



creative edge treatment



This will be hard to believe, but last summer we had a customer who called us at least a hundred times during the

first two weeks of owning her pond. She wanted us to hand feed her every minute detail of tending to her new backyard paradise. Then one day she called saying that she was experiencing string algae, so I told her that she needed some S.A.B.TM. I even explained to her how to dilute it down, and then I told her to, "put the solution around the perimeter of your pond." Those were my exact words. I swear they were.

String Algae in the Grass?

So she called back several days later saying that she did exactly what I'd told her to do, but she didn't see how the String Algae Buster in the grass around her pond was going to affect the

string algae in her pond. Yes, I'm telling you the absolute truth. She put the Buster in the grass, around her pond, instead of in the pond.

At that point I turned to Chris Wilson in the Tech Department and said, "If I get one more call from that woman, asking one more incredibly stupid question, we're going to repo her pond!" Chris volunteered to do the dirty work, and from that point on, his nickname in the office has been "The Pond Repo Guy."

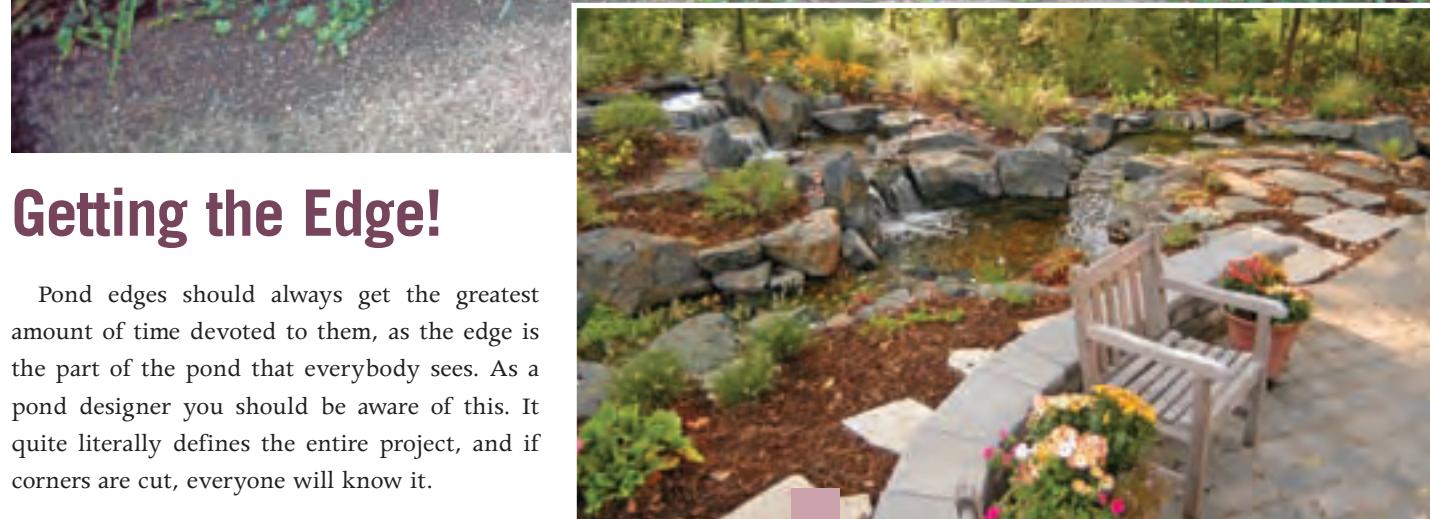
Ellen Beaulieu

NAWGS President





 How many times have you seen a traditionally built pond that looks like this? The sad thing is the contractor probably spent three weeks guessing the whole way through.



Getting the Edge!

Pond edges should always get the greatest amount of time devoted to them, as the edge is the part of the pond that everybody sees. As a pond designer you should be aware of this. It quite literally defines the entire project, and if corners are cut, everyone will know it.

Edges Are Always Done Last

The pond edges are usually done at the end of the project, but because the rocks are actually set early in the day, you need to start with a clear plan on how the edge will be finished.



As you can see here, good edges make all the difference.



While one person is still creating the waterfall, another person can get started on the edge work. This helps your crew use their time more efficiently.

- It's important to give children access to the pond—if you don't give them a place to get in, they'll find a way.
- One of the best ways to make a pond "child friendly" is to create a beach area that slopes gently down into the water. Be sure to use small river pebbles, because they're easy on tender feet.
- You'll also need to plan an area for aquatic plants. You can just stick young plants right between the boulders and fill in around them with gravel, or you can actually make a pocket with the boulders, which gives the plants more room to grow. A combination of methods is preferable in most situations.



It All Starts With the Consultation

The design of the edge should be determined during the sales consultation and, if possible, discussed with the client during actual construction. At that time it can be customized according to their wants and needs.

So, Let's Check Out an Example

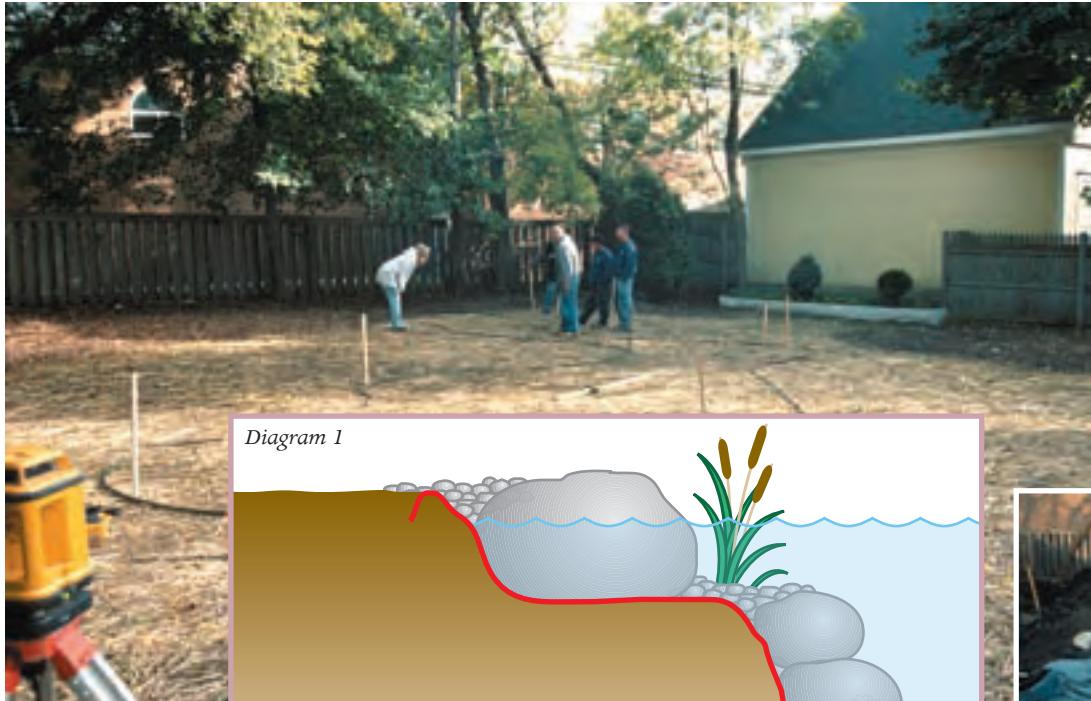
On a larger pond there are several different edge treatments that can be used.

- The clients have two young children and they're looking for a pond that the children can play in, but still maintain a natural look.
- They love gardening, and the pond will be planted with lush perennials.

Here's What We'll Do With the Pond

- Where kids are involved, we like to use larger boulders for them to hop around on.
- The large stones can double as seating too, and if they're positioned properly, people (especially kids) can sit on them and dangle their feet in the water ... safely.

CONSTRUCTION GUIDELINES



esp Llevando a Cabo el Plan para las Orillas **Implementing the Edge Plan**

Now that we have an idea of how the edges will be handled, we just need to implement the plan. The process actually starts right at the beginning of the job. The layout should reflect the plan, and the excavation will follow.

The pond needs to be excavated to allow for the different edge treatments that we'll be using. Larger boulders will be set across from the viewing area, and they'll help retain the soil that will soon become a raised planting area (*diagram 1*). This will help ease the transition from the flat yard up to the waterfalls. The shelf these boulders will be sitting on should be shallow, yet wide enough to support them. (*See Chapter 10 for more information on excavation techniques.*)

esp Ahora que tenemos una idea en como las orillas van manejadas, solamente necesitamos poner el plan en marcha.

Actualmente, el proceso empieza al principio del trabajo. La disposición debería de reflecionar el plan, y después seguirá la excavación.

El estanque tiene que ser excavado para permitir los diferentes tratamientos de las orillas que estaremos usando. Las piedras más grandes serán posicionadas directamente en frente del área de vista y ayudarán a conservar la tierra que muy pronto se convertirá en el área para plantar. Esto va a ayudar en la transición del patio a las cascadas. El estante en donde estás piedras van a ser acomodadas tiene que ser poco profundo, pero suficientemente ancho para soportar las piedras. (Refiera al Capítulo 10 para más información sobre técnicas de excavación.)

CONSTRUCTION GUIDELINES

Diagram 2a

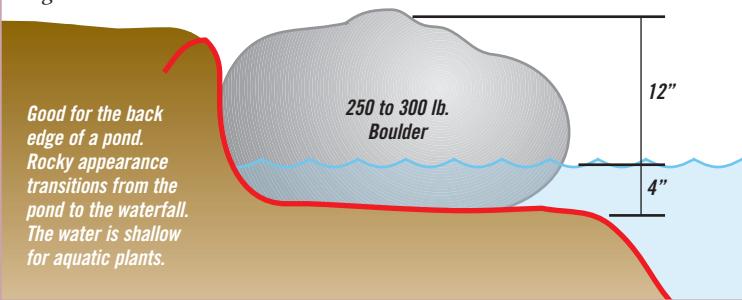
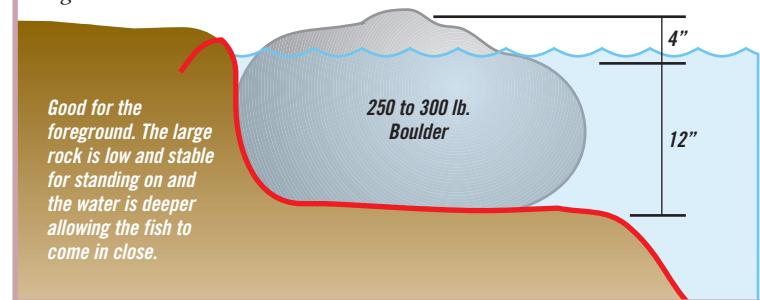


Diagram 2b



The Back Edge

On the back edge of the pond, we keep the shelf shallow for marginal plants allowing us to have more stone showing above the waterline. For aesthetic reasons and for construction efficiency, one huge boulder is most desirable. It's not only faster, but smart stone utilization. In *diagrams 2a & 2b*, we used the same size boulder to achieve two totally different finished products. The only difference was the depth of the shelf.

esp La Orilla de atrás del Estanque

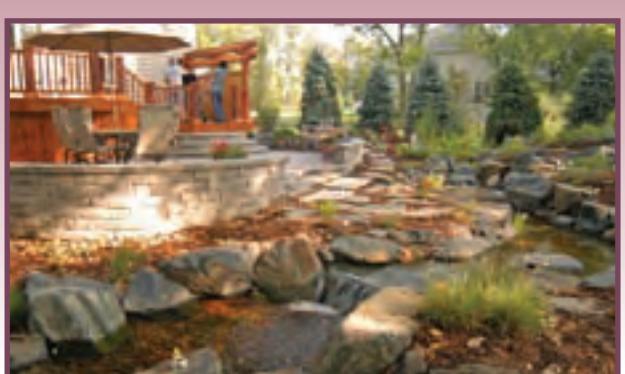
En la orilla de atrás del estanque, mantenemos el estante poco profundo para plantas marginales que nos permite tener más piedra a la vista, y sobre el margen del agua. Por razones estéticas y eficiencia de construcción, se prefiere el uso de una piedra más grande. No solamente es más rápido, pero también es buena utilización de piedra. En el diagrama 2a y 2b usamos el mismo tamaño de piedra para lograr dos productos totalmente diferentes. La única diferencia fue la profundidad del estante.



TIP from TEAM AQUASCAPE

There are many options for pond edge treatments, and each one plays an important part in how the pond is used and enjoyed. Get to know your client's likes and dislikes and show them pictures. Doing this ahead of time will ensure that your client will be satisfied with the final product.

esp Hay muchas opciones sobre los tratamientos que hay para las orillas de los estanques, y cada uno juega una parte muy importante en como el estanque es usado y disfrutado. Conozca los gustos y disgustos de sus clientes y enseñales fotos de diferentes estilos de estanques. Haciendo esto antes de empezar el trabajo va asegurar que su cliente termine satisfecho con el producto final.



CONSTRUCTION GUIDELINES



The Perennial Edge

For a perennial edge, simply fold the liner tightly up against the boulders. Bring the soil right up to the boulder and slightly above the liner and then install the plants according to the design. Lush plantings that cascade over the stones are exquisite—a water gardener's dream come true (*diagram 3*).

esp La Orilla Perenial

Para una orilla perenial simplemente doble la capa protectora fuertemente contra las piedras. Traiga la tierra directamente y ligeramente a las piedras, y un poco arriba de la capa protectora, e instale las plantas de acuerdo al diseño. Plantas exuberantes que estén cayendo sobre las piedras son muy exquisitas—el sueño de cualquier diseñador de terrenos acuáticos.

Diagram 3

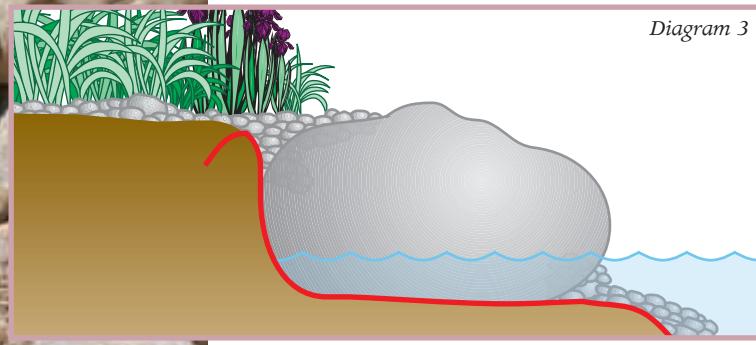
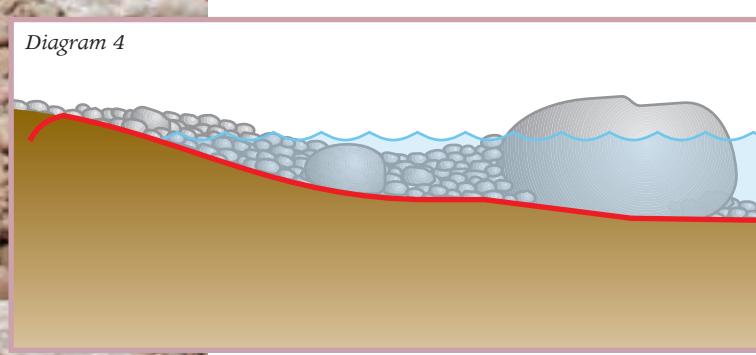


Diagram 4



CONSTRUCTION GUIDELINES

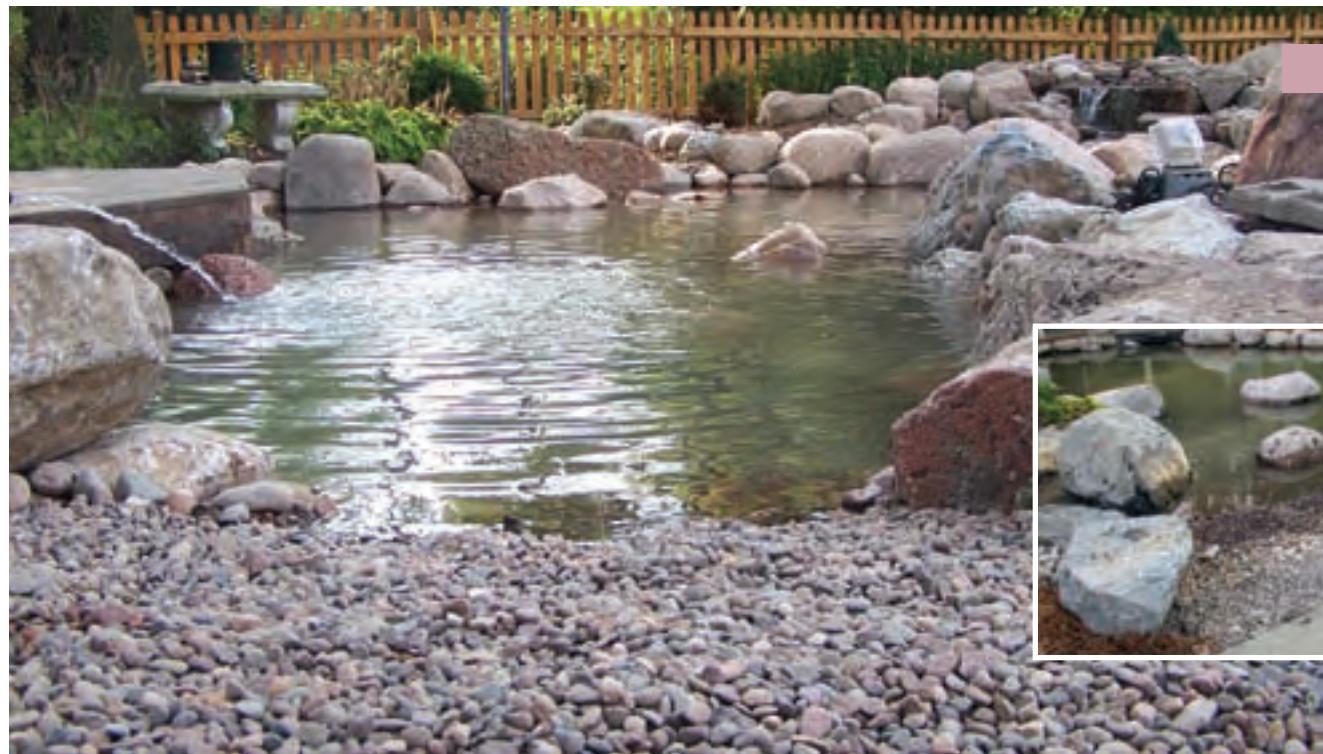
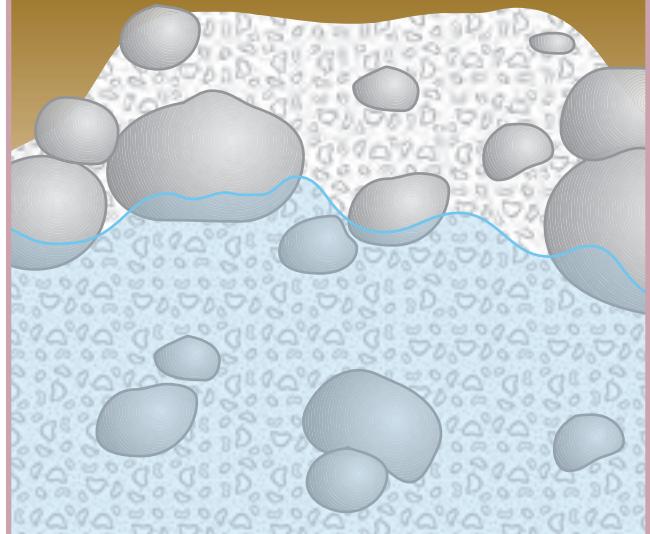
The Front Edge

In contrast to the large rocky edge on the backside of the pond, the front is more inviting, drawing you into the water. Start by using several larger boulders, similar to the ones used on the other side of the pond. Place them on either side of the shallow beach area. This will balance the pond's distribution of larger stones, while providing visitors with a place to sit and relax, while children play in the shallow water. A few medium-sized stones set in the gravel will help give it a natural look, providing some stability to the loose gravel (diagrams 4 & 5).

esp La Orilla de Enfrente

La orilla de enfrente es más lujosa y capta más la atención de la gente. Empiece por usar varias piedras grandes y similares a las que uso al otro lado del estanque. Colóquelas en cualquiera de los lados de la parte profunda del área de la playa. Esto va a balancear la distribución de las piedras más grandes del estanque, y a la vez ofreciendo un lugar donde la gente puede sentarse y relajarse en lo que los niños juegan en el agua. Varias piedras medianas posicionadas en grava le dará una apariencia natural, y a la vez, le ofrecerá estabilidad a la grava suelta.

Diagram 5 - Top View



Who says you can't build a gravel beach? Don't you just want to wade in and swim with the fish?

CONSTRUCTION GUIDELINES

The Planting Area

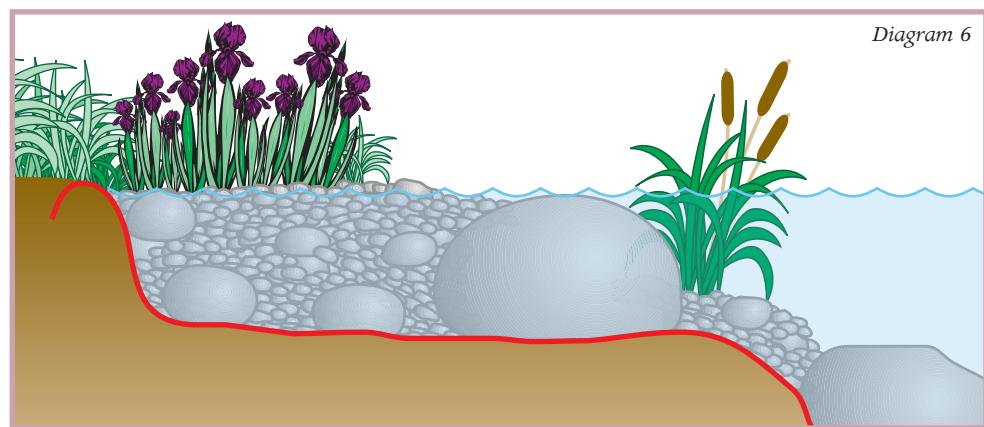
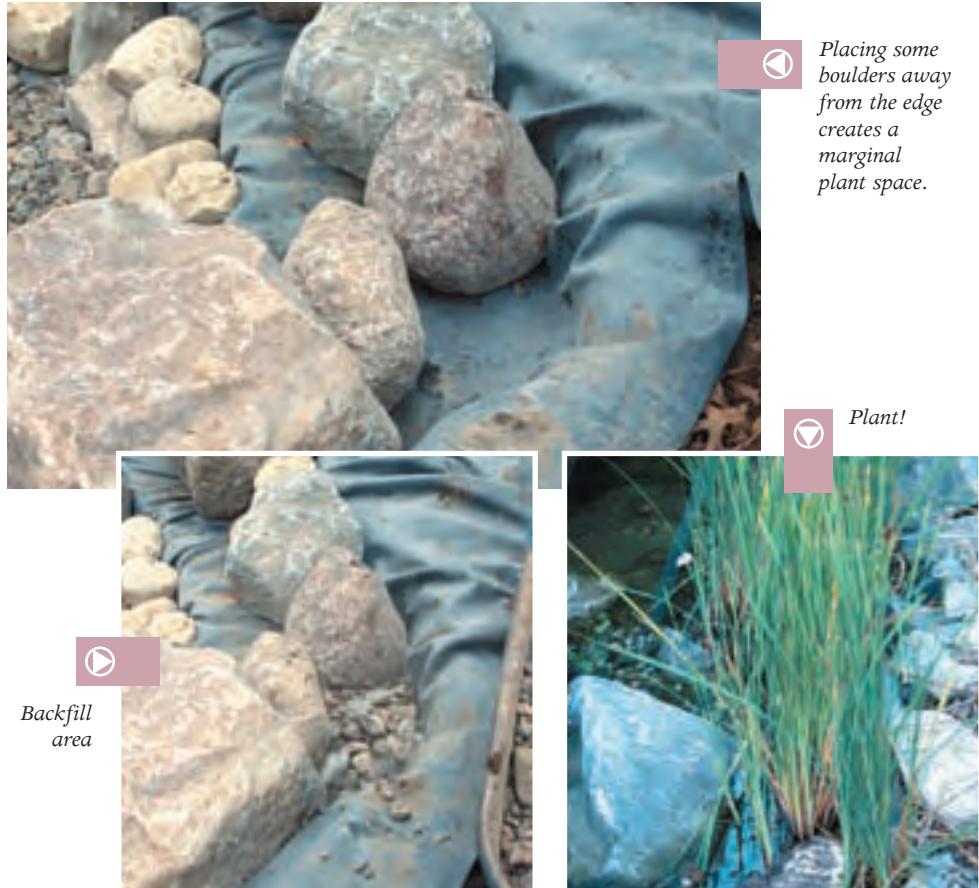
To create a simple planting area, find two boulders that have a good space between them. Place marginal plants between the boulders, and fill with gravel. The plants will grow into the rocky crevice, filling it with color, while providing the pond with added biological filtration. The plant roots will spread through the rocks helping to anchor them in place, while searching for nutrients.

If a larger grouping of marginal plants is desired, set the edge boulders 6 to 12" away from the pond's edge, place the plants in the pocket, and fill with gravel. This is a great way to grow a mass of plantings, which will help soften the edges. These two methods are suitable for deeper rooting plants such as iris, cattail, bulrush, pickerel rush, and arrowheads (*diagram 6*).

esp El Área para Plantar

Para crear un área para plantar, busque dos piedras grandes que tienen buen espacio en medio de ellas. Posicione plantas marginales en medio de estas piedras y después rellene el espacio con grava. Las plantas crecerán en la aertura rocosa llenandola de color, a la vez ofreciéndole al estanque más filtración biológica. Las raíces de las plantas se extenderán por medio de las piedras ayudando que se anclen en su lugar, y para poder buscar sustancia nutritiva.

Si Ud. desea usar una cantidad más grande de plantas marginales, posicione las piedras de las orillas de 6 a 12 pulgadas de distancia de la orilla actual del estanque. Posicione las plantas en la cavidad y llénela con grava. Esta es una manera fabulosa de cultivar una cantidad muy grande de plantas, que nos ayudará a ensuavisar la apariencia de las orillas. Estos dos métodos son muy convenientes para plantas con raíces más profundas como: la iris, cattail, bulrush, pickerel rush, y arrowheads.



CONSTRUCTION GUIDELINES

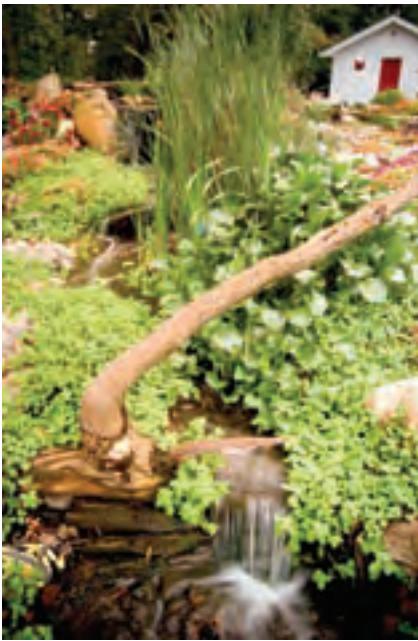


Using Shallow Rooted Plants

For shallow rooted plants like forget-me-not, creeping Jenny, spikerush, and parrot's feather, use a different method. Wait until the pond is full of water, then go around the perimeter sticking the plants in the shallow water between boulders. These low growing plants can be planted anywhere, and are great at disguising the liner and gravel edges. They should be planted just like you would plant groundcovers.

esp Usando Plantas con Raíces Poco Profundas

Para plantas con raíces menos profundas como el forget-me-not, creeping Jenny, spikerush, y parrot's feather, use un método diferente. Espere hasta que el estanque esté lleno de agua, y después camine alrededor del perímetro y empiece a posicionar las plantas en el agua de menor profundidad que está localizado en medio de las piedras. Estás plantas pueden ser plantadas en cualquier lugar, y son buenas para esconder la capa protectora y las orillas de grava. Deberían de ser plantadas como plantas normales.



As you can see, shallow rooted plants can be placed almost anywhere.



CONSTRUCTION GUIDELINES



The Gravel Edge

Probably, the most basic type of edge is the gravel edge. Simply excavate the pond as usual, and then cut an angle into the top 3" of the perimeter. Place the boulders several inches higher than the bottom of the cut angle, and fill the void with gravel. We usually fold several inches of extra liner into the angle just in case we need to make an adjustment. Complete the edge by bringing mulch up to the gravel (diagram 7a & 7b).

esp La Orilla de Grava

Probablemente, la orilla más básica es la orilla hecha de grava. Simplemente excave el estanque como siempre, y después corte un ángulo hacia las primeras 3 pulgadas del perímetro. Posicione las piedras varias pulgadas más altas que la parte de abajo del ángulo, y llene el vacío con grava. Normalmente envolvemos varias pugadas más de la capa protectora dentro del ángulo en caso que necesitamos hacer algún reajuste. Termine la orilla por unir la grava con el cubrimiento de plantas.



CONSTRUCTION GUIDELINES



Granite Block Edgings

If you're looking to break from the monotony of boulder edging that is typically seen in most pond designs, granite edgings can provide a nice crisp look that is both interactive and easy on the eyes. Granite edgings are quick and easy to build and act as a continuous medium that can bring someone right up to the water's edge.

To install the granite edgings you first need to excavate a shelf for the blocks to sit on. Ideally you want the water level to rest about 1-2 inches or so below the top of the block. Next you want to make sure that you run enough liner along the top shelf so that way you can fold the liner around the back and to the top of the block; tucking it just beneath ground level. The notch in the granite is meant for any piping or as a conduit to run electrical lines that may need to run alongside the pond. Then, you just need to backfill behind the edging with some well compacted soil or gravel as an appropriate base for the finishing touches

esp El uso de la piedra graníte para decorar las orillas

Si usted desea decorar las orillas de su estanque con algo fuera de lo común, puede usar ladrillos de granito. Al usar las orillas con granito vera que son rápidos y fáciles de instalar. Por supuesto usted no quisiera que el estanque tenga solamente orillas de granito porque después quedaría en lo mismo.

Para instalar las orillas del granito, primero necesita excavar un escalón para poner los bloques. Usted debe de mantener el nivel de agua de una o dos pulgadas de bajo de lo de arriba del bloque. Después necesita asegurarse que tiene suficiente liner en el escalón de arriba para que le quede suficiente liner para poder doblarlo por atrás y arriba del bloque. El espacio que queda en el granito se puede usar para cualquier tubería o como conducto para las líneas eléctricas que talvez necesiten estar colocadas a un lado del estanque. Entonces, nada mas necesitaría llenar detrás de la orillas con tierra bien condensada o grava como base apropiada para que se vea bien arreglada.

CONSTRUCTION GUIDELINES



Outcroppings

When a builder incorporates an outcropping into their design, they truly are providing maximum interaction between the customer and their pond, all with a natural

looking appeal. Now how do you incorporate an outcropping into your design? First, let us assume that your stone is 6" thick.

In this instance we'll say that we want the water level 2" below the top of the stone. So using your site level, dig your top shelf to 4" below water level. After that, you can place down the liner, tuck it up and behind the back edge and place your support boulders. Then for added protection to the liner, place a rock pad or two on top of the liner. Keep in mind that it's important to place appropriately sized boulders as support to maintain a level surface for the outcropping placement. Once you've checked all your levels you can place your outcropping and support its sides with some gravel or soil if you want to allow planting at the outcropping's back edge.



esp Outcroppings

Cuando un constructor incorpora outcropping en su diseño, están proporcionando la interacción máxima entre el cliente y su estanque, con una apariencia natural.

Ahora cómo usted puede incorporar un outcropping en su diseño? Primero, déjenos asumir que su piedra es 6 pulgadas de gruesa. En este caso diremos que deseamos el nivel del agua 2 pulgadas de profundo. Entonces tomando en cuenta su nivel del sitio, excavé el escalón de arriba a 4 pulgadas debajo de nivel del agua. Después de eso usted puede poner su liner doblarlo hacia arriba y detrás de la orilla, y colocar sus piedras de soporte. Entonces para mas protección a su liner, coloque uno o dos pedazos de underlayment encima del liner. Recuerde que es importante colocar las piedras grandes apropiadas como soporte para mantener una superficie al nivel para el lugar del outcropping. En cuanto ha verificado todos sus niveles puede colocar su outcropping y apoyar sus lados con un poco de grava o tierra si usted desea plantar en el borde trasero del outcropping.



TIP from TEAM AQUASCAPE

Maintain a 2:1 Ratio

When using an outcropping that is 3' in length, be sure that at least 2' of the stone is supported by soil (shelf). This will leave about 1' for an overhang.

Mantener una proporción de 2:1

Cuando use un outcropping de 3 pies de largo, asegúrese que por lo menos 2 pies de la piedra están apoyados por la tierra. Esto dejara como un pie para un sobresalido.

CONSTRUCTION GUIDELINES

Patios, Decks, and Ponds

Having a patio and/or deck near a pond is a necessity. They allow you to get right up to the water's edge. If you install patios and decks, take advantage of this fact. It's best to get the deck/patio built before you build the pond. Then you can bring the pond right up to the hardscape.

esp Los Patios, Cubiertas y Estanques

Teniendo un patio y/o cubierta cerca a un estanque es una necesidad. Le permiten llegar a la orilla del agua. Si Ud. instale patios y cubiertas, tome de ventaje este hecho. Es mejor construir el cubierta/patio antes de que construya el estanque. Así Ud. puede hacer que el estanque llegue al mero lado del patio/cubierta.

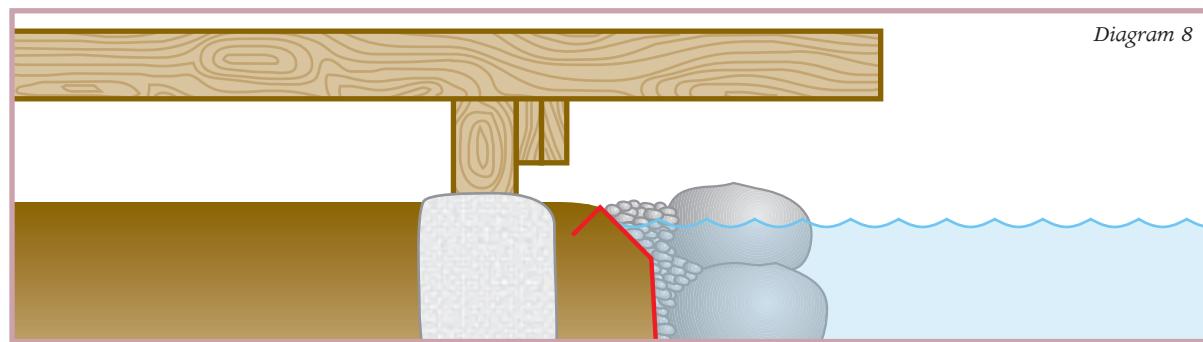


Diagram 8

Decks

Make sure you set the deck posts several feet back from the edge of the deck, and cantilever the joists past the posts. This will leave room for excavation. Simply dig the pond out 1 or 2' under the deck, and install the liner and rocks as usual. The overhanging deck will give a "dock-like" feeling to your water feature (diagram 8).

esp Las Cubiertas

Tenga cuidado que los postes de la cubierta estén situados varios pies atrás del borde de la cubierta final, y ponga las vigas voladizas antes de los postes. Esto le dejará espacio para excavar. Simplemente excavé el estanque uno o dos pies de abajo de la cubierta, e instale la capa protectora y las piedras como siempre. Teniendo la cubierta sobresaliendo de esta manera le dará a su terreno aquático la apariencia de un muelle.



CONSTRUCTION GUIDELINES

Patios

With a flagstone or paver patio, leave a small buffer of a couple inches of soil between the pond and the patio base. If you excavate too far, you can undermine the base and weaken the structure. We've repaired ponds where the patio has collapsed into the water from this exact scenario.

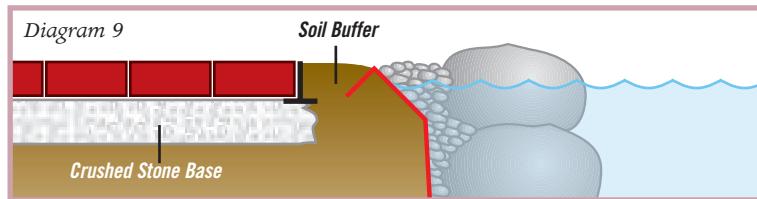
The crushed stone base is meant to be held in place by the surrounding soil. If this soil is removed, the stone base will slump into the liner bringing the patio with it. This is the last thing you want to have happening to your clients as they're holding an anniversary party next to their beautiful pond (*diagram 9*).



esp Los Patios

Con un patio hecho de flagstone (losa) o piedras precortadas, déje un espacio de varias pulgadas lleno de tierra en medio del estanque y la base del patio. Si Ud. excava demasiado, puede minar los fundamentos de la base y debilitar la estructura. Hemos reparado estanques donde el patio se había derrumbado hacia el agua por esa misma razón.

La base hecho de piedras aplastadas se mantiene en su lugar por la tierra que anda a su alrededor. Si se quita esta tierra, el base de piedras se desplomará hacia la capa protectora, llevando encima el patio. Esta es la última cosa que Ud. va a querer que pase si sus clientes estén haciendo una fiesta de aniversario al lado de su estanque precioso.



CONSTRUCTION GUIDELINES

Concrete Patios

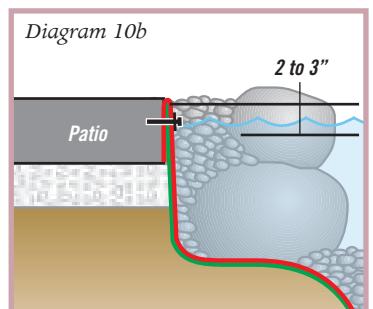
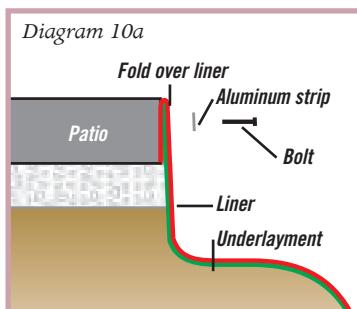
With a concrete patio, you can bolt the liner to the concrete and really keep things up-close and personal. When bolting the liner with concrete anchors, or using a Ramset, make sure the water levels are set properly or you may cause a future problem. Using aluminum strips approximately $\frac{3}{4}$ and $\frac{1}{8}$ " thick, drill holes through the aluminum and into the concrete. The holes should be a couple of inches above the water level so you don't cause a leak. Fold the liner so you're going through two layers. This will help resist tearing. Bolt the liner in place and continue around the edge until it's finished.

Once the liner is attached to the concrete, it's pretty difficult to change. After everything is set and double checked, the stones can be installed. Place the desired stones in front of the patio, leaving a couple of inches between the boulders and concrete. Then backfill with gravel. Backfilling with gravel will increase the stability and help eliminate the risk of rupturing the liner by catching it between the boulders and the concrete edge.

Los Patios hechos de Concreto

Con un patio de concreto Ud. puede sujetar la capa protectora con tornillos directamente al concreto. Cuando sujete los tornillos con áncoras de concreto, asegúrese que los niveles del agua estén nivelados apropiadamente o puede causar más problemas en el futuro. Utilizando fleje de aluminio aproximadamente $\frac{3}{4}$ de una pulgada de anchura, y $\frac{1}{8}$ de una pulgada de grueso, taladre hoyos por el aluminio y en el concreto. Los hoyos deberán de ser unas pulgadas más altas que el nivel del agua para no causar que el agua se derrama. Doble la capa protectora para que esté pasando por dos capas. Esto le ayudará en resistir que se rompa. Sujete la capa protectora en su lugar y continúe por el perímetro del borde hasta que se acabe.

Una vez que la capa protectora esté sujetado al concreto, es muy difícil de cambiar. Después de que todo esté sujetado y revisado una vez más, se puede instalar las piedras. Posicione las piedras deseadas en frente del patio dejando unas pulgadas en medio de las piedras grandes y el concreto. Después llénelo con grava. Llenándolo con grava aumentará la estabilidad y ayudará en eliminar el riesgo de romper la capa protectora por atraparlo en medio de las piedras grandes y el borde del concreto.



CONSTRUCTION GUIDELINES



Driftwood and Moss Accents

A favorite edge accent is to use driftwood and moss covered logs. They're almost a necessity in a naturalistic setting. They break up the pond's perimeter; our eyes are accustomed to repetition so this simple trick fools the brain, and eliminates the repetitive nature of a rocky edge.



TIP from TEAM AQUASCAPE

We suggest breaking up the repetitive edge of stone by placing a stump or log in the water. What about placing a boulder or two outside of the pond? Landscapers do it all the time with outcroppings. As pond builders, we can also use this simple method of creating symmetry and balance in our constructions. A few well-placed boulders will go a long way toward achieving that end.



CONSTRUCTION GUIDELINES



Breaking Up the Repetition With Logs

Logs can be set before or after the pond is rocked in. Setting them before will make the edge appear more natural and will truly disrupt the repetition of the stone. They also act as a transition between the outside of the pond, and the inside, which is another important factor in making a water feature blend into the surrounding landscape. The goal should be a melding of water, rock and plant materials with no discernible boundaries.

Edging is often neglected in pond construction, when it should be considered one of the most important elements. The key is to be creative, and don't be afraid to try out some new ideas.

