoil for removal
via the house.
We used a small, 1.5-ton mini-excavator
to create the rough shape of the pond and
cut and down to the required depth. Then,
we undertook the finishing with hand tools
by forming the planting shelves before lining
the pond with aquatic underlay. Finally, we
covered this with the 1-millimeter (0.04-
inch) PondGuard Firestone rubber liner.

Cover Your Liner!

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Waterfall foam has revolutionized how we

The Evolution of Construction

Pond construction is now changing in the U.K. Increasingly, I see customers having more varied requirements in their ponds. Of course, for many fish are still a key element, requiring minimum sizes and depths, but very often well-planted ponds and decorative features are becoming more popular.

I find a lot of customers are not aware of how modern construction techniques have changed the range of designs that they can have. Concrete is a very expensive and difficult material to work with, as well as being difficult to change. Of course, if you are planning a large and especially a deep koi pool — say, 1.8 meters (6 feet) — then the structural integrity will likely require this form of construction. But for most people a pond like this is probably over-engineered.

More often we are being asked to create ponds that are multi-use, often to keep all members of the family happy! No longer is pond like this is probably over-engineered. No longer is it all about the fish. Trying to mix both big fish and plants in the same pond can be a recipe for disaster if the two are allowed to mix. But careful use of rocks can keep the structural integrity will likely require this form of construction. But for most people a pond like this is probably over-engineered.

Typically, pond construction methods are constantly changing. New technology is being adopted all the time, and the rate that information is being disseminated around the world has increased many-fold, thanks to social media and the Internet. Many of these ideas, I have been impressed by some of the products that I have seen on recent trips to America. Not least surface skimmers designed specifically for ponds (not “borrowed” from swimming pool designs with very small inlets and collection baskets), and the use of waterfall filtrations. Up until recent times these products have been unavailable in the U.K., primarily thanks to the high shipping costs ... but this is slowly changing. Using new materials and techniques benefits not only the customer, who I believe is getting a better finished product, but also reduces construction time considerably.

The “after” picture (left) of the stream/falls that has the block wall. My small team (right) always tries to bring some playful fun onto our professional job sites.

Choose Priorities to Build the Best Pond

Up until now, every pond in the U.K. has been built differently and required a number of different construction techniques to be employed. This does not need to be the case though. Most people want a good-looking pond that meets their objectives, be it keeping fish, providing a unique feature in the garden, or allowing them to indulge a passion for water gardening. By helping the customer decide on their priorities I find that we are able to give them what they really want in the best design possible.

Typically, pond construction methods are constantly changing. New technology is being adopted all the time, and the rate that information is being disseminated around the world has increased many-fold, thanks to social media and the Internet. A lot of pond builders in the U.K. still build traditional-style ponds, such as the one I have talked about here, but increasingly this is changing. In August I will be taking a group of pond constructors back across the pond with me to introduce them to the different ideas. Increasing links between pond builders in different countries will help to develop the industry back in the U.K. And, notwithstanding the cost of importing bulky equipment from several thousand miles away, many of these ideas, I am sure, will begin to be adopted here.

About the Author

From a very early age, Mark MJ Wilson was fascinated by the aquatic world and knew that this would eventually become his life’s work. Through his academic training and varied commercial experience, MJ has built up a unique knowledge of aquatic design and husbandry, which, combined with his artistic flair, enables the construction of inspiring water garden designs that work in the real world. Taking his inspiration mainly from Mother Nature, Mark spends all of his life's work.

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Today’s pond customer will often look to his installer for landscaping and surrounding decorations to complement his new water feature. In the past, many installers have allowed these valuable supplemental sales to pass them by. Some of those who have made the foray into this business have limited themselves to providing plants, gazing globes, ceramic/resin vases, et cetera. I would like to present another possible, and highly profitable, alternative to consider.

Stone carvings can be a highly unique addition to a water feature or the surrounding area. They can be incorporated into small backyard ponds and can even be plumbed so water flows from them. Freestanding carvings can be placed by themselves as a focal point or in groupings with other rocks. A carved stone is a one-of-a-kind creation for your customer, and since each one will be unique, it can command prices far above the usual decor.

Over 15 years ago, Graystone Creations began offering carved stone fountains and stone sculptures to consumers and businesses across South Florida. More than once we were called in to add a carving to a newly built water feature. With no competitors around, pricing was high and jobs often yielded fees of several hundred dollars an hour. Some would have you believe that working with stone requires years of specialized training. Perhaps for museum quality pieces, that may be true. For our purposes, having a little creativity (pond installers have tons of that) and a few simple tools can result in some pretty happy customers and a landscape uncluttered by mass-marketed decorations.

Selecting the Stone

Over the years I have worked with many types of stones, including marble, granite, soapstone, composite (concrete-type mix), alabaster, limestone, coral and lava rock.

The best types of stones for detailed projects are the softer stones like soapstone, alabaster and limestone. They allow for detail work while the softness helps reduce accidental breakage. However, for this story I’ll be discussing lava rock due to its incredible compatibility with water features. It has a low price, is available in every market, is lightweight and can easily be shaped into natural-looking

Chisel Your Way to Success

by John Olson,
Graystone Industries

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RAVENNA WALL SPOUT

MANTOVA WALL SPOUT

Carvings. In fact, lava rock is so easy to carve that after a few dozen pieces, I found I could rough out a small- to medium-size fountain or free-standing stone in less than 15 minutes. Of course, that may be something you opt not to do in front of the customer paying several hundred to a thousand dollars.

Lava rock is available at most stonemasons and even major hardware stores during the season. It is also called feather rock in many places. Most of these rocks I have worked with come from the Sierra Nevada mountains. The best of these rocks for carving will be light gray in color. If you come across black lava rock, it is great for decorations but horrible for carving. You will notice the high silica content in it. These shiny flakes are basically glass and super-sharp. Trying to carve one of these will result in shattering over and over.

SAFETY NOTE: A heavy-duty pair of gloves is in order. Even the toughest hands can be quickly torn to shreds when handling this material. Eye protection is a must, and I strongly recommend a mask when drilling or grinding into it.

When selecting stones it may be helpful to pick out several different unique shapes. Feather rock can come in sizes from about a foot tall to over 8 feet. It comes in so many wonderful shapes and is perfect for carvings of oriental pagodas, Roman archways, medieval castles and freeform shapes. Veins of lava through this volcanic ash stone are a common occurrence and can really add to the beauty of the finished sculpture.

When selecting the rock, try to envision what types of shapes you can carve it into. I call it “talking to the rocks” as I move them around in different positions and angles so I can determine what each one will be. Remember that your finished carving is already there inside each stone. Your job is simply to remove the stone that is not needed.

Ready, Set, Carve!

Once the rock for a carving has been selected you will first need to flatten the bottom so it sits firmly on the ground, pad or basin. This is where the hand axe will be used on larger stones. Watch how you swing the axe, and never swing it toward yourself. A large chisel and hammer can also be used for slower but more accurate removal. Once

Visiting Away With Geese’s pond display at the New England Pond Show will leave you amazed. This small pond is packed with lawn furniture and plantings. And the Away With Geese unit is not hidden in the background. It is the centerpiece of the pond display and earns a lot of attention from attendees. The Away With Geese unit looks great and is easy to install and operate. It is maintenance-free and guaranteed to remove nuisance Canada Geese from all property types, such as: ponds/waterways; greenspaces/lawns; rooftops/buildings.

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The patented flashing solar-powered light system is uniquely designed to disrupt geese and drive them away permanently! No more geese, mess, or costly destruction... GUARANTEED!

Click the image to see the Away With Geese display at the New England Pond Show.
After your stone can sit flat and is not in danger of tipping over, it is time to carve the face of the stone. Having decided on the basic design of your carving, you will start removing unwanted stone using the larger chisels and hammer (or the carbide saw if the stone is soft enough). Most carvers prefer to start at the top and work their way down. Rough out the shape and remember that it’s fine to alter the design as you go along. You may encounter a hidden vein that you wish to highlight, or you may have a brilliant new idea once you’ve started. When sculpting it is typical to allow the stone to take on a life of its own. A stone carver can get a feel for the project as he works with the stone and adjust the design as needed.

The smaller chisels are used once the rough form is achieved. These smaller chisels allow you to carve in finer details and take off some of the rougher edges that the larger tools left behind. If carving a structure, the small chisel can create the detail that really makes it stand out. The rasp are also used at this point for smoothing out flat areas or giving the stone face a smoother, more finished look.

If your carving will be a natural, free-form shape, consider using a drill or chisels and point to gouge a large hole or holes all the way through the rock. By allowing light to flow through your carving, you add another dimension to it with the highlighting. You can also use the drill bits to carve pockets into the stone, perfect for small plants. These plants will add color to the finished artwork and help integrate it with any surrounding landscaping.

The Soothing Sounds of a Waterfall

You can carve pockets deep into the stone and allow the water going into them to fall from above, creating a waterfall effect. Over time you will learn the best way to carve these chambers or pockets to amplify the sound of the falling water. I like to call these echo chambers. The depth of the pool, the size of the chamber and its shape will all create different sounds and allow the water to be heard from great distances. Once a customer was standing next to a newly installed, 5-foot carved fountain and asked me, “Where is the speaker hidden?”

These fountains can take on many shapes and styles depending upon the surrounding landscape and features. When you’re creating a fountain by the edge of a pond, the water will be supplied by a submersible pump down inside the pond itself. If away from the pond, then an above-ground or below-grade basin will be needed. The best way to conceal the plumbing will be to use a long masonry drill bit to carve from the bottom of the rock up to the pool where the water will flow out. Very large stone lava rock fountains may require you to drill in as far as possible on both the top and bottom and then gently tap a length of rebar into the stone over and over until the drill holes connect. Remember to drill in from the top and bottom to prevent the rebar from blowing out the last few inches of rock.

Getting Started

Here are the basic tools needed and some pointers on how to begin creating your own stone carvings.

Suggested Tools and Their Uses

Chisel-end hammer: For removing large chunks of rocks. In a bind, a hand axe will do … but don’t plan on ever using it for anything else again.

Steel rasps of various sizes and shapes: For smoothing out rough areas, rounded shapes or inside corners.

Large steel chisel: For roughing out the basic form.

Small steel chisel: For detail work.

Claw chisel: A tool often used for removing a thin layer from the face of stone.

Point: For gouging out chunks of stone.

Carbide sawblade: Perfect for cutting softer stones.

All of the above-mentioned tools can be found at any hardware store, and many can be found at garage sales and flea markets. Used is fine, but try to keep the chisels sharp.

Sand papers: Use 60 to 300 grit for smoothing and polishing stones for a glasslike finish.

Grinder: A big time-saver, but not required.

Dremel: Another time-saver for detail work.

Large masonry drill bits: For adding tubing or creating fountains.

Batwing wood drill bits: For gouging out lava rock. (Once used for stone, they will be ruined for anything else again. Used is fine, but try to keep the chisels sharp.)

Waterfall Design Considerations

Having decided on the basic design for the top and bottom and then gently tap a length of rebar into the stone over and over until the drill holes connect. Remember to drill in from the top and bottom to prevent the rebar from blowing out the last few inches of rock.

Finishing Touches

Just like on the stones surrounding a pond or waterfall, you can age your carving by growing moss on it. This look can help blend the carving into the surrounding landscape and make it appear as if it has been there for hundreds or thousands of years. Most rocks will eventually grow moss if they’re out of direct sunlight and ample moisture is in the air. However, it is easy to greatly speed up this process. First, locate some available moss in the color and texture you desire. Tear the moss into chunks and put it into a blender (when your spouse is not around). Add a packet of dry yeast and some water, or pour in a bottle of beer. Blend the mixture into a thin paste and then paint it onto the carving in any area where you want moss to grow. Be sure to mist the rock face with water in a spray bottle each day for about a week if possible. Soon the entire rock face will have a nice coating of moss that will grow and thrive on its own in the right lighting.

Carving your own stone fountains and sculptures for your water features can be a profitable and rewarding experience. Anyone can set a spitter or a resin decoration on the side of a pond, but the addition of a stone carving can bring a uniqueness and sophistication that no store-bought decor can match. Best wishes and happy carving! ☛
by Zack DeKuiper, WeekEnding, Inc.

Closing the deal. Making the sale. Getting the customer to say “yes.” That is why we are here, right?

I am a guy who loves ponds. It is an obsession and it’s my favorite hobby at home. At work, however, it’s not about my hobby, but rather my career that pays for my hobby.

Translating my passion into sales dollars — closing the deal — means identifying customers, ascertaining their needs and matching their unique dreams with my knowledge and experience.

At our store in Holland, Michigan, we normally have over 1,000 koi and goldfish in the store, ready to entertain customers. They generate lots of giggles from little kids and “oohhs” and “aahhs” from passers-by. Some of those people are like lookers at a zoo, while others may be interested in ponds of their own. The first group needs to see your enthusiasm through friendly words and a little food for the kids to feed the fish. The second group, however, is the one you need to focus on during a busy store day. They are your clients.

What do we need to focus on with people who are interested but don’t know what comes next?

Wants, needs and realities — in that order.

Step One: What Do Your Customers Want?

“What do they want?” is where you start. Is it a koi pond, goldfish and plants; or perhaps a bubbling rock fountain? All conversations need to be friendly, effortless and seemingly just that: a conversation. But you need to be asking questions to isolate what they want and whether you have an opportunity to provide goods or services to meet that desire.

Does this client like to garden? Perhaps the conversation steers to the amazing variety of plants that a small pond opens up to him. How about fish? Goldfish offer color, durability and relatively low maintenance. But for personality and that true pet feeling, koi cannot be beat!

Step Two: What Do Your Customers Need?

Once you find out what your customer wants, make sure it is what she needs. If your customer wants a dedicated koi pond but she travels for business two weeks at a time, this scenario is not going to work for her without hiring a service. There are plenty of other options that will. Perhaps a pondless waterfall will satisfy the want of water along with the need for ultra-low maintenance. If she is handy and loves to putter, maybe a DIY kit will turn into a labor of love. If handy and dedicated are not two words that describe this client, then it is time to talk about professional installation. “Money cannot buy happiness” may be the old adage, but it will buy you a great pond and the service to maintain it.

Step Three: Counting Pennies

The last and most important aspect between want and need is the simple, realistic question, “What is your budget?” It is always one of the tough questions, but it needs to be...
asked in order to close a sale. There is a restaurant next door to us with an outdoor patio that the owner wanted to freshen up.

A local contractor came by, scheduled four visits over two months, spent at least 40 hours doing a design with 3D renderings and submitted a proposal for an amazing $125,000 renovation. They never discussed the budget in any of those four meetings … a budget that was actually $10,000. The contractor looked silly, the owner felt awkward and a lot of time was wasted.

Reality is there for all of us to deal with, and it is different for every person. If a client envisions a water-filled theme park in their backyard and has the financial resources to buy it, then have at it. But, as is true with most customers, we have to blend the dreams of the clients with their financial abilities and find the sweet spot in the middle.

Satisfying the Client

The want is usually the easiest to satisfy and requires you to paint a picture of the new water features in a way your clients can understand and visualize. Satisfying the need portion is all about making sure that what you are offering will fit within their lives for many years to come. Living within reality requires them to understand true upfront and ongoing costs — and you need to provide that accurately.

Many times you can close the sale right over the phone or in your store with the customer. There are times, however, when he will want you to come to the house and go over (in detail) how this water feature will look and feel in his family’s life. From a design point, there is no substitute for seeing the actual location in person to get perspective on your design. And if it is going to include installation services, it is an absolute must.

Charging for Consultation

Some may disagree with me, but I charge for this home visit. When I first started, I was so desperate for a sale that I would offer a home visit and quote nearly every customer who was interested. What I found is that I spent a lot of time and closed a very low percent-age of sales. Part of what it comes down to is the value of your time. I don’t just mean that “time is money,” which we all know is true in business. But what I am talking about is the perception of the value of the service you are offering.

This is where an old college term comes in: TANSTAAFL (pronounced tanstaffle). TANSTAAFL means, “There Ain’t No Such Thing As A Free Lunch.” If you place no value on your time and efforts to visit your customer’s house, don’t expect him to place value on it. Gas costs money, vehicles are expensive and my time has value. Like I said at the beginning, ponds are expensive and my time is no substitute for seeing and feel in his family’s life. From a design point, there is no substitute for seeing the actual location in person to get perspective on your design. And if it is going to include installation services, it is an absolute must.

Give Them Real Value

No customer wants to be nickel-and- diced at every turn, but a customer who is looking for a solid relationship understands that life does not come for free. By placing a value on your time and efforts, your current and future customers will see you as a professional offering them something more than they can get from a website — something they need. And, if in response to their willingness to compensate you for your time, you deliver on what you promised with a timely and accurate quote for a project they want … well, the deal will almost close itself. Isn’t that why we are in business!
Toxic Algae

Protect Your Pooch!
Toxic algae poses danger to pets

by Roger Tower,
Nualgi Ponds

The sun is shining, the birds are singing, and your dog is relaxing in the grass after a playful romp in a nearby pond. But after a few minutes, it becomes clear that something is wrong. His exhaustion has turned to disorientation and extreme lethargy. A few minutes later he is overcome by muscle tremors and vomiting. By the time you get him to the car, you realize that he may not make it home alive.

Nightmarish though it may be, this scene plays out each year as dogs are exposed to toxic algae in natural and manmade ponds. It’s vitally important to learn how to keep yourself and pets safe from toxic algae contamination — and what to do in case of algal toxin poisoning. Unfortunately, it is impossible to tell visually, by taste or by odor whether a bloom is toxic, so precaution is your best option if you’re near a scummy pond with your dog.
Deadly Blooms

The first recorded episode of animal poisoning attributable to cyanobacteria (aka blue-green algae) is active, scientists and policymakers refer to them as harmful algal blooms (HABs). What causes HABs and when do they occur? While many factors contribute to HABs forming, the primary reasons include:

- Still or low-flow water
- Warm temperatures
- Abundance of direct sunlight
- Excess nutrients, primarily nitrogen & phosphorus

HABs do occur naturally, but the frequency and severity is heavily influenced by humankind. In cases when toxin concentrations are unknown, pet owners should err on the side of caution and keep their dogs out of the water when suspicious-looking blooms appear. Only after water samples have been taken and analyzed can we be certain of the presence of toxins.

The blooms typically occur in the late summer and early fall when temperatures are highest and water levels are lowest. HABs are most likely to appear during periods of warm, sunny and calm conditions directly following a rain storm.

As rainwater passes through our storm drains and back into the waterways, it carries sewage and wastewater discharges as well as the residuals from fertilizers, animal manure and failing septic tanks. Add in a sunny day and slow water and you have the perfect recipe for an HAB!

In cases of extreme blooms, local agencies will typically place signs up around the waterway. But you should always check with your local, state and federal agencies for a forecast of HABs and to learn about active blooms to stay away from.

Treating Your Pet

How do you treat a dog who appears ill from blue-green algae toxins? Call the veterinarian immediately! Since death generally follows within days as a result of liver failure, treat every bloom as if it has toxins. Dogs are especially vulnerable to these waters because of their innate behavior to lap around a body of water. They are also attracted to the smell, which makes leaking very important. Hunting dogs are especially predisposed due to increased exposure outdoors.

Unfortunately, there is no antidote for the toxins produced by blue-green algae or cyanobacteria. Call the Pet Poison Helpline (800-213-6680) or the ASPCA (888-426-4435) for immediate help. Consultation fees will apply.

Human Precautions for Harmful Algae Toxins

- Lethargy
- Weakness
- Pale mucous membranes
- Disorientation
- Excessive salivation and tear production
- Muscle tremors
- Seizures
- Respiratory distress
- Vomiting
- Diarrhea
- Bloody, black or tarry stool
- Jaundice
- Shock
- Coma
- Death

A note to dog owners and parents: When in doubt, stay out! If you see a bad situation on a lake, even if it’s not the obvious pea-soup or paint kind of look, you’re better safe than sorry.

Prevention is Best

A pet is like part of the family ... especially a dog. Losing a pet can feel like losing a child or a longtime companion. Keeping pets safe is a priority, so if you live on a big property be careful of where you let your dogs or other pets play. Most importantly, keep your dog leashed while around suspected waters. If you use fertilizers, try to keep the area where they are used contained.

To be safe, only let your dogs or pets drink clean tap water. If possible, keep your dog on a leash near shorelines. Don’t let dogs wade, drink the water or eat/walk in beach debris. If your dog goes in the water remove them immediately. Don’t let them lick their fur or paws after getting out of the water until you can thoroughly rinse/wash them from a safe freshwater source.

Use a towel or rag to remove algal debris. If possible, keep your dog on a leash near any scum off your body and consult your veterinarian immediately. Since it is impossible to see if water is toxic, always err on the side of caution.

Animal Symptoms From Harmful Algae Blooms

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- Disorientation
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FAQs

Can I drink the water?

No – don’t drink untreated surface water.

If you ingest water, fish or blue-green algal products containing elevated levels of toxins, you may experience headaches, fever, diarrhea, abdominal pain, nausea and vomiting. If you swim in contaminated water, you may get itchy and irritated eyes and skin, as well as other hay-fever-like allergic reactions. If you suspect you might have come into contact with cyanobacterial toxins and are experiencing any of these symptoms, rinse any scum off your body and consult your physician immediately.

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Use a towel or rag to remove algal debris. If possible, keep your dog on a leash near any scum off your body and consult your veterinarian immediately. Since it is impossible to see if water is toxic, always err on the side of caution.
Boiling the water will also not remove the toxins.

Can I cook with the water?

No – do not cook in contaminated water.

Can I bathe or swim in the water?

No – avoid contact with contaminated water. The longer people remain in the water, the more severe the symptoms.

Can I eat fish caught from waters where HABs occur?

No – don’t eat fish as they concentrate toxins. If you live in an area where HABs occur, do not eat shellfish as they can also concentrate toxins from contaminated water sources.

What symptoms might I experience if I’ve been in contact with the water?

Skin rash, flu-like symptoms, tingling or numbness of the lips and mouth from within 30 minutes to three hours after exposure. Severe exposures might result in motor weakness, lack of coordination and/or respiratory or muscular paralysis.

What if I think I’ve been exposed to algal toxins?

Rinse yourself and/or your pet off after swimming in any ponds, lakes or streams. Get medical treatment right away if you think you, your pet or your livestock might have been poisoned by algal toxins. Remove all other people from exposure.

Tonic algae may not seem like a risk, but its dangerous effects can happen devastatingly quickly. Dog owners report that after playing in and drinking some of the water, strange behavior is exhibited within 45 minutes — including lethargy and vomiting, followed shortly by death. To protect your furry friends, check for signs, proceed with caution near polluted water and make sure to inform your friends of this silent killer.

No – don’t eat fish as they concentrate toxins. If you live in an area where HABs occur, do not eat shellfish as they can also concentrate toxins from contaminated water sources.

About the Author

Roger Tower at Nualgi Ponds communicates new techniques and methods for maintaining a healthy aquatic ecosystem in commercial/residential ponds. Offering helpful information to the community, attending local koi shows and working with the Nualgi partner network keep him busy while out of the office. Working with small businesses to produce valuable digital content has been a hobby and career of Roger’s since graduation. Roger studied Marketing Communications at Emerson College in Boston, Massachusetts and now resides in San Diego, California.

Preparation for POLYUREA

The must-do steps for perfect application

by Kent Wallace,
Living Water Solutions

Polyurea is a spray-applied plastic coating that is applied with special equipment and training. But this article is titled “Preparing for Polyurea” because, as a pond builder, you must likely won’t be applying it yourself. The equipment and training required usually runs between $100,000 to $150,000 and sometimes more. With that kind of investment and training, you will need to be a polyurea spray technician, keeping the equipment operating as often as possible, to get a return on your investment. Coupled so that is the maintenance and upkeep. Letting the equipment set for long periods of time between jobs is costly.

Tech Specs

Polyurea is a two-part system delivered to the surface to be coated at approximately 200 degrees Fahrenheit and 2,000 psi by a specialized set of pumping equipment, heated hoses and a spray gun. The two parts (polyureas solids and isocyanate) are heated and metered together by the pumping system, reaching the spray gun through heated hoses that can be several hundred feet in length. There are many polyurea formulas on the market for use in different situations and applications such as truck bed liners, roofing, decking, blast protection and armor plating, waterproofing, water containment, structural protection and more. Many of these formulas have plasticizers that provide specific chemistry for a particular application. The formulas used for water containment are generally pure polyurea formulas with no plasticizers.

The beauty of using polyurea in pond construction is that it can be applied over virtually any shape or structure within reason, without any wrinkles or folds, and has an elasticity of approximately 400 percent. It can support tons of boulders without puncture and roots can’t grow through it.

When used over bare dirt, an underlayment is laid down first with the polyurea applied over it. Polyurea is also a perfect surface coating when cold joints between different sections of concrete come together or when other structural materials such as piers or islands are in play. Indoor water features as well as features that come close to the surface to be coated at approximately 200 degrees Fahrenheit and 2,000 psi by a specialized set of pumping equipment, heated hoses and a spray gun. The two parts (polyureas solids and isocyanate) are heated and metered together by the pumping system, reaching the spray gun through heated hoses that can be several hundred feet in length. There are many polyurea formulas on the market for use in different situations and applications such as truck bed liners, roofing, decking, blast protection and armor plating, waterproofing, water containment, structural protection and more. Many of these formulas have plasticizers that provide specific chemistry for a particular application. The formulas used for water containment are generally pure polyurea formulas with no plasticizers.

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Polyurea is not glue! It has a “Band-Aid stick” to most surfaces and must be mechanically clamped to all penetrations, just as you would when using EPDM liner. Pond-type skimmers, bottom drains, midwater drains and returns are all produced with clamping flange faces for liner. These are perfect for polyurea. Top edges can overlap and be captured by the top cap or stone, just as you would with liner. Edge treatments can be accomplished with a ledge around the top, just as you would a plant ledge with stacked rocks and boulders hiding and securing the edge. Almost nothing sticks to polyurea. In installations where tile or vertical stone needs to be applied up the face of a surface or wall, stainless steel lath is fused onto the face to create a grid surface for the mortar to bond to.

Designing for Polyurea
When considering polyurea, think and design around what the technician needs to accomplish your goal. Construct in a "polyurea-friendly" manner. Corners should be radiused and not left as a sharp, 90-degree shape. It can be difficult to shoot into sharp corners, so even a slight radius of a half-inch is an improvement. Penetrations should be 10 to 12 inches away from corners, floors or other structures to allow room for the spray gun assembly to be maneuvered. Columns and structures should be at least 18 inches apart and shallow troughs should be at least 18 inches wide for clearance. If a deep trough is created it needs to be even wider so the technician can manipulate the equipment properly. Polyurea is usually applied in several passes to achieve a thickness of approximately 80 mils. The spray gun needs to shoot at 90 degrees to the surface, spraying “head-on” and not at an angle, to get an even coat. Spraying at an angle can cause runs, drips and an uneven coating.

Concrete Prep
When applying polyurea over concrete, the surface should have a “sidewalk” finish. Trowel the concrete surface as smooth as possible or parge the surface afterward to fill all the holes, gaps and imperfections. Polyurea will look like the surface it is applied to, so make it look nice, just as you would “Bondo” the body work on a car before painting. Use a product that will become very hard and not powdery or weak when applied thin. Some parge coatings can have a chemical reaction with polyurea and pinhole badly, causing an enormous amount of extra time to deal with. My personal favorite is Gray Bond-Kote by Super-Krete products. Always check with your polyurea applicator of choice before you apply any parge coating system.

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About the Author

Kent Wallace was born and raised in Las Vegas. Kent spent most of his adult life in the automobile industry at independent shops and dealerships, along with working at his own shop as a race car fabricator at age 24. Then, in 2001 a neighbor asked Kent if he could build her a koi pond like the one Kent’s father had. From that point on pond building became his new passion. This first pond he built was submitted to Better Homes & Gardens Magazine and won Best Courtyard Nationwide in their special interest publication.

Expect from them. They are used to shooting around protruding piping that gets cut off later by the pool plaster crew. They will assume you want a rough surface for a plaster coat unless you specify otherwise. Ask if they can have a couple cement finishers on hand to trowel the surface as smooth as they can and be prepared to pay for that. Otherwise you will be parging the entire surface yourself after they leave to get the finish surface smooth enough for polyurea. This will be expensive and time-consuming. No matter how nice they make the surface, there will always be some prep to do around the penetrations and some nitpicking of small imperfections.

Once finished, the project will be waterproofed for a period of time far longer than any other coating currently available. After you’ve experienced polyurea you’ll start finding projects that you can use it on and expanding the way you design.

Medo’s LA Series blowers are the best choice for koi ponds. Here are a few of the reasons why:

- They last longer, especially in hot, humid climates. Medo aerators have one moving part per piston. Properly installed and maintained, they have an expected service life of 6+ years.
- They run quieter, supporting the natural design of ponds. LA aerators have about as much ambient noise as a light bulb. Listened to a diaphragm pump lately?
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The Beauty of Real Basalts

Stainless steel wall scuppers in four styles
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The Background to Your Masterpiece

Add landscaping to stop leaving money on the table

by Max Taylor,
Magnolia Ponds and Water Gardens

In his rich, baritone voice, Kenny Rogers made "The Gambler" a household tune and gave us all a lesson on experienced, calculated decision-making. In our pond-building world, we get the call and play the game when we contract and build a feature. The length of time to build the pond depends on the number of crew members and their efficiency and experience. At the end of the project, the pond is built, the water is flowing, the customer is happy and the money is in the bank.

However, this is where too many pond builders have chosen to "walk away" when there is more money to be won ... or in our case, earned. For reasons unknown, builders have been taught to fold or run when they should have been raising the stakes and calling. If we're to take Kenny's advice, we should take happy clients and make them ecstatic while we are increasing our profits, without increasing our search for new customers.

Finishing the Masterpiece

Many of our customers have called us craftsmen or artisans. And, in every sense of the word, we are. Our medium is rock and stone, water and gravel, rubber and dirt. As we work with our hands, backs and muscles, we attempt to recreate the beauty found in nature. But I believe that if we are creating a masterpiece on our canvas, we need to consider a project incomplete without the surrounding plant life.

Consider the art world if some of the great landscape painters focused only on their focal points. What if Caspar David Friedrich or Claude Lorrain painted their beautiful masterpieces without backgrounds? Their artistry would be one-dimensional and lose meaning and expression. Background gives any artwork depth, flow and a sense of belonging. It draws one into the painting and causes one to "feel" what the artist is expressing. Without background, the subject will float like a disembodied soul.

By implementing properly placed landscaping, the rise in an otherwise flat yard becomes natural instead of an irregular mass of rock and gravel rising out of a desolate floor. The waterfall that poured out of a wooden fence before is now coming out of lush greenery, giving it a tinge of mystery and a sense of having been there forever.

I have had customers tell me that visitors have remarked, "I didn't know you had a stream on your property!" Isn't that what all pond builders are looking for? Isn't that the ultimate compliment? But most importantly, isn't that what our customers are looking for?

Having a few existing, mature trees doesn't hurt. To enhance the waterfall, we chose to frame it with more shrubs and accent it with some color, as seen in the Firecracker in the foreground.

Landscape design 101: Be sure that the plants in the foreground do not block the focal point behind them. Here dwarf daylilies and lilyturf will stay low so that the view of the waterfall and pond are not obscured.
Let’s talk about the money on the table. For our example, we will consider a pond-free waterfall and a 15-foot stream. To do 15 one-gallon perennials, 10 three-gallon perennials or ornamental grasses and three 20-gallon shrubs should run you about $350 if you add in extra for mulch and gardening mix. Add in 8 total man hours of labor, and the finished product will retail for at least $1,200. Not bad money for about a half a day if you have a two-man crew!

You already have the customer’s trust, so why not take advantage of what many have called “low-hanging fruit”? My business of building ponds without landscaping fed our family. But when I added landscaping to the designs, my profits increased and my reputation grew. I became known as “the pond builder to call in The Woodlands.” Completed projects sell even more completed projects … and a water feature is just not a completed project without landscaping.

Are you a pond builder who is afraid to do landscaping because you have never studied it, have no experience, et cetera? Your best source is your local wholesale nursery. Stay away from the big box stores or retail nurseries. Your local wholesalers will spend some time with you. Bring them your design (or pictures of past projects where you did no landscaping) and let them give you suggestions. They would love to see you succeed and will give you advice and support, just for the opportunity to provide you with plants.

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*A energy and electricity savings for similar performance and applications when compared to conventional asynchronous motor technologies, based on 30 kWh. 3 year base warranty with a free 2 year extension upon online product registration.
Making a perfectly flat backyard look like a stream belongs can be a challenge. But by bordering the sides of the waterfall with large bushes and grasses, a more natural appearance comes out.

Using Realtime Landscape Photo, I took the “pile of rocks” and showed the customer how the project would look with properly placed landscaping. Landscaping computer programs abound. I personally use VizTerra by Structure Studios for most of my projects. However, its learning curve is fairly difficult (but not as difficult as AutoCAD). One of the more simple programs that I use is Realtime Landscaping Photo, as shown in the two photos here. One can take a photo and manipulate it and place plants around it. It also comes with a landscaping program that a user can begin to work with to design from scratch. No one can be an expert with any program the first night, but instead of watching reruns on TV, working in landscaping software an hour a night will begin to show benefits quickly.

From Screen to Stream

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About the Author

Max Taylor is owner/operator of Magnolia Ponds and Water Gardens in The Woodlands, Texas. He entered the swimming pool and pond industry while living in North Carolina in 1992, then relocated to Texas in 2000. Max has won multiple national awards for design in both the pond and swimming pool industries. He was the recipient of the National Five Star Contractor Award in 2011 for excellence in customer service. He specializes in complex backyard design makeovers but is happy to create a simple pond-free waterfall for his customer. www.magnoliaponds.com

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May/June 2015
Have Your Waterfall and Eat It, Too!

Landscaping with edibles

by Max Phelps,
Rock Castles landscaping

Fruiting shrubbery and flowers can be used in landscaping a water feature just as easily as traditional shrubs or grasses — and they can look just as amazing. You’re going to landscape your waterfall and pond, so why not do it with edible trees, shrubs and groundcovers? Here are some that work well for me.

A Tasty Variety

Let’s start with a serviceberry (amelanchier), either a tree form or a clump. Let’s locate it to sort of lean toward our waterfall or stream. We’ll get lovely white blooms in March, and juicy fruit in June if we beat the birds to it. (You can’t say that about a crepe myrtle or a Japanese maple.)

If the water feature is out in the yard and away from big trees or any woodland, I always want to add at least one small tree as I landscape it. Ideally, the tree will be positioned to keep part of the day’s sunlight off the stream or pond, which will help with low oxygen and algae problems. Besides the serviceberry, Saskatoon, shadbush or serviceberry (depending on where you’re from), what other trees that bear food would work for that tree (or two or three) you plan to put in the waterfall or water garden landscape?

I’ve used pawpaws; they resemble a deciduous magnolia. You need two in a clump or another tree in the yard somewhere for good pollination. A quince or a dwarf apple could work. A semi-dwarf, self-fruitful cherry or cornelian cherry dogwood would make a lovely addition. More exotic options: jujubes, olives, various citrus trees or a mayhaw or mountain ash bred for its fruit. You can also try medlar or mulberry; the medlar tastes like apple butter with cinnamon sprinkled on! Do a little checking to see if a plant will live and prosper in your climate as you add fruiting trees around your pond and waterfall. For an evergreen, use Korean nut pine or Swiss stone pine, or in the southwest United States, the pinyon pine. Pine nuts are delicious!

Install Some Shrubbery

Next, add some shrubs of varying sizes for a naturalized look. I automatically go to the blueberry. There are blueberries that grow from Orlando to Ottawa, from a foot to 8 feet tall, and some keep their colored leaves most of the winter (at least in USDA planting zones 7-10). A rather new fruiting bush I highly recommend for zones 3-5, and worthy of trial in 6 and 7, is the honeyberry, or haskap. I also will use currants, gooseberries, blackberries and the upright thornless blackberries. Oregon grape holly is an evergreen that is lovely and has edible berries.

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Cranberries in bloom on a floating island. (Photo by Kitty Billings)

blue berries. Even if they’re not too tasty, they are good for you. The right edible shrub in the right location can make for both good landscaping and yummy snacking. (Metaphorically, I always love killing two birds with one stone.)

Blossoms
OK, let’s add a blossom or two. Ever add daylily blossoms to your salad? I prefer them a couple days before the bloom opens, myself. They can also be batter-dipped and deep fried. In Asian cuisine they are both staple and delicacy. Asparagus, onions, fennel, flowering kale and Swiss chard are all reasonable edible items that look nice in the landscape. And you can always find a way to hide one tomato plant or one hot pepper plant if you don’t want to showcase it.

To finish our layered, naturalizing look, let’s add creeping groundcover plants. Watercress is great in the bog or waterfall box, but cranberries can really naturalize a streambank or pond edge (see photo). Creeping rosemary for zone 7 and southward is wonderful at naturalizing pond edges. Wintergreen (gaultheria), also known as mountain tea or teaberry, is a cute little creeping evergreen for the shade. (Cranberries prefer sun.) Sheep sorrel or oxalis are tasty in a salad and do wonders to naturalize a waterfall edge. Creeping raspberries, ling-

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About the Author
Max Phelps built his first waterfall in 1997. While he has experience farming and beekeeping and ran a tax preparation business for 20-plus years, he has operated Rock Castles Landscaping since the fall of 1999. The company designs, builds and specializes in waterfalls and water gardens. Edible landscaping, gardening and farming are part of the culture in rural South Central Kentucky, the place Max calls home most of the time.

Max has been both an Aquascape CAC and a member of the IPPCA. He was also the first-place winner of the “Most Natural Looking Stream and Waterfall” category at INFOTANZA 2010, and he is the author of the twice-monthly landscape column “Yards to Paradise,” in its fifteenth season.

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Wagoi, but are also produced with either Doitsu or Gin Rin scales. In this article I’ll explain five easy ways to tell the difference between these two popular varieties of koi. Use the illustrations as a visual guide to help distinguish one from the other.

Color — B&W or W&B? There are just two colors on Shiro Bekko and Shiro Utsuri koi: black and white. The Shiro Bekko is a white koi with black markings. The Shiro Utsuri is a black koi with white markings. Although, some Shiro Utsuri are predominantly white. The white base color is called Shiroji, whereas, black is known as Sumi. If either fish has a patch of Hi, however small, it would be classified as a different variety.

Spots vs. Bands: The Shiro Bekko will have isolated Sumi markings on its body. These spots will be distinct and separate from each other and placed evenly over the body. The Shiro Utsuri variety has wide bands of Sumi instead of individual spots. The solid black bands appear as significant patches of color. These patches may join together to form a checkerboard pattern. The size of the Sumi markings will help to determine which type of koi you have. The Bekko has spots and the Utsuri has bands of Sumi.

Top vs. Wrap: The SUMI location is another defining feature of each variety. On Shiro Bekko the SUMI spots are placed only on the top. They are visible on the koi’s back and only above the lateral line, whereas on Shiro Utsuri, thick bands of SUMI wrap around the fish — often down to the belly — and extend below the lateral line.

Clean face or patterned face? Evaluating the face will help you identify the variety. A Shiro Bekko usually has no SUMI on the head or face. It should have a blemish-free face that is the same as the base color (Shiroji) on the body. Just the opposite for Shiro Utsuri. On the Utsuri head you will find interesting black patterns, often dividing the face in half. Menware is a traditional Utsuri head-pattern. If a heavy black pattern starts on the face and continues the length of the koi, then you are looking at an Utsuri.

Check out those pecs! Finally, look at the pectoral fins to differentiate between the two varieties. A Shiro Bekko generally has bright white pectoral fins, although an occasional black stripe may occur. With the Shiro Utsuri you should see black pigmentation in the pectoral joint; this feature is called Motogoro. Not every koi will exhibit this trait; some may have heavily striped pectoral fins, as well as SUMI stripes in the dorsal and caudal fins.

Koidentification!

Five easy ways to tell the difference between Shiro Bekko and Shiro Utsuri

by Ellen Kloubec, Kloubec Koi Farm

So, you have a black and white koi and you’re not sure if it is a Shiro Bekko or Shiro Utsuri. There are many similarities between the two varieties… as well as distinct differences. Some characteristics are easy to recognize. The subtle differences will become familiar with practice. Both varieties have only two colors: black and white. Both varieties have non-metallic skin. Both are commonly seen as
Non-traditional Scales

Both varieties are produced with non-traditional scale variations. Occasionally you may see a Bekko or Utsuri with Doitsu scales. This name, or description, is added as a prefix when scales are present only on the spine, along the lateral lines, or in both locations; Doitsu Shiro Bekko. The Doitsu scales are usually bigger than common koi scales. Likewise, the term Gin Rin precedes the variety name when the fish has shiny, light reflecting scales; Gin Rin Shiro Utsuri. Usually Gin Rin scales cover the koi’s body completely.

All the Colors of the Rainbow

The Bekko and Utsuri varieties are also produced in other colors. You may occasionally find the red and black coloring, as well as the yellow and black type. A red/orange-based Bekko is called Aka Bekko. A yellow-based Bekko is the Ki Bekko. Similarly, the red/orange-based Utsuri is called Hi Utsuri, and those with a yellow base are Ki Utsuri. These types are quite rare; even more uncommon is the addition of Doitsu or Gin Rin scales.

Regardless of the base color, you can identify the Bekko or Utsuri using the guidelines listed above. Be sure to check our illustrations of many koi varieties on our website. Follow this link to view them all. www.kloubeckoi.com/ellens-koi-education/

About the Author

Ellen Kloubec and her husband Myron began their aquaculture business in 1981, and their farm consists of 80 acres of mud ponds. Together with their son, Nick, they raise and supply healthy and hardy koi to wholesale customers throughout the USA and Canada. Ellen loves all things koi. www.kloubeckoi.com
plant, water feature or fish by two weeks or more every year. That’s a big deal whether you’re an aquatic plant supplier, an installer or anyone else in the pond business.

**Microclimate Types**

There are many factors that cause microclimates. The major ones affect the weather in your general area as well as on the location of your business property, project site and customers’ backyards. Once you understand their impacts it becomes possible to harness them to your advantage. They are interrelated and may affect each other.

Water bodies impact the surrounding climate, with larger bodies having greater impact. They are heat sinks, with a direct and strong effect on temperatures. The sun is another obvious factor. What is important to climate and weather is the individual sunlight characteristics: amount, direction, strength, elevation and length of sun. Obviously they are also crucial for aquatic plant survival and growth, as well as water quality. Southerners may need to limit sun exposure in summer, while northerners want to extend it during most of the year.

Topography definitely affects microclimates. Generally, gardens and features on the south or west side of a hill are warmer because they are sunnier. They also have longer seasons. However, cold air travels just like water: it runs downhill. So lower spots are generally colder and depressions collect cold. Higher elevations are subject to greater winds, depending upon the exposure.

Houses and buildings are often the strongest factors affecting a local property’s microclimate, especially when combined with surrounding paved areas. They form barriers that create protected areas away from prevailing winds. However, they may also form turbulent tunnels between structures or vortices around corners. Walls and paved areas usually absorb heat during the day that is radiated out at night. If the surface is impervious, water flowing off may accumulate, as can rain from downspouts.

Wind has a huge impact on microclimates. Stealing heat and moisture, it is especially influential for pondscapes. Wind affects oxygen levels, evaporation, temperatures, plant selection and placement and container water garden locations. They may also carry harmful sprays and pollutants from neighboring environments.

Don’t place sensitive plants against solid walls (top, left), where cold wind eddies may form. (Photo courtesy Paula Biles) Brick becomes a heat sink to moderate temperatures (top, right) after the sun goes down. Exposed properties are open to prevailing weather (above), especially wind. (Photos courtesy USDA-NRSC)

Pots use the pavement’s radiated heat to jump-start spring at this water garden center. (Photo courtesy Paula Biles)
properties or salt near coastlines. Open, exposed properties are most vulnerable to winds, where plants can be shredding and skimmers battle floating detritus.

Create Local Microclimates

Analyzing microclimates on an individual property will help you use the best orientation for your plant display and pond installation. (See sidebar.) It can also assist in optimizing an existing water garden. The information about specific sites can be applied to manipulate climatic conditions, which can lengthen the “enjoyment seasons,” add breadth to aquatic plant selections or reduce heat stress on fish and people during the peak of summer.

Fences make excellent windbreaks, in addition to their many other benefits. They create sheltered zones with less drying of plants, pond surfaces and people. Board-on-board fences and hedges are better because they are permeable. Wind travels right over solid structures, creating eddies on the leeside and forming cold patches at the wall’s base. Before adding fences, determine prevailing winds and plan how their shadows may help or hinder aquatic plant growth or bloom cycles throughout the year.

Like imitation trees, overhead structures provide welcome shade. When wisely designed, they can alter the amount of sun and shade according to the seasons. You could create a patio covering with maximum shade in summer and almost full sun in winter. Overhangs could extend enough so they would also shade fish at desired times of the year. Do your homework on sun positions and carefully plan your pergola. The result may not be Stonehenge, but it too can align according to the sun’s annual path.

Solid surfaces are heat sinks. Their ability to store and release...
Water. The most abundant compound on the planet, it makes up 70 percent of our bodies; it drives our weather patterns; it supplies nourishing rains for our crops; it allows our bodies to actually function and it’s used in manufacturing everything in some way, shape or form. Just think about it. Everything around us has been created or shaped by water. We flock to beaches, lakes, rivers and streams for a wide variety of recreational activities. In fact, aquatic destinations are ranked #1 for vacation locations.

The Bottom Line
Everyone complains about the weather. Now you can do something about it.

Tools to Evaluate Local Microclimates

- Min-max thermometers are cheap and don’t require batteries or the internet. Get several to deploy in open areas around a property to show corresponding temperatures. Then you can build a temperature record over both time and space. These will help evaluate the situation and plan accordingly.

- Knowing the sun position for any day of the year is important for solar energy, gardening, photography and other things. So there are numerous resources to find it. Websites and apps provide varying levels of detail.

- There are countless weather websites. Mine them for historical information by zip code. That will provide a realistic picture of an area’s annual weather, including wind strength and direction. Be sure to check for data showing temperature extremes for a few years. All these are important pieces of the local microclimate puzzle.

- Unfortunately, local plant nurseries are an endangered species. They’re worth their weight in gold — if you can find one. They know local plant zones, temperature extremes and other local particularities over time. Take their employees out for coffee, pick their brains and follow any leads they provide. Gather as much information as possible.

- Sometimes the obvious gets forgotten. Neighbors, especially gardeners, are the best source of relevant and reliable information for a property’s microclimates. If you get lucky, you might even find someone who has been there for a decade or two. Plus, you will build goodwill for the project and perhaps even gain new customers.

- This cartoon instantly explains microclimates to clients or employees. A guy in a snowy yard says the teeny tropical garden next to his house is a microclimate … because it’s in front of the heating vent.

One Drop at a Time
The art and science of small water features

by Ed Beaulieu
Aquascape

W

About the Author
Paula Biles was diagnosed at an early age with COPD (chronic plant obsession). The constant compulsion to have growing leaves and muddy hands led to an obvious treatment: water gardening. Paula belongs to the Garden Writers Association and has been a regular columnist for numerous hobbyist and trade publications. Her articles and photographs have appeared countless times in water garden magazines, newspapers, books and online.

Small Features

150 man hours were required to create this one-of-a-kind, custom-designed, custom-built, dry-stacked slate fountain.

Mediterranean Basin Tank fountains that pool water with the effervescence.

A fitting entry into an amazing system of shattered, gurgling of Columnar Basalt stone fountains that pool water with their effervescence.

A water fountain with a combative design that draws visitors into the environment with their effervescence.

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I know what you’re thinking ... we bathe in it, drink and flush it every day, but that’s not what I’m talking about! I’m talking about fresh water in its basic form as a small, decorative water feature. The options are truly limitless, as our imaginations can run wild with this exciting medium.

Water features can come in a variety of sizes and volumes, but I want to focus on small features because, gallon for gallon, they have the greatest impact of them all!

**Hard-wired for Water**

Growing up in the Midwest, I was in awe of Lake Michigan. To this day I can spend days along the spectacular coastline of this inland ocean. Of course it’s spectacular; it’s huge! The amount of wildlife and diversity is just as incredible as the sunsets. So how do we convey all of this in a small package? Easy: Just Add Water.

That’s right. As simple as it sounds, just add a touch of water to any environment and you will see an immediate change. Literally! As soon as it’s completed you’ll see people slow down and stop what they’re doing to investigate this microcosm of life.

The edges of a water feature will become home to a wide variety of organisms, all searching for a fresh supply of the clear, odorless — and for the most part, tasteless — liquid. Water is hard-wired within every living creature as a critical, life-giving compound, so when we’re near it we unknowingly stop, look and listen.

There have actually been studies on the physical effects our bodies undergo in the presence of water. Our heart rates slow down, our minds are cleared of clutter and we can just ... be. This is why waterfront property fetches a premium. The good news: we now have the ability to create that phenomenon anywhere!

Here are a few simple projects that can transform any space into an aquatic oasis.

**Fountains**

Fountains have been used throughout history to supply fresh water to villages using nothing but gravity. They have endured throughout the centuries and can be found in a variety of locations. The soothing sounds are an audible delight, filling courtyards and spaces with a sound that needs to be heard to be understood.

There are two main forms for fountains. The first is a standalone fountain structure, and you’ve seen them before: precast concrete, resin or, if you’re lucky, carved stone. They have a lower basin or bowl that houses the recirculating pump, which moves the water to the top. The water will then fill a small bowl until it overflows, raining down into the bowl below it and repeating this process until the water reaches the lowest point and the location of the pump.

There are hundreds if not thousands of variations, and they all have a common function despite the artistic differences.

The other fountain form is integrated into the landscape. The water-holding reservoir and pump are located underground, so the only thing that the viewers see is the artistic portion of the fountain itself.

Within this style there are two variations. The first is a solid, watertight container with a specific volume of water, designed to operate a particular size of fountain feature on top of it. These are small, easily installed containers for quaint, bubbling features with a simple ribbon of water (far left) is the perfect accent to an intimate patio setting. A patio with adjacent seating to a fire pit and water (middle) is a great place for entertaining. This design trio is the perfect blend for all occasions. Spillway bowl installations (right) can be completed using simple techniques and tools, progressively larger containers to match the increasing scale of the fountains.

Then there’s the modular, underground reservoir in which the basin is created according to the dreams of the client. A variety of materials can be incorporated for use in conjunction with the underground reservoirs. Resin and plastic features have been steadily increasing in popularity due to their ease of maintenance and prompt delivery, give us a call today!

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**POND Trade Magazine**

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**PerformancePro Pumps** provides reliable, energy efficient pumps that are made in the USA! This means excellent long-term affordability. Whether it’s a submersible, booster, or one of our most popular and versatile self-priming centrifugals, we have the best pump for your job! In addition to quality pumps, we offer free application assistance so you can be sure you get the best pump for your system. For specific information, application help, and prompt delivery, give us a call today!

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to the cost-effectiveness of the feature. The simplistic installation processes, durability and lightweight nature of this medium is bringing them into a wide variety of homes throughout North America.

Wooden forms, ceramic urns and metal sculptures are also used in a variety of settings to bring an artistic element into the garden that captivates all of the senses.

Streams and Waterfalls

The next step for a water shaper separates you from the rest of the pack: creating a stream and water fall from a pile of rock!

The underground reservoirs that we’ve been talking about have the ability to captivate all of the senses.

One of my personal favorites is the artistic element into the garden that captivates all of the senses. The key to a successful stream and waterfall is to keep it in scale with the space and, if possible, try to disguise or hide the water’s point of origin. This will reinforce the illusion of what we are trying to accomplish.

Beauty and Sustainability

The great part about customizable reservoirs is that they can be designed to capture and recirculate rainwater, creating a sustainable water feature that never needs a supplemental source of water. Careful planning and understanding of the precipitation patterns for the area is necessary for this to work properly. A sustainable fountain can be upgraded into a full-blown rainwater capture system in which the underground reservoir is designed to catch and store a surplus of water, which can then be used for irrigation or other outdoor water usage.

A 1,500-gallon rainwater capture system is used as the reservoir for a stacked slate urn fountain. The pumping system for the fountain doubles as the delivery system for the captured water, allowing it to be used for the surrounding gardens. Shaped within the space of a few square feet! Small features will challenge you like no other feature. Every element of a small feature needs to be carefully thought out in order for it to not only function properly, but also create the illusion of a much larger space. The key to a successful stream and waterfall is to keep it in scale with the space and, if possible, try to disguise or hide the water’s point of origin. This will reinforce the illusion of what we are trying to accomplish.

Putting It Together

The infrastructure of an underground reservoir consists of an EPDM rubber membrane or similar impermeable membrane sandwiched between two layers of geotechnical fabric that increase the puncture resistance and lifespan of the system. Aquablox are commonly used to create a structural void space within the liner. By increasing or decreasing the number of Aquablox we can create a reservoir of any capacity to meet the goals and budget of the client.

The beauty of doing this is that it will create an ever-changing ice sculpture that’s sure to have an impact during any season! And with the simple addition of a well-designed lighting package, this fountain will become the focal point of the garden.

The simplicity of this type of feature should not be overlooked, as it can have a powerful effect on viewers; the focus is on the rock and its relationship with the water. This is one of the most powerful forces on our planet! The fact that water, a shapeless compound that spills between your fingers, can carve through solid rock is mind boggling! But anyone who has viewed the grandeur of the Grand Canyon can attest that, given enough time, water will shape the world — and our lives — one drop at a time.
Yet another great year at the Water Garden Expo. The three-day show was hosted by Pondliner in Shawnee, Oklahoma. Great turnout, interesting educational seminars, booths to browse and great people to meet and get reacquainted with.

One of the highlights of the expo was the "epic" pond build led by Eric Triplett. To see the start-to-finish photos, go to http://bit.ly/1PqvgBV.
Outdoor Water Solutions Introduces Innovative Line of Solar Aerators

Outdoor Water Solutions is introducing a new line of Direct Drive “DD” high-efficiency solar aerators for 2015. Models include two koi pond versions as well as five different large pond models that can aerate 5-plus acres. All systems feature battery-free operation, which means we have eliminated the expense of rechargeable batteries and charge controllers, making the systems much less expensive and more affordable for most pond owners.

The koi pond aerators include one DD solar compressor producing 2.0 CFM of air, one high-efficiency solar panel, an aluminum mounting bracket with variable angle configuration, a DD controller, a lockable cabinet with weather seal, solar power disconnect, a cooling fan, one or two Optimal Air Diffusers, a weighted airline and a two-way valve for the two-diffuser system. The large pond systems can be purchased with and without accessories and range from 2.8 CFM to 5.6 CFM. There is also a hybrid system that uses solar energy and a 110-volt backup compressor for nighttime aeration.

If you’re looking for new, innovative products to sell, visit our website at www.OutdoorWaterSolutions.com or contact us for pricing and more information by emailing info@outdoorwatersolutions.com.

Outdoor Water Gardens Launches Professional Programs

Atlantic Water Gardens is pleased to announce a completely new concept: the Atlantic Professional Programs. The two programs are the Atlantic Distributor Consultant (ADC) and Atlantic Professional Contractor (APC).

When you become an Atlantic Distributor Consultant, you will be treated as if you were an independent contractor. You will be responsible for all sales, service, and billing. We will take care of everything else. Our goal is to provide you with a steady stream of new customers and to give you the tools and support you need to succeed.

For further information, please contact: Alyssa Schmidt, Program Coordinator. Phone: 330/274-8317, ext. 11. alyssa@atlanticwatergardens.com. www.atlanticwatergardens.com.

New Rock & Waterfall Cleaner Liquid from EasyPro

EasyPro’s new product offers commercial-strength, oxygen-based cleaning that quickly and effectively cleans rocks, waterfalls, water features, fountains, statues, plant pots and more. Simply pour the product into the area with the most active water movement for best mixing. The product lifts debris to your pond’s surface, where it can be removed by a net or skimmer. EasyPro’s full lineup of water treatments now includes 20 unique products available in a range of sizes for many pond applications. These treatments are designed for use in water gardens, ponds and lakes. EasyPro water treatments are made in the USA.

For more information or to request a full-color catalog call 800/448-3873 or visit easypropondproducts.com.

OASE Introduces New START Filtration Systems

OASE introduces a new line of filtration specifically designed for DIY or the beginner. These START filtration systems are easy to use and guarantee clear, beautiful water.

The new BioPress UVC 1600 Pressure Filter incorporates a handle for compression of the filter pads to clear the debris without opening the lid. Since the key attributes are accessible from the lid up, the canister portion of the unit is easily buried and concealed. An added bonus is the 9-Watt UV light, which helps eliminate algae from the pond.

The new BioSmart 1600 UV Filter cleans pond water with the ideal combination of large filter foam for maximum biological cleaning and an integrated 9-Watt UV clarifier to help prevent green water. Thanks to cleaning handles and a bottom discharge, the system is easy to clean without any mess. Additionally, this unit has an indicator to show when it is time to clean the system, removing all the guesswork.

The BioPress UVC 1600 and BioSmart 1600 UV each pair with a recommended AquaMax Eco Classic Pump, creating the perfect team for clear water and allowing owners to spend more time enjoying their ponds and less time maintaining them.

For those looking to build a pond who don’t know where to start, the new Filtral UVC 700 is a compact, complete filtration unit with integrated UV clarifier technology and a pump. The Filtral is easy to install in a pond and combines filtration with aeration by use of one of three beautiful water effects. The included diverter valve can be used to operate an additional water feature and the aerating nozzle display at the same time.

Learn more at www.oase-livingwater.com or call 866/627-3435.
Turtle Island Waterlilies Releases
2015 Collector’s HXT Trio

For the first time in industry history, Turtle Island Waterlilies is releasing three of our hardy/tropical (HXT) hybrid water lilies in our 2015 Collector’s HXT Trio.

Waterlilies (nymphaea) bring beauty, color, and habitat and are a great contributor to natural water clarification in a backyard pond. Many water lilies on the market are hardy (perennial — plant hardiness zones 3 through 11) but are only available in limited colors such as white, yellow, peach, pink and some reds. A pond enthusiast is likely to plant tropical water lilies that offer an extended range of colors, textures, sizes and fragrances, but unfortunately, tropical waterlilies are annual plants in colder climates (except far southern zones 10 and 11). Turtle Island Waterlilies has been busy developing a line of hybridized HXT (Hardy x Tropical) water lilies, merging the beauty, fragrances and features of tropical waterlilies into a creation of new hybrid perennial plants adapted for Northern climates.

Mike Giles, who created the famous, disease-resistant super-bloomer “SunFire” hardy waterlily, is the hybridizer behind the scene for the new HXTs, all of which are newly registered Intersubgeneric nymphaea.

“Turtle Island Violacious,” a vibrant purple hardy water lily; “Turtle Island Tropic Star,” a prolific, hot pink lily and “Turtle Island Fay McDonald,” an exquisite, amethyst blue hardy water lily.

These water lilies are available in limited quantities as a trio package on a pre-order basis. Shipping starts the last week of May. The plants are in the process of being patented, so resale restrictions may apply. Available exclusively from www.turtileislandwaterlilies.com.

The three Collector’s HXT Trio includes:

“Turtle Island Violacious,” a vibrant purple hardy water lily; “Turtle Island Tropic Star,” a prolific, hot pink hardy water lily; and “Turtle Island Fay McDonald,” an exquisite, amethyst blue hardy water lily.

Visit FountainBleuVac.com for more Information

REWARD TO BE POSTED
Tickled pink!
Little Giant Disappearing Fountains were designed with the contractor in mind. Beauty truly is made easy because the fountain, basin, pump, and plumbing come in one all-inclusive kit. This makes it perfectly suited for quick installation at a great price.

Quick and Easy installation.
Check out the installation here!

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