

# POOL NEWS

SPRING EDITION

APRIL 2012



## KITSAP PUBLIC HEALTH DISTRICT

We are pleased to announce that effective January 1<sup>st</sup>, 2012, the Kitsap County Health District changed its name to Kitsap Public Health District.

The replacement of “County” with “Public” will help reduce the confusion our customers experience when we are mistaken for a department of Kitsap County government. More importantly, it represents our intention to highlight the chief purpose of public health in our nation—to assure community-level conditions in which *all* people—the public -- can be healthy and safe.

## POOL SIGNAGE

You must provide and maintain signage specifying user rules and safety information in a conspicuous place in the pool area. The sign should have easily readable lettering at least three-eighths of an inch high.



All swimming, wading, spa, and spray pool facilities must have signs stating the pool rules. Swimming pool and wading pool signage requirements are identical.

Spa signage must include all the rules that apply to swimming pools plus additional elements. Please notice that for both swimming pools and spa pools, where no lifeguard is present, the following additional rules must be included in signage:

- Children age 12 and under must be supervised at the pool by a responsible adult (age 18 and older) at all times.
- Persons age 13 – 17 must not use the pool alone.

Signage is also required for spray pools, but requires fewer elements. Where diving boards are used, signs must be provided and maintained for their proper use. You can find sample signage for each situation on our website [kitsappublichealth.org](http://kitsappublichealth.org) in the Information/Pool & Spa section. Click on [Pool Owners and Operators](#) under the Public Pool & Spa Operators heading and scroll on the Department of Health website to find Pool Rule Signs.

## ANNUAL NOTIFCATION

Limited use pools facilities 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).
- Persons 13 – 17 are not to use the pool alone.

(Continued on page 2)



KITSAP PUBLIC HEALTH DISTRICT

345 6th Street  
Suite 300  
Bremerton, WA 98337

360-337-5235 t.  
360-337-5291 f.

[kitsappublichealth.org](http://kitsappublichealth.org)

For example, annual notification at apartment units may be in the quarterly resident newsletter or hotel/motels may have the notification signed during guest registration.

## POOL CLOSED FOR WATER QUALITY TESTING

Our goal at the Health District is to ensure swimmers are swimming in balanced, good quality water. Please remember that the water quality of pools and spas must be checked *at least once* every twenty-four hours. However, you may need to check the water quality on a more frequent schedule for the following reasons:

- High bather load
- Chemical adjustment
- Swimmer complaints

Pool operators often have other duties and may not always 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. There is no health code violation for a pool being closed.

## 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 infect the bathers. If the pH level is too low, it can damage the 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.

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 as free available chlorine

ALL POOLS & SPAS	MINIMUM	MAXIMUM
pH	7.2	8.0



## 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 us at 360.337.5235 and ask for the Inspector of the Day to report or go to [kitsappublichealth.org](http://kitsappublichealth.org) in the Information/Pool and Spa section. Click on [Pool Owners and Operators](#) under the Public Pool & Spa Operators heading and scroll on the Department of Health website to find an Injury Report Form.



## FLOW METER

A flow meter is a device that measures rate of the flow of water as it travels through the circulation system. The flow meter gives a numerical reading that is used to determine if the water flow is turning over the entire pool water volume in six hours or less. You should be recording this measurement daily. This standard ensures water quality standards are being met. Contact us if you need help to determine the proper turnover rate for your facility or see the following article.

## HOW TO CALCULATE YOUR SWIMMING POOL TURNOVER RATE

What is turnover rate? The amount of time it takes for all of the water in your swimming pool to be circulated through the pump/filter system. If the water is circulated twice a day then the turnover rate is 12 hours. If the water is circulated 4 times a day then the turnover rate is 6 hours. Use your total pool gallons and your gallons per minute (GPM) from the flowmeter to determine your pool turnover rate.

$$\text{Turnover Rate in Minutes} = \frac{\text{Pool Gallons}}{\text{GPM}}$$

$$\text{Turnover Rate in Hours} = \frac{\text{Turnover Rate in Minutes}}{(60)}$$

Example:

We want to know the turnover rate in our 25,000 gallon pool if our flowmeter reads 70 GPM.

$(25,000 \text{ gallons}) / (70 \text{ GPM}) = 357 \text{ minutes}$ ,

$(357 \text{ minutes}) / (60) = 5.95 \text{ hours}$

The turnover rate in this 25,000 gallon pool is approximately 6 hours.

What is the required turnover rate?

- If your pool was built before 4/12/90, the turnover rate must be at least once every 12 hours.
- If your pool was built after 4/12/90, the turnover rate must be at least once every 6 hours.

How do you calculate your required GPM to achieve proper turnover rate?

$$\text{GPM} = \frac{\text{Pool Gallons}}{\text{Turnover in Minutes}}$$

$$\text{Turnover in Minutes} = (\text{Turnover in hours}) \times (60)$$

Example:

We want turnover in our 25,000 gallon pool to be 6 hours

$(6 \text{ hours}) \times (60) = 360 \text{ minutes}$

$(25,000 \text{ gallons}) / (360) = 69 \text{ GPM}$

So we should have approximately 70 gallons going through the pump/filter every minute to achieve a turnover rate of 6 hours

Calculate your own required GPM:

First determine what your required turnover rate should be (6 or 12 hours). Now fill in the blanks below.

$$\text{GPM} = \frac{\text{Pool Gallons}}{\text{Turnover in Minutes}}$$

## WHAT TO DO WHEN THE WATER IS NOT CLEAR

A safe pool has proper water quality and good water clarity. If it is difficult to see the pool bottom drain covers, take action right away!

Immediately close the pool if you cannot see the bottom. If you can't see the pool bottom you can't see a person either.

Turbid water is caused by a variety of factors, but experts say it all boils down to trouble from water chemistry, the filtration system or hydraulics. Sometimes it's a combination of the three.

A problem with pool water chemistry is probably the leading cause of turbid water. A loss of chlorine can contribute to cloudy water. Keep in mind that chlorine's effectiveness can be impacted by too much stabilizer (cyanuric acid) in the pool which can lead to haziness. Such conditions prolong the time it takes to kill organisms. Total alkalinity and pH also play a big role in water turbidity. While chlorine can be the key, keeping the water balanced is the focal point.

Another frequent culprit in the battle against turbid water is the pool's filtration system. If you suspect a problem, make sure all the valves are in the proper position and check the flow. If water passes through the filter media at a different rate than approved by the manufacturer, debris can slip by. Use industry formulas to determine the proper filter size and see if it matches the one that has been installed. Note that if the filter is not being backwashed properly, small particulates can find their way into the filter bed and be carried back to the pool.

Here are some tips that pool operators can undertake on their own if they see cloudy water:

- Limit the bather loads or close the pool entirely. This will allow the system to "catch up," so the chemicals can do their work. This is especially useful in public pools.
- If the flow rate is too high, throttle back on the pressure-side valve and let less water through.
- Keep pool decks clear of debris and dirt. Remove visible debris daily and routinely brush and vacuum pool.

Like anything else, an ounce of prevention is worth a pound of cure. It's a good idea to be proactive and try to anticipate problems before they happen. Prevent accidents by monitoring water clarity in your pool. Remember in Washington State, a pool facility must close the pool when the pool bottom and sidewalls cannot be clearly seen.



## POOL PROGRAM STAFF

To reach an inspector, please call 360-337-5235 or dial direct:

- Bonnie Petek, Manager .....337-4701
- Ross Lytle .....337-5217
- Paul Guintoli .....337-4703
- Patty Olsen .....307-4249
- Dave Zollweg .....337-4702

