



# Independent Pool and Spa Service Association

Volume 7, No. 6, June 2006

## Region 9 Director's Report

What a year it has been so far. You all have been very busy and it is so hard to keep up with work, family, time for yourself, and those clients that are soooo needy. Yes we all have them and I choose to handle them my own way and always treat them with respect.

Last month Texas received some much needed respect from the Other Regional Directors from IPSSA and a lot of work was accomplished. Your bills will come a little earlier and also a late fee has been added if you can not get your bill paid on time. And if your payment skips a beat then a fee is there for that too. There have been some complaints but only a few and I see this change as any other change in any business that has grown. Have you gotten interested in building your skill level yet? Have you run into something in the field that you are unfamiliar with? Well these questions are for you to go to your chapter meeting with and ask the other members in your chapter to share what they know. One of the ideas the BORD had in Austin is to implement a calendar for the twelve months where all chapters could be talking about the same topics at the same time all over the IPSSA coverage area. This will be available to Chapters via the IPSSAN in the upcoming months. And last but not least is the continuing education program that is in the works. So far I have reviewed the Glossary and the first six chapters of the first module. I have been busy and so have you. I encourage you to help out in the Chapter and make yourselves available to the community for safe swimming practices. Remember that layers of protection are suggested and that there is no substitute for Adult supervision. That's it, that's all for now.

GREG  
512-754-4901

## pH

Is the level of how acidic the pool water is. You must maintain a good pH level or your chlorine will not work effectively. The level should be between 7.2 and 7.6.

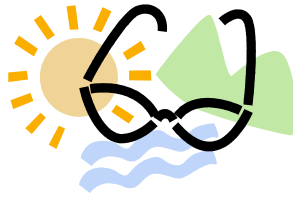
The most fragile and arguably the most important component of water balance is pH, a reading that indicates how acidic or basic your pool and spa water is. Without going into the entire story of what pH is and how it works, suffice it to say here that it's important to monitor it because it has an impact on your sanitizer effectiveness, not to mention your pool or spa's surfaces, equipment -- and you.

Here are the most common problems associated with both high or low pH levels:

High pH Readings	Low pH Readings
Poor sanitizer efficiency	Poor sanitizer efficiency
Cloudy water	Etched or stained plaster
Shorter filter runs	Corroded metals/equipment
Scale formation	Skin and eye irritation
Skin and eye irritation	Destruction of total alkalinity

The ideal pH range for pools is between 7.4 to 7.6. For spas, the range is 7.2 to 7.8. Any reading below 7.4 for pools or 7.2 for spas means your water is acidic. To correct the situation, you would add soda ash or sodium bicarbonate. Note: You should not add soda ash to a spa as you would to a pool -- it is too strong for the small spa environment.

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## June Meeting Attendance

The following member companies were not represented in June at our meeting:

A-1 Pools and Spa's, All About Water, Alpha Pool Service, Alpine Pool Service, Blue Water Pool Service, Byrons Pool Service, Clearwater Pool Service, Miko's Pool Service and Pool Patrol.

If there's any mistake let me know, Splash Gordon's (817) 589-7707 – Chapter Secretary  
Our standing rules call for a \$ 54.00 fine for missing two meetings in a row. Upon a third consecutive absence, the board may remove membership. It is your responsibility to make sure that you are counted in attendance at the meeting or to let one of the officers know that you are unable to attend a meeting!  
Hope to see you all at the March meeting.

SPLASH



# July Birthdays

Allen Kinderman – Dolphin Pool Service  
Ken Hamilton – Den's Pool Service

[ipahl@sbcglobal.net](mailto:ipahl@sbcglobal.net) or 817-595-1167



## Manufacturers' Representatives

Steve Cofer  
214-404-8771  
Fax 214-528-7665  
[Steve@DBIReps.com](mailto:Steve@DBIReps.com)



### Spending more time on your pool than in it?

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chlorine & **YELLOW OUT**  
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- **VAC-ALERT**
- **LAMOTTE**
- **PRAHER**
- **STAIN ERASER**

No Metals  
No Brushing  
Works in 24 hours  
Dissolves immediately  
Safe in any gunite,  
vinyl, plaster, or  
fiberglass pool



They clean  
up all  
types of  
algae!

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If the pH reading is above 7.6 for pools or 7.8 for spas, it means the water is basic or alkaline. To bring the pH level down in pools, you'll need to add some liquid muriatic acid to the water.

Here again, you need to take special care with your spa: Liquid muriatic acid is too powerful for the small volumes of water found in spas. Therefore, experts do not recommend using muriatic acid in spas. Instead, you should add dry acid.

pH is a number between 0 and 14 that indicates how acidic or basic a solution is (See Figure 5.4). Pure distilled water has a pH of 7.0 and is neither acidic nor basic. Water with a pH of lower than 7.0 is said to be acidic, and the smaller the number, the more acidic the water is. On the other hand, water with a pH greater than 7.0 is basic, and the larger the number, the more basic the water.

Acidic compounds, such as sodium bisulfate or muriatic (hydrochloric) acid, lower the pH of water. Alkaline compounds, such as soda ash or sodium hydroxide, raise the pH of water. Alkaline compounds are, therefore, basic. The use of both alkaline and basic to refer to high pH, and to compounds that raise the pH, causes some confusion with the *alkalinity* of water. The difference between total alkalinity and pH is discussed later.

In addition to the effects of pH on the chlorination process, there is also an effect on the total alkalinity of water. This plays a major role in the degree of calcium carbonate saturation. This dual effect makes the control of pH very important to the pool operator.

Molecules of water (and other substances) break up into electrically charged particles called ions. Water separates into positively charged hydrogen atoms, called hydrogen ions, and negatively charged particles containing one hydrogen atom and one oxygen atom.

The pH of a solution does not indicate the total amount of an acid or base in the solution, but only how much of it is ionized. This point is very important in the subject of total alkalinity.

pH is a very complicated subject, and the above explanation has been deliberately simplified to give sufficient, accurate information for swimming pool operation. Chemists would not accept it as complete, but it will do for this discussion.

Accurate control of the pH of swimming pool water is essential. pH effects flocculants, bactericides, algae growth, equipment maintenance and bather comfort.

The pH of swimming pool water must be kept slightly above 7.0 and must never exceed 7.8. Most state health departments recommend that the pH of swimming pool water be kept between 7.2 and 7.6. This range provides the best conditions for precipitation of flocculants on conventional sand filters and for effectiveness of chlorine as a bactericide.

Corrosive damage to pipes, filters and pumps might result from operation at a pH below 7.0. High pH values cause reduced effectiveness of bactericides and encourage the growth of algae.

Increasingly Acid			Neutral			Increasingly Basic								
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pool Water Zone														
<ul style="list-style-type: none"> <li>○ pH too low</li> <li>○ Corrosive</li> <li>○ Chlorine Lost</li> <li>○ Irritating</li> </ul>			<ul style="list-style-type: none"> <li>○ pH Ideal</li> <li>○ Neutral</li> <li>○ Maximum Chlorine Efficiency</li> <li>○ Comfort Zone</li> </ul>			<ul style="list-style-type: none"> <li>○ pH Too High</li> <li>○ Scale Forming</li> <li>○ Chlorine Less Effective</li> <li>○ Irritating</li> </ul>								
6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	8.4						

Control of pH is relatively simple. pH can be raised by the addition of soda ash (sodium carbonate, Na<sub>2</sub>CO<sub>3</sub>), sodium bicarbonate (NaHCO<sub>3</sub>) or sodium sesquicarbonate (Na<sub>2</sub>Co<sub>3</sub>NaHCO<sub>3</sub>o2H<sub>2</sub>O)- Other compounds, such as sodium hydroxide, can be used, but they are more dangerous to handle and are not recommended. The carbonate ions produced by these chemicals combine with some of the hydrogen ions and reduce the hydrogen-ion concentration. This makes the water more basic. Soda ash, sodium bicarbonate and sodium sesquicarbonate can be added to a pool by dissolving the powder in water and feeding the solution through a chemical feeder; dissolving the powder in a bucket of water and pouring the solution directly into the pool

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water; or by broadcasting the dry powder over the water surface. The amount required varies greatly from pool to pool, and only trial-and-error experience determines the correct amount for any specific pool.

Addition of acids, or acid salts, causes an increase in hydrogen-ion concentration and lowers the pH. Sodium bisulfate ( $\text{NaHSO}_4$ ) is an acid salt that is frequently used because it is safe to handle. It can be added by chemical feeder or by dissolving in a bucket and pouring directly into the pool. Muriatic acid is the commercial grade of hydrochloric acid ( $\text{HCl}$ ). If the pool operator is sufficiently aware of the dangers and precautions of handling acids, either of these two can be poured directly into the pool when no one is swimming. Acids may also affect the total alkalinity of water.

The scientific definition of pH is 'the negative logarithm of the Hydrogen ion concentration'. First accept pH is a scale measuring the acidity or alkalinity of a solution. Squeezed lemon and vinegar are sour or acidic. If we drank them we would take something alkaline like bicarbonate of soda or magnesia to neutralize the acidity in our stomachs - in other words raise the pH. The pH scale runs from 0 (highly acidic) to 14 (highly alkaline) with distilled water being neutral at pH 7.

Now instead of sour, lets use the term 'hydrogen ions', and instead of alkaline lets use the term 'hydroxyl ions'. Vinegar has many more hydrogen ions than hydroxyl ions. Conversely, soda ash and bicarbonate, being alkaline, possess more hydroxyl ions than hydrogen ions. In summary, acids produce hydrogen ions, alkalis produce hydroxyl ions. pH is the power (German 'potenz') of a solution to yield hydrogen ions  $[\text{H}^+]$ . One more step to go. The scale between 0 and 14 is logarithmic (pH 8 is 10 times more alkaline than pH 7 and pH 9 is 100 times more alkaline than pH 7) Now we are back to the scientific explanation of pH as 'the negative logarithm of the hydrogen ion concentration'. Negative because the more hydrogen ions, the lower the pH.

### Why is pH so important?

1. The pH value affects the amount of hypochlorous acid (free available chlorine) that is formed, and therefore determines the effectiveness of the chlorine as a killer of bugs.

At pH 6.5, 90% of the chlorine will be hypochlorous acid

At pH 7.5, 50% of the chlorine will be hypochlorous acid

At pH 8.0, 20% of the chlorine will be hypochlorous acid

Unfortunately you cannot run your pool at pH 6.5 - it would be acidic enough to corrode the metal fittings in your pool circulation system and it is too far from the human body's pH of 7.4 to be comfortable to bathe in. The compromise is 7.2 to 7.6, preferably midpoint of 7.4. Remember, if you let the pH drift out of this range, you will have to use more chlorine to get adequate disinfection.

1. Bather comfort. At high pH, the water will make your eyes sting and possibly give you a sore throat
2. At high pH there are two dangers.
  - a. The danger of scale forming on your pool surfaces, pipe work and fittings. This is because at a pH of around 8.0, the calcium in the water combines with carbonates in the water. Result? Calcium carbonate or scale.
  - b. Calcium carbonate can form into tiny particles and float around in the water giving it a cloudy, turbid appearance.
3. A low pH can corrode metals, eating away at copper fittings and heat exchangers leaving metal oxides to stain pool surfaces. Under certain conditions the precipitated (particulate) metals can tint your hair, giving you a rather dated appearance in these post-punk times!

A final note: Before adding any chemicals to adjust your pH levels, you must first consider total alkalinity.

Continued in next month's issue



Please check our on-line calendar for other upcoming events!  
Contact me to keep the calendar updated -  
let me know when there is an event coming up  
that should be brought to everyone's attention!

IPSSA Fort Worth  
P.O. Box 820852  
N. Richland Hills, TX 76180  
[www.ipssafortworth.com](http://www.ipssafortworth.com)

## July Calendar

July 4 – Independence Day  
July 10 – Officer Meeting  
July 18 – Member Meeting  
July 26 & 27 – Educational opportunity  
CPO course – Arlington NSPF 719-540-9119



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– ever fighting to keep us  
FREE!!!

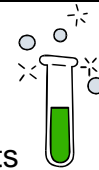
### Officers:

Jason S. Bonser – President 817- 605-0194  
David Boyd – Vice President 817-337-8585  
Gordon F. Slagle – Secretary 817-595-1167  
Paul Garcia – Treasurer 817-247-5247

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

Ingrid Slagle –  
Website/Newsletter 817-595-1167

### Pool Quiz results



- 1.) c - Chlorine
- 2.) a – True
- 3.) a – True
- 4.) d – Gas

# WEBTALK

Let me know if you have any questions regarding the website, [www.ipssafortworth.com](http://www.ipssafortworth.com) or this newsletter. If you would like to receive a copy of our monthly newsletter, please contact me. Or you can download the newsletter right off the web.

Contact me at: [ipahl@sbcglobal.net](mailto:ipahl@sbcglobal.net) - or – 817-595-1167  
Thanks, Ingrid



## **Our next meeting is:** **Tuesday, July 18 at:**

La Playa Maya Restaurant,  
1540 North Main Street  
Fort Worth, TX 76106 - 817-624-8411

That's a few blocks south of the Stockyards

We try to arrive around 6:30 PM with the meeting called to order at 7:00 PM.

We do our best to be finished by 9:00 PM.

## ***Speakers for our next Member Meeting***

Heidi Amos – Pentair  
Steve Cofer - DBI

## **Officers Meetings**

**Monday, July 10 – 7:00 pm**  
**Monday, August 7 – 7:00 pm**

Chili's Restaurant, 8000 Bedford-Eules Road  
Eules, TX 76180 - 817-577-1245



# *Welcome New Members!*

Fort Worth IPSSA Chapter gained two new members at our June member meeting.

Gary Davis - Gorilla Spa Service and  
Brian James - Carefree Pools

were voted in. Both have attended 3 meetings and passed the chemistry test. If you know anyone that would be a good candidate for membership, make the suggestion that they look into just what IPSSA has to offer. They can always come to a meeting to check us out. We'll even pay for their dinner.

Contact Jason S. Bonser  
817-605-0194

