

# Thank you for visiting our website!

We commend you for taking the time to learn about this exciting and somewhat overwhelming journey that is buying a swimming pool.

We consider ourselves, first and foremost, teachers. We're here to be a guide and mentor to you through your process of discovery.

# Our commitment to you is honesty and transparency.

# Our greatest hope is that you'll use the information we provide to make an empowered decision for your family.

Even if you don't buy a pool from us, we want each step of this process—from investigation, to sales, to construction—to be a great experience.

# We feel this is the only way to conduct ourselves as a business in our modern age.

In case you're not familiar with us, we manufacture world-class inground fiberglass pools and distribute them throughout North America through our network of independent authorized dealers.

We also install pools in our home state of Virginia, as well southern Maryland.

If you'd like to see what our customers have to say about us, take a moment to read <u>real-time third-party</u> <u>reviews and ratings from our customers</u>.

Perhaps you are still unsure whether a fiberglass, vinyl liner, or concrete pool is right for you.

To explore that topic a little further, check out our free ebook <u>Comparing Fiberglass</u>, <u>Concrete</u>, <u>and Fiberglass</u> <u>Pools in the Modern Age</u> for an unbiased and detailed explanation of the pros and cons of each type of pool.

As a quick review, this chart outlines the differences between fiberglass, concrete, and vinyl liner inground pools:

<b>DESIRED QUALITIES</b> OF INGROUND POOLS	FIBERGLASS	VINYL LINER	CONCRETE
Low Maintenance			
Speed of Installation			
Low Chemical Usage			
Smoothness of Finish			
Durability			
Low Lifetime Cost of Ownership			
Energy Efficiency			
Attractive and Elegant Look			
Beauty of Interior Finish			
Factory Controlled Quality			
Number of Available Features			
Resale Value			
Compatibility with Salt Systems			
Low Initial Cost			
Customizable Shape and Size			

■■■■ = EXCELLENT



In this comprehensive guide, we are going to tackle the most relevant questions pool consumers have about buying a fiberglass pool today.

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# Okay, let's jump right in!

# **Chapter 1:** How Much Does a Fiberglass Pool Cost in 2020?

In this section, we provide the tools needed to determine a ballpark price for your total project.

In the following video I discuss the topic of inground pool pricing and explain some of the factors that will help you plan your inground pool budget.



Determining your pool budget is probably the most pressing question you have. Let's get into some more detail and help you understand how to budget for your inground pool.

Let's start by understanding that buying a pool is a lot like buying a house. The price really depends on a wide range of factors including size, location, and materials.

Here are a few things to consider:

- The average cost of an inground pool in America in 2018 was just over \$40,000.
- In our installation area, our average customer spends about \$50k with the average range being \$40k to \$90k.
- The prices of pools from our authorized dealers vary dramatically from region to region...sometimes as much as 50% based on climate and availability of resources.

### **How Do I Plan My Personal Pool Budget?**

Assuming you are like most folks and prefer to have an authorized fiberglass pool dealer install the pool instead of installing it yourself, you can break your budget down into the following three categories:

- The base package
- The patio
- Options and accessories

# 1 How Much Does the Base Package Cost?

This is another tricky question because every contractor's base package is unique. Some pool builders will only include the pool shell, installation of the shell, and filter system. This is typically done in an attempt to make the initial price of the pool seem as low as possible...and it is a very common sales tactic that proves to be effective for them, at least in the short term. However, I haven't met a customer yet who enjoys being surprised with additional expenses during a project, so in the end, the builder is left with an unhappy client.

If you want to avoid surprise costs during your pool project, we have two words of advice:

- 1. Be specific regarding the labor and materials being quoted.
- 2. Get everything in writing.

Here's a list of potential expenses for a fiberglass pool:

POTENTIAL EXPENSES FOR A FIBERGLASS POOL				
The Fiberglass Pool Shell	Building Permit			
Delivery of Pool Shell	Crane Fee			
Water to Fill Pool	Dirt Hauling Fee			
Pump and Filter System	Stone or Sand for Installation			
Pool Vacuuming/Cleaning Equipment	Pool Fence			
Cost Of Retaining Wall	The Patio Cost			
Final Grading/Landscaping of Yard	Yard Drainage			
Electrical Hook-up Cost	Hitting Rock During Excavation			

We want to help you learn how to ensure you're getting a fair price and won't be taken advantage of.

#### Does the Shape of the Pool Affect the Price?

We are asked from time to time if the shape of the pool affects the price. Actually, it's the size, not the shape of the pool, that makes the difference. Basically, the larger the pool the higher the price.

**BUDGETING TIP:** To calculate a ballpark cost for a base package in most parts of the country, figure about \$1,000 per foot of pool length, plus \$10,000. This certainly does not hold true in all cases, but it's a start. For example, if you're looking at a 30' pool, you can estimate a \$40,000 base package. Again, prices in your area could be much higher or lower.

# 2 How Do I Budget for My Patio?

The cost of your pool patio is based on two things:

- The square footage of the patio
- The material you chose

#### So How Much Patio Do I Need?

The average pool patio is between 600 and 1000 square feet in size.

That is typically enough to accommodate some lounge chairs and a table and chair set, plus enough room to walk around the entire pool.

It's typically best to consolidate your patio square footage into 1–2 areas. For example, instead of having 8 feet of patio around the entire pool, try placing 10 or 12 feet on a side or an end of the pool and reducing the amount in another area. This will make the best use of your space.

#### So How Much Do Different Patio Materials Cost?

Here's a list of patio materials and typical price ranges (varies by region):

<b>Broom finish concrete</b>	\$8–10 per square foot
Stamped concrete	\$12–20 per square foot
<b>Concrete pavers</b>	\$16–24 per square foot
Natural stone	\$25-35 per square foot

**BUDGETING TIP:** Our average customer usually spends somewhere between \$3,000 and \$12,000 on their pool patio. However, it's not uncommon to see folks spend a lot more, sometimes \$20,000 or \$30,000.

# (3) Pool Options and Accessories

We'll cover pool options and some average prices in more detail later. But for the sake of budgeting, it's been our experience that most folks spend at least \$5k on miscellaneous items like salt systems, pool lights, and a pool cover.

If retaining walls are required, they could start around \$3k and be as much as \$30k. The average in our region is \$7k-\$20k.

Assuming you don't have an existing fence that meets pool code, you should allocate some of your budget dollars to fencing.

**BUDGETING TIP:** The average price range for an aluminum pool fence (most common) in most areas is \$30–\$45 per linear foot (between \$4,000 and \$6,500 altogether).

# Think you're ready to receive a quote for your pool? If so, click below to get started!



## CLICK TO REQUEST A QUOTE TODAY

- Other Pool Pricing Resources:
  - ► 5 Ways to Make Your Swimming Pool Project More Affordable
  - Seasonal Savings and Inground Pools: Is Spring or Fall/Winter a Better Time to Install?
  - ► Cheap Concrete Pools, The Economy, and Common Pool Buying Mistakes
  - Inground Pool Cost of Ownership: Fiberglass vs Concrete vs Vinyl
  - ► DIY Fiberglass Pools: The Ultimate Project
  - ► Top 5 DIY Fiberglass Pool Kit Mistakes and Considerations
  - ► How much Swimming Pool Patio Do I Need?
  - ► Top 6 Hidden Costs of an Inground Pool Project



# Chapter 2: How Do I Find the Right Size Fiberglass Pool?

In this section you'll learn about small, medium, and large fiberglass pools and which size might work best for you.

Before delving into this question, it's important to understand two things about the way fiberglass pools are measured:

- The measurements listed by the manufacturer are taken from the widest and longest points of the pool.
- All fiberglass pool dimensions include a 6" wide structural beam around the top of the pool. Manufacturers include that in their measurements. For example, the water's edge measurement of a 16' x 40' fiberglass pool will actually be closer to 15' x 39'. So, as a general rule, take 1 foot off the length and width to find the actual water's edge measurements of any fiberglass pool.

**POOL SIZE TIP:** Some manufacturers of fiberglass pools do not accurately list their pool sizes. Some pools may be off by 12" or more. Be sure to acquire a copy of the pool dig specs to find out exact measurements. Here at River Pools, we never misrepresent the size of our pools. <u>You can find our dig specs on each pool design page.</u>

#### What Are The Sizes of Fiberglass Pools?

Fiberglass pools are broadly categorized into 3 size categories according to the length of the pool.

Small fiberglass pools are up to 26'.

Medium fiberglass pools are between 27' and 34'.

Large fiberglass pools are typically between 35' and 41'.

POOL SIZE NOTES: The widest fiberglass pools are 16' wide because we have to transport them on the highway. Although there are many exceptions, most small pools are between 10' and 12' wide, medium pools are 13' to 14' wide, and most large pools are 15' to 16' wide.

#### Are Fiberglass Pools Too Small?

Speaking from personal experience, I have a large family (six kids) and we have the <u>16'x36' G Series fiberglass pool</u>. As you can imagine, our pool stays busy.

We host pool parties for birthdays, church youth events, and wrestling club pool parties every year. At last year's wrestling club pool party, we set up an outdoor movie screen and about 40 parents and kids watched "Star Wars" under the night sky while swimming.

To my wife and me, this is what owning a pool is all about, and this is exactly what we designed the G36 for. It meets our needs perfectly and everyone had an absolute blast.

Apparently, over 1000 of our fiberglass pool customers feel the same way. Having worked directly with many, many families over the years, I can't recall a single instance when a client, who had the space to get whatever pool they wanted, said their fiberglass pool didn't meet their size needs.

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# I've yet to hear, This pool's too small, Dad!

#### **M POOL SIZE TIPS:** Here are some quick points to consider:

- When it comes to entertaining, most adults spend the majority of their time around the pool rather than in the pool, so in many cases the patio space is just as important as the pool size.
- If you have kids and a small backyard space, the kids will be happy with whatever they can get.
- The average size pool in America is 15' x 30'.
- You can also check out these articles and videos.
- ► Are Fiberglass Pools Too Skinny? And Does Width Really Matter?
- ► How to Choose the Right Swimming Pool Size for You and Your Family
- How Do I Choose the Right Fiberglass Pool?
- ▶ Video: How Many People Can Fit in a Fiberglass Pool?
- ▶ What Is the Best Small Pool for a Small Yard?



# **Chapter 3: How Do I Find the Right Fiberglass Pool Design?**

This section will help you identify the style and features of the pool that best meets your needs.

#### Let's start with two basic questions:

- What features do you want in your pool?
- What shape do you prefer?
- What features do you want in your pool?

#### Here is a list of popular features:

- Tanning ledges
- Open swim lane
- Non-skid texture on steps

- Bench seating
- Open play/swim area
- 8' deep end

- Automatic cover friendly
- Steps integrated into pool
- Vanishing edge

#### **Tanning Ledges**

As one of the hottest features in the pool industry today, tanning ledges are gaining popularity because they add another dimension to the swimming pool experience. On hot days, adults love to kick back and relax in a partially submerged chaise lounge while enjoying a book and favorite beverage. Kids use them as a play area where they splash and jump from the ledge to the pool. It's also a great space for smaller kids just learning to swim.



Tanning ledge on our O30 model



Our L36 tanning ledge



Our D Series tanning ledge



C Series tanning ledge



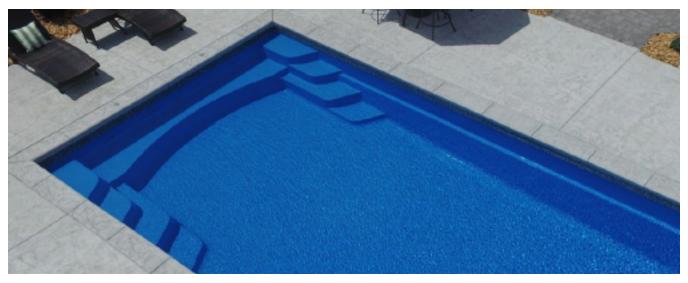
9x9 tanning ledge





#### **Bench Seating**

While actively swimming and playing games in the pool are incredibly fun and enjoyable, there's also a time for relaxing. Bench seats, integrated into the pool design, give you that needed space for enjoying quiet moments or talking with friends and family members. Therapy jets, incorporated into bench areas, are a popular option because of their soothing and therapeutic value.



Check out the bench layout in our G36 pool design.

#### **Automatic Cover Friendly**

Automatic pool covers are safety covers that mechanically move across the pool with the turn of a switch. Because the cover's track system is straight, pools that are also straight allow the track to be concealed beneath the coping edge. Pool designs that allow for this "under-track" system are what we consider auto cover friendly.



An automatic cover on our G36 pool design



#### **Open Play/Swim Area**

Perhaps you simply want to get the most bang for your buck. If this is the case, pools that are designed to provide maximum play space will likely appeal to you. Traditionally, rectangular pools are known for having very open interiors. However, there are some freeform pool designs, like our O Series, that give ample swim space in addition to their curve appeal.



Our G36 pool was designed with one thing in mind: to provide as much usable interior pool space as possible.



Our C Series models (like this 35' model) were designed to be the most spacious freeform pools on the market.



#### **Integrated Steps**

Having the steps integrated into the pool has several distinct advantages. Our fiberglass pools seamlessly incorporate entry and exit points into the pool design. Compare this to vinyl liner pools, which typically have very conspicuous white plastic steps that protrude from the natural footprint of the pool.

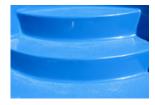


Pictured: Step layout of our R Series models. These wedding cake style stairs are located in the shallow end corner.

#### **Non-skid Texture on Steps**

All of our pool models have a slip-resistant surface on the steps, tanning ledges, and floors. The following are close-up images of our non-skid surface.



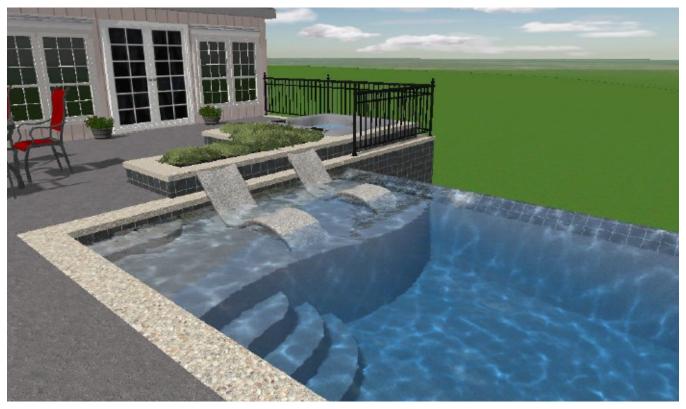


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... our fiberglass pools seamlessly incorporate entry and exit points into the pool design.

#### Vanishing Edge

A vanishing edge, also called a negative edge or infinity edge, is an area of the pool perimeter where water spills over the pool edge into a catch basin located below the perspective of the pool patio. This is typically a consideration on sites with a substantial slope that would allow for such a beautiful feature. Vanishing edge pools are quite expensive, typically adding at least \$25k-\$50k to the price of the project.



Pictured: Image of a vanishing edge option on our D Series pool design.



... typically a consideration on sites with a substantial slope that would allow for such a beautiful feature.



# 2) What Pool Shape Do I Prefer?

The are two broad categories of pool shapes:

Linear

Freeform

## **■ Linear Pool Designs**

# Linear pools can be divided into two broad categories: rectangular and roman end pools.

Roman end pools are distinguished from rectangular counterparts by the distinctive arch at one or both ends of the pool. Both Rectangular and Roman End pools are automatic cover friendly, meaning they allow the cover track system to be located beneath the pool coping.

Here are our linear pool design options:





#### The D Series

Pool Size: 12 x 24 | 15 x 28 | 15 x 32 | 16 x 36 | 16 x 40 View Pool Blueprint

Looking for the perfect tanning ledge pool? Adults can lounge and relax, kids can splash and play, and both discover a new dimension of the backyard pool experience with the D Series.







The R Series
Pool Sizes: 10 x 20 | 12 x 24 | 15 x 28 | 15 x 32 | 16 x 36 | 16 x 40 View Pool Blueprints

The R Series features ample seating areas, a vast pool interior, and sleek clean lines. It's considered by many to be the most wellbalanced rectangular pool available.

LEARN MORE



**G36** 

### **The G Series**

Pool Size: 16 x 36 View Pool Blueprint

In an effort to give you the greatest value, we designed the G36 model to give you the most open swim space possible.









# The T Series Pool Size: 16 x 40 x 8'6" Deep

View Pool Blueprint

The T40 model is 6" deeper than most of the fiberglass deep end pools on the market, with a shallow end 30% larger than the industry standard.

LEARN MORE





# The L Series Pool Size: 16 x 36

View Pool Blueprint

A timeless design with relevant features, the L36 model showcases a grand tanning ledge, sizable deep end bench, and roomy pool interior.







# **Freeform Pool Designs**

Freeform pools have curve appeal, but typically at the cost of sacrificing some swim space. However, there are freeform designs on the market that strike the perfect balance between curve appeal and liberal amounts of space. We designed our O Series specifically for this purpose. It has more open swim space than any other freeform pool in its class.





#### The O Series

Pool Size: 15 x 27 | 15 x 30 View Pool Blueprint

Striking the ideal balance between curve appeal and swim space, the O Series packs big pool features into a mid-size package that's one of our most popular designs.

**LEARN MORE** 



We used the same premise when designing the C Series, which has 33% more space than similar size freeform pools on the market, all while integrating a tanning ledge and generous bench seat.





#### The C Series

Pool Size: 16 x 35 | 16 x 40 View Pool Blueprint

The C Series features a tanning ledge, generous bench seat, and stunning curve appeal while providing more swim space than any other pool in its class.









# **Chapter 4:** What Options and Accessories Should I Consider?

Are you ready for a crash course in pool options?

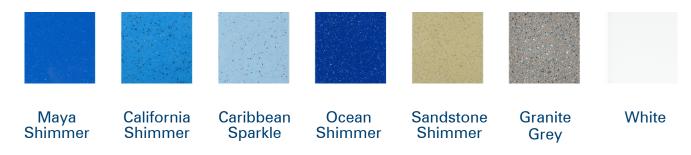
#### We're going to cover:

- Pool color
- Salt chlorine generators
- Pool lighting
- Pool covers (automatic, safety, standard winter, solar)
- Pool heaters
- **■** Waterline tile
- **■** Automatic vacuum cleaners
- Cascades and water features
- Pool fence

#### **Pool Color**

Before the turn of the century, the majority of fiberglass pools installed in America were white. Today, pool owners have also embraced the warm and welcoming feel of colored pool finishes. The white gelcoat is also making a comeback in the mid-century modern aesthetic.

#### Here are our range of pool colors:



The Maya Shimmer is our standard gelcoat color. All other colors are upgrades.



Pictured: White



Pictured: Sandstone Shimmer



Pictured: Maya Shimmer



Pictured: Ocean Shimmer



Pictured: Caribbean Sparkle



Pictured: Granite Grey



Pictured: California Shimmer

You can also visit our pool color page.

#### Salt Chlorine Generators



Salt chlorinators work by converting salt, which is dissolved in your pool water, into pure chlorine. As a result, you get great water quality without the harsh side effects typically associated with chlorine pools like burning eyes and strong odors.

Simply maintain the proper salt level in your pool by adding salt directly to the water once or twice a season, test your water on a regular basis, and enjoy. Considering the low maintenance benefits and exceptional water quality, salt water chlorinators are tough to beat.

However, the down side of owning a salt pool is that because they are so easy to maintain, people tend to neglect them. Because you cannot detect the smell of chlorine, the chlorine level can creep up to levels that will damage the pool surface and pool equipment. It is imperative that salt pools are tested weekly regardless of how good the pool looks.

In terms of price, salt systems on inground pools typically cost between \$1,500 and \$2,500 installed. You can expect to spend under a hundred dollars per year in salt. However, the cell (the component that converts salt to chlorine) will fail after 3-6 years at a replacement cost of \$600-\$900.

The cost of replacing the salt cell is usually about what it would cost to maintain a traditional chlorine pool over that period.





### **Pool Lighting**

Here are some common pool lighting questions:

# 1) Are Pool Lights Safe?

Yes, so long as they are installed correctly, they are absolutely safe. Most modern pool lights are low voltage, meaning they only require 12 volts to function, as opposed to the pool lights of decades ago that used 120 volts.

# Are They White or Colored?

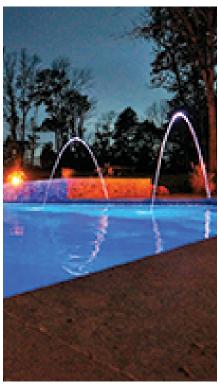
The vast majority of pool lights installed today are colored LED lights. In fiberglass pools these LED lights are typically about the diameter of a soda can and offer a variety of color options. Most lights are controlled by a light switch and will rotate through colors as it is turned off and on.

# **How Many Lights Do I Need?**

We advise getting two lights on pools 30' long or more. The color of the pool also has an impact on the brightness of the light as darker colors absorb more light. For customers with pools over 35' who really want their pool to pop, three lights may be in order.

# **How Much Do They Cost?**

It typically costs between \$650 and \$900 to install each LED light for a fiberglass pool.











#### Pool Covers (automatic, safety, standard winter, solar)

In most areas around the United States, people close their pools during the winter months and consequently need a pool cover. Several different types of covers are available.

#### **Standard Winter Cover**

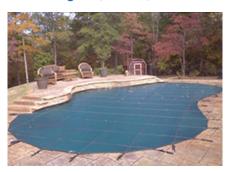
**Price Range \$75-\$300** 



Standard covers are made of a **tarp-like** material and are held down with water bags. This material only **lasts 1–2 seasons** before needing to be replaced. Another disadvantage of this type of cover is the fact that it **holds very little weight**. However, it does keep sunlight and debris out of the pool so long as it stays in place. Standard covers also **require a pump**, which means that you must be vigilant throughout the off-season to ensure too much water does not build up on the cover, which can cause it to cave in. It's also not uncommon for these covers to **partially come off** over the winter.

#### **Security/Safety Cover**

Price Range \$1,800-\$4,500 installed



About 95% of our customers get security covers, also known as safety covers. These covers have a **trampoline-like** appearance with **spring-loaded straps** that anchor into the concrete. There are two main types of security covers: **mesh** and **solid**.

Mesh covers allow water to pass through, thus eliminating the need for a cover pump. They do allow sunlight to pass through, which will result in algae growth if the pool is opened later in the spring. However, because the surface of a fiberglass pool is virtually nonporous, you will be rid of the algae within a day or so after the first cleaning. Because mesh covers typically last 10–15 years (3–5 years longer

than solid covers), **cost about 30% less**, and are virtually **maintenance-free**, most fiberglass pool owners think mesh is the way to go.

Solid covers, on the other hand, do not allow any light to pass through the cover. This leads to a cleaner pool in the spring. However, because water accumulates on the cover, it needs a cover pump and will require a watchful eye over the course of the winter to ensure it continues to function properly. These covers typically last 6–10 years. The cover pump will typically last 2–3 years with a replacement cost of \$200–\$350.

#### **Automatic Covers**

Price Range \$11,000-\$15,000 installed



#### What are the benefits of automatic pool covers?

#### **Automatic Pool Covers:**

- •Reduce maintenance by keeping debris out of the pool
- •Add a layer of safety to protect children
- Serve as wonderful solar covers, increasing the pool temperature by trapping heat during at night



- Keep out unwanted guests (uninvited neighbors and critters)
- Eliminate the need for a pool fence in some areas
- Virtually eliminate evaporation of pool water

#### **How Long Do Auto Covers Last?**

The cover fabric will typically last between 6 and 10 years at a replacement cost of \$4k to \$6k.

#### What Are the Disadvantages of Automatic Covers?

Because they are so effective at retaining heat, many customers find they need to open the pool cover at night to allow the pool to cool off. It's not uncommon for pools with auto covers to reach temperatures in the mid to upper 90s during the hottest part of summer.

Consequently, many customers choose to get a pool heat pump that has a cooling option. This keeps the pool temperature at a refreshing level.

#### Solar Covers

Price range: \$100 for cover only - \$1000 installed with a reel system



Solar covers work exceptionally well for one thing: extending the swim season. They retain heat during the night that the pool absorbs during the day.

On average, the use of a solar cover will **extend your swimming season about 4–6 weeks**, 2 to 3 weeks on each end of the season.

So why doesn't everyone use solar covers? They are a pain to work with. Reel systems are the best way to remove and re-install the cover, but they span the width of the pool and take up a lot of space.

One common misconception about solar covers is that they are effective at keeping debris out of the pool. Not so. The debris does collect on top of the cover, but you still have to take the time to remove it or it all ends up in the pool anyway. It's just as fast to vacuum the pool.

### **Swimming Pool Heaters**

Let's cover the two most common types of pool heaters on the market today: **natural gas/propane heaters** and **heat pumps**. As a general rule, pool heaters are only used during the beginning and ends of the swim season.

#### **Natural Gas/Propane Heaters**



These heaters burn **natural fuel**, propane (LP) or natural gas (NG), to heat the water. They do require hookup to a fuel source as well as electricity to operate. They typically cost \$3,000–\$4,000 plus the cost of gas and electrical hookup.

#### Pros:

- Heats the water very rapidly
- Heats the water regardless of outside air temperature
- •Initial cost of unit somewhat less expensive than a heat pump

#### Cons:

- Grossly inefficient
- Very high cost to operate (as much as \$300-\$800/month)

#### **Swimming Pool Heat Pumps**



Swimming pool heat pumps work on the same principle as heat pumps for a home. They condense heat from outside air to heat the water. They require electrical hook-up. Because of the amp draw of the units, this will cost more than the electrical cost of a natural gas/propane heater. However, there is no expense to run propane or natural gas to the unit. Heat pumps typically cost from \$4,500-\$6,500.

#### Pros:

- •75% more efficient than LP/NG heaters
- Low operating cost (usually \$50-\$250/month)

#### Cons:

- Higher initial cost
- •Only works when air temperature is about 55°F or higher
- Heats slowly (give it 2–3 days to get to temp)

We find that about 19 of 20 of our customers who install heaters choose heat pumps simply because of their dependability and low operating cost. Basically, if you want absolute control of your pool temperature year round and you're not worried about a hefty fuel bill, go with the LP/NG heater. If you're looking to extend your swim season at the lowest cost, a heat pump is probably for you.

#### **Waterline Tile**

Price range: \$2,700-\$3,500









#### What is waterline tile?

Waterline, or perimeter tile, on a fiberglass pool is ceramic or glass tile that is adhered to the surface of the pool with a specially formulated silicone product. The tile is grouted with a silicone product as well, allowing the tile to flex and move with the pool shell.

#### Is waterline tile required on fiberglass pools?

No, it is not. Unlike a concrete pool, waterline tile is not needed to keep the waterline free of staining. It is used purely for aesthetics.

#### What are the pros and cons of waterline tile?

#### Pros:

- Beauty
- As the pool ages gracefully over the decades, waterline tile will make any dulling of the pool surface less conspicuous.

#### Cons:

• It will eventually need to be replaced after an average lifespan of **7–10 years**. The replacement will cost \$3,500–\$4,000.

#### **Automated Controls (Automation)**

Price Range: \$2,500-\$5,500



Did you know that technology exists that allows you to **fully control your pool from a touchpad** mounted in your home or even **from your smart device**? Automation is becoming more popular as we continue to embrace the digital age. This technology allows you to control pool temperature, lights, water features, and also make your pool "party ready" with the touch of a button.

#### **Automatic Vacuum Cleaners**

Price Range: \$400-\$2,500



The number of automatic vacuums available on the market has increased exponentially just in the last five years. Where there were once only about 3 or 4 options, now there are about 50. Automatic vacuums range in price from about \$400–\$2500 and vary in their effectiveness as well. The three main types of automatic vacuums are suction-side, pressure-side, and robotic cleaners. We tend to gravitate toward the robotic cleaners because they are a stand-alone unit that does not require additional plumbing or booster pumps, which can fail over time. Are they a requirement? No, because you can always vacuum the pool with standard cleaning equipment. They are a nice option, but one that could be a future addition if necessary.

#### **Water Features**

Water features are an amazing accent to any pool...and they don't have to cost a fortune. Below are some of the most popular water features.

#### **Cascade Waterfalls**

Price Range: \$900-\$2,000



Cascades are great because they are beautiful and affordable, don't take up patio space, and fill the pool area with the rich sound of falling water. They are controlled at the filter system and come in a variety of lengths. The cascade shown in the picture is 18" long.

#### **Bubblers**

Price Range: \$450-\$750 each

Bubblers add another dimension to the pool experience. The upwelling water is both beautiful and fun for kids.





#### **Deck Jets**



Pictured above: lighted laminar deck jets. They produce a clear tube of water that can be illuminated at night. These typically cost several thousand dollars

Pictured below: standard deck jets, which basically shoot water from a nozzle. They produce a steady stream without the "glass tube" effect. Standard deck jets are typically \$500 to \$1,000 each.



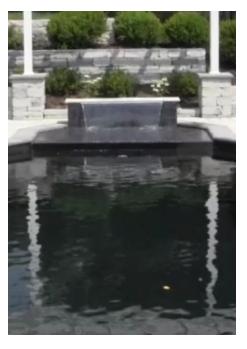


#### **Custom Poolside Water Features**

#### Price Range: per quote

One of the best ways to accent a fiberglass pool is with a poolside water feature. Below are several that were custom designed and built for the client. The price for most poolside water features can range from \$2,500 to \$25,000.









#### **Firebowls and Firepits**

If you want to make a profound impact in your backyard space, bring the elements of fire and water together. Gain inspiration from the projects below. Fire bowls typically range in price from \$5,000 to \$8,000 installed and fire pits can start around \$2,500 and go up from there.













#### Spas, Wet Decks, and Wading Pools

Thinking of adding a poolside spa, wet deck, or wading pool? These features can be integrated by having them spill over into the pool, or they can be a completely separate vessel. These features can cost anywhere from \$6,500 to \$35,000 depending on whether they are elevated and what materials are used in their surround.



#### **Pool Fence**



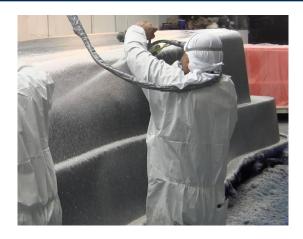
The most popular pool fence on the market today is made of powder-coated aluminum. This sleeklooking, low-maintenance product is perfect for pool projects where a privacy fence is not a requirement. The typical color is black, but white, green, and copper colors are also available. Aluminum fence typically costs around \$30-\$45 per linear foot.

PVC fence is also a viable option around pools, especially when a 6-foot-tall or higher fence is needed. It is also relatively low maintenance and durable. PVC privacy fence typically costs \$35-\$55 per linear foot.

Wooden and chain link fence are by far the most budget-friendly options. Wood requires much more maintenance than aluminum or PVC. With chain link fence, be sure to check your local fence codes because the standard-size diamond openings do not pass in most areas. Wooden and chain link fence can cost \$20-\$30 per linear foot.







# **Chapter 5:** Which Fiberglass Pool Manufacturer Is Best?

In this section we're going to provide you with more information about the manufacture of fiberglass pools that you will find anywhere else in the world. Why? Because we have nothing to hide, and we have felt for the longest time that there has been an absolute void of good information in this area.

We are thrilled, having entered the manufacturing space in recent years, to finally shed light on real scientific data that will empower you to make a sound decision.

What we won't do is mention other manufacturers. Instead, we will describe exactly how we build our pools and why we expanded from nationally recognized installer to manufacturer in the first place.

# 6 Reasons We Expanded from a Nationally Recognized Installer to a Manufacturer of Inground Fiberglass Pools

A lot has changed at River Pools since our humble beginning as a pool installer in 2001. Initially, we bought fiberglass pool shells from other manufacturers just like Ford dealers buy cars from Ford. We knew that we wanted to be the best fiberglass pool company possible, but we never dreamed that someday we would become a highly sought-after manufacturer in our own right.

- Below are 6 reasons why we expanded from being a nationally recognized brand and premier pool builder throughout the Virginia/Maryland region into a manufacturer of fiberglass pools for distribution across the country.
- 1 Defective Pools from Other Manufacturers Presented a Major Challenge

As we grew as an installer, from six pools per year to well over one hundred, we came to understand that we were only as good as the pool shells we installed. Unfortunately, we did not always receive great pools, and sometimes not even acceptable ones. We felt obligated to our clients to ensure they were delighted in the end so we took great measures to make everything right. Although our customers were happy, we were left extremely frustrated. This was the spark that ignited our first ambitions to manufacture our own pools.



We're careful here to point out that there are really good fiberglass pool manufacturers in the marketplace today, and generally speaking, the quality of fiberglass pools has increased across the board since our early days as an installer. Notwithstanding, the same principle holds true: a builder is only as good as the pool he or she installs. And there are certainly builders who currently find themselves in the same situation we were in years ago.

# (2) We Needed to Control Our Own Destiny

Eventually, our frustration reached critical mass and we decided **the only way to be the best fiberglass pool company was to manufacture our own pools**. Was it a leap of faith? Sure. Did virtually everyone tell us we were crazy? Yes they did. But we had a clear vision of what a fiberglass pool should be, for both the homeowner and the builder, and we felt destined to make it a reality.

## (3) We Wanted to Design Pools We Would Want in Our Own Backyard

By the time we started manufacturing, we had sat across the kitchen table with thousands of prospective clients. We had a deep understanding of what sizes, shapes, features, and colors resonated with the consumer.

One of the things we love most is **the freedom to design our own pools**. We scrutinize every square inch and treat every pool as though it is going in our own backyard. The creation of every design is a thrilling experience that we laughingly liken to the birth of a new child, and we are excited to constantly expand our line and bring new models into the fold.

# (4) We Wanted Pools That Were Easy to Install

Before we began manufacturing, we had installed over 1,000 fiberglass pools from most of the major manufacturers in the country. Heck, we had been named one of the Top 50 Pool Builders in America by Pool and Spa News. We clearly understood what made a pool great from an installation standpoint. We also knew that we could leverage that experience to produce the most structurally sound and installation friendly pools available, and that's what we set out to accomplish.

#### Were we successful?

Here's a text we received from Billy Becker, one of the nation's leading fiberglass pool installers after installing his first R32 model:

"The pool set like a dream, the walls were straight, and it was nice and level. It went great!"

Coming from an installation background ourselves, we understand how frustrating it is to spend countless hours trying to compensate for a pool that is manufactured crooked or out of level, or having concerns that the pool could break from being built too thin.

We vowed that, first and foremost, our pools would be a pleasure to install.

# (5) We Want to Reach More People

As a regional pool builder with <u>international brand recognition</u>, we constantly received requests from good people around the world who desired to work with us. These are folks who clearly aligned with our core beliefs and philosophy.

Here's a typical message that came through our Facebook page:



March 20 at 9:34pm

Facebook User: "Do you install in <my US city> area or have a local experienced dealer?"

River Pools and Spas: "Hi, great to hear from you!. We do not currently have a dealer that services your area. We have had people like yourself go to local pool builders and request they become a dealer...that's a long shot, but always an option. Thanks and good luck!"

Facebook User: "Thanks. Sorry to hear that. We were almost sold on the C40!"

River Pools and Spas: "Glad you like it:)"

Facebook User (the next morning): "After watching your videos, I don't think I could trust another manufacturer/builder. Nothing seems to come close."

Frankly speaking, this breaks our heart. We knew that **manufacturing fiberglass pools would open the door to work with great folks like this through our network of authorized dealers**. Our dealer base is ever expanding, we're able to reach more and more people, and we're excited to someday realize our vision of families across the country enjoying beautiful fiberglass pools that are easy to maintain and a joy to own.

# 6 We Believe in the Benefits of Fiberglass Pools

None of this would be possible without our deep conviction that **fiberglass pools bring tremendous benefits to both homeowners and pool professionals**. Having begun as a vinyl liner pool installer, we saw an immediate difference in what we might call "customer delight."



Basically, our fiberglass pool customers wouldn't stop raving about their pools. This, and the fact that the installations went relatively well, led us to the point where we fully embraced fiberglass.

In retrospect, it was the best thing we ever did, and we still carry with us a vigor and excitement for the product, and we see the tangible evidence of these benefits in the faces of our customers.

We are excited to share with you how we manufacture our pools through our cutting-edge system called <a href="The River Pools Way: Advanced Manufacturing">The River Pools Way: Advanced Manufacturing</a>.



#### **Advanced Manufacturing**

The fiberglass pool shell is the foundation of the entire pool project. We have made it our mission to produce a pool you can rely on for many years, even decades, into the future. The fruit of our efforts is our manufacturing methodology called The River Pools Way: Advanced Manufacturing.





Limited Lifetime Structural Warranty and 15-Year Finish Warranty

- 1. Gel Coat Surface Layer
- 2. Vinyl Ester Resin for Corrosion Resistance
- 3. Chopped Fiberglass For Strength
- 4. Hand Laid Woven Roving at Stress Points
- **5.** Structural Comb Supports
- **6.** Chopped Fiberglass Strength Layer



The River Pools Way includes a series of cutting-edge materials and manufacturing best practices. When implemented, it ensures you have the strongest, most durable fiberglass pool possible.

Without getting too technical, the core premise in our advanced manufacturing is to drive a process called polymerization during the manufacturing process. Polymerization is the process by which **polymer molecules cross link** together to **form a web of strength within each layer of the shell structure**. Each layer of our fiberglass pool undergoes this polymerization process, and the more cross linking that occurs, the **stronger** and more **corrosion-resistant** the pool shell becomes.

We developed our advanced manufacturing to drive the polymerization process and fuse the entire structure together, layer by layer, into a single composite structure that is incredibly strong and durable.

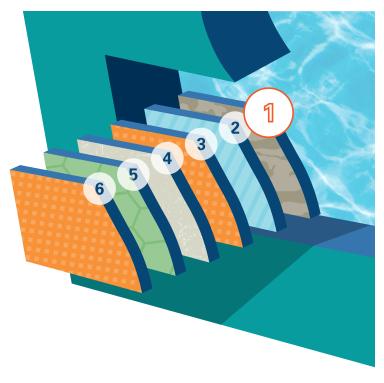
## **■ Layers of The River Pools Way: Advanced Manufacturing**

# **1) Gelcoat Surface Layer**

The entire **surface of the pool** that we see, touch, and feel is a thin layer of gelcoat. Because fiberglass pools are actually built from the inside out, gelcoat is **the first layer applied** during the manufacturing process. Our gelcoat is spray-applied to a thickness of **27 to 30 mils** and provides the <u>rich color</u> and smooth finish that make fiberglass pools beautiful and user-friendly.

#### Gelcoat Spraying Process





Our skilled technicians spray our gelcoat blend evenly to provide a beautiful finish and optimum coverage.

You have probably heard that <u>fiberglass pools are easier to maintain than traditional pools</u>. This is because the gelcoat surface is relatively **non-porous**. This makes the pool algae-resistant and eliminates the need for burdensome maintenance like brushing the entire pool each week, or costly acid washing every 3–5 years to kill embedded algae.

It's important to us that our gelcoat **achieves a proper cure** as this will ensure its **durability**. If you read enough online forums about fiberglass pool gelcoats, you'll find some people, especially with older white pools, had problems with their pool surfaces eroding away. The surface would "chalk" and turn to white powder before their eyes.

The surface of these pools was deteriorating. In some cases, this was most assuredly due to homeowner neglect, but in many cases the gelcoat never achieved a full cure.

This deterioration could be for a number of reasons:

- Improper factory conditions
- The gelcoat was under-catalyzed
- The gelcoat was not backed by another layer of laminate to drive the cure

# To prevent this from happening, we go to great measures to ensure that, not only our gelcoat, but all the layers of our pool shell achieve maximum polymerization.

With as many polymer chains cross-linked as possible, the product reaches a full cure with maximum strength and durability. One key to making this happen is **temperature**, because it is heat that drives the cross-linking process.

# Here's How We Drive the Cross-Linking Process of Our Gelcoat:

# Check mold temperature with a temperature gun to ensure it's at least 77°F

Fiberglass pools are manufactured on a mold. Molds are huge fiberglass structures that are a mirror image of the pool. We heat the entire mold to a minimum temperature of 77 degrees before spraying the gelcoat. Why? **Once the gelcoat is sprayed, it immediately becomes the same temperature as the mold.** 77 degrees is the ideal temperature for composites manufacturing, so by ensuring the mold is 77 degrees, we are helping the gelcoat to achieve a full cure.

#### Heat gelcoat material to at least 77°F

When it comes to composites, consistency is our friend. By **ensuring our drum of gelcoat material is well blended and the right temperature before it is sprayed,** we create a condition where it can reach its highest performance potential.

#### Maintain consistent air temperature and humidity levels

Our factory is **climate-controlled** with state-of-the-art **infrared heat** that delivers heat to the plant while allowing our ventilation system to function properly. Air temperature is another variable that can greatly affect the cure of our pools. Having the ability to control our factory conditions is a huge advantage over concrete or vinyl liner pools that are constructed on site and subject to the volatilities of weather.

#### Use specially blended catalyst at the correct percentage

Gelcoat, and all other resins within the composite, are blended with a catalyst. This is a liquid that, when added, initiates the process of polymerization. We use **special blends of catalyst for the summer and winter** and ensure that the **correct percentage of catalyst is mixed with the gelcoat during the spraying process**.

**Too much** catalyst, and the gel **sets too rapidly**, preventing proper spray pattern overlap. **Too little** catalyst, and the **cure of the gelcoat is compromised**.

# 2 Vinyl Ester Resin for Blister and Corrosion Resistance

The second layer of the fiberglass pool manufacturing process is our vinyl ester chopped fiberglass layer. Vinyl ester is a premium-grade resin specifically blended to prevent an unwanted process called osmotic blistering. Osmotic blistering is a phenomenon where the gelcoat surface forms actual blisters and separates from the next laminate layer.

This happens as water travels through the gelcoat, comes in contact with other contaminates, and forms a larger molecule. The larger molecule then tries to exit the same way it came in. That causes an outward force on the gelcoat, eventually resulting in a blister.

Vinyl ester resin prevents this from happening because it acts as a watertight barrier. The water passes through the gelcoat, contacts the pure water barrier, then leaves. There are a huge variety of blended vinyl esters available to composites manufacturers, and truth be told, it only takes a small percentage of vinyl ester to call a product "vinyl ester resin." Our vinyl ester is specially blended to produce the best blister protection available.

## **Our Vinyl Ester Resin Application Process**







Next we roll out the fiberglass to consolidate and remove all air.

A second advantage to our vinyl ester chopped fiberglass layer is that it helps drive the cure of the gelcoat. As soon as the gelcoat has set, we apply this layer of chopped fiberglass that serves as a gigantic heating blanket. The beauty of our advanced manufacturing is that the exothermic heat (called exotherm for short) generated from the curing process of each layer actually helps drive the cure and cross-linking process of all previous layers. Talk about synergy!





# (3) Chopped Fiberglass For Strength

Now that we have our gelcoat surface applied and our corrosion and blister resistance covered, it's time to start building strength into the pool shell. Chopped fiberglass is applied by a "chopper gun" that simultaneously chops continuous strands of glass fiber into roughly 1" pieces while spraying resin and catalyst all onto the mold. It is then rolled out to consolidate and remove air.



Why do we use chopped fiberglass vs. hand-laid fiberglass to build strength?

We have done it both ways and we prefer chopped fiberglass for several reasons.

- Chopped glass actually gives the pool the perfect balance of flex and strength. We have found that pools that are more hand-laid than chopped are actually more flexible than we prefer. The pool needs to be strong enough to lift, transport, and set and also rigid enough to hold its shape. We feel that chopped fiberglass in bulk strikes that perfect balance.
- We do not have a lot of employee turn-over. One of the disadvantages of chopped fiberglass from a manufacturing standpoint is that it requires a lot of skill to produce a consistent thickness. In contrast, hand-laid woven roving has a set weight and thickness so it's easier to manage material use. However, because our fiberglass specialists are highly skilled and we keep the same teams year after year, we don't have a problem with consistency. Evidence: the cut-outs from every pool that show the true pool thickness and the fact that we weigh each and every pool as an internal quality-control measure.





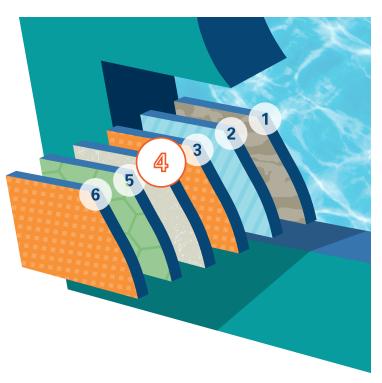


# 4 Hand-Laid Woven Roving at Stress Points

We reinforce specific areas of the pool shell that are subject to higher levels of flexural stress, such as where the pool floor meets the walls, tanning ledges, steps and benches with this added layer of woven roving fiberglass for additional strength.



Woven roving





Application of woven roving to our pool shell



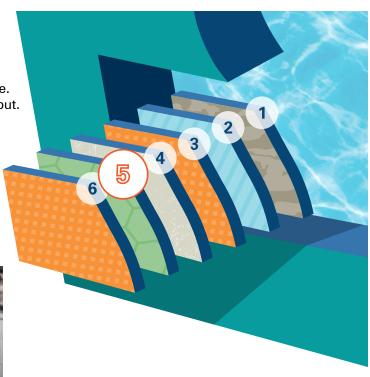


# (5) Structural Comb **Supports**

Fiberglass is naturally flexible. In fact, its tensile strength is many times that of concrete. But there are times where we want it to stay put. Consequently, we use structural comb ribs and support layers throughout the pool shell and obtain a much higher strength in these areas with very little material or labor cost.

We use structural comb supports under the entire surface of all steps, benches, and tanning ledges. We also use structural comb ribs along the side walls of the pool.



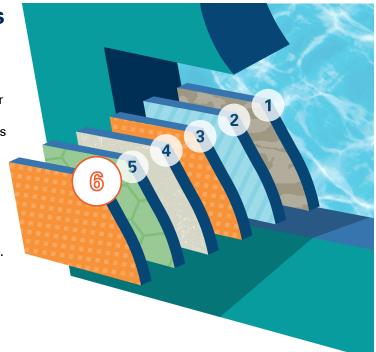


Our structural comb material, when sandwiched between layers of fiberglass, adds incredible strength.

# (6) Final Chopped Fiberglass Strength Layer

Our pool manufacturing crescendo is a final layer of chopped fiberglass to provide even more strength. The exotherm from this layer is the final heat blanket that will continue to drive the cross-linking process of all previous layers to a full cure. While adding this layer, we also glass-in the lifting points on the pool.

This concludes the manufacturing of the pool shell. Next, the pool is removed from the mold, trimmed, detailed, and shipped to a very excited family somewhere.







#### What You Need to Know about Fiberglass Pool Warranties

Fiberglass pool warranties are a strange thing because, on the surface (no pun intended), they all seem pretty much the same, but they aren't. Again, the fiberglass pool is the foundation of the entire project, so if you think the pool warranty is important, we would suggest taking the time to read the entire warranty from any manufacturer that you're considering.

#### Questions to ask about fiberglass pool warranties:

- Is the warranty transferrable?
- Does the content of the warranty match the claims of the warranty's name?
- Who is on the hook to drain the pool and replace water and chemicals in the event of a structural failure?
- Are the company's warranties readily available on their website?

#### Fiberglass pool warranties come in twos

Fiberglass pool manufacturers provide **two warranties**: one to cover the **structure** of the pool shell, and another to cover the **surface**. The structural warranty is typically for a much longer duration and is usually pretty straightforward. The surface warranty, depending on the manufacturer, can be a little more difficult to follow and, in some cases, not even provide much of a warranty at all. This is where reading the warranty comes in handy.



#### **Our Lifetime Structural Warranty**

Here are some highlight from our Lifetime Structural Warranty:

- Covers a structural failure due to defects in workmanship or materials
- It is transferrable
- We cover the cost to drain and brace the pool
- We cover the cost to refill the pool and replace chemicals



#### **Our 15-Year Surface Warranty**

- Covers osmotic blisters for a period of 15 years
- · Is transferrable

# **Click here** to read our entire warranty!

Digital photos taken of every pool before delivery



# **Chapter 6: Do I Have** a Good Yard for a Fiberglass Pool?

In this section, we give you the tools you need to conduct a basic assessment of your yard for a fiberglass pool.

There are actually quite a few things we look for when surveying a backyard for an inground pool.

#### Here are two that we look for immediately:

- The amount of area we have to work with
- The slope of the yard

If there's not enough space to install a pool, that's an obvious deal breaker. We also look at the slope or grade of the yard, which is important because it determines if there is a need for retaining walls, which can dramatically impact the cost and design of the overall project.

BACKYARD TIP: Measuring your yard for a pool? Be sure to contact your local building and zoning office to determine the setbacks from the property lines and house. Ask if there are any easements or other restrictions specific to your property that would affect the pool or patio placement. It's also a good idea to have your underground utilities marked to ensure they do not interfere with the pool.

Other than yard space and slope, there are several other factors to consider when surveying a backyard for a pool:

#### Access

An inground pool is often the largest project that will ever happen in a backyard. It usually involves hauling massive quantities of dirt out, and multiple truckloads of other materials in... not to mention a huge one-piece pool shell that needs to make its way from the street to it's new home. All this happens through whatever pathway you can provide. As you will see in the following video, we can work with even the tightest access lanes, so if you have a challenging site, don't get discouraged.







#### Trees

We are often asked, "How close can trees be to the pool?" Think of it this way: a tree often looks about the same under the ground as it does above the ground. We need to take care not to disturb too much of the root system. Ideally the pool and patio will be located outside of the "drip line" of a tree, or just outside of the outer extremities of the branches, although many times this is not possible.

BACKYARD TIP: If removal of a tree is necessary and the stump is within the pool or patio area, be sure to **remove the entire stump** instead of just grinding it down, which is what most tree guys will want to do. Many times we have the tree guys leave the stumps about 3' high and we remove them with our equipment before beginning excavation. We just ask the customer to cover the cost to haul and dispose of the stump if it needs to be removed from the site.

Also check out: Inground Pool Construction and Trees: 7 Questions and Answers

#### Privacy

Even if your backyard isn't completely concealed, there are many ways to screen the pool area if you feel the need. **Privacy fence** and **landscaping** are two common ways to accomplish this. Just keep in mind that plants and trees, although great at providing a visual barrier, don't provide a good noise barrier.

# Ready for a pool professional to take a look at your yard? Then click here to get started!

- Other Backyard Guidelines:
  - ▶ What Is the Best Small Pool for a Small Yard?
  - ► Inground Pool Elevation: How High Should I Set My Pool?
  - ► Fiberglass Pool Retaining Wall Video: Solutions for a Sloped Yard
  - ► Inexpensive Retaining Walls for Inground Pools (Video)



# **Chapter 7: What's the Best Way to Install a** Fiberglass Pool?

Our unique fiberglass pool installation methodology incorporates a series of ground-breaking best practices. If properly implemented, The River Pools Way eliminates the most common fiberglass pool installation problems.

Did you know that River Pools actually began as an installation company? That's right, we have been fortunate to have installed well over 1,000 fiberglass pools since 2001, and we've always been motivated to give our clients a great experience, peace of mind, and an installation that stands the test of time.

Because of our efforts to constantly produce new and better installation practices and because of our desire to share what we've learned with the world, we have become recognized as thought leaders in the industry, especially with regards to fiberglass pool installations. We have been listed as one of the Top 50 Pool Builders in America. We teach fiberglass pool installation classes at Industry Trade Shows on the National and Regional levels. Millions of folks just like you read and watch our fiberglass pool installation articles and videos on our website to deepen their understanding of the process.

Consequently, our unique advanced installation within The River Pools Way has sparked a nationwide revolution with regards to the way fiberglass pools are installed. We developed this technology after we began to see that installing a fiberglass pool according to the "industry standard" actually led to a failure rate that, to us, was unacceptable.





#### What Is The River Pools Way: Advanced Installation?

The River Pools Way includes our unique installation methodology that virtually eliminates the sources of major fiberglass pool installation problems:

- · Settlement or shifting of the pool shell
- · Leaks in plumbing lines and around jets and other pool fittings
- · Separation between the pool and patio
- · Bulges in the side walls of the pool

#### ■ How Does the Advanced Installation Work?

The components of The River Pools Way: Advanced Installation:

# Our "River Rod" Fuses the Pool Shell and Patio Together

One area of concern is where the pool shell and patio join. We developed our River Rod to serve as a means to fuse the pool shell and patio together to prevent shifting, settlement, or movement of any kind that could result in structural failure. The River Rod is a 12-inch-long composite rod that we install into the top of the pool shell. It becomes encased in the concrete bond beam that we pour around the perimeter of the pool. Watch the following video to better understand how River Rods work.







# (2) Plumbing Straps That Secure Plumbing to the Pool Shell

One of the major causes of pool plumbing leaks is movement. When pipes shift, this sets in motion a chain reaction that puts undue stress on the pipe, plumbing connections, and the components of the pool the plumbing is attached to, such as return jets, skimmers, drains, etc. In The River Pools Way, we secure the plumbing by fastening the pipes to the pool shell using a strap system. This ensures there is no stress placed on any component of the plumbing system.



#### **Other Related Content:**

**5 Keys To Perfect Fiberglass Pool Plumbing** 

# (3) All Schedule 40 PVC Hard Pipe

When installing a pool, there are basically two types of plumbing pipe to choose from: hard pipe or flexible pipe. In The River Pools Way, we only use hard pipe. Because it does not flex and bend with the contours of the pool, it does require more effort to install. However, flexible pipe is actually not rated for underground use, so we don't feel it's worth the risk.

#### **Other Related Content:**

- Rigid PVC vs Flexible PVC: Which Is Best?
- **How to Heat Bend Rigid PVC Pipe for Swimming Pools**





# (4) Crushed/Chipped Stone Backfill Material

What is backfill material? It is simply the material that we place under the pool and around the outside of the pool shell after it is set in the excavated hole. The use of clean, crushed stone backfill is imperative to the long-term success of a fiberglass pool installation.

Sand, the traditional material used in the industry, works well in areas with pure sandy soils, but it doesn't take a soil specialist to understand what happens to sand when it becomes saturated with water: it liquifies. Consequently, our experience has been that there is a much higher percentage of fiberglass pool installation issues when using sand as a backfill material such as:

- Settlement of the pool shell after installation
- Leaks developing from pressure on plumbing as a result of sand settlement
- · Bulges in the side walls of the pool shell

These are challenges we faced and fixed early on, but they virtually went away overnight the moment we stopped using sand and began using clean, crushed stone as our backfill material. It drains better, it doesn't move, and it doesn't change its properties when wet.

#### Other Related Content:

- ► 7 Deadly Sins of Fiberglass Pool Installations
- ► How Much and What Type of Stone Is Needed for a Fiberglass Pool Installation?
- ▶ Installing a Fiberglass Pool Properly: Sand vs. Stone, Which Is Better?

# 5 Plumbing Encased in Stone to Prevent Plumbing Settlement

Unlike sand, the right stone backfill will not move or settle. This creates a condition for long-term plumbing success.

#### Other Related Content:

► How to Prevent a Nightmare with Your Swimming Pool Project

# 6 12"-Thick Concrete Bond Beam around Perimeter of Pool

All inground fiberglass pools require some concrete to be poured around their perimeter to stabilize the pool shell. With The River Pools Way, this concrete bond beam is poured extra thick and flows under the lip of the fiberglass pool shell and encases the River Rod. As this concrete "bites" around the River Rod and the lip of the pool, it "locks" everything into place, ensuring the pool and patio will be structurally secure for many, many years.

# (7) Sump Pipe for Monitoring/Removing Ground Water

Eventually, all fiberglass pools will need to be drained, even if it's decades down the road. There needs to be a means to inspect and remove any groundwater that is present around the outside of the pool shell to prevent damage from occurring. Because we think long-term, our advanced installation includes a "sump pipe" that gives one the ability to do just that.

#### **Other Related Content:**

▶ 3 Reasons Not to Drain a Fiberglass Pool without a Professional

#### **Prevention Is the Key**

We've found that the real challenge with inground-pool-related problems is that they are all connected. In other words, **one issue will typically lead to another**. For example, settlement around the pool can lead to a leak, then the infiltration of water can lead to additional shifting and movement, resulting in an unfortunate chain reaction that, if never remedied, never ends.

The fundamental philosophy of The River Pools Way is to understand and prevent the root cause of these problems. This equates to a trouble-free pool that will stand the test of time.



#### **CLICK TO REQUEST A QUOTE TODAY**

#### What Is the Fiberglass Pool Installation Process?

Here are the basic phases of a typical fiberglass pool installation:

- 1 Excavation
- 2 Setting and Leveling the Pool
- (3) Plumbing the Pool and Filter System
- 4 Backfilling the Pool Shell
- **(5)** Coping and Patio

# Phase 1 | Excavation

#### What happens first?





When we pull into your driveway, we hope to see your kids waiting with their bathing suits on. That's when we know it's going to be a fun job!

The first thing the crew will do is paint the pool on the ground and use a laser level to establish how high to set the pool in the yard. This will tell us how deep to dig the hole. We'll then position the dump truck close to the hole (if needed) and begin excavation.

While one crew member digs the hole, the others begin to work on setting the pump and filter system. Excavation of the hole usually takes between three hours and one and a half days, depending on the size of the hole and how long it takes to dispose of the dirt.

Our excavated hole is about a foot larger than the outside of the pool and 2-4 inches deeper than the pool depth.

#### So when does the pool typically arrive?



The pool will usually show up around lunch time of the first day, although it varies from job to job. Once the pool arrives, our team will unload it with the crane or excavator, set it on the ground, and begin installing the fittings and plumbing around the pool.

#### Related Articles:

- ► 7 Deadly Sins of Fiberglass Pool Installations
- ► Swimming Pool Excavation: 4 Questions You May Not Think to Ask
- ► Inground Pool Elevation: How High Should I Set My Pool?
- Can Fiberglass Pools Be Built on Fill Dirt?





# Phase 2 | Placing the Gravel Foundation



After the excavation is complete, we will place a 2–4" thick layer of gravel in the hole which the pool will rest on. This gravel base determines the height of the pool, so we use a laser level to set the gravel at precisely the right elevation. We are usually at this point at the end of day one or the beginning of day two of construction.

It's important to note that we use gravel instead of sand for our installations. Let's talk about why.

#### Sand vs. Gravel for Installation: Which Is Better?



Back in the early 2000s, we at River Pools installed roughly our first 250 on sand. Over the following years we found that a certain percentage of these pools had problems such as pool settlement, bulges in the side walls of the pool, and leaks in fittings and plumbing around the outside of the pool.

We determined all of these issues resulted from using sand... and if you consider the properties of sand, it makes sense why. First, sand liquefies when saturated with water. What do you think will happen to a pool filled with water that weighs tens of thousands of pounds and is resting on a bed of liquid? Doesn't sound too reassuring, does it?

Second, when backfilling around the outside of a pool with sand, it's almost impossible to compact that sand 100 percent. What do you think happens over the following 18 months when the sand backfill finally settles? It puts pressure on the side walls of the pool and the plumbing that it encases. This causes the fittings the plumbing is connected to leak. The weight of the saturated sand on the side walls of the pool can also cause them to bulge inward.

We eventually switched from sand to gravel backfill. The moment we did so, all of these problems vanished. We haven't had a single fitting leak, wall bulge, or pool settle in many, many years.

Okay, now that we laid our gravel base, we are ready to set the pool in the hole.

#### How do we lift the pool?

We typically use our excavator or a crane to unload and set the pool shell. Some of our most interesting deliveries have involved floating pools down the river, pushing them down narrow city alleys, and even flying them in via helicopter!











But regardless of how we get the pool to your backyard, one of the most critical junctures in the installation process is when the pool is set in the hole and leveled.

#### Why Is Properly Setting and Leveling the Pool So Important?

Basically, the entire pool floor must rest on a solid foundation to ensure the pool is structurally sound. This prevents it from shifting and settling over time. The crew will strive to achieve our goal of getting the pool within 1/2 inch of level or less, all while ensuring the entire pool floor rests firmly on the gravel foundation.

We feel it's important for anyone considering a fiberglass pool to know that **fiberglass pools are never perfectly level**. Again, our goal is to get every pool **within a half-inch or better**. The industry standard is one inch, but it's not uncommon to see fiberglass pools far more out of level than that.

To ensure the pool is to our standards, our team will repeatedly lift and re-set the pool shell as many times as needed. A common mistake is to rush this critical phase of the process, which only leads to pools being out of level or eventually shifting or settling due to the pool shell not resting on a proper foundation.

We usually have the pool in the hole and level by end of Day 1 or by end of Day 2 depending on the project.

#### Related Articles:

- ► Sand vs. Gravel: Which Is Better for a Fiberglass Pool Installation?
- ► How Level Should a Fiberglass Pool Be?
- ► Read about our Level Pool Promise Here
- ► How to Unload, Lift, and Set a Fiberglass Pool (Cool Video)

# Phase 3 | Plumbing the Pool and Filter System

#### What is the filter system?

The filter system is composed of two major components: the **pool pump** and the **filter**. The pump circulates the water, and the filter removes debris and small particles from the water. At the filter system you also typically find other elements such as valves that control the flow of water, salt water chlorinators if you have one, a switch for the pool light, and a heater if desired.

#### Where is the filter system typically located?

Usually within **30 to 60 feet from the pool**, but it can be much further away if the site dictates. If possible, it's best to locate the pool equipment (i.e., filter system) at the house, preferably somewhere inconspicuous. It's also not uncommon to locate it in the yard, somewhere out of plain view.

#### Related Articles:

- ▶ Rigid PVC vs Flexible PVC: Which is Better?
- ▶ 5 Keys to Perfect Fiberglass Pool Plumbing
- ▶ Fiberglass Pool Plumbing Video: How to Install Skimmers, Returns, and Main Drains
- ► How to Heat Bend Rigid PVC Pipe Video
- ► Where Should I Locate My Pool's Pump and Filter System?

# Phase 4 Backfilling the Pool Shell



Once the plumbing is complete and the pool is set in the hole and leveled, it's time to start filling the pool with water and backfilling around the outside with gravel.

The gravel on the outside and the water on the inside must be brought up together to equalize the pressure.

It's also important to install what's known as a drain pipe during this phase of construction. The drain pipe is an 8" PVC pipe that extends from the top of the patio to the bottom of the excavation. There is typically no permanent pumping system installed. This pipe simply allows us to access any ground water around the pool in the event the pool requires draining in the future.

Usually by the time we begin backfilling the pool, the electrician has begun wiring the pool equipment. Ideally, the pump and filter system will be wired so we can start circulating the water as soon as possible... although sometimes there are circumstances that prevent this.

Usually by the end of Day 2 or 3, the crew has the pool shell installed and full of water with all of the plumbing completed, and this completes the initial installation phase of construction. Before beginning the coping and patio work, we will need an inspection. This is also the point at which we install waterline tile on the pool if specified, unless it has been installed prior to pool delivery.



#### **Related Articles:**

- ► How Much and What Type of Gravel is Needed with a Fiberglass Pool Installation?
- ► How Not to Backfill and Install a Fiberglass Pool... Scary Pictures!

# Phase 5 | Coping and Decking

With the pool completely backfilled and inspections approved, our team is ready to install the coping around the top of the pool shell and the pool patio. There can be a delay of a few days to two weeks before the patio crew arrives, depending on weather and inspection schedules. The patio can take anywhere from two to five days to install, depending on the size of the patio and material used.

# What is cantilevered concrete coping, how is it installed, and why is having an experienced contractor so important?

We discuss types of pool coping on our <u>patio and coping page</u>, but it's important to understand the importance of having an experienced contractor pour your cantilevered concrete coping. Check out the related articles below to see for yourself the unfortunate results of not having a seasoned mason perform your work. You'll also see a video demonstrating our method of pouring cantilevered concrete coping.

#### Related Articles:

- ► How to Form and Pour Cantilevered Concrete Coping Video
- ▶ Why Is Pouring Concrete Cantilever Coping Around a Fiberglass Pool So Difficult? (Must See Photos)
- ► How NOT to Install Paver Coping on a Fiberglass Pool Video

#### **Installation Summary**

Well, there you have it. Hopefully you've found this informative. Just to wrap things up, here are 5 take-aways you should remember about fiberglass pool installations:

- 1 The total process usually takes anywhere from 3 to 6 weeks for a typical project.
- 2 The type of material used under and around the outside of the pool is critical. Based on our experience, we feel clean, crushed stone is the way to go.
- 3 Setting and leveling the pool correctly is imperative if you want your pool to look great and last a long time.
- 4 How the pool and patio tie together is extremely important. The River Pools Way uses composite River Rods to fuse the pool and patio together.

If you're looking for even more fiberglass pool installation info, check out Jason's article that was published in the **January 2013 editon of Aqua magazine**:

▶ Top 5 Fiberglass Pool Installation Problems and Solutions



# **Chapter 8:** How Do I Find a Reputable Pool Contractor?

The purpose of this section is to provide you with the tools and insights needed to help you find a good, reliable contractor who will stand behind their work.

If the DIY thing is not for you, this may be the most important chapter of this book. Why? The contractor you entrust your backyard with to install a swimming pool will make or break this whole process. After consulting with literally hundreds of fiberglass pool customers from all around the world over the past 16 years, we have seen the good, the bad, and the ugly of the fiberglass pool industry. All of our experience regarding contractors can be summed up in this one statement:

# Nothing can compensate for a poorly installed pool.

The truth is that there are vast differences from one pool contractor to another. You don't have to look hard on the internet to find horror story after horror story about shady pool guys. This is a smudge on the face of our industry, and it's why this is clearly your biggest decision as a consumer.

This is also why it's critical to have at least a base understanding of the installation process before your project begins...so you can know what a quality installation looks like and what questions to ask.

But before we delve into how to find the right contractor, I want to discuss two reasons people often choose the wrong contractor: **Price** and **Installation time**.

I'm not sure what makes some folks lose their mind when the temperature gets up to 95°F, but regardless of how hot it is or how loud the kids are screaming, please do your due diligence when choosing your pool contractor. **Don't simply go with the cheapest price or quickest installation time**. Despite what you may be thinking right now, you probably will be tempted to do so at some point. Yes, of course these two factors should be considered. You don't want to be gouged from a price standpoint, and you certainly don't want to wait 9 months for your pool, but hasty decisions lead to regret.

No one is interested in spending \$40,000 to \$100,000 in their backyard only to end up with regret.

A few short tasks can help ensure you've found a good and trustworthy contractor.

#### The 2-Step Process For Finding a Reputable Pool Builder:

At first glance, these two steps may seem a little tedious. However, they are far and away the best way to find out what a pool builder is made of. If you are willing to follow these guidelines, you will be able to separate the "wheat from the chaff," so to speak.

#### **Step One: The Interview**

Once you've determined that the contractor has been around for some time, it's a good idea to have a conversation directly with them, either on the phone or in person. I'd opt for in person so I can read body language. (This could become uncomfortable for the builder.)

Okay, you're going to ask a series of questions. Here we go:

#### Q: How many fiberglass pools have you installed?

This will give you a good idea of their experience specifically with fiberglass. Anything less than 20 pools would concern me.

#### Q: How many did you install last year?

This is a set-up question.

#### Q: Can I have all of last year's references?

Here's the deal. If they told you 12 and can only give you 6 references, this means you have a 50% chance of being happy. Sounds like a gamble to me!

#### Q: Have you ever made a mistake?

If they say no, get up and leave. They're either lying or don't have enough experience. Everyone, and I mean everyone, screws up from time to time. It's how they handle the mistake that counts.

#### Q: What was the biggest mistake you have made?

This is a toughy. If the contractor squirms a little bit on this one, I wouldn't be concerned, but if they are open with you, it's a great sign.

#### Q: How did you handle the mistake, and can I call that customer?

If you don't get a yes on this, there's a great chance they haven't been completely honest with you.

# Q: Can you point out 3 customers on you reference list where you made mistakes and rectified them?

These are obviously people you want to contact.

# **Step Two: Calling References**

If the proof is in the pudding...this is the pudding. This can be a bit time-consuming, but come on, you're about to make a huge investment here!

#### Here's what you want to do:

- Call old and new references to get a feel for how their current level of service is, as well as how
  their product holds up over time.
- Call references from jobs both close to and far away from the contractor's place of business to determine if geography impacts their level of service.
- Call customers with **products as similar to yours as possible**. If you're considering a paver patio, for example, call someone with a paver patio.
- Call any of the "problem" customers the contractor pointed out.
- When speaking with the references, **ask what impressed them the most and least** about the contractor. Ask if they would change anything if they had to do it over again.

After going through this process, perhaps you'll find that you have a "gut feeling" (either good or bad) about most of the contractors you interviewed. Perhaps you'll also find that your pocketbook is telling you one thing and your instincts another. All we can say is that based on our experience in speaking with hundreds and hundreds of people from all over the country over the years is that **if you follow your pocketbook**, **you are absolutely rolling the dice with this huge investment**...and we have spoken with too many good people who lost that gamble.

We would advise you to **follow your instincts** with regards to selecting your pool contractor. Wait for the pool if you have to, but there is a lot at stake. When these nightmare scenarios occur in backyards, they can leave you heartbroken for many, many years.

Would you like to speak with one of our dealers? They are a cut above, and would love to help answer any questions you have. Simply request a pricing quote to get the process started.

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# This can be a bit timeconsuming, but come on. You're about to make a huge investment here!



# **Chapter 9:** What Are My Financing Options?

The purpose of this section is to answer the most common pool loan questions and provide links to some of the best lending agencies.

Understanding that the majority of our customers finance their pool in one way, shape, or form, we at River Pools want to help you understand the task of pool financing and how it typically works for most homeowners.

Pool customers pay for their swimming pools in a variety of manners. Some of the routes typically taken are:

- Home equity loan/line of credit
- · Second mortgage
- Unsecured loan

- Out of pocket (cash)
- Credit card

POOL FINANCING TIP: Planning to finance a large portion of your project? Be sure to get pre-approval before having companies out for estimates. Many times, folks have their dream pool all lined up only to find out they cannot secure the necessary financing.

#### **Home Equity Loans & Second Mortgages**

Of all listed, the most popular methods are second mortgages and home equity loans (or lines of credit), which allow homeowners to borrow against the equity in their homes. These are relatively easy to secure and have competitive rates.

#### **Unsecured Loans**

If you have a second mortgage or if a home-equity loan is not an option, there is still hope. **Unsecured loans** do not require home equity, but you will need solid credit.

If this seems like an option for you, we would suggest contacting <u>Lightstream</u>, a <u>Division of Suntrust that specializes in swimming pool loans</u>. There is also <u>AMS Financial</u>, who works with at least five lending agencies who specialize in pool loans.

Simply check out the information and links below to find out how to apply, calculate monthly payments, and learn other benefits such as:

- Low fixed rates from 4.74%–6.74% APR\*‡ with AutoPay (reflects program's exclusive discount incentive)
- Flexible loan terms from 24 months up to 84 months
- Loan amounts from \$10,000 to \$100,000\*\*

- No fees
- · Response in minutes during business hours
- Funds in your account as soon as today†
- · Joint applications accepted
- Available in all 50 states
- Funds can be used to finance any part of your project
  - Pool Loan and Financing Resources:
    - ▶ Our Fiberglass Pool Pricing Guide to Help Determine the Project Cost
    - **► Calculate Monthly Payments**
    - ▶ Financing FAQ
    - ► <u>Visit AMS Financial Who Works Directly with At Least 5 Different Pool Loan Lending Agencies</u>
    - Apply with Lightstream



We at River Pools want to help you understand the task of pool financing and how it typically works for most homeowners.



# **Chapter 10: What** Are Some of the Most **Common Mistakes Homeowners Make** when Buying a Pool and What Do I Need to Be Aware Of?

This section is designed to help you avoid some common oversights pool customers make.

## Mistake #1: Not Getting Everything in Writing

Let's say your builder has just started excavating the hole for your pool. Naturally, you're very excited about the project starting and the prospect of swimming in the coming days or weeks. But then you get a knock on the door by the contractor asking how you would like to pay the hauling fees for disposing of the dirt. This was never discussed during the entire sales process, and you become irate at having to fork out an additional \$500-\$2,000 you were not planning on. There are many such scenarios become a reality every day. This is what we're trying to avoid.

#### **Most Common Hidden Costs**

- Dirt hauling in/out
- Electrical hook-up to pool equipment
- Fencing
- Landscaping
- Patio
- Drainage work for yard or pool deck
- Retaining walls
- Tree removal
- Hitting ground water or rock during excavation

#### **How to Avoid Hidden Costs**

#### The salesperson's quote sheet

This should disclose all potential costs and clearly specify what is and is not included in the builder's scope of work. Make sure everything is in writing.





### Mistake #2: Starting the Project with Unknown Costs

This is different than having surprise costs pop up during the project. This is going into a project with knowing that you'll have an expense, but not knowing how much. For example, some pool builders are famous for just giving square footage prices for patio or retaining walls and patios, knowing full well that the client has no concept of what the final cost for those options will be. They are more concerned with closing the deal than their customer being within a specified budget.

Let's say a salesperson walks in your backyard and it's obvious that you will need a 3-foot-tall retaining wall that I know will end up costing you around \$12k. To make the price seem lower on the front end, I tell you that you will need a wall, our price is \$35 per square face foot, and maybe it will cost a "few thousand dollars." The deal is done and the contract for the pool and patio is signed, leaving the wall for later. But alas, later always comes and you flip out when, after the pool is already installed, you're slapped with a \$12k bill. Sounds crazy, but it happens all the time. Moral of the story: get the wall, patio, fence, electrical, and every other price in writing before construction begins.

## Mistake #3: Not Properly Vetting the Pool Builder

As discussed earlier, interview the builder and call references. If a pool dealer does not give you references you should be highly concerned. Frankly, you should not even have to ask your pool builder for said references. For example, our company reference list currently holds over 1,000 customers. Pool shoppers are welcome to call any one of them. If a builder tells you that they have no references because their customers refuse to be on a list, they are simply lying to you.

# Mistake #4: Making Decision Solely Based on Price

It bugs me that I even need to mention this but alas...I guess I must. It always baffles me to hear a customer say they want a great, great, super-low price but they also expect great, great quality and service. Huh? Say what? There is an old saying I once heard. It goes something like this: "All of your customers want you as a business to make money and turn a profit. They just don't want you to make any money on them." This quote certainly holds true for some shoppers, but the majority understand that in order to deal with a reputable, steady company where quality and service are a fundamental component of the building process, then the company must make money. This means on all customers. Now don't get me wrong. I am not advocating here that pool guys should break the bank on every job and not earn their keep. What I am saying, though, is that there will always, and I stress ALWAYS, be companies available that will build your pool for less. This is also why so many swimming pool companies go out of business. In the 16 years we've been in business here in Virginia and Maryland, we have witnessed about 20 fiberglass companies start and fold their businesses. And no, that is not an exaggeration. How would you like to have had your pool installed by one of these companies? Although price always has and always will be an important part of choosing your pool builder, make sure that it's not your first priority. If it is, then you might find yourself being the next victim of a terrible pool building experience.

#### Mistake #5: Focusing on the Short Term

Whether you are looking at the type, size, price, or any other component of your swimming pool, you need to make decisions based on how long you think you might be in your home, not just on your circumstances today. There are hundreds of examples of this but I'll name a few.

A pool shopper settles on a vinyl liner even though they really want fiberglass. They do this because the pool will cost them \$6,000 less initially. Over the next 25 years, they end up spending about \$8,000 more than they would have during the life of pool ownership because of liner replacements. These residual expenses would have been nonexistent had they just gotten a fiberglass swimming pool in the beginning.

A pool shopper is torn between fiberglass and concrete. The cost for their 16x40 fiberglass pool with patio, options, electric, etc., is \$55k. They've also been quoted a white plaster concrete pool (20x40) for the same package at a price of \$45k. Because the \$10k "is just too much too overlook," they go concrete. That same consumer ends up spending \$12,000 11 years later on the resurfacing of their pool after the roughness of the surface and water chemistry become just too much to bear. At this point, they are already regretting their near-sighted initial decision, but they are stuck with what they have and hope the next surface does better. Unfortunately, they again deal with the same problems over the next 12 years and this time the resurface costs them another \$14k. By this point they are left with the decision to fill the pool in or spend the money, and at the pleas of their 5 grandchildren they decide to spend the money...

Now I submit this question: Did this person end up saving any money at all in the long run? Well, we all know the answer is a resounding 'NO,' and in fact the consumer spent about \$15,000 more over the course of 23 years than they would have if they'd invested more up front for a high-quality fiberglass pool.

#### Mistake #6: Buying Based on Installation Time Frame

The problem that many pool shoppers have during pool season when they start getting quotes from contractors is that they find many builders cannot start their pool project immediately because there are many other pools on the calendar. And due to the fact that the shopper procrastinated by not looking more seriously sooner in the year, they are likely confronted with the issue of choosing a contractor solely based on who can install their pool the soonest.

Do not put the trust of your backyard in the hands of a company that can give you immediate satisfaction. This is a terrible mistake and one that people all over the country regret every June–September.



Do not put the trust of your backyard in the hands of a company that can give you immediate satisfaction.

# Mistake #7: Not Trusting Your Gut

Many of you who are reading this book at this very moment are getting ready to pull the trigger on a pool company somewhere around the globe.

As you do your research, you will receive impressions about which pool builder, manufacturer, etc., to choose.

Based on our experience, these feelings should not be ignored.

I can't tell you how many people I've personally spoken to who, after the project went south, said something like, "I had a feeling to [fill in the blank] but for [fill in the blank] reason, I decided not to...and now I wish I had."

This is not exactly the most scientific approach to buying a pool, but there are tremendous differences in builders and manufacturers.

If problems arise during your project (not uncommon), all you have to rely on is the integrity of the human beings you've entrusted your backyard to.

Do your best to ensure they are worthy of that trust and you'll likely be fine.

# That's a Wrap!



CLICK TO REQUEST A QUOTE TODAY









