

# POOL NEWSLETTER

APRIL 2014

## WELCOME NEW FOOD/POOL SAFETY TEAM

Happy Spring! Your new Food Safety Team is Jim Zimny, (Program Manager), Paul Giuntoli, Ross Lytle, Patty Olsen, Dayna Hernandez, Niels Nicolaisen, and Dave Zollweg.

We are wishing our long time Food & Living Environment Program Manager, Bonnie Petek and co-worker, Patty Olsen a *Happy Retirement*. Patty has been our Pool Water Quality Technician for the last ten years. We wish both *Good Luck* in this new chapter of life.

Jim Zimny was promoted to Food & Living Environment Program Manager last July. Jim has over 20 years experience working for the Environmental Health Division at Kitsap Public Health.

Dayna Hernandez joined us in July. Dayna has a Bachelor of Science degree from Western Washington University. She primarily inspects restaurants and coordinates our Recreational Shellfish Biotoxin Monitoring Program and our Fresh and Saltwater Beach Water Quality Program.

Niels Nicolaisen has been with the Health District for nine years. He has worked for the Enviro-Stars Program and the Pollution Identification and Correction Program.

We look forward to a long, hot, and safe summer working with you!

## DAILY TESTING REQUIREMENTS

Is your staff aware that it is required by law that your pool and spa water quality be tested each day prior to opening to the public? Yes, it's true! Each pool or spa must be tested at *least* once per day for free available chlorine, total chlorine (or bromine), and pH. Spa temperature must also be tested daily. This needs to be done before opening your pool to let people swim.

Testing at least once per day is a minimum requirement. Depending on a variety of factors, you may find that it is necessary to conduct these tests more frequently. For example, hot tubs with a high bather load may need to be tested at least once per hour to ensure proper disinfection and pH levels.

Other testing requirements include a weekly alkalinity test and a cyanuric acid test (for pools using a stabilized chlorine as a sanitizer). Also, keep a log sheet of your readings and any adjustments you have made to the water (i.e. adding chemicals, back flushing etc.).



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## **POOL CLOSED**

Please remember that pools and spas must be checked at least once every twenty four hours. You may need to check the water quality on a more frequent schedule though for the following reasons:

- High bather load
- Chemical adjustment
- Swimmer complaints

It happens that pool operators have other duties and may sometimes not have a chance to check water quality before the pool is scheduled to open. If you are unsure of your levels please keep the **pool closed** until you know the water quality is correct. If the pool is closed to swimmers you need to either post a sign or lock the door (if not a fire exit) so swimmers do not enter. It is not a health code violation for a pool to be closed. Our goal at the Health Department is to ensure swimmers are swimming in balanced water.

## **WHAT YOU NEED TO KNOW ABOUT CYANURIC ACID IN POOLS AND SPAS**

Cyanuric acid comes in two different forms. One form is cyanuric acid by itself, and the other form is a combination of chlorine disinfectant and cyanuric acid. When it comes in the latter form (disinfectant and cyanuric acid combination), the active ingredient on the label is listed as either “Dichloro.....” or “Trichloro.....”. If you see this, it means that when you add disinfectant to the pool or spa, you are adding cyanuric acid with it. Please look at the active ingredient of your disinfectant to see what you are using.

Cyanuric acid is recommended (not required) only for outdoor pools and spas. Summer’s strong sunlight can break down the chlorine chemical in water, and you can lose up to 90% of the chlorine in as little as two hours. Cyanuric acid holds on to chlorine in water to slow down the loss caused by sunlight.

There are negative effects from having too much cyanuric acid in your pool or spa. One negative effect is that cyanuric acid not only slows down the loss caused by sunlight, but also slows down the chlorine’s ability to kill germs. Cyanuric acid should be maintained between 30ppm and 50ppm. Having more than 50ppm of cyanuric acid does not provide additional benefit for retaining chlorine in water while the ability to kill germs goes down above that level. Another possible negative effect is that, at 100ppm or higher, some scientists suggest damage to the liver. But this has not been confirmed.

If cyanuric acid measures higher than 90ppm, it must be lowered. You can obtain a reagent from your pool supplier to measure the concentration of cyanuric acid. If you have cyanuric acid in your pool or spa, it must be measured at least once a week. If it measures higher than 90ppm, it must be lowered by draining old water and adding fresh water. As a side note, when you add water especially to a spa, make sure you are not putting the water that was sitting in a hose to the spa. When water just sits, bacteria called *Pseudomonas aeruginosa* can grow in it, and these bacteria can cause skin infections. Run the water through the hose for a few minutes before starting to fill the spa. Make sure that disinfectant and pH measurements are in the proper range.

## **PROPER DISINFECTANT AND pH LEVELS**

The Washington State Water Recreation Facilities Code, WAC 246-260, requires that you test the disinfectant and pH levels at least once a day. If pH levels and disinfectant levels are not in the proper range then the pool must be closed until the proper range is attained. Pools may open to the public when levels are correct.

As you may know, if there is not enough disinfectant in water, germs that can make people sick may survive and

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infect the bathers. If the pH level is too low, it can damage parts of the pool. If the pH is too high, chlorine will not work to kill germs. Monitoring and adjusting disinfectant and pH levels is crucial to ensure pool safety. Make sure you are using the right kind of reagents and follow the directions for water testing. Refer to the tables below for optimal disinfectant and pH levels.

## WATER QUALITY STANDARDS

SWIMMING POOL	MINIMUM	MAXIMUM
Chlorine	1.5	10
Chlorine w/Cyanurate Acid	2.0	10
Bromine	2.5	10

SPA & WADING POOL	MINIMUM	MAXIMUM
Chlorine	3.0	10
Chlorine w/Cyanurate Acid	3.5	10
Bromine	4.0	10

The above is measured in free available chlorine.

ALL POOLS & SPAS	MINIMUM	MAXIMUM
pH	7.2	8.0

## MAINTAIN IS THE NAME OF THE GAME FOR SAFETY AND SAVINGS

Regular equipment maintenance at your pool facility helps reduce costly repair and unnecessary breakdowns. It also helps you to maintain excellent water quality and is critical for ensuring bather safety. As you get your pools ready for another season of use, give some extra attention to the safety interlock system (if your pool is equipped with one) in order to detect a possible problem before it occurs.

### SAFETY INTERLOCKS

Safety interlocks between chemical feed pumps and the pool recirculation system should be tested regularly to ensure that the chemical feed pumps shut down when the pool recirculation system is off. This is important because of the potential safety issues associated with continuing to feed disinfectant, (i.e. chlorine, and possibly acid as well, i.e. muriatic acid) into the recirculation system when the system is down for maintenance or because of some other condition. When the system turns back on, the two compounds combine to form a chlorine gas that then gets pumped into the pool and could seriously injure a bather.

### TEST YOUR SYSTEM

With the recirculation system operating and the chemical feed pumps running, shut down the water recirculation pumps and visually observe the chemical feed pumps to see if they shut down as well. If your interlock system is operating correctly then the chemical feed pumps will also shut down. If the chemical feed pumps do not shut down then have your interlock system repaired immediately and increase water quality testing to ensure proper water chemistry until the repair can be made.

## REMINDERS

### TEST EMERGENCY SHUT-OFF

Pool operators are required to test the emergency shut-off switch for pool and/or spa at least twice annually to determine if it is properly operating. Please record the test date and results for your records.

### REPORT INJURY AND DROWNING

The owner/operator of a Water Recreation Facility must report any death, near drowning or serious injury to the Health District within 48 hours. A serious injury means someone has called for emergency aid and/or the person needs immediate medical treatment at a clinic or emergency room and/or is admitted to a hospital. Please call the Health District at (360) 337-5235 to report or go to the Kitsap Public Health District website [kitsappublichealth.org](http://kitsappublichealth.org) to locate an Injury Report Form.

### ANNUAL NOTIFICATION

Pool facilities are required to provide pool rule signage. Limited use pools where lifeguards are not present must notify users when first using the facility and at least annually thereafter of the pool rules. Place special emphasis on the following two rules:

- Children 12 years of age and under are not to use the pool unless supervised by a responsible adult (18 and over) whenever they use the pool.
- Persons 13—17 are not to use the pool alone.

## RECREATIONAL WATER ILLNESSES (RWIs)

Contrary to popular belief, chlorine does not kill all germs instantly. There are germs today that are very tolerant to chlorine and once these germs get in the pool, it can take anywhere from minutes to days for chlorine to kill them. Swallowing just a little water that contains these germs can make your patrons sick.

Knowing the basic facts about recreational water illnesses (RWIs) can make the difference between an enjoyable time at the pool, beach, or water park, or getting a potentially serious illness. Swimmers share the water—and the germs in it—with every person who enters the pool. Swallowing even a small amount of recreational water that has been contaminated with feces containing germs can make you sick.

In the past two decades, there has been a substantial increase in the number of RWI outbreaks associated with swimming. **Keeping chlorine at recommended levels is essential to maintain a healthy pool.**

## RECREATIONAL WATER ILLNESSES PREVENTION

Aquatics professionals have a responsibility to provide a safe and healthy swimming environment for their patrons. Healthy Swimming behaviors will help protect your facility from Recreational Water Illnesses (RWIs) and help stop germs from getting in the pool.

The responsibility for preventing recreational water illnesses does not fall on pool staff alone. Swimmers need to be educated about the necessary behavior changes that they need to make in order to reduce the spread of recreational water illnesses. Together you can:

- Make safety and health at the pool a top priority.

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- Build a communication bridge to your health department and other aquatic facilities to get information about outbreaks in your community.
- Post and distribute health information about swimming problems for your guests. This can be found at the Washington State Department of Health at [www.do.wa.gov/NewsRoom/](http://www.do.wa.gov/NewsRoom/).
- Promote good hygiene and safety around the pool. Inform parents that unhealthy behaviors (i.e. spitting, blowing nose, urination in water etc.) at poolside and elsewhere are no longer acceptable.
- Develop a bathroom break policy.
- Evaluate hygiene facilities. Parents interviewed have said they change diapers at poolside because changing rooms were unclean, poorly maintained, and/or had inadequate diaper-changing facilities.
- Have a written fecal accident response policy and keep records of all fecal accidents, chlorine and pH level measurements, and any major equipment repairs or changes.
- Ensure that all staff knows the critical role of water testing, proper testing methods, and how to respond if disinfectant levels are not adequate.

Remember...ask your guests for feedback.

