

VOLUME XXXII, NUMBER 11

November 2019

California Capitol Report

California Legislature Adjourns for the Year

By John Norwood

into the newsletter.

Director of Government Relations, California Pool & Spa Association.

The California Legislature adjourned for the year on September 14th. Governor Gavin Newsome completed his work signing or vetoing bills the Legislature sent to him on October 13th. Below are labor and workers' compensation bills signed into law by the Governor. Unless otherwise states, these bills will become law on January

tributing members of their communities.

Associate

Management Team

Rose Smoot IOM, CAE -

Duties: requests to and from BORD,

associate member relations, governance

information and requests for documents, IPSSA sick route oversight, Education

Fund guidelines, grievance information,

chapter governance tools, IPSSA.com

Penny Gaumond - Project

top material requests, codes for water chemistry test, process orders from chap-

merchandise & book order fulfilment,

Duties: trade show materials requests, table

ters for sick route coverage cards, IPSSA

Phone: (888) 360-9595 x2

Email: info@ipssa.com

Resource Specialist

Executive Director

website updates.

social media posts

Email: rose@ipssa.com

IPSSA Partners with Pride Industries

IPSSA proudly partners with Pride Industries for the mailing of the IPSSAN to its subscribers. In addition to taking on the role of the "mail house" for the IPSSAN, Pride Industries will insert loose advertisements

Pride Industries is a 501(c)3 nonprofit social enterprise that was founded in 1966 in the basement of a church in Auburn, California with a mission to create jobs for people with disabilities. Through a wide spectrum of services, Pride Industries helps people overcome employment

For more information about Pride Industries: https://prideindustries.com/

obstacles and empower them to lead productive, independent lives as con-



1, 2020

EMPLOYMENT

SB 142 (Wiener) – requires the California Building Standards Commission (Commission) to develop and propose for adoption building standards for the installation of lactation space for employees, specifies criteria for lactation Continued on page 7

Region 6 Riverside Chapter Donates Money

The Riverside IPSSA chapter is always looking for ways to serve its community and help its fellow members, and this year the members have elected to donate money to the Patriot High School Varsity Golf team, on behalf of Jake McGhee, son of long-time IPSSA member Brent McGhee.

Jake has been playing golf for three years and in that time has only lost six matches. The Patriot team has placed 2nd every year since Jake has played.

The team raised over \$2600 and IPSSA Riverside hopes its



donation will help the team in its goals to purchase new uniforms

and fund tournaments in the 2019-2020 season.

IPSSA Southeast Valley Chapter

PENTAIR



members that are water chemistry certified Melody Bond - Membership Assistant

Financial Office Team

Phone: (888) 360-9505-6012 x1

Duties: submit tax data, Swim Fund, track

Elizabeth Hosea-Small -Account Manager

Email: liz@ipssa.com

Assistant
Phone: (888) 360-9505 x1
Email: membership@ipssa.com
Duties: membership applications, transfers,
cancellations, change of address or contact
information, auto-pay sign up or one-time

payments, update beneficiary on file, pass-

word help with portal, chapter officer update IPSSAN Newsletter

Doug S - IPSSAN Editor

Email: editor@ipssa.com Duties: IPSSAN content, IPSSAN advertisements

Arrow Insurance

Diane Howard- Insurance Bookkeeper

Email: diane.howard@hubinternational.com 800-833-3433 Duties: proof of insurance requests

IPSSA's new Southeast Chapter receives training from Pentair.

DO NOT HOLD
DATED MATERIAL

Things to do in November

- ➤ Focus on yourself
- ➤ Schedule your annual physical
- ➤ Education at Int'l Pool Spa Patio Expo

Inside This Issue

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THE IPSSAN

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Deadline for submission of articles is the 20th of each month. Material submitted late will be considered for the following month.

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A Message from the President

By David Hawes

IPSSA President, Region 1 Director

Hi Everyone, I hope you all had a very productive and profitable Summer. This is the time of year when most of us can catch our breath and start to unwind a bit. I hope you all will take this opportunity to evaluate your commitments and priorities. Look at your successes and setbacks from the season and maybe start to put processes in place to be more efficient and take time for personal growth. As leaders of our businesses and maybe our homes, it is important that we stay focused on here and now, but also the future.

One dictionary defined a Leader as: the person who leads or command a group, organization, or country.

A second use of the term Leader is: an organization or company that is the most advanced in a particular area.

It is important in every organization, business, or association,

to have good strong leadership. This helps to ensure success, and sustainability of the entity. I want to commend some of my fellow BORD members for the hard work and long hours they have put in as leaders in our association. Several of them are on committees that meet 2, 3, or more times per month, to work *Continued on page 7*



WELCOME NEW MEMBERS!

REGION 1 – Tracy Chapter: Jorge Heredia... Capital Valley Chapter: Joshua Vigil... REGION 7 – San Diego Chapter: Dylan Bray-Morgan Williams... REGION 11 – North GA Chapter: Kristian Bjerke... REGION 12 – Tarrant County Chapter: Larry Short.

Pid You Know...

February 6, 2020 BORD Meeting

Same location as the Leadership Event

February 7-9, 2020 Leadership Weekend Kona Kai, San Diego CA

info@ipssa.com for more information



May and July BORD meeting minutes published in the IPSSA Member portal

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.



IPSSA needs to appeal to the Millennial work force

By Rose Smoot

Executive Director IPM, CAE

The workforce is changing. Generation X is slowly, but surely, handing over the keys to the finally-come-of-age Millennials. These young professionals now make up a full third of the work force and, in eight years, they will make up 75% to be exact. Fact check: If associations don't do anything to enlist the millennials in the next decade, there won't be anyone left to join IPSSA. So, let's get moving.

This group of people are techsavvy and career-oriented, but their work comes second to quality of life, family, and friends. This is a group of individuals that are constantly checking their phones and apple watch for most of the day. They probably buy the latest in pool technology equipment, as they know it will save them time and energy by doing so. But with all of that, this group, appreciates being recognized for their efforts and having their ideas and opinions heard.

Stories and emotional appeals go a long way when establishing initial relationships and creating messaging for them. They demand personalization, so don't try sending generic emails on topics that don't matter to them. Engagement is a big priority too — it's not enough to gain their attention, you must continue to keep it!

How does IPSSA reach them? What messages will resonate, which platforms they can be found on, and what media channels are most influential? After all, if you're not tailoring your messages to your market, who are you reaching? Understanding what they want to see is the only way to increase Millennial memberships.

This means, on a practical level, you need to offer them new experiences, and the opportunity to learn. Think about forming a task force to address the next generation of pool professionals that specifically focus on recruitment



The BORD at its August 10, 2019, by a majority voted decided to dissolve the IPSSA Management Company (IMC). The IMC is the billing company for your membership dues and insurance. The change will take place for your 2020 invoicing. The look of the invoice will be different: however, no changes are expected on how you are billed or pay your monthly invoice. Additionally, the email address and mailing address for IPSSA will remain the same. IPSSA is committed to providing the exceptional customer service you have come to know and expect. Any questions please contact membership@ipssa.com or 888-360-9505 XT. 1



Rose Smoot

and retention of this group.

Five ways IPSSA Can attract
and retain millennials

1. Recruit with a clear message. Make your first contact about them and not IPSSA. Invite them to a chapter meeting by a personal invitation, they like to feel connected. Another way to connect for the first time, is utilizing social media. Learn what tools will best serve this population. Some examples are Instagram,

Twitter, Snapchat and Face Book. Make a social media plan and use it. Don't start out the first couple of months gangbusters, keep it up. Push information to IPSSA Inc, we will get the message out too. Here is the key: millennials want to be engaged, make sure you have an interactive meeting. Assign someone from the expansion team to guide and mentor this person for the first couple of years.

2. Demonstrate how the asso-

ciation can help them. Flexibility and affordability are essential. Many young people are just starting their pool business and don't have a lot of excess funds or time. See if your budget provides a discount for the first year of membership. Offer them a discount to education that provides professional growth. Think of incentives to capture this crowd, remember, they are just starting their pool business. More than likely, they have a family to support, so give

them a reason to be there. Incentives are a good way to start. Think about project-based volunteering. This is a good way for a

millennial to feel appreciated.

3. Create a section of your chapter just for these individuals.

Continued on page 5

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 video or conference call. 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:

 Marketing and Communications designs and implements strategies for promoting IPSSA by continuously strengthening its brand and developing web, social media, and print materials (including the IPSSAN). MCC's objective will be to execute a comprehensive marketing and communications strategy which clearly presents IPSSA's mission and its services.

Legislation and Regulation develops and implements strategies to ensure that the association's public policies and government affairs activities are fully

addressed and communicated.

• Membership Program - promotes and facilitates the recruitment and continuity of IPSSA members.

· Education - provides advice to the BORD on the strategic directions and development of the educational activities of IPSSA and supports the ED FUND. Please submit your email intent with your name, and committee you wish to serve. Those wishing to volunteer may select one-committee to serve. Committees may have no more than eight to serve on a committee. 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





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CYA: Ally For Pools – Havoc for Hot Tubs

Do your hot tub customers complain about smelly, itchy water that's hard to manage? Are they tired of having to drain and refill the water every couple of months? While you may think it's just poor water maintenance on the part of the hot tub owner, the problem could lie in a quickly rising cyanuric acid (CYA) level that affects chlorine's ability to sanitize.

What is CYA and Why Is It Used?

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CYA (cyanuric acid, also known as conditioner or stabilizer) is a chemical first introduced into the swimming pool industry in 1956. Back then pools were commonly chlorinated with liquid chlorine like sodium hypochlorite or calcium hypochlorite that came in a powdered form. The problem is that chlorine is subject to degradation by the UV rays of the sun and therefore needs to be added once or even twice a day. The loss

Well...

of chlorine in water to sunlight is 75% in 2 hours or a complete loss in 4 hours.

CYA keeps the chlorine in the water up to eight times longer. Pools that used to need daily chlorine additions now only need chlorine once a week with CYA. However, chlorine in the water quickly binds to CYA and a smaller portion of the chlorine is available. So, the chlorine is around longer but it does not kill as quickly. And as the CYA increases, there is less and less chlorine available for killing bacteria and microorganisms.

Innovative chlorine manufacturers in the late 1950s started combining chlorine with CYA to make chlorinated isocyanurates called dichlor and trichlor. Trichlor tablets quickly became the most popular chlorinating product for

CYA Buildup is Real

While trichlor is still a popular choice for chlorinating swimming pools, most hot tubs are chlorinated with dichlor. Dichlor is about 50% CYA. This means that for each 10 ppm of chlorine added to the water from dichlor, the CYA increase is 9 ppm.

In other words, a 300-gallon hot tub adding 1 1/2 teaspoons of dichlor 4 times a week can build up a CYA level of 50 ppm in as few as 4 weeks and reach 100 ppm CYA in only 7 weeks. Another way to look at it is that each person per hour in the hot tub will consume 4 grams of pure chlorine or 8 grams of dichlor which is 3.5 ppm of chlorine in a 300-gallon hot tub. Bottom line is that 2 people using the hot tub 2 times a week will consume 14 ppm chlorine and increase the CŶÂ by 12.6 ppm per week. More times of use or more people would require more chlorine and have a larger increase on

CYA Slows Down Kill Times

The kill time (CT value) for pseudomonas aeruginosa, which is the organism associated with hot tub rash or itch, with no CYA is about 20 seconds. It is 1 minute and 30 seconds with 50 ppm CYA and nearly 2 minutes with 100 ppm CYA. As CYA increases the effectiveness of the chlorine decreases. To achieve the same kill time would require a much greater chlorine level in the water. So, as the CYA increases you need to make a corresponding increase in

the free chlorine level. This makes the free chlorine level a moving target.

CYA buildup and the increase in kill times has led the CDC to issue this statement, "The CDC recommends not using cyanuric acid or chlorine products with cyanuric acid in hot tubs/spas." This was published in May 2016 in a CDC article called "Your Disinfection Team: Chlorine &

The Pennsylvania Department of Health in December 2016 published a statement "At even moderate levels of cyanuric acid, the amount of time it takes chlorine to kill pseudomonas aeruginosa (the bacteria that causes "hot tub itch) can be as much as a hundred times as long as in a hot tub or spa without cyanuric acid." This appeared in the publication "Public Swimming and Bathing Places: Operational and Biological Protocol Recommendations.

Other Ramifications

High levels of CYA has also been known to cause corrosion because it is part of the total alkalinity of the water. When working with the Langelier Saturation

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How to obtain a certificate of insurance

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- Fax a request to Arrow Insurance Service at (805)955-9535; or
- E-Mail a request to Arrow Insurance Service from either

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CYA

Continued from page 4

Index on balancing water, you have to account for the CYA level. To do that you subtract about one third of the CYA reading from the Total Alkalinity reading. The result is your TA may be lower than you think which could result in corrosive water that is damaging to surfaces and unpleasant to soak in.

Problems Arise

The result of CYA build-up in hot tubs is a myriad of negative effects that no hot tub owner wants to experience. Those include cloudy water, bad smelling water, skin irritations and worse. When disgruntled customers look for answers, they are told to add more chlorine to "shock the tub" which only compounds the problem by adding even more CYA. After as little as 2 months, there's no way for chlorine to recover. Owners are

forced to empty their spas prematurely which leads to frustration and the perception that owning a hot tub is difficult.

Warnings not Working

Even though the CDC and other scientific evidence says CYA should not be used in hot tubs, most hot tub owners use chlorine. According to PK Data in the APSP 2018 Yearbook, 60% of all hot tubs are sanitized with chlorine and the chlorine most often used and recommended is dichlor.

Dichlor by Another Name

Dichlor is listed on its container labeling as sodium dichlor-striazinetrione with the added designator of either dihydrate or anhydrous. However, dichlor is also known sodium dichloro isocyanurate which clearly calls out the

cyanuric acid content of this formula. All disinfectants for hot tubs must be approved by the EPA (Environmental Protection Agency) and they must state the exact chemical ingredients and percentages on the label.

Now That You Know CYA is Bad

With no need for UV protection, CYA should not be in hot tubs. It causes problems with killing microorganisms by slowing down chlorine's kill times which could potentially produce unsafe water. It could lead to corrosion or

staining but more importantly, it makes taking care of hot tub water much harder than it needs to be.

FROG @ease is the CYA-Free solution

Fortunately, there's a way hot tub owners can avoid all of these issues: FROG @ease with SmartChlor Technology. It's the only self-regulating chlorine sanitizer with 0% CYA. Users love it because there's no measuring and it consistently delivers crystal clear water that also smells and feels great. Together with FROG minerals, it creates Fresh Mineral

Water that kills bacteria two ways, helps maintain water balance and conditions the water for softness. With 75% less chlorine and shocking only once a month with a non-chlorine shock, hot tub owners find it incredibly easy to own a hot tub and the water stays cleaner longer. To learn more, visit frogatease.com.

Resources for this article: https://www.health.pa.gov/to pics/Documents/Programs/Opera tions-SOPRecommendations.pdf https://www.cdc.gov/healthy-

Continued on page 13

Millennial Work Force

Continued from page 3

This a tech-savvy generation, so set-up exclusive offerings for this group including educational opportunities, an invitation-only Face Book group, and special group meetups. Ask one of them to help orchestrate this group. Remember this group wants to be engaged and fulfilled. Sponsor one person to the Leadership Seminar. Appoint a mentor from your chapter for shadowing at the event.

- 4. Make your meetings/events interactive and fun. You have mixers, you have meetings a supply houses, but how do you invite these folks? Emphasize hands-on activities. You know this already; you have to you keep them interested. Think about your meetings, what you do, and be sure they are purposeful. Is it the same stuff, different month? Try gamifying.
- 5. Gamifying membership by associating points with efforts to increase engagement. For example, all meeting attendees receive 10 points. Engaged on social media? That's another 5 points. Brought in a new member or gave a presentation at a meeting? 100 points! Recognize the members with the most amount of points and give a reward. Millennials love to be rec-

ognized for their work and efforts! Some of you incorporate points for your sick route coverage, apply that mentality to this group as part of your young professional engagement program.

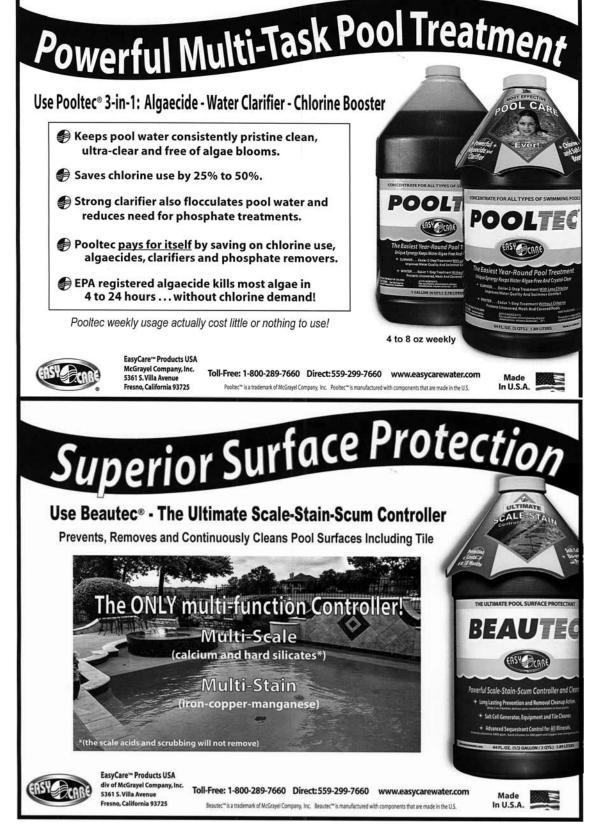
At all cost avoid stereotyping. Don't assume they are lazy, techobsessed or self-absorbed. You will find when engaging with them they might be able to provide unique skills that make them a great asset to an organization, such as IPSSA. They might be the ones to manage your social media plan and provide insight on how to recruit new members in all age ranges. Give them a chance to be engaged.

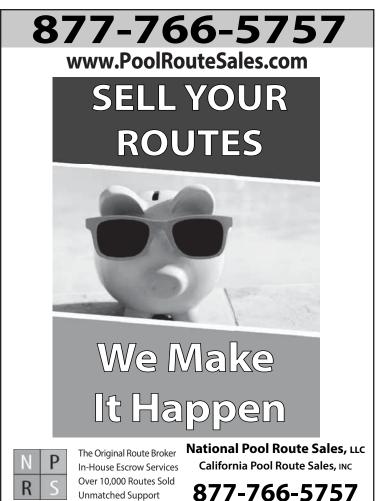
If we employ efforts to attract millennial members, we are making a long-term investment, and ensuring their stability and sustainability for years to come.

IPSSA Inc. is here to provide support, ideas and promotional material to all chapters that want to engage with young professionals. Email us at info@ipssa.com. You are the grassroots of the association and we want to help every step of the way.

Facts provided by Naylor Publications, Site-Seeker Online Presence and WebScript.







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Hey Ray!

Answers to recent questions asked to IPSSA's insurance broker



By Ray Arouesty

Ray Arouesty is Senior Vice President of Arrow Insurance/ HUB International and IPSSA's endorsed insurance provider. He can be reached at (800) 833-3433 or ray.arouesty@hubinternational.com.

Question:

I have always provided fullservice pool maintenance to my residential customers, but I'm now considering giving my new and existing customers a 'chemstop only' option. Do you have any concerns with service techs providing limited service options?

Answer:

Providing a 'chem-stop' option may help you attract and retain customers, but be aware that providing limited service

comes with additional risk. By definition, chemical-only service is limited and the law in some states may provide that the pool tech is responsible to provide more – such as to warn of safety issues that are beyond the scope of limited chem-stop service. involving Safety hazards hydraulics, electrical defects, and heaters aren't usually covered in a chem-stop agreement and you may find yourself justifying why you failed to notify the customer of a safety defect if someone is hurt or property is damaged. It's therefore very important to have a written service agreement that clearly describes exactly what duties you will be performing, as well as what services are not included. You should explain the need for regular maintenance to the items that aren't covered by 'chem-stop service' and the risk involved if proper maintenance isn't performed. Consider a 'cafeteria-style' approach where the customer can opt for periodic maintenance for items beyond the scope of the 'chem-stop service. These add-ons could include checking that GFCIs are operating, equipment is bonded and main drains are properly secured. Doing so should provide you with a defense in the event are involved in litigation involving an accident.

Ray Arouesty, J.D. is Senior Vice President of Arrow Insurance Service, a division of HUB International Insurance Services Inc.

NEW FEATURE! VOLUNTEER SPOTLIGHT

IPSSA's newly launched Volunteer Spotlight feature puts our amazing volunteers front and center in the IPSSA Community! We want to use this unique opportunity to thank the wonderful individuals that continuously donate their time and energy to help IPSSA and the pool and spa industry thrive. We encourage all IPSSA members to connect with these star volunteers to let them know about the Spotlight. To be featured in our next Volunteer Spotlight, in the IPSSAN, Face Book and YouTube email your picture, pictures of any information that supports the spotlight, and answer a few questions. Forward to info@ipssa.com.

- 1. Tell us about yourself
- 2. Tell us about your volunteer experience with IPSSA. Project in the past that would be featured as a spotlight.
- 3. Why did you decide to become a volunteer
- 4. How has volunteering impacted your career
- 5. How has being involved with IPSSA made a difference in your community or outreach to the public

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California Capitol Report

Continued from page 1

rooms provided by employers, requires employers to develop and implement a lactation accommodation policy, as specified, and instructs the Division of Labor Standards Enforcement (DLSE) to create a model lactation accommodation policy.

SB 530 (Galgiani) – provides

that construction industry employers who employ workers pursuant to a multi-employer collective bargaining agreement can satisfy sexual harassment training and education requirements by verifying completion of specified training provided by a state approved apprenticeship program, labor

President's Message

Continued from page 2

on projects that are helping IPSSA be successful and sustainable as time marches on. These leaders perform all of their tasks as volunteers, simply because they believe in the spirit of our association. We have leaders in our chapters that work tirelessly to be sure meetings are held, there is food to eat, and a speaker worth listening. There is no one leader in IPSSA, there are many that work hard to make sure we are an organization or company that is the most advanced in a particular area. I want to take time to THANK all of the volunteer workers, officers, and members that do such an admirable job every month making IPSSA what it is. As your President, I am very proud of the work that is getting accomplished and I have enjoyed getting in the trenches and working alongside many of you. There are changes coming to our association, that many of us have been working on for many months. As leaders, it is incumbent upon us to look out at the future landscape of the service industry and try to steer the ship

to avoid potential issues. I want to assure you all that these changes have been dissected and decided on, to be sure they provide you with the best membership experience and value possible. IPSSA is a great association that many of us have enjoyed being part of for the last 30+ years, and moving forward, we want to continue that mission. be done. We need you. Stay tuned....

For Dave Hawes' video message and to keep current on other

We want to attract more members of the service community, provide better education, and be a leader in the industry. To accomplish this, it will take a strong group of individuals to get involved and become the next generation of leaders. I would like to encourage all of you, as you evaluate your time and commitments to include IPSSA in the thought process. Talk to a chapter officer, committee member, or Regional Director. They can help you get involved. There is plenty of work that still needs to

IPSSA events give us a LIKE and a FOLLOW on Facebook!

COVERAGE IF YOU ARE INJURED ON THE JOBSITE

O HUB arrow insurance service

Members participating in the IPSSA Group Insurance Program are automatically insured to \$5,000 for medical bills due to accidentally injury at the customer jobsite. This coverage can pay for an emer-

gency room or urgent care visit and covers injuries like dog bites, lacerations and slips and falls. It's even available to pay a deductible expense if you already have health insurance.

Accidental Injury Medical Coverage is another reason IPSSA members have the best insurance available anywhere! Arrow Insurance Service, Inc ♦ (800)833-3433 Lic No. 0757776



management training trust, or labor management cooperation committee.

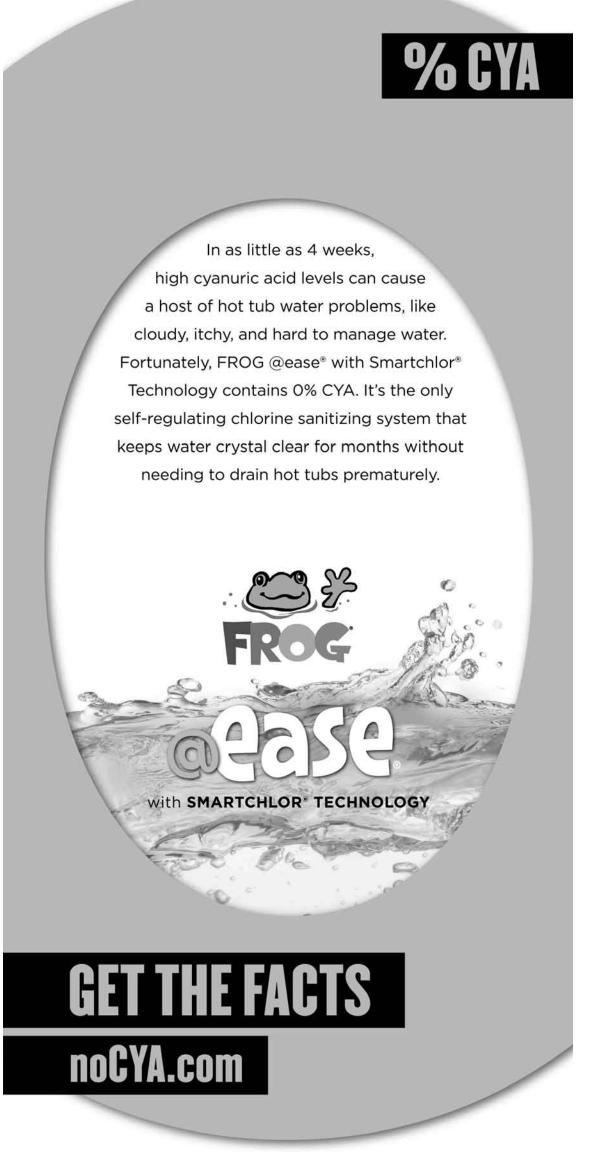
SB 688 (Monning) – provides that if the Labor Commissioner determines an employer has paid a wage less than the wage set by contract in excess of minimum wage, the Labor Commissioner may issue a citation to the employer to recover restitution of the amounts owed.

AB 5 (Gonzalez) - is the codification of the Dynamex "ABC" employment test articulated by the California Supreme Court last year. The application of the test is subject to multiple exceptions and, in general, there is still considerable confusion as to the application of the new law. The author of the bill, Assembly member Lorena Gonzalez, authored what is known as a Letter to the Journal expressing her intent that AB 5, and specifically Labor Code § 2750.3(e) relating to "business-tobusiness" contracting, was not intended to change the law on coemployment. This will be one of the many issues litigated in the coming year. Whether a threatened initiative from ride-sharing and other digital platform companies

emerges remains to be seen. Regardless, this issue will be the subject of additional legislation in

AB 9 (Reyes) - extends the deadline by which victims of workplace harassment, discrimination, or civil rights-related retaliation must file their allegation with Department of Fair Employment and Housing (DFEH) or forever forgo redress on those grounds. Currently, a victim must ordinarily file within one year of the most recent incident giving rise to the claim. This bill

Continued on page 16



Great Ways Service Techs Can Expand Their Network

By Daniel Seeger

Working as a service tech in the pool and hot tub industry can feel like a fairly solitary job. A good amount of time is spent alone in the truck, moving from one backyard to another. Connections are made with customers, of course, but it can sometimes seem like there few people to talk to that truly understand the challenges faced in the field.

Networking is often positioned as an important skill for people looking to move from one job to another, and that's certainly true. But even for individuals who are settled in to their position, development of a strong network of fellow professionals can be an invaluable tool for learning the latest developments in a field or simply getting needed advice for handling daily tasks in smarter, more efficient ways.

Luckily for pool and hot tub service techs, there are several options available to help stay connected, no matter how much solo time is built into the job.

Perhaps the most intuitive route to develop a professional network is via social media platforms. Given its focus on the

workplace, LinkedIn is probably the best option. In addition to simply making connections locally and across the country, LinkedIn also provides a news feed option. As opposed to the family photos and funny memes found on other sites, the items posted to LinkedIn tend to be very focused on workplace concerns, so a strong network of fellow service techs is likely to lead to a highly informative stream of ideas and articles.

Other social media platforms will require a more concerted effort to connect in the best, most productive ways. Instead of simply joining up and following fellow service techs, seek out the feeds and groups connected to relevant trade organizations, such as the Pool and Hot Tub Alliance (PHTA). These groups will have highly curated content with a sharp focus on matters relating to the industry.

On all of these social media platforms, don't settle for simply reading the shared posts. Engage and interact. Post comments. The more engagement there is, the more likely it is to make specific connections with other people who are similarly seeking a professional support network.

Interaction can happen offline, too. Seek out local and regional groups of professionals in the same field. There might be regular meetings or social events specifically designed to bring people together.

If there aren't readily available organizations that cater specifically to the pool and hot tub industry, broaden the scope. Start instead with a group that caters to a wider range of professionals, maybe for younger workers or for people employed by general service or maintenance industries. Within the confines of those larger groups there are likely to be at least a few cohorts with similar backgrounds in the pool and hot tub industry.

And if options in the immediate area are ultimately too limited, think national. The major trade organizations provide multiple ways to plug in and connect. There are often openings on advisory boards and other leadership opportunities. When the trade organization hosts or has a strong presence at a conference, there is sure to be at least one formal social networking session specifically designed to help make connections.

Professional development courses offered by the national trade organization can also be a boon for people hoping to forge connections, especially when there's a classroom or other onsite component. Commit to the learning in the courses, but also



plan to develop camaraderie with classmates. In addition to building of a professional social network, the class is also likely to be more productive when actively engaging with other learners. Even in the most robust courses, some of the best education comes from peer-to-peer conversations.

Whatever route is chosen, the pursuit of a strong network of professionals is going to be highly beneficial for any pool and hot tub service tech. New techniques can be learned and better job opportunities might come to fruition.

Some added effort will be required on the front end to make these connections, but the stronger the network is, the more valuable it will be. And every new link builds that strength.

For those hoping to build their professional networks while attending professional development classes, PHTA has several certification programs available, including designations for CSP (Certified Pool & Professional), CST (Certified Pool & Spa Service Technician),

CMS (Certified Pool & Spa Maintenance Specialist), CHTT Certified Pool & Spa Hot Tub Technician, and AST (Advanced Service Technician).

PHTA will also offer on-site training for service techs at upcoming conferences. At the 2019 International Pool | Spa | Patio Expo, taking place November 2-7 in New Orleans, attendees can pursue the following certifications: CMS, CHTT, CST, and AST.

Sessions providing certifications in CMS and CST will be on the schedule at the Southwest Pool & Spa Show in Houston, January 22-25, 2020.

And courses providing certifications in CSM, CST, and CHTT will take place at the Pool and Spa Show in Atlantic City, taking place January 28-30, 2020.

There are also leadership opportunities available on the PHTA Service Council.

You can also follow PHTA on LinkedIn, Facebook, Twitter, and Instagram. To learn more about any of these opportunities, visit PHTA.org.

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Filtration Operation: Getting back to basics

By John Watt, Pentair

When it comes to keep pool water clean and clear, the swimming pool industry knows that the pool filter is key. Chemicals help keep pool water clean but even chemical manufacturers agree that if the filter isn't working properly, chemicals can't provide clean and clear water alone. It's important to get back to basics to truly understand how Sand, DE and Cartridge filters work. But to truly understand how filters work, pool professionals must understand how the pool pump feeds water into these filters. Understanding the relationship between the pool pump to the pool filter gets to the heart of obtaining clean and clear water. Pool professionals that understand this relationship can then incorporate filter cleaning, chemicals, variable frequency drives and automatic controllers to obtain pool water nirvana.

Pump & Filter Sizing

Filtration systems, regardless of the media being used, are designed to filter water within a particular range of water flow. One of the most common mistakes service techs see in the field is a filtration system equipped with an oversized pump. Why is an oversized pump a problem? A pool pumps that pushes water through the filter too fast, impedes the filters' ability to perform its job correctly. The faster you move the water through a filtration media the worse job it does. The slower the velocity the better job the filter does separating debris from the water. It is therefore extremely important to properly size the filtration system to the required pump flow to achieve efficient water filtration.

The current standards for filtration:

- high rate sand filtration is 15 gpm per square foot of surface area
- DE it is 1-2 gpm per square foot of surface area
- Cartridge filtration is .375 gpm per square foot of surface area

To size a filtration system correctly, it is necessary to determine the required turnover rate for the pool as well as verify the proper filtration rate. A typical commercial pool of 150,000 gal needs a 6-hour turnover rate and would therefore require 416 gpm (gallons per minute) flow rate. The challenge comes in when you encompass the clean and dirty flow rates. When the filter is dirty the resistance to flow goes up and flow rate drops. When the filter is clean the resistance to flow goes down and the flow rate goes up.

Example: a pump that will give you 275 gpm at 83 feet of head and 400 gpm at 60 feet of head (23 TDH change between clean and dirty filter mode) That being said the filtration will now have to handle 400 gpm even if the needed flow rate for turnover is only 275 gpm.

There are 3 things that need to be taken into consideration when looking at the system.

- Clean filter flow rate: Making sure that the system will handle the extra flow when the filter is clean.
- Dirty filter flow rate: Making sure that the minimum turnover flow rate is met when the filter is dirty
- Backwash Flow rate: Ensuring that the flow rate meets

the manufacturer's requirement for sand and DE filtration where backwashing is applicable. (This pertains to filter size, pump size as well as backwash plumbing size.

So, how do we know what the system is currently doing and what it is capable of?

- Backwash the filter as prescribed by manufacturer
- Attach vacuum and pressure gauges to the pump
- Convert vacuum and pressure readings to TDH (vacuum X 1.13 pressure X 2.31)

Apply TDH to manufacturers curve for the existing pump (This will give you the flow rate at its maximum with a clean filter). Make sure that the maximum flow rate does not exceed the maximum flow rate for your filtration system.

• Add 23 feet of head to your TDH and that will give you the dirty filter flow rate. (make sure that this flow does not drop below the minimum flow rate to meet your turn over time as well as the minimum required flow for the other equipment on the pool such as heaters, skimmers, sanitizing system....

What are your options?

- Change the pump to one that better fits the flow requirements.
- Add a VFD with flow control that will allow you to hold a constant flow rate to compensate for TDH changes during the clean to dirty filter cycle.
- Add additional filtration (additional filter or larger single filter)
- Note: of these three options the addition of a VFD is the only option that will actually pay for itself over time in energy savings.

However, keep in mind that an oversized filter with a smaller HP pump can improve filtration but cause other problems. A typical example of inadequate backwash time or flow rate will show up when the system is put back into filtration mode. When a sand filter is not properly backwashed a small amount of debris (silt) will come out of the returns for the first few minutes after returning the system to normal filtration mode. Some of the silt will also remain in the filtration system working its way deeper into the sand bed. This can lead to costly service, repairs or even premature replacement of the fil-

Filter Pressure & Filter Cleaning

Like any filter, once the filter gets dirty, it needs to be cleaned to continue to operate properly. Filter pressure is one of the best ways to determine if a filter is dirty and needs to be cleaned. The change in pressure differential (pounds per square inch (psi) can help a service professional determine if a filter is dirty or needs to be backwashed. In order for this type of information to be most effective, it is helpful to keep a log of the filter pressure for each pool. Many service technicians will do this at the time if pool opening and leave the information posted near the filter in the pump room or will log it into the customer's pool chart. One of the most important figures to note is the initial psi on the gauge at the top of the filter tank. If a pool is having trouble with water turbidity or with the heater cycling while trying to maintain the proper water temperature,



John Watt in filter.

service techs can start their diagnosis by looking at the filter pressure reading. If, for example, the pressure reading at pool opening was 18 psi but now shows 30 psi when the trouble is occurring, the first thing to consider is a dirty filter. Begin by backwashing the filter to see if that fixes the problem. By restoring the water flow allows the filter to function properly which should allow the water to clear and might even fix the problems with the pool water heater. As mentioned earlier when the filter pressure goes up the water flow rate goes down. A lack of water flow through the heat exchanger allows the water to absorb too much heat and shut off on the high limit safety circuit built into the heater.

However, a newer challenge has presented itself now that variable speed pumps have become extremely prevalent on today's pools. In the past, the pump was either on or off and service technicians took the psi measurement when the pump was on. But with variable speeds pumps (VSPs) they do not run constantly at full speed making it harder to obtain an accurate psi reading. In the case of VSPs the flow increases,

and the pressure also increases but not necessarily because the filter is dirty. To overcome this issue, many service techs today turn up the pump to the highest pre-set circulation speed (not the highest speed on the pump) and take a psi reading during their weekly service. Those that aren't doing a weekly service often ask their customers to perform this task and tell them to call the pool service company if the psi increases by more than 10pounds. Running the pump at the highest pre-set circulation speed and checking psi is a part of the

weekly service along with cleaning the filter baskets, skimmers etc. Cleaning the filters when there is a 10-lb increase in pressure is especially important with cartridge and DE filters as it can prolong the life of the filter. Following this procedure will help avoid compression and compaction of dirt and debris on the face of the grids and or cartridges making them last longer and easier to clean.

Cleaning pool filters

There are several ways to clean filters. The most common *Continued on page 21*

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IPSSAN

NEW ASSOCIATE MEMBER SHOWCASE

The Pool & Hot Tub Alliance (PHTA): A One-Stop Resource for Everything Pools and Spas

IPSSA members take pride in their profession, care about their fellow colleagues, promote water safety, and are committed to continued education and professional growth. PHTA is proud to become an associate member of IPSSA. We would like to thank IPSSA's Board President, David Hawes, Executive Director, Rose Smoot and all the Directors and Chapter Presidents of IPSSA for engaging with PHTA so we can all work together to provide fellowship and professional growth within the industry.



Experience tells us that we usually accomplish more by working together than we do by tackling things on our own. That's why the recently formed Pool & Hot Tub Alliance (PHTA) foretells great things for every industry sector, including manufacturers, distributors, builders, retailers, and service companies.

The Association of Pool & Spa Professionals (APSP) and the Swimming National Foundation (NSPF) officially merged on April 1, 2019, to form PHTA, with the broad mission to "Celebrate the Water." To that end, PHTA aims to expand swimming, improve water safety, fund valuable research, and conduct outreach activities aimed at introducing more people to swimming, making swimming environments safer, and keeping pools open to serve communities.

To fulfill this mission, PHTA serves as the umbrella organization that includes the Pool & Hot Tub Professionals Association [a 501(c)(6) trade organization that manages certifications, standards, awards, and member services] and the Pool & Hot Tub Foundation [a 501(c)(3) taxexempt organization that manages education, publications, research, fundraising, and grantmaking].

Thanks to the combined infrastructure and resources, PHTA members now benefit from an array of efficiently delivered education, advocacy, promotion, research, and support services.

Education

PHTA offers a wide range of business and technical courses for pool and spa professionals. Certification courses include: CBP Certified Pool & Spa Building Professional, CHTT Certified Hot Tub Technician, CMS Certified Pool & Spa Maintenance Specialist, CPO Certified Pool & Spa Operator, CRP Certified Pool & Spa Retail Professional, CST Certified Pool & Spa Service Technician and PPSO Professional Pool & Spa Operator.

Advocacy

PHTA is the industry's trusted and powerful voice in government.On Capitol Hill and in front of state and local government entities, PHTA fights for pool and

spa safety and our member interests, while opposing overly restrictive and unreasonable policies that could unnecessarily damage both member businesses and local economies.

PHTA responds to a rapidly changing economic and regulatory environment and continues to

evolve, not just keep pace, but to march ahead of emerging trends and future challenges. Through government relations and standards development that became key components to state and local building codes, PHTA advances key legislation and regulation at

Continued on page 19





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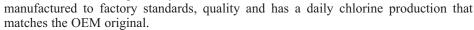
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Continued from page 5

water/swimming/residential/disinfectiontesting.html

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15,000	1		
20,000	1		
25,000		1	
30,000		1	
40,000	·	1	1
50,000		1	1
60,000		2	

	Total Gallons	#101001 Blue Unit 7.5-20k	#101066 Black Unit 20-30k	#102001 80z of Booster 7.5-20k	#102003 10 lb bucket each 2.5 lb bag equal 75k gal.	#101080 Commercial Unit only (No minerals)
				795	11.2	
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	80,000		2	1		
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	100,000		3	1		
	120,000		3	3		
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Volunteer Spotlight

Mark Uberecken, Region 9, West Houston Chapter President

1. Tell us about yourself: Entered this industry in 2009, when I opened Unified Pool Solutions, a pool service and repair company. Member of IPSSA for the past five years and currently serve as the President of the West Houston IPSSA Chapter. Reside in Katv. Texas. a suburb of Houston, with wife, Carrie, and our four children, Clare, Luke, Caroline, and Callie. Before purchasing my pool business, I worked in corporate America. I decided it was more important to be around for my four children then it was traveling around the country on business. I am also a independent thinker and the pool business seemed to fit my way of thinking. The ability to make a decision about your own business of interest.

2. Tell us about your volunteer experience with IPSSA. Project in the past that would be featured as a spotlight.

I am most proud to have been a part of the Hurricane Relief

project our chapter completed in 2017. Hurricane Harvey devastated our area. Our West Houston IPSAA chapter is relatively young and small. At that time, we were just getting to know each other but found ourselves in a position where we really needed to lean on each other's expertise, because we were facing uncharted situations (draining pools, flocking, equipment failures, etc). Honestly, our industry was stressed. We were facing lots of responsibilities and a growing concern as to the economic impact these hardships were having on our industry. Remember, most did not have flood insurance, so the financial burden to most homeowners was unavoid-

As our West Houston IPSAA chapter met and shared insight on cleanup topics, all the stories ended the same; people were hurting. We began discussing ideas of how we, as a group, could give back and assist our

community. Understanding that while helping someone else, this would also strengthen our relationships and build community within our chapter.

The scale of damage was everywhere and frankly overwhelming, so we decided to focus on one project. Each member was presented with the opportunity to nominate a flood victim that they knew. Nominations included a few photos and basic information of recipient and current need and condition of pool. Once nominations came in, the chapter voted on which project to invest in. At that time, we did not fully know the scope of what we would be able to do. Once a recipient was identified, me and Bill Williams (President at the time), completed a site survey to identify the actual needs. At the following meeting, we agreed to utilize some chapter funds. What we did not expect was the generous response we would receive from local distributors, other companies, and associations. Donations of equipment, material, labor, and additional funds came in until everything was covered. We were able to provide about \$20,000 worth of equipment, materials, and repair at no charge. A workday was held in July, where IPSSA members donated time to set and rework equipment pad. All other phases were completed as donating companies had time to work it into their schedules.

You can read more about this project here in an article featured in Pool Pro Magazine. I still check on the flood victim from



Mark Uberecken

time-to-time, to make sure everything is going well.

3. Why did you decide to become a volunteer? I feel honored to be asked to serve as Chapter President and have the opportunity to represent IPSSA in our area. I would like my actions to reflect the spirit of serving others. It is very important to me that my children realize that life isn't just about a paycheck, but rather about how we treat others.

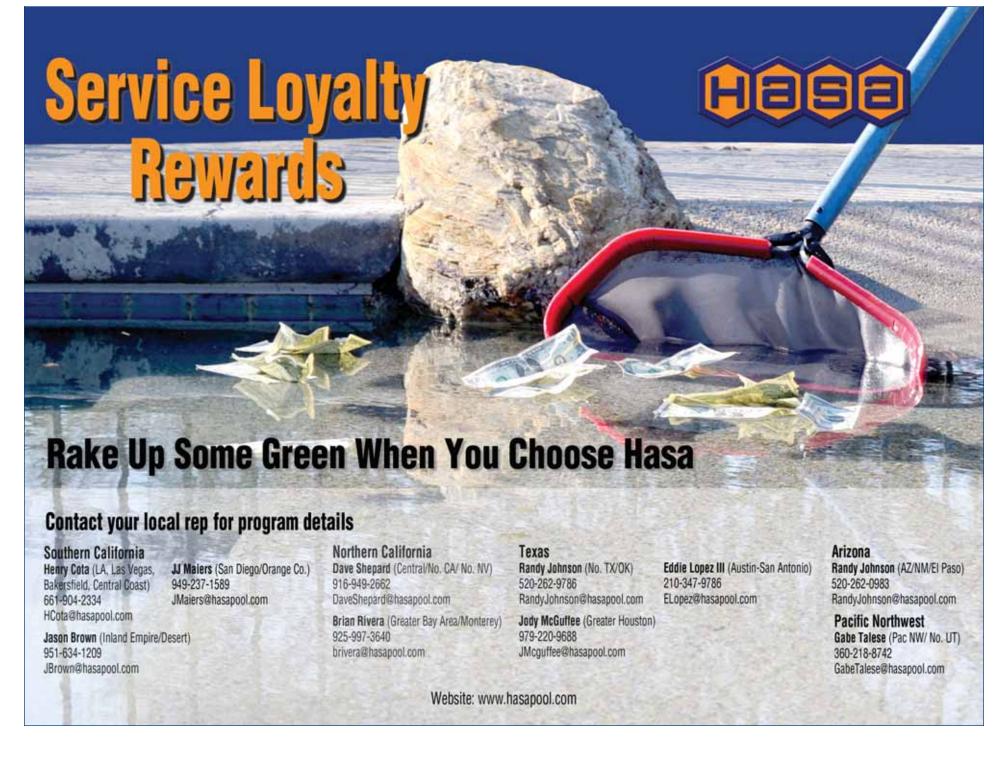
4. How has volunteering impacted your career. Relationships! The relationships that I have built from volunteering for IPSSA, at local schools or my church has created a network of relationships that help expand my business. Ultimately, people want to do business with someone they know and trust. Volunteering is an easy way to let others see who you are.

5. How has being involved with IPSSA made a difference in your community or outreach to the public

As an IPSSA member, we have lots of opportunities to make a difference, it may be something little like taking a call and connecting someone to someone else in the industry who could help or by utilizing our organizations resources to educate our community. This year, our chapter has become actively engaged in promoting water safety awareness. We have done that by offering members an opportunity to receive CPR training and by donating water safety materials to our customers, local schools, and community events. We are most excited about our newly formed relationship with the Judah Brown Project. The Judah Brown Project is an organization in Houston that is very involved in water safety education and promoting of the importance of swim lessons. We have been able to fund numerous swim scholarships this year due to a donation allocated from our membership as well as a matching gift from IPSSA general swim scholarship fund.









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What You Need-Where You Need It When You Need It

California Capitol Report

Continued from page 7

would give victims three years to file instead.

AB 51 (Gonzales) – prohibits California employers from forcing employees to waive, as a condition of employment, continued employment, or the receipt of any employment-related benefit, their right to have future legal disputes over incidents of harassment, discrimination, civil rights-related retaliation, or for Labor Code violations heard in the dispute resolution forum of their choice. The bill also protects California workers from retaliation if they refuse to

agree to such a waiver.

AB 170 (Gonzales) – adds newspapers delivery services to the list of exempt work not subject to the "ABC" employment test in Labor Code § 2750.3 (AB 5 and Dynamex).

AB 547 (Gonzales) – requires the Director of the Department of Industrial Relations (DIR) to reform an advisory committee to refine the recommendations on inperson sexual violence and harassment prevention training requirements for janitorial employers and employees. The bill also adds

requirements to the janitorial employer registration process, including, but not limited to, the employer has no wage and hour final judgments outstanding, pending wage and hour liens or suits in court or with the Department of Fair Employment and Housing (DFEH), or lack of compliance with all terms of any DFEH administrative settlement.

AB 749 (Stone) – prohibits settlement agreements which contain a provision that restricts an employee from working for the employer against which the employee has filed a claim.

WORKERS' COMPENSATION/SAFETY

SB 159 (Wiener) – addresses preexposure and postexposure prophylaxis relating to HIV. The bill does not specifically refer to workers' compensation, but there could be a conflict in cases where an injured worker has an exposure where prophylaxis is indicated. This is a situation where the licensing laws do not neatly align with the prescription drug formulary.

SB 537 (Hill) – requires thirdparty networks which arrange physician and ancillary medical services for employers, but that do not qualify as "Medical Provider Networks" (MPNs) as that phrase is used in the Labor Code, to disclose to employers "rate sheets" that show the discounted prices paid to providers, and makes several additional amendments to the laws governing MPNs.

The bill makes two important amendments for workers' compensation claims administrators. First, it clarifies the times during which a claims administrator must be available to respond to a request for authorization. Second, the bill requires providers to include the national provider identifier (NPI) number for the physician or provider who actually provided the services and authorizes the employer to withhold payment until the NPI is provided.

As it relates to the use of NPI numbers for billing, it should be noted that while SB 537 requires the Division of Workers' Compensation (DWC) to adopt rules governing how this is supposed to work for standardized billing forms, nothing precludes an employer, insurer, pharmacy benefit manager, or third-party claims administrator from requiring the physician's or provider's NPI at an earlier date. It is also interesting to note that this requirement, per SB 537 and now Labor Code § 4603.2(b)(1)(C), is declaratory of existing law.

AB 203 (Salas) – requires construction employers engaging in specified work activities or vehicle operation in counties where Valley Fever is endemic to provide effective awareness training on Valley

Fever to all employees annually and before an employee begins work that is reasonably anticipated to cause substantial dust disturbance. The bill would require the training to cover specific topics and would authorize the training to be included in the employer's injury and illness prevention program training or as a standalone training program.

Training for current employees is to be provided by May 1, 2020.

AB 528 (Low) - changes the required timeframe in which pharmacists are required to report dispensed prescriptions to the state's prescription drug monitoring program (PDMP), Controlled Substance Utilization Review and Evaluation System (CURES), from seven days to the following working day; authorizes physicians and surgeons who are licensed by the Medical Board of California (MBC) but do not possess a federal Drug Enforcement Agency (DEA) registration to register for access to CURES; requires pharmacists to report Schedule V drugs to CURES; expands the authority for a prescriber's licensed delegate to retrieve data from CURES on behalf of that prescriber; makes other technical and clarifying changes to laws governing the state's PDMP.

AB 1804 (Assembly Labor and Employment) – relates to Cal/OSHA reporting. The bill requires the employer's report of serious occupational injury, illness, or death to the division to be made immediately by telephone or through an online mechanism established by the division for that purpose. The bill, until the division has made the online mechanism available, would require that the employer be permitted to make the report by telephone or email.

AB 1805 (Labor and Employment Committee) — makes changes regarding the definition of "serious injury or illness" and "serious exposure" to bring the language in line with federal Occupational Safety and Health Administration (OSHA) standards and creates uniformity in the Labor Code.







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Associate Member Showcase

Continued from page 11

the federal, state and local levels PHTA speaks with a single, united voice when advocating at the local, state, national, or international level. Working with legislators, regulators, and local officials, PHTA provides feedback on proposed measures while working to ensure that the pool and spa industry isn't subjected to unfair regulations. Recent examples include the PHTA's continued work with the Environmental Protection Agency to have certain pool covers qualify for WaterSense labeling, which would help the industry market them as energy- and water-conserving products. PHTA also is working with the U.S. Department of Energy to finalize a federal standard for variablespeed pool pumps. Another

example is the group's work to inform members how best to respond to new tariffs.

Promotion

Promoting water activities as part of a fun and healthy lifestyle is at PHTA's core. The group accomplishes this by helping members promote their businesses and guiding the industry's future. Since 1983, PHTA has been the accredited Standards Development Organization for the U.S. pool and spa industry. These standards establish voluntary minimum guidelines that have the force of law. Other ways PHTA promotes the industry is through an awards program that recognizes outstanding pool and spa designs, its endorsement of National Water Safety Month (which is May), and its Step Into Swim program that provides funding to like-minded individuals and organizations that are passionate about creating more swimmers.

Research

Information is power, and nothing is more powerful in business than reliable statistics. Fortunately, PHTA publishes Yearbook, a biannual publication of comprehensive, current, and trustworthy information on the residential aboveground and inground pool and hot tub industry. Yearbook offers thousands of

dollars' worth of research for a fraction of the price that it would take to gather and assemble on one's own.

Support

Membership in PHTA comes with a long list of supportive benefits, from a weekly e-newsletter and marketing tools to discounts on seminars, credit card processing fees, lability insurance, etc. PHTA has also created the WAVE Young Professionals Network to encourage members under age 40 to get involved and to support their career development.

Pool service and repair is a vital sector of the pool, spa and hot tub industry, and PHTA is proud to be an associate member supporting IPSSA. We look forward to providing IPSSA members with education to support professional growth and being your voice in government working hard to fight for pool and spa safety while opposing overly restrictive and unreasonable polices that could damage the service sector of our industry.

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Swimming in Spreadsheets – Cyanuric Acid, Ratios, and Problematic Models

By Jeff Gaulding, PhD

Chemistry & by Roy Vore, PhD, Microbiology

The great CYA debate is one that has raged within the Pool and Spa industry for decades. Until recently, the discussion centered on laboratory studies and water quality data from real pools to help guide the technical standard for proper pool management. However, a new mathematical model has been created and has begun to enter into this debate.

It is important to remember that models are only as good as their assumptions. Models are created to help better understand complex systems, and anyone who has managed a swimming pool for any length of time knows how complex they can be. Models can become quite intricate in structure. But don't confuse a complicated model with a good one. A good model is one that uses sound assumptions to make predictions that can be tested and proven through scientific studies or real-world data. Most importantly, predictions need to be tested before being accepted as fact.

The new model recently published by the CMAHC Cyanurate Ad Hoc Committee uses a very complex approach, including a multitude of spreadsheets to attempt to predict outcomes in pool water. It is because of this complexity and these many spreadsheets that this article is being written. After careful evaluation of the assumptions in this new model, we, as scientists, have come to the conclusion that the assumptions in this model are flawed and the resulting predicted outcomes do not align with years of collected data in realworld, pool water data.

Flawed Assumptions

A great deal of attention has been recently drawn to an idea that pool operators would realize better outcomes if they managed CYA Stabilizer and Free Chlorine in relationship to each other via an artificial ratio devised through this new model. Several years ago, someone suggested it be 7.5:1 CYA to FC. Now, the CMAHC Cyanurate Ad Hoc Committee suggests that it should actually be 20:1.

In reviewing the published study that focuses on this CYA stabilizer to Free Chlorine relationship, there are at least seven (7) assumptions outlined in the model that do not reflect realworld pool situations. And unfortunately, these flawed assumptions are used in an attempt to simplify a complex real system, like pools, into a mathematically solvable format – a spreadsheet. Those flawed assumptions then generate flawed recommendations. In short and borrowing a common phrase from the computer science world - "Garbage in, garbage out." Prior to the creation of this new model, the CYA recommendations to be used by pool operators were based on data collected from actual swim-

To emphasize the point, it is important for pool operators to review the puzzling assumptions that provide the foundation of support to the recent 20:1 CYA to

		dicted by IC Model	Actually Reported by The CDC (2011-2012)	
Disease	Illnesses / year with 0 FC	Illnesses / year with 1 ppm FC and 100 ppm CYA	Total Illnesses associated with Pools and Spas	Illnesses when FC was confirmed to be at least 1 ppm
E. coli 0157:H7	136,818	7,341	21	0
Giardia	15,842,105	762,025	21	

"Outbreaks of Illness Associated with Recreational Water – United States 2011-2012". Morbidity and Mortality Weekly Report (MMWR), 64(24); 668-672. Data cited are cases from "Treated Recreational Water" Table. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6424a4.htm

FC Model. The assumptions in question are listed below and the statements in quotations come directly from the publication and its supplementary material:

1. Swimmer Movement: "Velocity of 0 cm/min in the x direction (Ux) was chosen to keep the model as simple as possible." This means that to rationalize the model, the authors assumed the swimmers in the pool are not swimming and are standing completely still for the entire time they are in the pool.

2. Pool Depth: "Depth of pool at 91.44 cm is a typical shallow pool depth of 3 feet" and "Distance between bathers 118.05 cm (3.87 ft.) is equivalent to 15 ft2/bather of surface area.' So now all the swimmers are standing in three feet of water, in a grid 4 feet apart. And again, not moving...

3. Swimmers: What about these swimmers? The model assumes they are all children (based on the estimate of how much pool water they drink to get the model's exposure). Each model child spends around 2 hours a day, 73 days per year in the pool. As a reminder, this time spent in the pool requires them to arrange themselves in a 4' x 4' grid and stand around in 3 feet of water not moving for those 2 hours a day, 73 days per year. Does this sound like the behavior of a typical swimmer, especially that of a child?

4. Pool Closure: "The model conservatively assumes continual sloughing 24 h/day, 7 days/week at a constant bather load, thus not accounting for partial diurnal recovery from overnight disinfection." So, the pool never closes and is always at the maximum capacity - Keep in mind that while each child only spends 2 hours in the pool, when that time is up they are instantly replaced by another child in the same spot. This continues in the pool for every child in every spot in the 4

x 4 grid for 24 h/day, 7 days per

5. Circulation: "For Giardia and Cryptosporidium, the maximum probability of infection occurs at very low diffusivity values (<100 cm2/min)" and "turbulent diffusion is typically in the hundreds to thousands of cm2/min." In other words, the risk is highest when the water isn't moving much - so the model assumes that the swimmers aren't moving and the pump is not running. The ratio described in the model does not factor in circulation and filtration, which is critical to maintaining a clean and sanitary pool and in and of itself would be cause for immediate closure of a commercial swimming pool facility.

6. Swimmer Waste: The model predicts how much feces each swimmer is putting into the pool (or in the case of this model, each stander). However, the math behind the model is extremely sensitive to this assumption - if even 18 mg less poop (that is 35/10,000 ths of a teaspoon) – is put in by each stander per hour they are in the pool, then a ratio of CYA to FC of 450:1 would be recommended by the model. Remember - this spreadsheet concludes that we should change decades of pool operating practices – based on a guess as to how much swimmer waste there is. There is a pretty enormous difference in conclusions based on an extremely tiny amount of poop.

7. Water Replacement: To make the math work, the water is never replaced – no splash-out, no replacement water from backwash, no rain, no evaporation, no nothing.

This is starting to sound less like a pool and more like a spreadsheet.

Flawed Recommendations from Flawed Assumptions

The authors of the paper understand the modeling of Giardia does not reflect the real world (emphasis in bold): "It was not possible to develop a model that provides accurate estimates of absolute risk". They go on to point out that "The high rate of Giardia infection is not realistic but results from the assumptions used in this model: concentration of Giardia in feces, percent of population infected with Giardia, every visit to a pool with no chlorine and constant 24 hour/day 7 dav/week high bather load, and no filtration of cysts." How can the authors confidently believe in the increased relative risk of Giardia infection if they admit that rate of infection is not realistic?

The answer is they can't, which is what actual data from real pools tells us. There are dozens of recreational water illness outbreak reports in numerous scientific journals. The CDC has been periodically publishing RWI summaries since 1978 with the latest one covering 2000 to 2014 (CDC 2018). These are pools operating under the current guidance on cyanuric acid, so certainly a vast majority of those using CYA are operating far above a 20:1 ratio, and in that period of time there are zero reported cases of E coli, Shigella, Pseudomonas, Legionella, Norovirus, and very importantly for this discussion, Giardia, when there was proven to be 1 ppm of free chlorine in the water. This is the real world data published by CDC, not the output from a spreadsheet.

To give this some perspective, the CDC estimates that pools in the US have 301 million swimmer visits per year. Given that number of visits, then the model would predict the following, compared to what we actually

Using the assumptions within the model that determine the proposed 20:1 ratio, and assuming that there was zero chlorine during an outbreak, the incidence of Giardia is overestimated by more than 15,000,000 cases per year. The model similarly overestimates the incidence of E. coli by over 100,000 cases. If we look at the model's prediction for pools that were run at the highest ratio of CYA and FC that fits with the current recommendations of 1 ppm FC and 100 ppm of CYA, there should be more than 750,000 cases of Giardia coming from those pools each year. How many have actually been observed from pools that were confirmed to have 1 ppm of FC? Zero How confident changing decades of practices practices that are demonstrated to effectively prevent illnesses due to pathogens susceptible to chlorine - based on a model that so severely overestimates the scope of the problem?

CONCLUSION:

The key takeaway from this where both model and real-world experiences agree - is that the most important factor in keeping a clean, healthy swimming environment is proper pool maintenance, and keeping a chlorine residual of 1- 4 ppm. Cyanuric Acid helps prevent sunlight from destroying that residual, which makes it easier and less expensive for pool operators to maintain the appropriate chlorine level. We need to ask ourselves, who is behind the continuous push to further regulate Cyanuric Acid in the industry? If we are

truly concerned about public health, our focus needs to be on maintaining recommended levels of free chlorine to prevent disease from the readily controlled pathogens and on using secondary disinfection systems and proper maintenance practices to combat Crypto outbreaks. Rather than swimming in spreadsheets, let's be sure bathers are swimming in clean and clear pool water.

REFERENCES:

CDC. 2018. Outbreaks Associated with Treated Recreational Water — United States, 2000–2014. MMWR, 67, 547-551.

BIO: Roy D. Vore, Ph.D:

Dr. Vore is a technology manager at BioLab, Inc. His work focuses on the control of microbial growth in recreational water and household surfaces. Roy is a Certified Pool & Spa Operator, a member of NSPF's Education Committee, an active contributor to APSP's Recreational Water Quality Committee, was a major contributor to the Disinfection Water Quality module of the Model Aquatic Health Code (the "MAHC", and the lead author of NSPF's Recreational Water Illness handbook. Dr. Vore holds a Ph.D. in bacterial physiology, masters and bachelor's in microbiology. Dr. Vore has over 80 scholarly papers and presentations on the selection and use of industrial biocides, biocide testing methodology, the microbiological of swimming pools and spas, and the governmental regulation of biocides

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BIO: Dr. Jeffrey Gaulding, Ph.D:

Dr. Jeffrey Gaulding received his PhD in Chemistry from Georgia Tech and his BS from Emory University. During his doctoral work he was awarded several fellowships, including being appointed to a National Institutes of Health training grant. He began his career in the pharmaceutical industry, and has been working in the pool and spa industry for several years. Dr. Gaulding is also a Certified Pool & Spa Operator and recently joined the Pool and Hot Tub Alliance's Recreational Water Quality Committee.

Jeffrey Gaulding, Ph.D, Jeff.gaulding@biolabinc.com

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Filtration

Continued from page 9

cleaning procedure is by backwashing. Below are detailed best practices and tips for each filter type.

Sand Filter backwashing: First vou must determine proper backwash flow rate (15 to 20 gpm per Square foot) example: A 3.1 square foot sand filter needs no less than 46.5 gpm and no more than 62 gpm. Too much water flow and you could potentially lift the sand bed and pass it to waste, a much worse case scenario you could damage the laterals and or filter tank from the sand blasting effect as the water is introduced at the bottom of the tank at a high velocity. Not enough water flow and you will not remove the debris from the sand bed completely. As a result, the debris that is still in the filter works its way deeper into the filter. When this happens, the debris in the bottom of the filter can turn to 'caliche' and the filter then must be replaced because the 'caliche' that forms often cannot be removed because of its size and difficulty to break up.

Another problem with backwashing sand filters occurs when the filter is backwashed too frequently in desert or dusty environments. In some cases, silt can pass completely through the filter when it is clean. This results in calls from pool owners explaining they have sand in their pool and that additional sand comes out of the pool returns when they vacuum. In order to diagnose this situation, begin by asking if when you brush the pool does the "sand" makes a pile or a cloud in the pool. If it makes a pile there could be an issue with the filter. If it makes a cloud it is not sand, but rather silt. If it is 'silt' the problem is that the sand filter is actually too clean and therefore should NOT be backwashed. When a sand filter is very clean, it allows the larger particulate to pass through the filter. This is a sign to stop backwashing the filter, and allow it to load up and then begin to trap the silt into the filter to help with this a clarifier or flocking agent can be added.

Determining how long

backwash a sand filter should not be determined by looking at the water flowing out of the backwash line. Sand filter backwashing should be done in 3 minutes. Set a stopwatch for a 3 minute backwash cycle don't guess.

DE filter backwashing: Unlike sand filters, backwashing DE filters frequently does not affect the filtration rate. However, it does create extra work and expense for service techs. DE filters should be backwashed for the same 3 minutes, however the cycle should be broken down into a 1 minute backwash, then a 1 minute filtration for three separate cycles (make sure you shut the pump off each time you switch between backwash and filtration. This procedure helps to separate the DE coating from the grids so it can be removed from the filter. A DE filter should be backwashed at the same 10 psi increase over normal operating pressure as any other filter media. A DE filter should be torn down, cleaned and degreased at least twice a year. Body lotions and sunscreen collect on the grid material and cannot not be backwashed away. A degreasing agent should be used to complete the filter maintenance process. It's important to note that muriatic acid will permanently lock the oils and lotions into the grid material and is therefore not recommend-

DE filter recharging: When recharging the DE filter, always follow the manufacturer's recommendation as to the amount of DE used to charge the filter. The proper way to charge the filter is to use a 5-gallon bucket then add water and DE together to create a slurry. Slowly pour the slurry into the skimmer while the pump is running. This will ensure that the grids or elements are properly coated from top to bottom.

Cartridge filter backwashing: If you have a backwash valve on your cartridge filter, something has gone awry. Cartridge filters are not designed to withstand water flow in the reversed direction therefore it must be taken apart to clean. A cartridge filter is cleaned in the same manner as a DE filter teardown, hosing the surface debris off the cartridge is only the first step (if it is your only step you might as well not bother). Body oils and lotions are the number one contributor to a plugged cartridge filter. Getting the oils and lotions off the cartridge surface is the difference between frequent cartridge replacement and cartridges that last and run a longer time between cleanings. The oily buildup on the surface plugs up the pores on the cartridge that restricts water flow and it also it creates a very sticky surface. Cartridge filters trap dirt on the surface and when the filter is turned off the debris falls to the bottom of the tank to free up more surface area for the next cycle. If the surface of the cartridge is sticky the debris does not fall away causing the filter to plug up in a very short period of time.

Many pool service professionals now offer cartridge filter cleaning services. Not only do the hose off the filter, they soak the filter with muriatic acid and a filter cleaning agent, then re-soak the filter with a liquid chlorine bath to brighten and lighten the filter (making them look nicer when returned to the client). Finally, the filters needed to air dry before using them again. Allowing them to dry completely give the cartridge time for the fibers to fluff back up, which is important because the fibers need to expand to be effective. If they can be pushed own easily, it reduces the filter cycle. Many service companies suggest the pool owner own two sets of cartridges so the client can continue to use their pool while the other set is being cleaned. The most effective system is for the service tech to take the filter media when they close the pool for the season, clean it at their shop, then return the filters ready-to-use in the spring when they re-open the pool. Since pools are typically at their dirtiest during spring opening season, those cartridges are filtering more debris than usual, some pool service professionals change out the filters after the pool startup. Once the water is clear, they then install new filters to provide a more productive filtration process over the course of the summer. This also extends the lifespan of the new filter cartridges.

Automation

On large commercial swimming pools, perform manual weekly checks, an automatic controller can be used to set a backwash schedule based on psi reading. Therefore, an automatic controller can be an invaluable addition to a pool's filtration system. With an automatic backwash controller, the need for a service technician to be present to perform this maintenance procedure although recommended—is not necessary because the parameters set in the controller will automatic the backwashing process. Most backwash cycles occur when a 10 to 15 psi increase occurs—starting with a clean filter psi reading. Controllers can also be set to backwash on specific days of the week or times of the day.

Conclusion

Understanding the relationship between the pool pump to the pool filter gets to the heart of obtaining clean and clear pool water. Using filter pressure psi readings and understanding the way in which variable speed pumps affect filter pressure readings are also key to truly understanding how the filter is performing and when it's time to clean the filter. Once you have your filters and pumps sized correctly for one another, regular filter cleaning will help ensure the cleanest, clearest water for both commercial and residential swimming pools. Be sure you have your filtration operation in full swing this summer.

Policy on IPSSA mailing list

The IPSSA general membership mailing list will not be given out to anyone including members, associate members or outside organizations. This policy has been established to protect members from possibly being placed on inappropriate and or indiscriminate lists.

* IPSSA Education Fund *

The IPSSA Education Fund – Advancing Professional Training and Education in the Swimming Pool and Spa Industry.

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Applicants may apply two times a per calendar year, up to \$200 per class instruction for individuals. Maximum two submittals per calendar year.

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For questions about the program, please inquire at info@ipssa.com or call 888-360-9505 ext. 2.

Mission Statement: IPSSA Education Fund is to advance professional training and education of the Self-Employed Swimming Pool and Spa Service and Repair Professional by subsidizing group classes that will expand his/her knowledge of their profession.

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Third Wed., 6:00 p.m., The Elks Lodge 19071 N Lower Sacramento Road, Woodbridge Pres. Rick Plath (209) 456-1605 service@rickspoolservice.com EAST BAY

Third Tues., 6 p.m., Pleasant Hill Community Center, 320 Civic Drive, Pleasant Hill Pres. David Luthy (510) 435-5252 townandcountrypool@comcast.net EAST CONTRA COSTA

Fourth Tues., 6:00 p.m., La Fuente Mexican Restaurant, 642 1st Street, Brentwood Pres. Dale Vaughn (925) 759-3819 dalevaughn1176@comcast.net

EL DORADO

Second Thurs., 6:30 p.m., Shingle Springs Comm. Ctr. 4440 S. Shingle Road, Shingle Springs Pres. Shawn Panico (916) 201-6245 / www.edipssa.com ELK GROVE

Second Wednesday, 7:00 p.m., Logan's Roadhouse, 9105 W. Stockton Boulevard, Elk Grove

Pres. Chris Bass (916) 704-1505 basspoolservice@gmail.com GOLD COUNTRY

First Mon., 6:00 p.m., Sierra Grill Smokehouse, 2515 Grass Valley Hwy., Auburn, CA Pres. Ryan Ruminson (530) 401-7346 ryanruminson@sbcglobal.net

MODESTO CENTRAL VALLEY:

Third Tues., 6 p.m.
El Rosal Restaurant, 3401 Monte Vista Ave. Pres. Albert Camarillo (209) 628-2717

acspoolserv@yahoo.com SACRAMENTO CITY

Fourth Wed., 7:00 p.m., Plaza Hofbrau
2500 Watt Ave., Sacramento
Pres. Kelli Carrillo (916) 730-7636
TRACY: Fourth Thurs., 6 p.m.,
Perko's Café, 1321 W. 11th Street, Tracy 95376 Pres. Kevin McLard (209) 833-9200

kevin_m@klmpools.com
WEST PLACER: First Thurs., 5:30 p.m., Strikes Bowling Alley, 5681 Lonetree Blvd., Rocklin CA 95765 Pres. Bryan Soto (916) 258-5114 norcalpools916@gmail.com

REGION 2 (CENTRAL CALIFORNIA) B.O.R.D. Member: Manuel Margain (559) 307-1072 E-mail: manuelmargain1@gmail.com

BAKERSFIELD: First Tues., 5:30 p.m., Rusty's Pizza, 6675 Ming Ave, Bakersfield Pres. Beau Braisher (661) 332-4952 braisherpools@gmail.com

CENTRAL COAST

Second Wed., 7 p.m., Mtgs alternate between N/S Co., Contact chapter Pres. for info. Pres. Ron Rusconi (805)549-7961

CONEJO: Second Wed., 7:30 p.m., Alpha Water Systems, 725 Cochran Street #A, Simi Valley Pres. Dennis Van Sloten, (805)813-6154

dvs10@live.com CONEJO VALLEY

Second Wed., 6:30 p.m., Superior Pool Products 1200 Lawrence Drive #400, Newbury Park Pres. Michael Flanagan (805) 444-7960 FRESNO: Fourth Tues., 7 p.m. Roundtable Pizza at First & Bullard, Fresno

Pres. Norm Carpenter, (559) 217-1228 ipssafresno@gmail.com

SANTA BARBARA Second Mon., 6:30 p.m., Rusty's Pizza Parlor

232 W. Carrillo, Santa Barbara (downtown) Pres. Joe Burich (805) 451-1963 mericks2001@yahoo.com Poinsettia Pavilion, 3451 Foothill Rd, Ventura Pres. Max O'Brien (805) 794-6270 / gotomax@att.net VISALIA: Third Wed., 6 p.m.

Amigo's Cantina, 5113 W. Walnut Ave., Visalia Pres. Roman Gomez (559) 992-5779 romangomez1251@yahoo.com

REGION 3 (NORTH L.A. COUNTY) B.O.R.D. Member: Terry Snow (909) 982-9962 E-mail: tls.pools@verizon.net

ANTELOPE VALLEY: Second Monday, 6 p.m. SCP Antelope Valley, 4514 Runway Dr., Lancaster Pres. Bob Cranmer ph: (661) 609-3682

warren_cranmer@msn.com DIAMOND BAR

First Thurs., 7:00 p.m. PEP, 563 W. Terrace Dr., San Dimas 91773 Pres. Johnny Hernandez (626) 833-7456 justpools626@yahoo.com FOOTHILL: Third Thurs., 7:00 p.m. 849 Foothill Blvd. #4, La Cañada Pres. Raul Fernandez (818) 378-9231 SAN FERNANDO VALLEY

Third Wed., 7:30 p.m. (March meeting is mandatory) Canoga Bowl, 20122 Vanowen, Canoga Park Pres. Blaine Enbody (805) 529-7562

SAN FERNANDO VALLEY METRO

First Tues., 7 p.m., Canoga Bowl, 20122 Vanowen, Canoga Park / Web site: www.sfvmetro.com Pres. Eric Nielson (818) 710-1628 willowcreekpools@gmail.com

SAN GABRIEL VALLEY

Second Thurs., 7:00 p.m. PEP, 1862 Business Center Dr., Duarte, CA 91010 Pres. Brian Nies (626) 536-2008 brian@propoolm.com

SANTA CLARITA VALLEY

First Thurs., 7:00 p.m. Vincenzo's Pizza, 24504 ½ Lyons Avenue, Newhall Pres. Kent Simpson (661) 373-9901

REGION 4 (SOUTH L.A. COUNTY)

B.O.R.D. Member: Adam Morley (310) 493-3565 E-mail: adam@paradisepools.biz

CENTRAL LOS ANGELES Second Mon., 6:30 p.m., Han Woo Ri Presbyterian Church, 1932 S. 10th Ave, Los Angeles Pres. Juno Yi (323) 850-8118

juno8118@gmail.com ÉAST LONG BEACH Second Tues., 6:30 p.m., Ecco's Pizza, 2123 N. Bellflower Blvd, Long Beach

Pres. Bill Rothwell (562) 301-4059 pooboy1950@yahoo.com SOUTH BAY

Second Wed., 7 p.m., American Legion Hall 412 S. Camino Real, Redondo Beach

Pres. Rick Morris, (310) 755-5279 Rick-morris@sbcglobal.net WESTSIDE

Second Tues., 6:30 p.m., American Legion Hall 5309 S. Sepulveda, Culver City Pres. Rick Haro (310) 204-4327

rick@haropools.com WHITTIER

First Wed., 7 p.m. Superior Pool Products in Santa Fe Springs Pres. Grant Hucko (714) 240-2099 hucko@sbcglobal.net

REGION 5 (ORANGE COUNTY) B.O.R.D. Member: Michael Kei Black (714) 891-0351 E-mail: mblackels@netzero.com

ANAHEIM

Third Wed., 6:30 p.m. Roundtable Pizza, 12829 Harbor Blvd., Garden Grove Pres. Cal Pratt (949) 230-746

CENTRAL ORANGE COUNTY
Last Tues., 7 p.m., Coco's, 14971 Holt Ave., Tustin
Pres. Mark Harrison (949) 874-8234 maharrison16@yahoo.com

DANA POINT

Second Tues., 6 p.m., Coco's, Crown Valley and I-5 Pres. Cliff Gross (949) 587-9773

cliffgross@cox.net
MISSION VIEJO First Tues., 6 p.m. Woody's Diner, 24321 Avenida De La Carlota,

Laguna Hills, CA 92653 Pres. Chris Dodds (949) 683-6076 NORTH ORANGE COUNTY

ORANGE COAST

Last Monday, 5 p.m., Roundtable Pizza on Adams & Beach Pres. Rob Mangus (716) 318-1254 thonrath@hotmail.com

ORANGE COUNTY #9
Second Wed., 7 p.m., Dad Miller Golf Course
North Gilbert Street, Anaheim

Pres. Rob Tobias (714) 812-7993 ORANGE COUNTY POOL PROFESSIONALS

Last Mon., 6:00 p.m. Claim Jumper Banquet Room, 18050 Brookhurst St., Fountain Valley CA 92708 Pres. Jim Romanowski (714) 404-2550 poolperfection1@aol.com
SOUTHWEST:

First Wed., 6 p.m., ABC Pools 10560 Los Alamitos Blvd., Los Alamitos Pres. Ken Tipton (562) 430-8515

SURF CITY Third Tues., 6:30 p.m., Superior Pool Products, 10865 Kalama River, Fountain Valley

TUSTIN/IRVINE Second Tues., 6:00 p.m., PSOC Waterline

Technologies, 220 N. Santiago Street, Santa Ana Pres. Rich Foley (714) 974-1514 YORBA LINDA

First Wed., 6:45 p.m., Lampost Pizza, 21480 Yorba Linda Blvd. #D, Yorba Linda CA (call president to confirm mtg time). Pres. Jaime Aranda, (714) 746-5138 jaimearanda@sbcglobal.net

REGION 6 (INLAND EMPIRE) B.O.R.D. Member: John Dixon (951) 316-1675 E-mail: waterwhisperer1@verizon.net

CORONA: Second Tues., 7:00 p.m., Marie Callenders 160 E. Rincon St. (at Main St.), Corona Pres. Jenifer Meza (951) 833-0055 aquatechpoolservice@earthlink.net **HEMET:** Third Wed., 6:00 p.m. Megabites Pizza, 1153 S. State St., Hemet, CA 92543

Kenny@WetworksPoolCare.com MENIFEE VALLEY First Wed., 7 p.m. at My Buddies Pizza 2503 E. Lakeshore Drive #A, Lake Elisnore

Pres. Kenny Campbell (951) 733-4330

Pres. Renee Marier, (951) 285-9672 mangopoolnspa@verizon.net ONTARIŎ/ RANCHO CUCAMONGA

Second Tues., 7 p.m., Location varies,

please contact chapter president for more info

Pres. Ron Goodwin (909) 989-0406 good2win@msn.com PALM DESERT

Third Thurs., 6 p.m./7 p.m., please check with pres. Sloan's, 81539 US Hwy 111, Indio CA Pres. Gary Kauber (760) 702-5865

PALM SPRINGS:

First Wed., 5:00 p.m. Superior, 5700 Indian Springs Rd, Palm Springs Pres. James Elliott (760) 413-0463 **REDLANDS:** Second Tues., 6 p.m.

Hickory Ranch, 32971 Yucaipa Blvd., Yucaipa Pres. Bill Brooks (909) 553-5780
RIVERSIDE:

First Tues., 6:00 p.m., Cask N Clever, 1333 University Ave., Riverside Pres. Nathan Smith (972) 296-7946 info@riversidepools.com TEMECULA/MURRIETA

Third Wed., 7 p.m., Pat & Oscar's 29375 Rancho California Rd., Temecula Pres. Scott Peterson (951) 255-4175 ipssascott@yahoo.com

REGION 7 (SAN DIEGO COUNTY) B.O.R.D. Member: Michael Harris (619) 395-6700

E-mail: barrowpoolssd@gmail.com

CARLSBAD Third Wed., 6:00 p.m. El Ranchero Restaurant, 1565 N. Santa Fe, Vista Pres. David Talbot (760) 845-6863

ahoypools@sbcglobal.net ESCONDIDO Third Wed., 6:30 p.m., Call for location. Pres. Bruce Smith (760) 741-3960

Bsmith1956@cox.net NORTH COUNTY COASTAL

Third Tues., 6:30 p.m. Brett's BBQ, 1505 Encinitas Blvd., Encinitas Pres. Nick Nelson (760) 802-3391

3genpools@gmail.com RANCHO DEL MAR

Third Mon., 5:30 p.m., Oggi's Sports, 12840 Carmel Country Rd., San Diego, CA 92130 Pres. Wayne Maynard (858) 361-8313 arrowheadpoolservice@yahoo.com SAN DIEGO

Third Wed., 7 p.m., Admiral Baker Clubhouse, 2400 Admiral Baker Road, San Diego Pres. James Morketter (619) 708-4972

Elcerritopool@yahoo.com SAN DIEGO EAST COUNTY

Third Tues., 6 p.m., Superior Pool Products, 1973 Friendship Dr., El Cajon Pres. Berny Sweeny (619) 244-0496

bernypoker@hotmail.com SAN DIEGO METRO: Fourth Thurs., 6:00 p.m. Sammy's Woodfired Pizza, 8555 Fletcher Pkwy La Mesa, CA 9194

Pres. Steven Elbik (619) 316-0690 Poolsoltuions72@gmail.com

REGION 8 (SOUTHWEST) B.O.R.D. Member: Mike Lee (480) 786-0687 E-mail: mountainsidepools@mac.com

Third Thurs., 5:45 p.m., Superior Pool Products 2350 W. Broadway Rd. #110, Mesa Pres. Steve Ward (480) 213-0481 wardspool@yahoo.com NORTH PHOENIX

Third Tues., 6 p.m., SCP 18201 N. 25th Avenue, Phoenix AZ 85023 Pres. William Goossen (623) 580-9802 goosse-man@cox.net

SCOTTSDALE

Third Mon., 6:00 p.m., Pool Water Products, 20810 N. 25th Place, Phoenix Pres. Clifton Orson (480) 585-0000 orson@hotmail.com

SOUTHEAST VALLEY

Second Thurs., 5:30 pm, Superior Pool Products, 7330 S. Atwood, Mesa, AZ Daniel Morris (480) 284-4296 TUCSON: Third Wed., 6:30 p.m. Superior Pool Products, 4055 N. Runway Drive.

> WEST VALLEY Third Wed., 6:00 p.m., Cloud Supply 1100 N. Eliseo Felix Way, Avondale

Pres. Perry Wingate (520) 429-0806

Pres. Trent Brumfield (623) 210-1615 WESTERN LAS VEGAS

First Mon., 6:30 p.m. (excl. holidays) Vietnam Vets Hall, 6424 W. Cheyenne, Las Vegas Pres. Laurie Beecher-Valenzuela (702) 556-4477 ipssalauriebeecher@gmail.com

REGION 9 (TEXAS) B.O.R.D. Member: Becky Clayson (210) 240-3121 E-mail: becky.clayson@yahoo.com

AUSTIN

First Tues., 6 p.m., Cherry Creek Catfish Co. 5712 Manchaca Rd, Austin Pres. Keith Timm (512) 636-3750 keith@acuaticoinc.com

CLEARLAKE: Fourth Tues., 7:00 p.m., Rudy's BBQ, 21361 Gulf Fwy, Webster Pres. David Potts (208) 887-6486 david@freedompools-texas.com

CORPUS CHRISTI: First Thurs., 6:30 p.m. SCP in Corpus Christie Pres. Michelle Wilkinsonr (209) 604-6460

HILL COUNTRY: Third Tues., Komal Latin Kitchen, 2550 Hunter Rd., San Marcos, TX Pres. Jascha Wood (512) 216-7663

HOUSTON; Second Tues., 7 p.m. IHop, 11225 Katy Freeway, Houston Pres. Bryan Norris (713) 234-7649 bryan@norrispools.com NORTH AUSTIN

Second Tues., 6 p.m., Cedar Park Library, 550 Discovery Blvd. Pres. Jim Smith (512) 206-0606

NORTH HOUSTON

Third Tues., 7 p.m., IHop 25619 Interstate 45, Spring Pres. Stephen Titone (281) 773-8643

Stitone2001@yahoo.com SAN ANTONIO: First Mon., 6:30 p.m. Longhorn Café, 17625 Blanco Rd., San Antonio, TX Pres. Jorge Martinez (210) 549-7665

pooldoc@hotmail.com WEST HOUSTON First Tuesday., 7 p.m.: Spring Creek Barbeque 21000 Katy Freeway, Katy, TX 77449 Pres. Bill Williams (832) 593-6299 poolmaxxinc@gmail.com

REGION 10 (BAY AREA SOUTH) B.O.R.D. Member: Stan Phillips (925) 518-1718 E-mail: stan@aquacps.com

FREMONT

Jan.-July: Second Mon., 6 p.m., Mountain Mike's Pizza 20261 Patio Dr, Castro Valley, CA 94546 Pres. Michael Murphy (510) 579-1448 MID-PENINSULA

Last Tues., 7 p.m., Superior Pool Products 2692 Middlefield Rd, Redwood City Pres. Justin Lindley (650) 863-6661 justinyourpool@gmail.com MONTEREY COAST: Fourth Wed., 7:00 p.m.,

85 Nielson St, Ste 201, Watsonville, CA 95076 NO April meeting. May meeting in new location Pres. Terry Page (831) 297-2215 pinnaclepoolandspa@sbcglobal.net

MARIN & SONOMA COUNTY Third Wed., 7 p.m., Lucchesi Park, Petaluma Park, 320 N. McDowell Blvd., Petaluma Pres. Darrell O'Neal (707) 217-1546

dandmpool@aol.com SANTA CLARA VALLEY Third Thurs., 5:30 pm,

SCP, 2036 Martin Ave Santa Clara, CA 95051 Pres. Fred Doering (408) 685-8078 nexuspoolservice@gmail.com SILICON VALLEY

Every Other Wed., 5:30 p.m., Mountain Mikes Pizza,

1724 Miramonte Ave., Mountain View Pres. David Guslani (650) 333-1351

dguslani@earthlink.net TRI-VALLEY: Second Thurs., 6 p.m., SCP, 6700 Sierra Lane, Dublin Pres. Gary Heath (925) 719-5334 gary@thepooldoctors.com

REGION 11 (FLORIDA/GEORGIA) B.O.R.D. Member: Derric Raymond

(407) 908-4555 E-mail: derric@raymondscustompools.com

GOLD COAST (Ft. Lauderdale area) Second Tues., 6:30 p.m., Wings Plus, 9880 W. Sample Rd, Coral Springs Pres. Ana Labosky (954) 224-7733 www.ipssagoldcoast.com; resident@goldcoastipssa.com

MANASOTA (Bradenton/Sarasota) First Mon., 7:00 p.m., Call for meeting location and directions Pres. Todd Starner (941) 915-2135 tstarner@tampabay.rr.com

NORTH GEORGIA Pres. Benjamin Decker (404) 405-0197

ben@classicpoolsvc.com OSCEOLA (Kissimmee/Orlando) Second Wed., 6:30 p.m. Fat Boy's Restaurant, 2512 13th Street, St. Cloud

Pres. Diane Fowler (407) 460-6680 poollady2001@gmail.com PORT CHARLOTTE

Fourth Wednesday, 6:30 p.m., Buffalo Wings & Rings, 1081 W. Price Blvd. North Port Donna GilDeMadrid (941) 626-3968 **SARASOTA:** First Tues., 6:30 pm Gecko's Grill & Pub, 351 N Cattlemen Road, Sarasota Pres. Andy Homner (941) 330-5757 andy@clearwavepoolcare.com

TREASURE COAST: Fourth Tues., 7:00 pm Duffy's Sports Bar, 6431 SE Federal Hwy, Stuart Pres. Allen Schroeder (772) 215-1884

> **REGION 12** B.O.R.D. Member: Neal Holt (972) 617-9877 E-mail: poolguy713@gmail.com

DALLAS: Fourth Tues., 5:30 p.m. Rockfish Seafood Grill 7639 Campbell Rd, Suite 800, Dallas Pres. Travis Coleman, (469) 585-4119

FORT WORTH Third Tues., 6:30 p.m., La Playa Maya Restaurant 1540 N Main Street, Fort Worth Pres. Tina Slagle (817) 991-0555

MID CITIES DFW: First Mon., 7:00 p.m., SCP, 2107 Hutton Drive, Carrollton TX 75006 Pres. Casey Gardner (469)835-5674

TARRANT COUNTY First Tues. 7 p.m., El Chico's Café 7621 Baker Blvd., Richland Hills

Pres. Jason Wilson (817) 366-1200 WAXAHACHIE: Second Wed., 7 a.m., Denny's, 408 Westchase Drive, Grand Prairie Pres. Tom Sheehy (214) 395-0143 / tsheehy@prodigy.net

Associate Members

For more information about our associate members, please visit their web sites. If company representatives are available to speak at chapter meetings, their topics and geographic availability is indicated.

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