

# THE IPSSAN



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The Independent Pool & Spa Service Association, Inc. exists for the mutual professional benefit and growth of its members and for the continued improvement of the pool and spa service industry.

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## Successful Winterization: The Extra Steps By Alicia Stephens and Jamie Novak, NC Brands/BioLab

**SUMMER IS WINDING DOWN** and as much as we don't want to, it's time to start thinking about winterizing pools. The sun is shining and the days are hot, but cooler nights and shorter days will be here before long and then it will be time to close pools for the winter. The goal of winterizing a pool is to ensure that the pool can be opened quickly and easily in the spring, achieving water that is clean, clear, and ready for swimming with as little work as possible. Preparation is the key to successful winterization.

There are three main objectives of winter pool care:

- The first objective is to provide sparkling water upon pool opening. Opening a pool that is clean and clear is the result of a successful winter care program.
- The second objective is to inhibit the growth of bacteria and algae. Proper winter care treatments can help prevent a buildup of contaminants, assisting with a faster turnaround time in the Spring the water clear.
- The final objective of winter pool care is to protect the pool surface and equipment. Part of winter care is balancing the water. Balanced water will keep pH, total alkalinity, and calcium hardness in the correct range, reducing scaling and corrosion that can occur during the winter months.

The first element to consider when closing a pool is timing. The key to winter care is to not close the pool too early. In many cases, pools are opened and closed by the calendar. For example, many customers open their pool at the first of May or later and close it at Labor Day, regardless of weather conditions. Water is often already warm when opening the pool and is still warm when closing the pool. Warm water is an ideal condition for bacterial growth and algae blooms. Winterizing chemicals

applied to warm water will not be as efficient in the off-season or as effective at keeping the pool clean and clear. Chemicals added to warmer temperatures get used up at a faster rate because they have more work to do in warm water. Pools that are closed while warm or opened after the water has gotten

warm are much more likely to be cloudy, green, and demand larger amounts of chlorine. Pools ideally should not be closed if the water temperature is above 70OF and should be opened again before water reaches 70OF in the spring. A liquid solar blanket can help reduce heat loss and extend the swimming season into the fall if a longer swimming season is desired when temperatures start to drop at night.

There are two categories of winterization that occur when closing a pool: Physical and chemical. Physically winterizing a pool focuses on protecting pool equipment and surfaces from damage due to freezing. It also focuses on keeping dirt and debris out of the pool to help keep it clean and clear while the water is not circulating. The amount of physical winterization that must be done to protect a pool depends on environment and expected weather over the course of a winter. In warmer climates, physically winterizing pumps, filters, and other equipment is often not necessary due to warmer temperatures in the off-season. However, we all know what happened on Texas recently where many pool owners were caught off guard with an unexpected freeze. In colder climates or if there is a risk of a deep freeze, steps should be taken to protect pumps, filters and



plumbing from freezing.

In colder climates, lowering the water level in the pool is recommended to help prevent damage from freezing water. The recommended level is usually below the skimmer opening or at a level advised by the pool's manufacturer or pool builder. Freezing water can cause equipment, pipes, and fittings to crack, leading to costly repairs. It is recommended to blow out the lines once the water level has been lowered to protect against breakage. The addition of a skimmer plug can also help protect the skimmer from being damaged by freezing temperatures.

Regardless of climate, covering the pool is an important part of off-season pool care. The pool will go long periods of time with no use, and most pool owners stop paying attention to maintenance activities such as brushing, skimming, and vacuuming in the off-season. Dirt and debris will be introduced over the course of the winter and covering the pool will reduce the need for these activities. As winter progresses, keep excess water and debris cleaned off the top of the cover. If water and debris get too heavy, the cover can be pulled into the pool. This can damage the pool itself, as well as create a big mess to clean up when the debris from

the cover ends up in the pool too. In the spring, when you remove the winter cover, take care not to allow dirt, debris, and contaminants from the top of the cover fall into the pool. This can create problems with filtration, water clarity, and chlorine demand, as well as other issues.

When chemically winterizing a pool, it is imperative to treat and remove all existing problems before closing. Closing a pool with issues will allow problems to get worse over the course of the winter, causing additional requirements of time and chemicals during spring opening. Water balance, sanitizer residual, and water clarity should all be evaluated and balanced before a pool is closed. Clearing up problems before closing allows the winterizing program to work effectively, and helps you open the pool quickly and easily in the spring.

Water Balance should be considered first when winterizing a pool. pH, total alkalinity and calcium hardness should all be balanced to ideal parameters before the pool is closed. Winter temperatures bring colder water, which can lead to a corrosive environment. Prolonged exposure of corrosive water to the pool's surfaces may cause etching and metal staining to become more prominent on

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## Letters to the Editor

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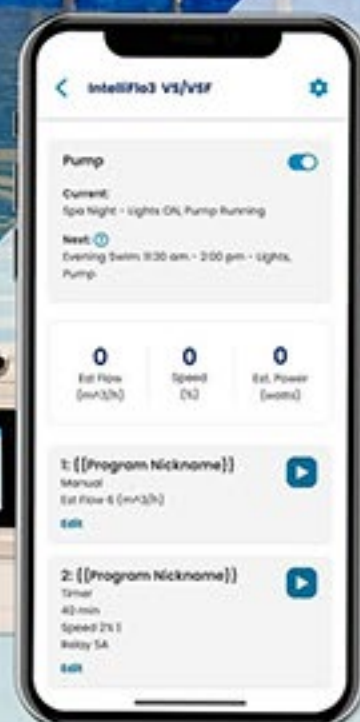
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## We want to spotlight our members!

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Have you had to use the IPSSA's Tech-4-Tech Coverage (previously called sick route) benefit? We are looking for members to send us testimonials on how Tech-4-Tech Coverage helped them in their time of need. Please send your story to [editor@ipssa.com](mailto:editor@ipssa.com).

#### IPSSA MEMBER PORTAL

Have you logged on and updated your IPSSA.com Member profile listing? Enhance your exposure by uploading your company logo, linking your business website and social media pages, as well as uploading some pictures of your work. If you need your log in credentials re-sent, please contact [memberservices@ipssa.com](mailto:memberservices@ipssa.com)



## A Letter from the President

HELLO IPSSA NATION. I hope this finds you all doing well and staying as cool as possible out there in the summer heat.

I am happy to report that the IPSSA Weekend of Inspiration registration is now OPEN! Look for the QR Code - Scan and all the registration information is available. The 2024 Weekend of Inspiration is held February 2-4, 2024, at the Westin in Long Beach, CA. My team has put together one of the best weekends and will be different than what you have experienced in past years. I promise you that it will not be like the old leadership weekends. For example, if you are a new officer or a re-elected officer, register for the event by November 17th to be eligible to win 1 of 8 drawings for \$100 gift cards. If your Chapter has both of its officers registered by November 17th, then your Chapter becomes eligible to win 1 of 5 drawings for \$250 Chapter funds give-aways. Free money (thanks to some of our Premier IPSSA Associate Members) just by registering by November 17th.

The Weekend of Inspiration will start on Friday, February 2nd with a BORD meeting this is optional to attend. Friday, early evening, we have planned a cocktail tabletop reception featuring several of our IPSSA Associate Members. Saturday, February 3rd, will start with breakfast and our keynote speakers discussing leadership and what it means to be a leader. For those of you that have been re-elected to your leadership role, you will learn how to become a better leader, and not just in your IPSSA role but in your company and your community. Saturday night is a plated dinner, a comedian, raffle, and a DJ spinning the very best of "Yacht Rock"! Oh, did I mention that the theme for the banquet is...you guessed it "Yacht Rock"!

We will be also handing out the Terry Cowles Memorial Award, as well as our two new awards, Chapter of the Year and Pool Professional of the Year. Being the first to ever win one of these two awards is "kind of a big deal".

So, remember, February 2-4, 2024, at the Westin in Long Beach, CA and be on the lookout for that QR Code to register. I am really excited about this event, and I know you will not be disappointed! The team has done a great job changing things up to make it fresh, walk away with tools to help you in your chapter, community, and business. It is also a good time for you to have a little fun, see old friends, make new friends. Remember with your volunteer support IPSSA remains a strong association.

We that is all I have for now. Stay cool, stay hydrated, wear your hat and sunscreen, and as always thank you for your support.

Take care,

Todd Starner, IPSSA National BORD President

## IPSSA Code of Ethics

AS A MEMBER OF the Independent Pool and Spa Service Association, Inc., I will utilize my professional knowledge and skilled practical workmanship in providing quality customer service. To that end, it will be my responsibility to keep informed of developments in the pool and spa industry including new techniques and product applications.

My second obligation will be to the members of IPSSA by giving them any professional assistance they may need including sick route coverage. With respect to sick route coverage, I will treat sick route clientele with professionalism and respect and will not solicit the business of a sick route client while providing sick route coverage.

My final responsibility will be to my community and its citizens. I will strive to communicate the necessity for pool safety and other issues of importance to pool and spa owners.

In these ways, I will promote the ideals and objective of the Independent Pool and Spa Service Association, Inc.

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# Successful Winterization

Continued from front page

pool surfaces, as well as cause increased potential for damage to pool equipment. In addition to balancing the pool water before closing, a stain and scale control product should be added at closing to protect the pool from surface problems and metal-based staining or water discoloration. These products are a great combination to provide superior protection over the course of the winter, setting you up to get the pool started off in the right way when summers rolls around again.

A chlorine residual is important to maintain when closing the pool. Establishing a 1-4 ppm residual before adding winterizing chemicals is ideal as the longer you can maintain a residual in the water, the easier spring opening will be. If no residual is present at closing, the pool is likely to experience chlorine demand at opening. This is the buildup of contamination in the water that can consume larger than typical amounts of chlorine and

make it difficult to establish a residual. If a pool is closed while experiencing a chlorine demand, the water is extremely likely to be cloudy or problematic when opening. The contamination will go unchecked during the winter, and bacteria and algae will grow in the absence of a chlorine residual. This will lead a more substantial demand upon opening and increased amounts of chlorine necessary to establish a residual at spring opening. Chlorine demand must

be addressed and corrected before winterizing occurs.

There are many options for winterizing chemicals and winter kits available when it's time for closing. Regardless of which kit you choose, all pools should be brushed and vacuumed, then shocked with a chlorine oxidizer before closing. In addition to the basics, however, there are many other specialty options that can enhance the winterizing process. Adding algacide to prevent algae growth over the winter is a very effective way to help you open a clear pool in the spring. It can often be difficult to maintain a chlorine residual through the entirety of the off-season (especially if using a mesh cover). In the event the chlorine residual does drop below 1 ppm, the presence of a preventative algacide will continue to protect the pool from algae growth. This will help avoid opening a green, swampy pool in the spring.

There are many preventative measures you can take at closing to simplify the opening process, requiring less work and less time to get the pool ready for swimming. The addition of a quality broad-spectrum enzyme product can be a key element to water clarity and surface cleanliness at opening. Enzymes, paired with a surfactant, will break down non-living contaminants in the water, reducing the workload for chlorine. Not only is the pool easier to open, that ugly scum line accumulation that often mars spring openings will often not form when enzymes are present. Pools will have better water quality upon opening, be more likely to maintain a chlorine residual in the off-season and will not have a scum-line accumulation at the waterline that needs to be physically scrubbed off the surface.

**“No matter which chemical options you choose for closing, it's imperative to keep an eye on the pool over the winter. In some cases, it might be necessary to add additional winterizing chemicals underneath the cover to prevent problems.”**

Reducing and minimizing the level of phosphate in the pool upon closing is also a key initiative to take to help ensure a faster turnaround time at opening. The addition of a phosphate remover will improve water quality and clarity, while increasing the probability that the pool will open clean and clear. The addition of a multi-functional product that contains both enzymes and a phosphate remover can be a key element in helping to prevent problems over the course of the winter.

No matter which chemical options you choose for closing, it's imperative to keep an eye on the pool over the winter. In some cases, it might be necessary to add additional winterizing chemicals underneath the cover to prevent problems. Many service professionals even offer an off-season “check” service for pools one time per winter. And as mentioned, timing for closing in general is just as important as chemical treatment and equipment preparation. Close late, open early! However, when you do close, proper preparation and treatment will make opening in the spring a much simpler job. ■

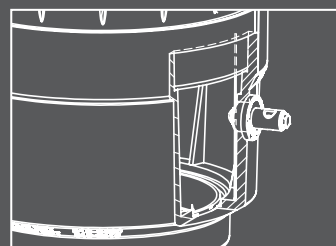
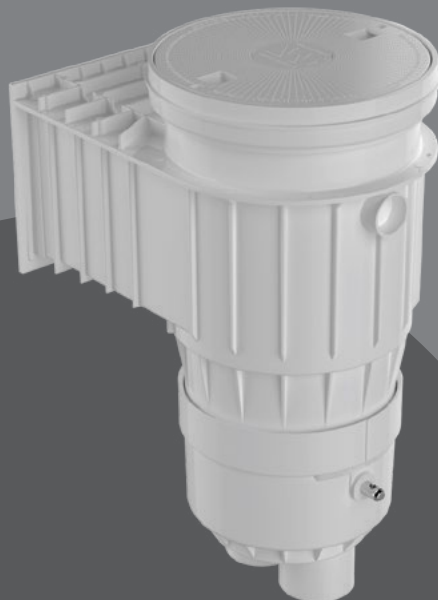
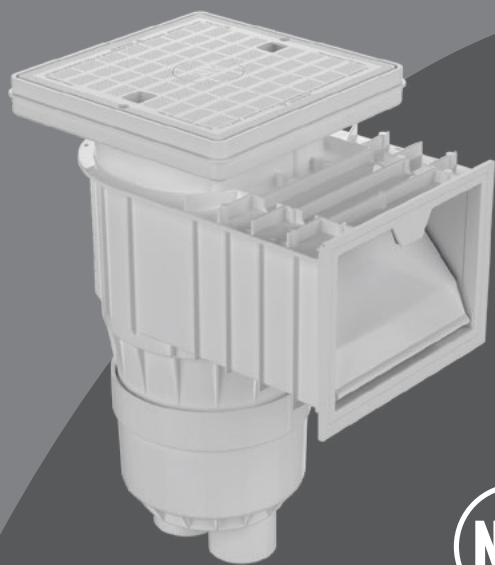


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#### ABOUT THE AUTHORS

Alicia Stephens is the Director of Training and Education for BioLab Inc. In her 22 years with the company, she has focused primarily on education, training, and development, as well as technical support and new product research and integration. Currently, Stephens supports all education and training initiatives for the BioLab Pro Dealer division.

Jamie Novak is the Director of Pro Brands at BioLab, a division of KIK Consumer Products. She's held multiple positions in marketing and sales for major manufacturers Newell Rubbermaid, Zodiac Pool Systems, and AquaStar Pool Products with over 18 years of experience in the swimming pool & spa industry. Jamie received her MBA with concentrations in Marketing & Leading Organizations from Johns Hopkins Carey Business School.

Stephens and Novak share a passion for the swimming pool and spa industry and enjoy working together as a part of the BioLab Pro team.

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# Pool Chemical Safety

## By Center for Disease Control and Prevention

POOL CHEMICALS, SUCH AS chlorine and bromine, are added to treated venues (for example, pools, hot tubs/spas, and water playgrounds) to protect swimmers from the spread of germs and prevent outbreaks. Other pool chemicals help with the disinfection process (for example, pH control), improve water quality, stop corrosion and scaling of equipment, and protect against algal growth. However, pool chemicals can injure people when mixed together or when appropriate personal protective equipment is not used when

handling them.

Follow these recommendations to prevent pool chemical injuries:

### DESIGN OF POOL CHEMICAL STORAGE AREA AND PUMP ROOM CONSTRUCTION

- Include spill containment features, also known as secondary containment, in chemical storage areas to prevent pool chemical leaks or spills from mixing with any other substances.
- Provide aquatics staff and patrons with easily accessible safety showers,

eye wash stations, and other appropriate chemical safety equipment.

- Install appropriate fire suppression equipment.
- Consult with your local fire department or code enforcement agency for guidance.
- Provide adequate lighting for reading labels on containers throughout the chemical storage area and pump room.

### AIR HANDLING (FOR INDOOR VENUES)

- Follow local building codes or American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard External.
- Separate the air handling systems for the chemical storage area, pump room, and venue area from the rest of the building.
- If an older building does not have separate air handling systems, consider installing emergency heating, ventilating, and air conditioning (HVAC) cutoffs in these areas.
- Ensure that the chemical storage area, pump room, and venue area are well-ventilated.

- Contact the product's manufacturer or the local or state hazardous materials group for proper disposal procedures.
- Protect pool chemicals from heat sources and flames.
- Do not store possible ignition sources, particularly gasoline-, diesel-, or gas-powered equipment in the chemical storage area or pump room.
- Do not smoke in the chemical storage area or pump room.
- Prioritize good housekeeping in the chemical storage area and pump room. Do not allow rags, trash, debris, etc. to collect in the area.
- Store and consume food and drinks away from pool chemicals.

### ENGINEERING

- Install an alarm to alert the aquatics staff if the recirculation pump shuts down.
- Install a device that automatically deactivates the chlorine/pH feed pumps when there is no or low flow in the recirculation system.

### SECURITY

- Secure the chemical storage area and pump room to limit access, especially to children and animals.
- Provide locking mechanisms for the chemical controller to prevent unauthorized tampering.

### PERSONAL PROTECTIVE EQUIPMENT (PPE) AND SAFETY DATA SHEETS (SDSS)

- Ensure availability of and easy access to PPE and up-to-date SDSs near (for example, in the hallway just outside of) the chemical storage area, pump room, venue area, and any other location pool chemicals are stored or used.
- Ensure availability of and easy access to PPE and up-to-date SDSs at a location other than those listed above in case of chemical spill or incident that would prevent access.

### CHEMICAL STORAGE

- Store pool chemicals in compliance with local or state building and fire codes.
- Store pool chemicals below 95°F/35°C and in conditions recommended by the manufacturer (for example, low humidity and out of direct sunlight).
- Protect stored pool chemicals from getting wet.
- Protect individual stored chemicals from mixing together or with other substances by storing each pool chemical separately in a dedicated location and storing incompatible chemicals away from each other.
- Store chemicals in original, manufacturer's-labeled containers.
- Consult with the chemical manufacturer if the container is damaged.
- Dispose of deteriorating, unwanted, or unlabeled pool chemicals safely.

### CHEMICAL HANDLING

- Only allow those who have been trained in pool chemical safety practices to handle pool chemicals.
- Maintain good communication among pool chemical handlers, including establishing a chain of command and documenting chemical use.
- Post instructions on pool chemical safety practices in the chemical storage area and pump room. Order laminated posters for FREE.
- Respond to pool chemical spills immediately by following the emergency response plan and using separate dedicated materials to clean up spills.

### MAINTENANCE AND REPAIR

- Close the venue to swimmers if the recirculation system is not running or before servicing chlorine/pH control feed or recirculation system. Do not allow swimmers back into the venue until after the chlorine/pH control feed and recirculation systems are restarted and run for a minimum of 5 minutes (if water quality meets required standards).
- Turn off both the chlorine/pH control feed and recirculation systems before servicing either system.
- Ensure adequate ventilation in and around the pump room and venue area during maintenance and repair and use appropriate PPE.
- Ensure that only properly trained people service chlorine/pH control feed and recirculation systems.
- Develop and follow protocols for the maintenance of the chlorine/pH control feed system that will prevent mixing of different pool chemicals, for example flushing water through the chlorine feed tubing before cleaning it with acid.
- Communicate clearly to other staff about and document maintenance and repairs.
- Set up a preventive maintenance program and

Continued on page 8



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# Pool Chemical Safety

Continued from page 7

regularly replace equipment or parts before they fail (for example, check for leaks in feed pump tubing, replace tubing regularly, check clamps, and check valves).

## POOL CHEMICAL TRAINING FOR STAFF

- Train all staff in pool chemical safety basics and provide additional training for those working directly with chemicals.

- Include at least the following topics in operator training/certification to decrease the likelihood of pool chemical injuries:
- Impact of each pool chemical on the water's chemistry and the monitoring systems
- If the test kit's limit is exceeded, how to measure higher chlorine levels (for example, using dilution or higher range test strips)

- Layout of a safe chemical storage area and pump room
- Calculation of venue volume and the appropriate amount of chemicals needed for the volume
- Safe chemical storage and handling practices (for example, prevent chemicals from mixing together)
- Check out Occupational Safety and Health Administration (OSHA) resources:
- Chemical Hazard Communication (OSHA 3084) External
- Hazard Communication Guidelines for Compliance (OSHA 3111) External
- Basics of preventive and safe maintenance of equipment (for example, close venue to swimmers if recirculation system not running)
- First aid for pool chemical exposures and other emergency response basics

## EMERGENCY RESPONSE PLAN

### BEFORE AN INCIDENT

- Develop an emergency response plan which includes:
- Spill-cleanup procedure
- Chemical incident and exposure response
- Clear chain of command and alternates with contact information
- Evacuation plan
- Communication plan for alerting patrons, staff, and emergency responders
- Train the aquatics staff on the procedures in the emergency response plan.
- Keep a copy of the emergency response plan near (for example, in the hallway just outside of) the chemical storage area, pump room, and venue area and ensure that another copy is also available at a remote location in case of an evacuation.
- Ensure up-to-date SDSs are easily accessible to first responders in case of evacuation.
- Have a phone with updated emergency numbers near (for example, in the hallway just outside

of) the chemical storage area, pump room, and venue area and ensure that a phone is also available at a remote location in case of an evacuation.

- Practice emergency response with first responders.

### DURING AN INCIDENT

- Activate emergency response plan.
- For indoor venues, if chemical fumes are released in the chemical storage area, pump room, or venue area and the corresponding air handling system is
- Separate from other areas of the building, leave HVAC system on to ventilate.
- Shared with other areas of the building, turn off the HVAC system immediately.

### AFTER AN INCIDENT

- Document the incident and response and report them to local or state permitting officials. [Local or state permitting officials should consider revising public health regulations in response to reports of pool chemical injuries to reduce the future likelihood of such events.]
- Conduct a post-incident critique with all parties involved in the response.
- Revise the emergency response plan as needed.

## CHEMICAL PACKAGING AND LABELING (FOR MANUFACTURERS)

- Package and label each pool chemical (for example, chlorine and acid) so that they can be easily identified and distinguished from each other.
- This should be done consistently, as changing the shape, size, or color of the container or labeling can lead to chemical-mixing errors.
- Notify customers of any changes in the packaging or labeling of pool chemicals.
- Consider identifying pool chemicals on the container lids.
- Use labels resistant to both corrosion and deterioration. ■



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## Resource Corner

**IPSSA MEMBERS** Retrieve the Arrow/HUB Insurance Claims Report, via IPSSA Member Portal under resources. If you can't find it there, check out the IPSSA Chapter toolbox, it will be waiting for you there.

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# Simplifying Hot Water Chemistry & Conserving Sanitizer for New Spa Owners

By John Bokor, Haviland

WITH A PLETHORA OF NEW hot tub owners in the market, it is important they understand how to properly care for their spa water. With sanitizers in high demand, retailers and service professionals need to take a “back-to-basics” approach with their customers to provide them with the simplest plan for hot water treatment. The goal is to educate new hot tub owners on how minimize the use of chlorine while still properly maintaining their spa water chemistry to avoid the pitfalls that can occur should their hot tub water chemistry falls out of balance.

## BACK-TO-BASICS 1: STAY BALANCED

It all starts with water balance. Making sure your hot tub customers have the correct balance (total alkalinity to calcium hardness) to support a proper and stable pH is key. Balanced spa water is the best way to ensure the chlorine, or sanitizer, has the ability to keep that spa water sanitized. To help maintain that balance, especially for new spa owners, using a blended borate specifically designed for spa water can really help keep spa water chemistry in balance.

Borates can, in fact, help lower chlorine consumption because borates have a buffering ability that allows spa water to remain at a more stable pH level for a longer period of time. In turn, borates allow chlorine to be more efficient and effective at sanitizing the water. In addition to using a borate as a water-balancing tool for pH control, new spa owners also like the way it makes the water look and feel. One of the reasons spa water treated with borates has more ‘sparkle’ is that the borate product increases the refractory index of the water so more light is reflected and ‘sparkly.’

Finally, borates help to improve the overall bather experience. All borates can be considered derivatives of boric acid—the active ingredient in eye drops—and this soothing ability translates into hot tubs treated with borate. In addition, because borates are a mineral salt, they help make skin feel softer and help reduce ‘red eye’ that is common from the hot water steam.

## BACK TO BASICS 2: KEEP CLEAN FILTERS

Keep filters clean! Simply rinsing the filter with water does not remove the contaminants that become embedded in the pleats of the cartridge. Keeping filters clean allows the filter to operate properly and remove contaminants from the water so chlorine is not tied up with floating debris. Water clarity is only as good as the filter will allow it to be. Chemicals can resolve many different water quality problems, but if the filter is not working properly, neither will the water treatment program. The pandemic has led people at home to use their spa more—especially if they have a new spa! As a result, filters have been working overtime, so they need even more frequent cleaning.

Although it’s not a favorite topic of conversation with new spa owners, it is important for spa retailers and service pros to point out to new spa owners that soaking is not a substitute for bathing. Statistics show many people do not shower before they get into a hot tub. This habit can severely impact the water quality as chlorine and bromine react with bather waste and cause turbid or cloudy water, forming chloramines that give spas a distinctive odor, or reacting with organic compounds (contaminants) that settle along the waterline and leave a coating where bacteria can grow.

Even when bathers shower before entering a hot tub, contaminants from their bodies can cause the sanitizer to be used up very quickly. The more people there are and the longer they stay in the spa, the faster sanitizer levels decrease. This results in a lower concentration of sanitizer levels than what needs to be present in the water to kill harmful bacteria. Further, chloramines can cause irritation to the eyes, skin, and respiratory tract.

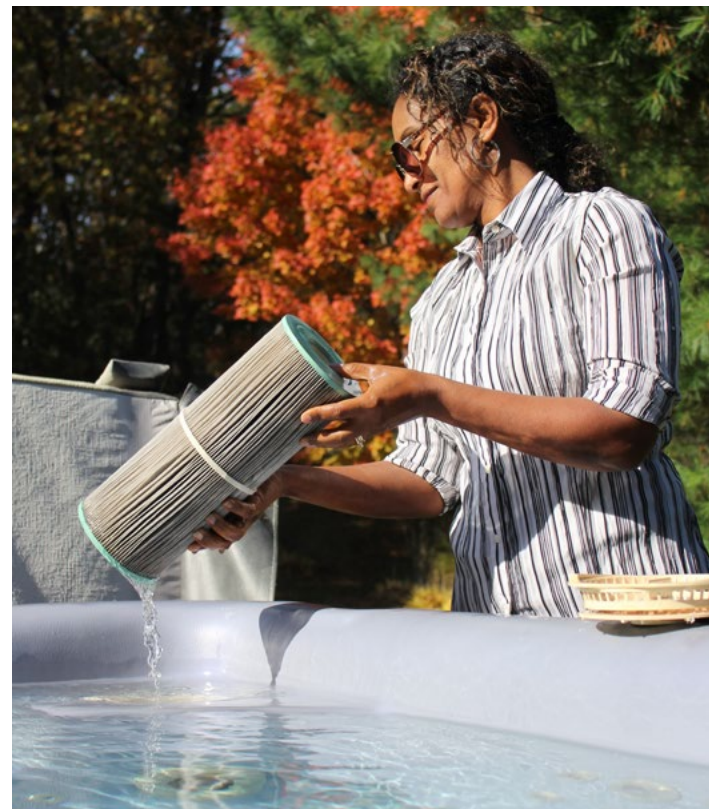
In addition, having jets in a hot tub increases the need to sanitize and clean filters regularly. One must remember although body wash feels great on the skin, it leaves a film of oil on the body that is removed by the jets, which quickly mixes into the hot tub water and clogs up the filters.

## BACK-TO-BASICS- 3: OXIDIZE OFTEN

Oxidize on a regular basis. We commonly use the term “shocking” for this step. This is the part that gets rid of “the yuck.” Oxidizing breaks up chloramines and bromamines, and restores the sparkle and clarity to the water. Many spa service professionals include a weekly dose of enzymes that can reduce the frequency of shocking, because the organic load doesn’t have a chance to build up.

In keeping with the goal of reducing the use of chlorine, routinely oxidizing spa water, especially with a non-chlorine shock, can be beneficial to controlling contaminants so chlorine work more effectively. Disinfection—also referred to as sanitizing—is the effective killing of germs. Oxidation is the destruction of non-living wastes like skin, urea, hair follicles, and other materials introduced to the water .

Chlorine demand is much higher when organic contaminants are present. Therefore, it takes longer to remove demand and create an effective free-chlorine residual. This is why oxidizing with a non-chlorinated shock is so important. Because non-chlorine shock does not contain chlorines, it will not combine with chlorine to create unwanted disinfection byproducts—such as combined chlorine or chloramines. The odor from combined chlorine or chloramines is carcinogenic and causes eye and lung irritation. Higher bather loads can lead to a higher demand and more sanitizer consumption. So, it is important to regularly oxidize this non-organic waste to free up chlorine to sanitize.



## BACK-TO-BASICS 4: SANITIZE CONTINUOUSLY

Never say “hey it looks good, it must be fine”. Sanitizer is what protects us. No matter what type of sanitizer you are using, it is extremely important to maintain the proper level. Proper water balance, regular filter maintenance, and routine oxidizing will reduce the amount of sanitizer that will be consumed. That said, protecting the bathers is the goal. Always maintain the proper levels for the sanitizer you are using.

It’s also important to remind new spa owners that hot water does not kill germs. Service techs should start by informing their clients that hot water does not kill germs. Hot tubs are typically maintained between 100 and 104 F. This temperature may feel scalding on the skin at first, especially if one jumps into the hot tub immediately after walking through a snowy backyard or swimming in a cold pool. However, this temperature is certainly not high enough to kill bacteria and other germs that may be present in the water. In fact, the warm, wet environment of the vessel actually fosters bacterial growth. Germs living at typical hot tub

Continued on page 12

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# Hot Water Chemistry & Conserving Sanitizer

Continued from page 11

temperatures can survive for days, even weeks.

Most spa owners think bacteria and germs are more likely to appear in a warm environment rather than a cold one. The goal is to educate clients on the differences

between hot and cold-water temperatures and the importance of consistent water sanitation. Hot tub water that isn't sanitized is far less forgiving than pool water that isn't balanced.

## SANITIZERS

Sanitizers will eliminate germs in a hot tub. That said, not only do these get used up quickly due to the quantity of organic waste in the water, the heat of a hot tub

actually breaks down these chemicals rapidly, creating the need to add these products more frequently. Ideally, the sanitizer in a hot tub should be adjusted after every use, and the filter should be cleaned and/or replaced regularly. Although technicians should ensure the filters are clean, they must encourage their clients to keep an eye on the sanitizer levels.

Sending reminders to customers via email (and text), telling them to clean their filters on the first day of every month and so forth can really increase customer loyalty. Don't overlook making the reminders fun and funny. You can get some real laughs from customers when they get an email or text that says something like "Shock your spa, you filthy animal!"

## STEP 5: KEEP TESTING!

Lastly, test, test, test! There are several methods available in the industry today. Choose the one that suits your needs best. Small adjustments are easier to make than large ones. Make sure the consumer is also testing every few days. This can be done w/ a simple strip, but will ensure that the spa owner is aware of their own water chemistry before they bring you a sample and say "fix this" please! ■

## PRO TIPS

Pool pros must follow a few tips to ensure the overall wellness of their clients' hot tubs.

### Service tip 1

The CDC recommends checking and adjusting hot tub chemicals every hour when bather load is high to make sure chlorine is at 2 to 4 parts per million (ppm) and the pH level is 7.2 to 7.8. In the case of bromine, the sanitizer level should be between 4 and 6 ppm.

### Service tip 2

Service techs should be sure to include a note on their maintenance checklist to scrub off any slimy bacteria (biofilm) that appears on hot tub walls, so it does not continue to circulate in the water.

### Service tip 3

One should also make a note of the installation date and any hardware changes or major repairs on the customer record. Many newer hot tubs come from the factory or have options to add secondary disinfection devices, which can help improve the water quality and lessen the amount of maintenance work. That said, these devices require regular upkeep that is often overlooked, such as replacing solarized ultraviolet (UV) bulbs or replacing an ozonator as they have a limited lifespan.

### Service tip 4

Create a laminated checklist for new and existing spa owners. Many technicians are now leaving a laminated 'enter-exit-checklist' attached to spa covers. This encourages users to check sanitizer and disinfectant levels as they open and close the spa when they enter and exit the vessel. Note: It is important water balance parameters are in range, and a sufficient amount of sanitizer is present in the water.

### Service tip 5

Typically stabilized chlorines, usually dichlor, are used in spa care. Dichlor will introduce a small amount of cyanuric acid to the water. Though introduction of cyanuric acid has never been the cause of any water born illness, its important to periodically drain and refill the water to reduce cyanuric acid, which can inhibit spas recovery in the event the water goes cloudy or has other water upsets. 3-4 months for most residential spas, more frequently if use is heavy.

## ABOUT THE AUTHOR

John Bokor is Haviland Pool & Spas director of sales and has more than 25 years of experience in the pool and spa industry. Bokor, a certified pool operator (CPO), regularly speaks to professional dealers and pool owners within his territory about water chemistry and maintenance. He can be reached via email at [jbokor@havilandusa.com](mailto:jbokor@havilandusa.com) and on Facebook @LegendaryPLS.



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# How to Get Rid of Pollen in Your Pool (and Other Small Debris)

By Orenda Technologies

## OVERVIEW

Pollen floats on the surface of the water during springtime, and it is not something chlorine can easily oxidize and remove. It is also notoriously difficult to filter out in skimmer pools because pollen floats on the surface and may not get pulled down into skimmers. This procedure outlines how to address pollen (and other small debris, like ash) the Orenda way.

Remember that water quality depends on three things: circulation, filtration, and chemistry. This procedure presumes your pool has decent circulation and filtration, otherwise this process may not be as effective as it should be. You may need:

- A sprayer bottle
- A measuring cup
- A net and pole

- CE-Clarifier
- CV-600 or CV-700
- PR-10,000

## POLLEN

Pollen is an organic material that is not easy for chlorine to address. And because it floats at the pool's surface, it often does not get filtered out, but instead sticks to tile lines and inside skimmers. The key to removing



## How to Remove POLLEN & ASH

Based on 10,000 gallons (37,855 L)

pollen is getting it physically out, or changing the surface tension of the water to get it pulled into the filter. CE-Clarifier is the top choice for this, assuming your pool has been purged with CV-600 or CV-700 enzymes already. The enzyme residual is key to addressing pollen, while CE-Clarifier grabs it and helps it get filtered out.

## FIRST VISIT

1. Brush pollen off the tile line into the pool.
2. Spray/broadcast the initial dose of CE-Clarifier (4 fl.oz./10,000 gallons) across the surface of the pool.
  - CE-Clarifier should push debris toward the perimeter of the pool.
  - Ideally, the pool has already been purged with CV-600 or CV-700 enzymes this season. If not, we strongly recommend beginning with an enzyme purge to create a residual that can better handle pollen. This process is much easier with enzymes already in your water.
3. Use a net to remove as much physical debris as you can.
  - Pollen, ash, and other small debris are small enough to go through a normal net. Consider using a net with a finer screening ability to capture pollen and remove it from the pool.
4. Clean out the skimmer baskets.

## NEXT VISIT

1. On your next visit, if necessary, add the weekly dose of CE-Clarifier (1 fl.oz./10,000 gallons) or the weekly dose of CV-600/700 enzymes (2-5 fl.oz./10,000 gallons), then repeat step 2 above. Vacuum the floor, as some particles may drop to the floor and need to be vacuumed.
2. Check filter pressure. Backwash and/or clean filter if needed.

**Notes:** The CE-Clarifier is designed to attract particles (like pollen) to it, and create larger, heavier groups of particles for easier filtration. The enzymes in CE-Clarifier will help reduce surface tension for more rapid clearing of small debris. With enough time, the pollen should be able to be filtered out.

## ASH

If you have wildfires in your region, the soot and smoke in the

air can leave ash in your pool. As a rule of thumb, if you can smell smoke or see a haze in the sky, it's getting into your swimming pool too. Ash and soot are primarily carbon, but also contain nitrogen and phosphorus, with several other elements too. As a result, wildfires near swimming pools lead to an abundance of algae's favorite nutrients (eutrophication) in swimming pools. It's best to address ash directly, rather than hoping chlorine can handle it—because it cannot.

1. Use a net to remove as much physical debris as you can. Pollen, ash, and other small debris are likely to go through the net and not be captured, and that is to be expected. Just remove what you can.
2. Clean out the skimmer baskets.
3. Once physical debris is out of the pool, purge with CV-600 or CV-700 (32 fl.oz./10,000 gallons) and PR-10,000 (8-16 oz./10,000 gallons), if your pool has not already been purged and maintained with enzymes this season.
  - If your pool has been maintained using enzymes already this season, your pool should be prepared to handle ash. Just increase the weekly maintenance dose as needed during wildfire season.
4. Spray/broadcast CE-Clarifier (1 fl.oz./10,000 gallons) across the surface of the pool to accelerate particle filtration.

## OTHER SMALL DEBRIS

Just like pollen and ash, other small debris is also difficult for chlorine to manage. Pollen, ash, and other small debris can float on the surface of the water and tend to mix with non-living organics and oils that float to the surface too. This leads to dirty scum lines on the tile and an ugly appearance to the water. Most dirt and debris will eventually sink. But again, if the pool is loaded with organics, the rising oils can stick to the falling debris, and hold it in suspension. This leads to cloudy water.

A prime example of oils and debris staying suspended is when using PR-10,000 without enzymes in the water. It takes much longer for the cloudiness to clear.

When in doubt, start with enzymes and CE-Clarifier to get the particles to the filter faster. ■

Click [here](#) to access the original article published by Orenda Technologies on 05/12/2022.

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# Pool Heater Installation: Stopping the Threat of CO Gas

By Tom Soukup, Article originally published by AQUA Magazine, July 18, 2023

ON FEBRUARY 24, five people were evacuated from a Hampton Inn & Suites in San Antonio, Texas due to carbon monoxide (CO) exposure from the facility's pool heater. Fortunately, everyone impacted was okay, but two were hospitalized.

Carbon monoxide poisoning, sadly, isn't an extremely rare occurrence. In January of 2022, a pool heater failure in Ohio sent 14 people to the hospital. There were 13 other reported carbon monoxide related incidents in the United States last year.

One of the most regrettable things about carbon monoxide poisoning events is that the vast majority of them are preventable. Whether the culprit is a pool heater, boiler, water heater, furnace or unit heater, the cause usually isn't the piece of equipment itself but, rather, improper installation or inadequate maintenance.

As pool professionals, we have the responsibility — even the legal obligation — to install and maintain gas-fired equipment, as outlined in the manual and local code.

## READ THE MANUAL

I cannot overstate the importance of understanding the product you're installing. Read the manual completely. Become intimately familiar with the codes that apply to these appliances. Maybe most importantly,

it's critical to know the venting category of the piece of equipment being installed.

Venting appliances with the incorrect material is one of the leading causes of venting system failure.

Gas-fired pool heaters are typically Category 1, 3 or 5 appliances. To muddy the waters a bit, certain models can be Cat 1 or Cat 3, depending on the installation and how it's vented. If the heater features a blower, it's most likely a Cat 3 appliance. If it doesn't, it's most likely Cat 1. High-efficiency appliances are generally Cat 5. Installers must confirm the category in the manual and vent the appliance accordingly.

A Cat 1 gas-fired appliance is a negative pressure, atmospheric vent system. This means that there is no fan or blower in the unit. A natural draft, or convection current, is created simply because hot gasses rise. Because there is negative pressure within the vent, the venting system isn't required to be gasketed or otherwise sealed.

Cat 3 appliances have an induced draft, which is created by a fan or blower. This creates positive vent pressure. Most manufacturers of Cat3 appliances require AL29-4C venting systems. This is a stainless steel, gasketed vent material. If a positive pressure vent isn't gasketed, flue gasses will leak into any space through

which the flue passes.

Cat 5 appliances are high-efficiency, condensing appliances. The heat exchangers in these appliances are so efficient that flue gasses remain below 140 degrees Fahrenheit when properly installed and maintained. The low flue gas temperature means that the appliance will generate condensate within the heat exchanger and flue. This condensate is highly corrosive and will, over time, destroy all material aside from plastic vent pipe.

Because Cat 5 appliances produce much lower stack temperatures, PVC, CPVC and Poly vent pipe can and must be used. These materials are impervious to the caustic environment created by the condensate.

While PVC is permitted by most jurisdictions, I recommend using a polypropylene venting system instead, like Centrotherm. It's specifically designed for venting systems and can withstand higher temperatures than PVC or CPVC. It also assembles via a gasket and clip system, instead of PVC primer and cement. In the event of a clog within the flue, it can be easily disassembled and reassembled.

## SERVICE WORK

If your company has the service contract for a pool facility or you are the facility's service manager, it's extremely important to



This is a Category 3 appliance that has been vented with incorrect material. Condensate became trapped in the vent elbow and caused deterioration. All photos courtesy Tom Soukup.



This is a Category 3 appliance that has been vented with incorrect material. Most codes dictate that a vent must terminate at least 18 inches above the proposed snowline. If the vent is blocked by snow, carbon monoxide would back up into the occupied space. Also, the gas regulator, which has a vent, is far too close to the hot surface of the vent termination, which is a potential source for ignition.

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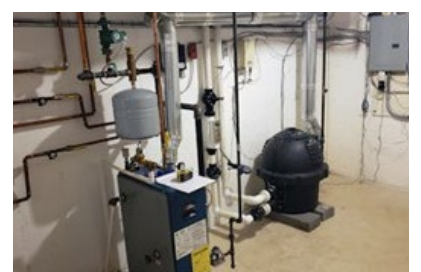
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check the equipment on a regular basis, especially the venting system.

As rudimentary as this sounds, the most effective way to check the integrity of the venting material on a Cat 1 or Cat 3 appliance is to take the handle of a screwdriver and knock it against the metal venting material. Obviously, if punctures occur, the venting must immediately be replaced. More likely though, you could hear metal flaking off the inside wall of the vent pipe. If this occurs, it's time to do further investigation, requiring the vent to be disassembled and likely replaced.

This screwdriver test and a visual inspection should, at minimum, be conducted annually, though I suggest every six months. The heat exchanger should be inspected and cleaned once a year as well. A clogged heat exchanger or insufficient water flow through the heat exchanger will create high flue gas temperatures. This will destroy incorrect vent material. While inspecting the system, ensure that adequate combustion air is being provided.

Cat 5, high-efficiency units feature sealed-combustion burners. This means that intake air should always be provided from outside the building. This typically includes PVC through a wall or roof, terminating directly in the burner. At no point should a Cat 5 appliance draw air from inside the building.



This is a perfect example of incorrect venting. Both the boiler and the pool heater in this image are Category 3 appliances, but are vented using standard Category 1 vent systems. The installer tried to overcome the flue gas leakage by taping the seams, which is absolutely unacceptable.

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# Pool Heater Installation

Continued from page 16

Cat 1 and Cat 3 appliances can draw combustion air from inside the building, but for a variety of reasons, the best practice is to supply outdoor air. If there isn't enough air permeation in the enclosed space, operating the appliance will create a negative pressure indoor environment. This lack of combustion air will result in incomplete combustion, reducing the efficiency of the appliance, causing premature fouling of the heat exchanger, generating higher flue gas temperatures and, ultimately, damaging the unit.

Many mechanical rooms that contain Cat 1 or Cat 3 appliances feature louvers on an exterior wall. These louvers, which are supposed to actuate when the heating appliance fires, should not be trusted. We've witnessed far too many situations in which louvers have been bypassed, are broken, obstructed, frozen shut, or otherwise inoperable. This is simply one more reason to provide outdoor air

directly to the unit. Most manufacturers make a fresh air kit for their units.

It should also be noted that many pool heaters are installed in close proximity to treatment chemical storage. These chemicals are caustic and will lead to premature heater failure if present in the combustion air, even in extremely low concentrations.

There's yet another risk to supplying a heater with combustion air drawn from indoors. Most pool mechanical rooms are adjacent to a natatorium. The negative pressure created by the heating appliance creates a vacuum in the



A non-functioning barometric damper, as seen here, is another opportunity for carbon monoxide to escape the flue and enter the occupied space.

mechanical space, often drawing makeup air from the natatorium. The pool treatment chemicals suspended in this air will cause damage to the heating appliance and other susceptible equipment in the mechanical room.

## TRAINING AND SUPPORT

Understanding the installation and maintenance requirements set forth in the heating appliance manual and local codes is critical, but so is being familiar with the intricacies of the specific appliance.

When questions come up, do not hesitate to contact the manufacturer's representative directly. Also inquire about training opportunities for yourself or your technicians. Sometimes, this training is provided by the manufacturer while other times, it may be hosted by a manufacturer's representative or supply house.

It's also important to be aware of local codes, which supersede manufacturer specifications. It's a good

idea to build a relationship with your local code officials. These people can be a resource for information, but if they learn that you do quality work, they may also become a source of service work and replacement leads.

## BEING PROACTIVE

A passive approach to venting installation and maintenance is dangerous. Pool heaters and venting are one of the most overlooked systems at a hotel, motel or aquatic facility. A proactive approach should be taken when acquiring service contracts on systems that your company has installed.

Don't be afraid to lock out (red tag) a heating appliance if it's not installed or maintained properly. This can literally be a life and death scenario, and if you were the last professional to touch the system, the liability may be in your hands.

If we red tag a system, we capture photos and videos of the issue and send it to the owner. This reduces our exposure in the event that something bad occurs. If the customer isn't taking steps to rectify the issue, it's good practice to notify your local official that has jurisdiction. This may be a code enforcement officer, gas company official, etc. Every step you take to notify others of the issue is risk mitigation for you. Make notes and save copies of all communications.

The vast, overwhelming majority of carbon monoxide poisoning events are preventable and the direct result of negligence. While carbon monoxide poisoning events are not everyday occurrences, they present serious consequences. Make every effort to ensure public safety and insulate your business for the consequences of someone else's negligence. ■



The rust stains around the vent stack are a strong indicator that the interior of the venting system is deteriorating. The absence of a correctly sized starting collar between the appliance and the vent is also the site of a potential flue gas leak.

*This article first appeared in the July 2023 issue of AQUA Magazine — the top resource for retailers, builders and service pros in the pool and spa industry. Subscriptions to the print magazine are free to all industry professionals. [Click here to subscribe.](#)*

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Gentle Chlor is an all-in-one saltwater chlorine generator in an advanced compact design for your pool. Easy one-touch start to keep your pool crystal clear and your skin feeling silky smooth.

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3. Bi-Directional Flow Sensor
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Interested in other pool equipment? We offer a wide variety at competitive pricing. You can also save time with our convenient and fast ordering, along with local pick-up and delivery options.



# HEY RAY!

**Ray Arouesty, Senior Vice President of Arrow Insurance Service, a division of HUB International Insurance Services, answers commonly asked insurance and liability related questions from pool service professionals.**

**QUESTION:**

I regularly service a residential account and this week I arrived to find the pool a mess. There were lawn chairs in the shallow end, and it appeared that the pool was recently used by a very large group of people. The homeowners explained that they are now renting their pool for day use and their pool was used on Independence Day. Do you think I should drop this account?

**ANSWER:**

Homeowners renting their pools for day use has recently gained popularity with the advent of social media and apps connecting pool owners and prospective rental users. But servicing these hybrid-use pools creates a challenge for the swimming pool service tech.

The main job of a pool tech is keeping the pool sanitized to provide a safe environment for swimmers and that is difficult with varying bather load. Commercial pools handle this challenge with automated chlorination systems that provide chlorine on-demand. Residential pools rarely have this type of chlorination system making it tough to maintain adequate sanitation. You and the homeowner should discuss installing a chemical controller to reduce the transmission of waterborne diseases. This is especially important now, given your knowledge of the quasi-commercial usage of the pool.

The next concern is safety equipment. Commercial pools commonly have life rings and Sheppard hooks nearby for swimmers in distress. Many backyard pools do not, and the homeowner would be wise to install this equipment. It's generally not the job of a pool tech to evaluate these types of safety considerations, but you might be blamed if you don't.

It's foreseeable that alcohol will be consumed at these pool parties. Is the deck safe? Are the steps slippery? You will hear terms like the "co-efficient of friction" if you are brought into a lawsuit involving a slip and fall injury during one of these pool parties.

There are many other issues as well. Is the equipment fenced? And is the pool even safe. Many pools have inadequate bonding and even inadequately secured main drains. Have you evaluated these items.

It's a big decision for a homeowner to rent a pool. It's a bigger decision for a pool tech to continue servicing the pool. ■



**Ray Arouesty**  
SENIOR VICE PRESIDENT, ARROW INSURANCE SERVICE A DIVISION OF HUB INTERNATIONAL INSURANCE SERVICES

[IPSSA Insurance](http://IPSSA Insurance) | [Arrow Insurance Service](http://Arrow Insurance Service) | 805.955.9530 | [Ray.Arouesty@HubInternational.com](mailto:Ray.Arouesty@HubInternational.com)

## Upcoming IPSSA & Industry Events

**POOL INDUSTRY EXPO  
(PIE SHOW)**  
September 14-16, 2023  
Hyatt Regency  
Monterey, CA

**IPSSA NATIONAL BORD  
MEETING**  
November 10-11, 2023  
Mandalay Bay  
Las Vegas

**PSP/DECK EXPO**  
November 13-15, 2023  
Las Vegas Convention Center  
Las Vegas

**WORLD AQUATIC HEALTH  
CONFERENCE**  
November 13-15, 2023  
Las Vegas Convention Center  
Las Vegas

**IPSSA'S WEEKEND OF  
INSPIRATION CONFERENCE**  
February 2-4, 2024  
The Westin  
Long Beach, CA  
Click [here](#) to register!



**IPSSA's Find a  
Pool Service  
Professional**  
Search Function

**DID YOU KNOW** that potential customers can search for a pool service directly from the IPSSA website? These results populate an IPSSA member near them. Log into your member portal to add your company logo, website link and social media links to enhance the search results for your company. If you need help logging into your member portal, send an email to [memberservices@ipssa.com](mailto:memberservices@ipssa.com) to reset your password.



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COMMUNICATION



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- ✓ No pool deck damage or construction required
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- ✓ Wireless communication
- ✓ Simple installation for both new and existing applications
- ✓ Reduces water and energy consumption
- ✓ Optional online monitoring and alerts



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**IPSSA has expanded its rewards and recognition to include 3 BIG AWARD OPPORTUNITIES. 2023 nominations are now open!**



NOW ACCEPTING NOMINATIONS FOR THE

## 2023 IPSSA AWARDS

CHAPTER OF THE YEAR AWARD  
 POOL PROFESSIONAL OF TOMORROW AWARD  
 TERRY COWLES LIFETIME ACHIEVEMENT AWARD

Award Nomination Deadline: 10/15/2023  
 Go to [www.ipssa.com/ipssa-awards](http://www.ipssa.com/ipssa-awards) for Guidelines and Nomination Forms

**Nominations are due by October 15, 2023. Go to [ipssa.com/ipssa-awards](http://ipssa.com/ipssa-awards) for more information.**

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[www.countyleakservices.com](http://www.countyleakservices.com)

### CALLING ALL IPSSA REGULAR MEMBERS

## IPSSA is Recruiting for Volunteers to Serve on the IPSSA BORD Committees

**THE COMMITTEES MEET FOUR TIMES A YEAR** through Virtual experience. With this format very little time is taken away from your business or family. You will be able to work with the IPSSA BORD to ensure your organization is doing all it can to help the members and the community it serves. The committees are as follows:

- **Education Committee:** Provides advice to the BORD on the strategic directions, development of the educational activities of IPSSA and public awareness to the community. Oversees the IPSSA Education Fund.
- **Marketing and Outreach Committee:** Designs and implements strategies for promoting IPSSA by continuously strengthening its brand and message - Knowledge through Community

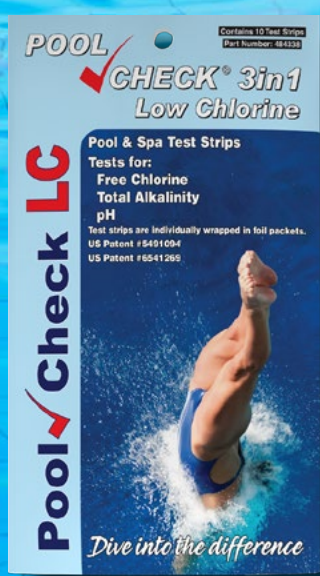
- **Membership Committee Program:** Promotes and facilitates the recruitment and continuity of IPSSA members

Please submit your email intent with your name, and committee you wish to serve. Those wishing to volunteer may select one-committee to serve. If interested, please submit your name right away. If you are not selected for the committee of choice, please know that committees change throughout the year and we will keep your name on file. If you are interested or would like more information about the committee purpose and how best you can serve, please feel free to contact me, Rose Smoot at 888-360-9505 or [rose@ipssa.com](mailto:rose@ipssa.com). ■

## USING ALTERNATIVE POOL SANITIZERS?



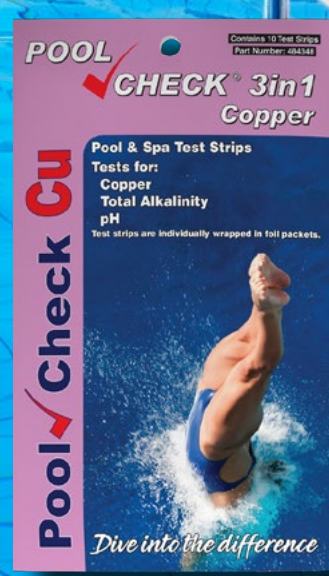
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Visit our new website dedicated to pool professionals – [LesliesPro.com](https://LesliesPro.com)



#### SEE INVENTORY

Check store inventory before visiting



#### SHOP ONLINE FOR PICKUP

Buy online and have your items ready for pickup, saving time



#### WHOLESALE PRICING

Access to your wholesale pricing & visibility to consumer retail prices



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Easy reorder functionality for frequently purchased items



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Intuitive, simple online shopping interface



#### FIND PRODUCTS EASILY

Easy to find the products you need as a Pool Professional

## Introducing Leslie's Pro Partner Program

A new program designed to grow your business.

Enroll today to take advantage of these program benefits:



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Qualify for trade pricing on the products you use every day.



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Add new customers to your business with referrals from your local Leslie's stores.



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## IPSSA's Find a Pool Service Professional Search Function

**DID YOU KNOW THAT POTENTIAL CUSTOMERS** can search for a pool service directly from the IPSSA website? These results populate an IPSSA member near them. Log into your member portal to add your company logo, website link and social media links to enhance the search results for your company. If you need help logging into your member portal, send an email to [memberservices@ipssa.com](mailto:memberservices@ipssa.com) to reset your password.

### Sparkling clean water *everyday*

... improving your pool and spa water experience since 1982



Ozone acts as a primary oxidizer, not as a disinfectant or biocide. Disinfection is achieved by maintaining a free available chlorine or bromine residual. Because Ozone is a more powerful oxidizing reagent than chlorine, Ozone reacts with organic or nitrogen containing compounds faster. Ozone does not combine with other compounds; instead, it causes the organic and nitrogen compounds to break apart. The smaller molecules are more water soluble, and some can even gas-off. Amine compounds are altered so that they no longer combine with chlorine. Ozone stops the buildup of chlorinated organic and amine compounds and does not form combines.

To summarize, chlorine's biocidal and residual properties are excellent, and in pool and spa water, chlorine is the primary biocide and the free available residual. Ozone is the primary oxidizer. Ozone increases chlorine's effectiveness as a biocide and residual.

Without Ozone, the homeowner uses much more chlorine to keep a free available residual and requires "superchlorination" or "shocking" compounds and other specialty chemicals to treat problems caused by pool oxidation by chlorine.

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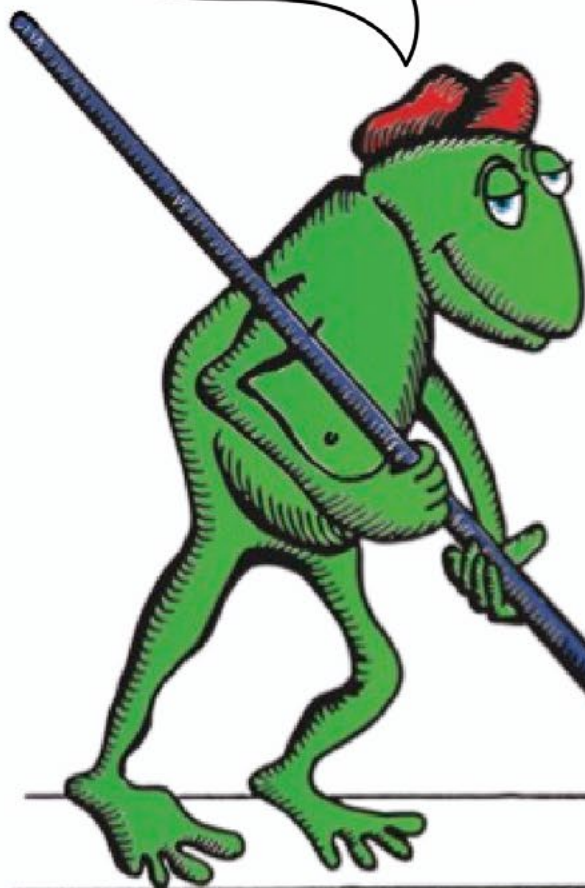
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POOL INDUSTRY EXPO

September 14, 15, 16, 2023

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**H2Flow Controls Launches LevelSmart Wireless Autofill System for Pools, Spas and More**

H2flow Controls, Inc., a privately-held manufacturer of products that are used to control, protect, and measure machines and processes, is pleased to announce the launch of the LevelSmart Wireless Autofill System for pools, spas, ponds, water features, tanks and other bodies of water.

LevelSmart eliminates the chore of filling bodies of water manually – and the risk of over-filling – by employing innovative and patented proprietary sensing methods. When positioned at the desired water level in a body of water, the LevelSmart sensor wirelessly communicates with the LevelSmart valve controller to

perform operation of an automatic valve. When water is needed, the valve controller opens the valve, allowing the desired water level to be maintained.

Whether a pool is located in a hot climate with significant evaporation, is prone to bather splash-out, or loses water due to regular backwashing, LevelSmart offers valuable and effective water level monitoring 24-hours per day. “We’re incredibly excited to bring LevelSmart to the Pool & Spa market”, says Sean McDermott, VP of Sales. “The opportunity here is about more than providing a product of convenience. LevelSmart will help customers reduce their water and energy consumption, it’ll stop them from burning out their expensive pool pump, and it will increase safety around the pool. Also, the extremely simple and non-invasive installation means it is perfect for all new and existing pools”.

LevelSmart is currently available for purchase through various online retailers and directly from H2flow Controls.

To learn more about the LevelSmart Wireless Autofill, visit [h2flow.net](http://h2flow.net), email [sales@h2flow.net](mailto:sales@h2flow.net), or call 888.635.0296.

**Star Tribune names King Technology, Inc. a 2023 Top Workplace**

King Technology, Inc. has been named one of the Top Workplaces in Minnesota by the Star Tribune. A complete list of workplaces selected is available at [startribune.com/mn-top-workplaces](http://startribune.com/mn-top-workplaces) and was also published in the Star Tribune Top Workplaces special section on Sunday, June 18.

Produced by the same team that compiles the 32-year-old Star Tribune 100 report of the best-performing public companies in Minnesota, Top Workplaces recognizes the most progressive companies in Minnesota based on employee opinions measuring engagement, organizational health and satisfaction. The analysis included responses from 124,719 employees at Minnesota public, private and nonprofit organizations.

The results of the Star Tribune Top Workplaces are based on survey information collected by Energage, an independent company specializing in employee engagement and retention.

“We are thrilled to have been named a National Top Workplace, and we owe this achievement to our incredible employees,” Randy Roseth, president, King Technology, says. “Their dedication and passion for our mission



is what makes our organization great, and we are proud to have them on our team.”

Star Tribune CEO and Publisher Steve Grove said, “The companies in the Star Tribune Top Workplaces deserve high praise for creating the very best work environments in the state of Minnesota. My congratulations to each of these exceptional companies.”

“Being named a National Top Workplace is a great accomplishment, and we are thrilled to have received this recognition,” says Desiree Church, chief human resources officer. “Our employees are the heart and soul of our organization, and we are truly grateful for their commitment to our vision and values.”

King Technology makes water care products that are easy to use and take the stress and mess out of water care. King Technology creates and manufactures innovative, smart products and systems to sanitize pools and hot tubs. Their unique technologies and products are market leaders, proven to keep water clean and crystal clear. They deliver something no one else can—Fresh Mineral Water® in every pool and hot tub.

What King Technology really does, however, is Enrich Lives Daily, providing possibilities for people’s lifestyles and for growing careers.

To qualify for the Star Tribune Top Workplaces, a company must have more than 50 employees in Minnesota. Over 5,000 companies were invited to participate. Rankings were composite scores calculated purely on the basis of employee responses.

For more information, please contact Desiree Church at 612-271-6520 or [desiree.church@kingtechnology.com](mailto:desiree.church@kingtechnology.com).

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SALT AND CHLORINE POOLS  
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<b>4-Packs (Pool)</b>				<b>Single Units (Spa)</b>	
<p>Blue/White Units</p> <p>Item # 331003 7.5K - 20K gallons <b>\$15.00 OFF</b></p>	<p>Black/White Units</p> <p>Item # 331067 20K - 30K gallons <b>\$17.50 OFF</b></p>	<p>Blue/White Boosters</p> <p>Item # 332004 7.5K - 20K gallons <b>\$7.50 OFF</b></p>	<p>Black/White Boosters</p> <p>Item # 332064 20K - 30K gallons <b>\$11.25 OFF</b></p>	<p>Yellow/White Unit</p> <p>Item # 331057 100 - 400 gallons <b>\$1.00 OFF</b></p>	<p>Indigo/White Unit</p> <p>Item # 331055 400 - 1000 gallons <b>\$1.30 OFF</b></p>
<b>Single Units (Pool)</b>				<b>Commercial (Pool)</b>	
<p>Blue/White Unit</p> <p>Item # 331001 7.5K - 20K gallons <b>\$4.00 OFF</b></p>	<p>Black/White Unit</p> <p>Item # 331066 20K - 30K gallons <b>\$5.00 OFF</b></p>	<p>Blue/White Booster</p> <p>Item # 332001 7.5K - 20K gallons <b>\$2.00 OFF</b></p>	<p>Black/White Booster</p> <p>Item # 332066 20K - 30K gallons <b>\$3.00 OFF</b></p>	<p>PoolRx+ Commercial Unit</p> <p>Item # 101080 (Alloy-Cylinder Only. Requires Granular Minerals, Part # 332003) Ideal for 150K - 500K gallons <b>\$15.00 OFF</b></p>	<p>Blue/White Granular Minerals Bucket</p> <p>Item # 332003 Treats up to 300K gallons <b>\$34.00 OFF</b></p>

Learn more about these amazing products at [poolrx.com](http://poolrx.com) We are also featured on podcasts: [thepoolguypodcastshow.com](http://thepoolguypodcastshow.com) and [poolchasers.com](http://poolchasers.com)

# BLUE SQUARE®

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**GRACE**  
Marketing

HAVING STARTED HIS CAREER as a pool service tech for ten years before becoming a pool builder, the founder of Blue Square, Tim Murphy, had long aspired to develop and manufacture better, more efficient

pool equipment. Through his many years of experience, Tim developed the Q360+ in-floor cleaning system, which included the Q360+ Actuator Valve. This 6-port valve tied into the variable speed pump,

unique at the time, and worked on water flow, not pressure. His continued passion to develop innovative pool equipment is what made Blue Square Manufacturing what it is today.

As Blue Square has grown, we now manufacture in-floor cleaning systems, new and replacement LED pool lighting, modern pool drains, and more. As we continue to grow and develop, we will continue to stay true to our founder and manufacture the industry's most innovative pool equipment.

Our famous [Vivid 360 LED Pools and Spa Replacement lights](#) allow new lighting to be installed using existing lighting cable — eliminating the need to pull new cable and simplifying installation. Our quick-connect plug kits make Vivid 360 “the most reliable, service-friendly replacement LED on the market”. The Vivid 360 LED lights include replacements for pool, spa, and nicheless lighting (also replaces fiber optic). Our adjustable tab system fits most lighting niches including Jandy®, Hayward® and Pentair, and are public and commercial pool compatible.

The latest release in Pool Lighting are the [Vivid 360 LED Replacement Pool and Spa Bulbs](#). The Vivid Bulbs with an E26 fixture base, feature an advanced microprocessor with wide-angle, high-output LED chips. Guaranteed high-speed LED performance and bright, vivid light output. Easy to install, fits in standard pool bulb sockets and housings. Easy to use ON-OFF toggle switch, use toggle to switch between the color settings on the RGB bulbs. While lighting is one of our

best sellers, our [Q360+ In-Floor Cleaning System](#) is the world's most efficient pool cleaner. Q360+ is the only system that consistently delivers savings throughout your entire pool at every pump speed. The energy-efficient Actuator Valve delivers maximum flow with minimal pressure variations. The 6-port design efficiently distributes water to each jet. The Q360 Performance Plus jets feature a nozzle that improves cleaning like never before. The jets blow debris into the patented [Eclipse Drain](#), a single-source suction that blends into any pool surface and is made in the U.S.A. [The Abyss Canister](#) captures debris and channels it into the 14” basket, minimizing flow loss. This innovative design keeps heavy debris from interfering with the operation of your pool equipment and filtration system while maintaining steady water flow.

When you partner with Blue Square, you can expect an intimate customer service experience, fast shipping times, reliable products, and an industry-leading warranty. We sell through most distributors and buying groups. For more information on how to order, call (480) 612-6880. ■

### Things to do in August

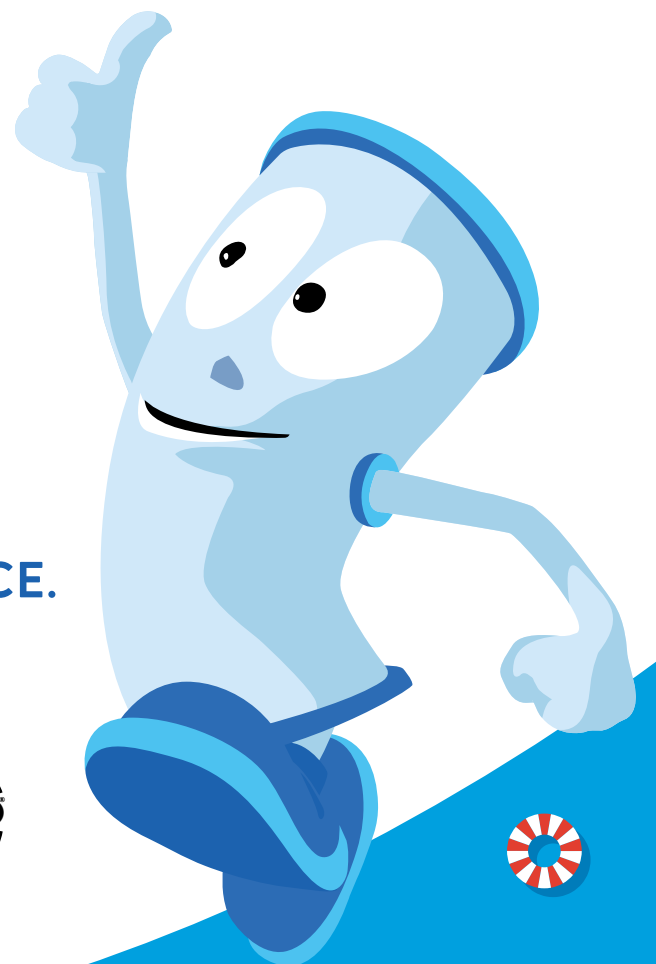
- Wear Sunscreen
- Wear a Hat
- Drink Lots of Water

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# FICTION vs. FACT

## 1. Membership in IPSSA means you have to participate in the IPSSA Insurance Program through Arrow/HUB Insurance Service.

**FACT:** Membership in IPSSA requires you to have general liability insurance with a minimum of \$1Mil limit. Proof of insurance must be provided upon acceptance of membership.

## 2. As a new member of IPSSA you must pass the IPSSA Water Chemistry Exam immediately.

**FACT:** A new member has up to one year to pass the IPSSA Water Chemistry Exam or may provide a certificate of training from one of the following courses: IPSSA Water Chemistry Exam, Professional Pool & Spa Operator (PPSO), Pool Chemistry Certified Residential (PCCR), Certified Pool Operator (CPO), LA County Health Department License, Florida Registered/Certified Pool and Spa Exam. Each Chapter can accept

alternate certification or still require IPSSA Water Chemistry to be passed. All proof of alternate certification must be sent to IPSSA National by the Chapter President, not the Member.

## 3. As a prospective member you must attend three meetings before acceptance of membership.

**FACT:** That is not IPSSA National Policy, chapters do have the authority to adopt meeting requirements for their prospective members.

## 4. Chapters must learn how to file insurance claims.

**FACT:** Chapters are not required to file an insurance claim. Individual members should be responsible for filing and contacting their insurance broker.

## 5. IPSSA National and Chapter dues include insurance fees.

**FACT:** Your membership dues

(formerly known as fees) do not include insurance or any service fees.

## 6. Members pay a reinstatement fee.

**FACT:** IPSSA National does not charge a reinstatement fee. The only time member is charged a fee by IPSSA National is for returned checks.

## 7. IPSSA National collects fines for chapters on individual members.

**FACT:** Chapters and regions are responsible for collecting fines to individual members.

## 8. Chapters can buy gift cards or hand out cash to chapter members from dues, chapter support and/or manufacturer rebate programs.

**FACT:** Chapters may not expend any Chapter funds for general gifts for chapter members (including their families, employees, and designates); distribution of excess revenues of the Chapter; payment of business

expenses of Chapter members (including most insurance) unless approved in advance and in writing by the IPSSA Board of Regional Directors.

## 9. IPSSA doesn't contact or call me when I haven't paid my dues.

**FACT:** Multiple emails are sent out during the month noted "IPSSA Membership Past Due - First Notice/ Second Notice." If we don't receive payment by the end of the month a cancellation notice is sent out to the member and we alert Arrow Insurance if you are enrolled.

## 10. IPSSA won't let me rejoin after I've been cancelled for membership.

**FACT:** IPSSA is more than willing to have members rejoin that accidentally dropped. All we ask is for the members to pay their past membership dues so there is no lapse in membership. ■

## PENTAIR Rebate Program — Take Advantage

PENTAIR AQUATIC SYSTEMS appreciates the support of IPSSA membership. Pentair is pleased to continue offering IPSSA a rebate incentive based on individual product purchases of each member.

Pentair will reimburse IPSSA National one dollar (\$1.00) for each whole good that a member purchases throughout the year. The list of qualifying whole goods is the same that are listed in Pentair's PIP program, but basically pumps, filters, heaters, heatpumps, cleaners, automation systems, sanitizers and colored lights are included.

For IPSSA to receive payment each member must register individually on the [Pentair IPSSA Incentive Program Registration Form](#), which is available on the IPSSA member portal site under Member Only Exclusive Offers. This will allow Pentair to monitor and collect electronically from participating distributors

purchase details, or direct from the member purchases for the rebate accumulation.

If a member does not register, their purchases will not qualify and cannot be added later.

The Pentair Incentive Program reflect purchases made between the dates of October 1st through September 30th during each rebate year.

This program does not affect any member purchases that may also currently be individually enrolled in the PIP program. If dealers have any questions regarding the program, please have them dial 800-693-0171 or send an email to [rewards@pentair.com](mailto:rewards@pentair.com).

The funds generated will be used for IPSSA's continuing education and research programs. ■



Since 1984 — Employee Owned  
Specialists in Swimming Pool Safety Products

The employee owners at **Pool Covers, Inc.** are committed to great customer service for you and your clients!

Know that when you refer your clients to us they do not need to shop anywhere else. Pool Covers, Inc. employee owners will not only provide **superior customer service** but will provide you with the most innovative products to make your clients pool safe. We offer child safety fencing as well as safety swimming pool covers. Our style of "one stop shopping" makes it faster and more convenient for you and your clients.

Remember, for every client you refer that purchases a safety product from Pool Covers Inc., you will receive a referral check. We here at Pool Covers, Inc. appreciate you and your business!

Pool Covers Inc. providing quality safety products and service in Northern California for over 30 years.

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Save Lives, Save Water, Save Heat, Save Money!

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### Boost your filter's performance with ProTeam Dry Clarifier.

It works by penetrating the sand with a highly effective polymer formula which helps collect particles as small as 2 microns that would otherwise pass through the sand media.



Restores water quality after heavy use

Use weekly to add sparkle to the water



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# New Products



## CCEI USA offers energy efficient controller

CCEI USA's Phileo VP automated controller provides energy efficient chemical regulation as the unit's motor only activates during dosing, saving energy usage. The Phileo VP automatically tests and monitors pH levels in pool water and adjust chemicals in the water as needed. The peristaltic dosing Phileo VP comes equipped with a color changing, LED light that changes according to the pool's water chemistry—changing from green, to yellow and red—to provide a quick visual indication if the water chemistry is balanced or falls out of the accepted levels for sanitized pool water. The energy-efficient Phileo VP plugs in to any protected 120V outlet and sends alerts directly to mobile devices so users can check the water chemistry of their pool at any time. UL listed. This product was recently chosen a Top 50 Readers' Choice product by Pool & Spa News. **Learn more at [www.ccei-pool.com/us/](http://www.ccei-pool.com/us/).**



## Natural Chemistry offers Retail Display Racks for Spa Water Care Products

For a limited time, Natural Chemistry will offer a beautiful retail display rack for its line of high-end spa water treatment products. With sleek graphics and modern wooden shelving, this retail display rack will enhance any retail store area. Designed for retail operations looking to add a premium line of spa water treatment products, the display rack is available to those purchasing 12 cases of any mix of NC spa product available in the product line, from maintenance and remedy product to balancing and sanitizing products. **For more information, contact your local NC Brands District Sales Manager, email [ncbrands@biolabinc.com](mailto:ncbrands@biolabinc.com) or visit [naturalchemistry.com](http://naturalchemistry.com).**



## Waterway's Crystal Water Cartridge and D.E. Filters Have New Features!

Waterway's Crystal Water Cartridge and D.E. Filters are at the top of the list when considering swimming pool and spa filtration. With their 2 1/2" internal plumbing (the largest in the industry), they have the ability to minimize restrictions and improve water flow.

Crystal Water filters now have a new and improved larger heavy duty manual air relief valve that comes with a top mount assembly and handles for easier positioning and top removal. They both come with a stainless steel pressure gauge which is rated the best in the industry.

Waterway have also incorporated a new, heavy duty commercial grade, tamper proof, band clamp that helps tightly secure the filter when in use. It also has a chemical resistant coating that will help in the longevity of the filter.

In addition, Waterway is now offering a 2 year warranty on these filters.

These filters utilize brand new tooling with a re-enforced ribbed bottom and have a chemical resistant glass fiber reinforced polypropylene tank for exceptional strength and long life.

We have also improved and upgraded the packaging to keep product safer while in transit.

These filters have been highly rated and use state-of-the-art internal design, providing greater and more efficient filtration. For the clearest, most inviting water, choose the Crystal Water Cartridge and D.E. Filter.

**Please contact your Waterway sales representative for more information or visit us at [waterwayplastics.com](http://waterwayplastics.com).**



## Blue Square's new Vivid 360™ LED Replacement Bulbs

Blue Square's new Vivid 360™ LED Replacement Pool & Spa Bulbs are engineered to replace most existing pool and spa bulbs to deliver more colorful and vivid lighting than ever before. The new line of Pool & Spa bulbs are available in 12 volts and 120 volts and come in three color options - Cool White, Warm White, and RGBW Multi-Color.

The Vivid Bulbs with an E26 fixture base, feature an advanced microprocessor with wide-angle, high-output LED chips. They have guaranteed high-speed LED performance and bright, vivid light output. The bulbs are easy to install and fit in standard pool bulb sockets and housings. The bulbs are user-friendly, with an easy-to-use toggle switch to turn on/off or between the color settings on the RGB bulbs.

Each bulb comes with a 5-year warranty. **For more information on the Vivid 360 Bulbs, visit [bluesquaremfg.com/bulbs/](http://bluesquaremfg.com/bulbs/).**



## The IntelliCenter® Upgrade Kit for EasyTouch®/IntelliTouch® Pool Control System

Put the latest pool automation technology in the palm of your customer's hands with the IntelliCenter® Upgrade Kit for EasyTouch®/IntelliTouch® Pool Control Systems. It's any easy, breezy win-win!

It's a business booster for you with thousands of pools eligible to upgrade to the latest technology. And it's easy to install. Use the current wiring and housing — just change out the bezel! The Upgrade Kit has all the benefits of the flagship IntelliCenter System, including reliability, versatility and expandability.

- An intuitive touchscreen for easier installation and setup to help you get out of the backyard faster
- More consistent connections powered by AWS® technology for increased reliability and stability, meaning fewer late-night service calls
- Proactive remote monitoring to keep all your customer's equipment and devices running smoothly
- Dedicated support from Pentair's automation specialists

And it's better for your customers with easy app control from anywhere, making pool enjoyment as effortless as a summertime float. The IntelliCenter System helps make pool life as easy as it should be. It's automation done right!

Give your customers the latest in pool automation and turn it into more business for you.

**To dive in and explore, visit [Pentair.com/intellicenterhub](http://Pentair.com/intellicenterhub) today!**



## Save water with ProTeam Quick Cover

Evaporation is a significant contributor to water and heat loss in water. ProTeam's water surface nano-layer protection quickly prevents evaporation. This environmentally friendly product provides an invisible layer of protection that can't be touched. Can either eliminates or compliment cumbersome solar covers in saving water. Apply directly to skimmer with just a small amount needed to cover the surface area of the pool. Add weekly or after intense rain. Made in the USA. **Learn more at [proteampoolcare.com](http://proteampoolcare.com).**





# Associate Members

## BHG Sales

[bhgsales.com](http://bhgsales.com)  
714-982-8856  
Ben Gargle: [bgargle@bhgsales.com](mailto:bgargle@bhgsales.com)  
Quality Products for the Pool Industry

## Blake Sales Associates\*

[blakesales.net](http://blakesales.net)  
800-748-5756  
John Grucky: [john.grucky@blakesales.net](mailto:john.grucky@blakesales.net)  
Products which we represent

## Blue Square Manufacturing

[www.bluesquaremfg.com](http://www.bluesquaremfg.com)  
(Office) 480-612-6880; (Cell) 941-705-2533  
Donald Smith: [dsmith@bluesquaremfg.com](mailto:dsmith@bluesquaremfg.com)  
Blue Square Manufacturing is an innovative pool equipment manufacturer headquartered in Chandler, Arizona. From LED pool & spa lights with patented plug kits to the Eclipse Drain and Q360+ in-floor cleaning system, Blue Square is known for manufacturing the industry's leading products.

## CAMEREYE

[camereye.ai](http://camereye.ai)  
Michele Baker: 619-518-3361  
CamerEye™ is the first Artificial Intelligence Smart Fence and safety ecosystem to provide faster distress detection and help save lives.

## CCEI USA Inc.

[ccei-pool.com](http://ccei-pool.com)  
617-304-5618  
Arthur Schutzberg: [aschutzberg@ccei-pool.com](mailto:aschutzberg@ccei-pool.com)  
CCEI USA is an electrical pool equipment manufacturer, based in Inglewood, California, but with roots in the South of France. For over 37 years, we have manufactured the brightest nicheless lights on the market, connected chemical feeders, low voltage transformers, simple automation, water treatment solutions, and can be connected via Bluetooth or Wi-Fi.

## Compass Minerals

[compassminerals.com](http://compassminerals.com)  
913-343-2194  
Tommy Allmon  
[allmont@compassminerals.com](mailto:allmont@compassminerals.com)  
Compass Minerals is the leading salt producer in North America and the U.K. We take pride in safely delivering essential mineral products to help keep people safe, feed the world and enrich lives. Our high-quality ProSoft® Pool Salt is formulated for pool professionals and certified by the National Sanitation Foundation. ProSoft Pool Salt is designed to meet or exceed the standards set by leading chlorine generator manufacturers and contains high purity, extra fine crystals that dissolve rapidly.

## County Leak Services / The Pool Center

[countyleakservices.com](http://countyleakservices.com)  
714-632-0134  
Bill Campbell: [bill.campbell@countyleakservices.com](mailto:bill.campbell@countyleakservices.com)  
Swimming pool and spa leak locating, repairs, remodel

## D&D Technologies

[www.us.ddtech.com](http://www.us.ddtech.com)  
714-677-1300  
[info@ddtechusa.com](mailto:info@ddtechusa.com)  
D&D Technologies was founded on child safety and we are committed to preventing toddler drownings worldwide. D&D Technologies is the designer and manufacturer of the MagnaLatch® magnetically triggered safety gate latch and TruClose® self-closing, polymer safety gate hinges. D&D Technologies is the recognized leader in safety and hi-performance gate hardware globally providing the broadest range of gate hardware for every application.

## Discount Tires/America's Tires

[tires.com](http://tires.com)  
480-606-6000  
Lori Thomas: [Lori.thomas@discounttire.com](mailto:Lori.thomas@discounttire.com)  
Discount Tire Company is an independent tire and wheel retailer. Discount Tire operates in most of the lower 48 states in the United States and is the largest independent tire and wheel retailer in the world.

## Freedom Solar Energy

[freedomsolarenergy.net](http://freedomsolarenergy.net)  
760-806-3733  
Kristal Needham: [kristal@freedomsolarenergy.net](mailto:kristal@freedomsolarenergy.net)  
Solar Pool Heating System Installation and Service. Solar electric, Solar hot water heating, battery integration and security installations

## H2flow Controls, Inc.

[www.h2flow.net](http://www.h2flow.net)  
888-635-0296  
[sales@h2flow.net](mailto:sales@h2flow.net)  
H2flow Controls is dedicated to developing innovative products that are used to control, protect and measure machines and processes around the world. In residential and commercial pool and spa markets, our solutions are used to measure flow, maintain water levels, increase energy efficiency, and eliminate the risk of drain entrapment.

## H2O So Clean Pool & Spa Services

[h2osoclean.com](http://h2osoclean.com)  
858-732-5426  
Daniel Schreiber: [daniel@h2osoclean.com](mailto:daniel@h2osoclean.com)  
Lead Acquisition, Customer Pre-Screening, and Marketing for Pool and Spa Service Companies throughout San Diego County

## Horizon Spa & Pool Parts

[horizonparts.com](http://horizonparts.com)  
520-295-9750  
Bruce Johnson: [bruce@horizonparts.com](mailto:bruce@horizonparts.com)  
Wholesale distributor of pool parts, spa parts, business education

## iWallet

[iwallet.com](http://iwallet.com)  
866-376-4880  
Jim Kolchin: [jim@iwallet.com](mailto:jim@iwallet.com)  
iWallet is the #1 processing app that's designed

to accept all forms of payments in the field. The revolutionary app gives employees the freedom from hardware and ultimately gives customers different payment options.

## Jack's Magic

[jacksmagic.com](http://jacksmagic.com)  
727-536-4500  
Nadia Beane: [nadia@jacksmagic.com](mailto:nadia@jacksmagic.com)  
Jack Beane: [jack@jacksmagic.com](mailto:jack@jacksmagic.com)  
Manufacturer of pool stain removal chemicals

## Kent Westfall Pool Inspections

442-256-1623  
Kent Westfall, Owner/Pool Inspector:  
[kwproinspections@gmail.com](mailto:kwproinspections@gmail.com)

## LaMotte Company

[lamotte.com](http://lamotte.com)  
800-344-3100  
Rich DeMoss: [rdemoss@lamotte.com](mailto:rdemoss@lamotte.com)  
Robin Myers: [rmyers@lamotte.com](mailto:rmyers@lamotte.com)  
Manufacturer of water testing products

## Microglass, LLC

[microglassllc.com](http://microglassllc.com)  
Chris Zigar: [admin@oxiumllc.com](mailto:admin@oxiumllc.com)  
941-362-1010  
Prolong & Protect The Life Of Plaster, Quartz, & Pebble Finishes

## National Plasterers Council

[nationalplastererscouncil.com](http://nationalplastererscouncil.com)  
847-416-7272  
[mail@npconline.org](mailto:mail@npconline.org)

## Orenda Technologies

[orendatech.com](http://orendatech.com)  
Harold N. Evans: [info@orendatech.com](mailto:info@orendatech.com)  
Formulation, manufacture, marketing and sales of specialty chemical water treatment products.

## Piranha Pool Product

[piranhapoolproducts.com](http://piranhapoolproducts.com)  
951-600-1302  
Jenel Resh: [jr@piranhapoolproducts.com](mailto:jr@piranhapoolproducts.com)  
An industry leader among pool cleaning brands, Piranha's products include leaf nets, poles, and brushes which are available through hundreds of wholesale distributors around the country.

## Pool and Hot Tub Alliance/California Pool and Spa Association

[www.cpsa.phta.org](http://www.cpsa.phta.org)  
602-619-2129  
Susan Kregar: [skregar@phta.org](mailto:skregar@phta.org)  
The Pool & Hot Tub Alliance protects and advances the common interests of the industry by providing education, advocacy, standards development, research, and market growth to increase our members' professionalism, knowledge, and profitability.

## Pool Industry Expo, Inc. (PIE SHOW)

[info@poolindustryexpo.com](http://info@poolindustryexpo.com)  
650-327-7743 (7PIE)

PIE has well earned its reputation over the past 34 years, with more than 130 exhibitors per show and attendance ranging as high as 5 to 6 thousand, many of the attendees and exhibitors from those shows are still showing up in Monterey for their "Education Vacation".

## Pool Water Products\*

[poolwaterproducts.com](http://poolwaterproducts.com)  
James Bledsoe: [jbledsoe@poolwater.com](mailto:jbledsoe@poolwater.com)  
Richard Holtzworth: 949-756-1666  
Wholesale distributor of swimming pool and spa chemicals and accessories, equipment and parts, electrical and plumbing supplies

## Powell Pool Company, LLC

[powellpoolco.com](http://powellpoolco.com)  
480-789-1435  
Mike Lee: [mike.lee@powellpoolco.com](mailto:mike.lee@powellpoolco.com)  
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[regenaqua.com](http://regenaqua.com)  
408-582-2888  
Paul Williamson: [paulw@regenaqua.com](mailto:paulw@regenaqua.com)  
Regenaqua will revolutionize the water treatment of swimming pools and spas, particularly in arid climates where periodic draining and refill is necessary to "regenerate" water that is chemically saturated and can no longer be properly sanitized. Their patented system regenerates the water without draining even a portion of the existing water as all current reverse osmosis systems require.

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[nidec-motor.com](http://nidec-motor.com)  
262-692-2001  
Jim D'Angelo: [jim.d'angelo@nidec-motor.com](mailto:jim.d'angelo@nidec-motor.com)  
Hank Wiseman: [hank.wiseman@nidec-motor.com](mailto:hank.wiseman@nidec-motor.com)  
Nidec Motor Corporation, under the US Motors® brand, produces the most service friendly, energy efficient pool and spa replacement motors in the industry.

## Water Savers Co.

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Leak detection and repairs for pools and spa

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