# Guidance for Shutting Down and Reopening Water Recreation Facilities

## Applicability

This guidance is provided to operators of Water Recreation Facilities regulated under chapters 246-260 WAC and 246-262 WAC which include facilities such as swimming pools, spas, wading pools, splash pads, wave pools, and waterslides. Use this guidance when Water Recreation Facilities are required to be closed but there is no reason to believe that they are contaminated or damaged. If there is any contamination or damage, ask the local health department for advice.

## Background

Water Recreation Facilities may be required to close due to different types of emergencies such as an earthquake, flood, or pandemic. Depending on how long the state of emergency continues and how long an order to close those facilities lasts, they may stay closed for days, weeks, or even months. Water Recreation Facilities that are not properly treated can allow algae and mosquito problems to occur and can also allow harmful bacteria to grow in water. If untreated pools and spas are reopened to users without taking proper steps, the users may get exposed to harmful bacteria that can make them sick. More information about illness causing bacteria is available at the end of this guidance document.

## Must Do's

- Close the facility with locked barriers and post "Closed" signs.
- Refer to WAC 246-260-141 for "Water Recreation Facility pool not in operation" at https://apps.leg.wa.gov/WAC/default.aspx?cite=246-260-141 and meet the requirements as best you can.
- Follow one of the options below to minimize risks to users when Water Recreation Facilities are reopened.

## Options for Extended Closure

We recommend that an operator uses *one of the following options* during any extended closure.

### Option 1

**Keep the recirculation pump on and maintain the water quality as usual throughout the closure period.**

- This is not an option if your water or power supplies are out.
- Make sure you have plenty, and consistent supply, of pool chemicals. Demand on chemicals should be much lower with no bathers using the facilities. If you run out of chemicals or your chemical supply chain gets discontinued, this may not be an option for you.
- Using this option will allow you to reopen the pool/spa after a state of emergency ends and an order to remain closed is lifted without taking any extra steps.
- The recirculation pump must stay running at all times to keep the water flowing through the system.
- Make sure that the disinfectant (chlorine or bromine) level and pH level are both in the correct ranges so that bacteria cannot grow.
- Maintain water quality as required in WAC 246-260-111 and WAC 246-260-999.
- Consult the local health department first and ask for advice if you think the minimum disinfectant level and the flow rate can be lowered during the closure period.
- If you have jets in your spa, you should run the jets at least once a day to make sure that disinfected water flows through the jet system to kill bacteria in the jet pipes.
- Maintain the water level as usual so that the water travels through both the skimmer/gutter system and the main drain system.
- Maintain the filters and balance water chemistry as usual. If indoors, keep the ventilation running as usual.
- Pool heater should be preferably turned off because colder water demands less chemicals and germs grow at a slower rate.

## Option 2

**Completely drain the pool/spa including surge tank and filter housing and keep the surfaces dry throughout the closure period.**

- This is similar to winterizing a pool.
- This is recommended to save energy, chemicals, and water especially for small facilities like spas, wading pools, and splash pads.
- This is not recommended if you have a large pool or a pool that may pop up due to a high groundwater table. A high groundwater table may be a permanent or seasonal condition in your area depending on different climate and geographical factors. When the groundwater level is close to the ground surface, an empty pool can float like a boat and pop up out of the ground.
- This is not recommended if you have a plaster pool/spa that may be damaged if it stays dry for a long time.
- Ask your pool design engineer/architect or pool builder if this is a preferred option for your facility.
- The goal is to remove water to prevent bacteria, algae, and mosquito growth.
- The correct and recommended procedure on how to do this depends on the specific design of your pool. For example:
    - A sand filter should be completely drained.
    - Cartridge filter element should be removed from the filter housing, cleaned, and stored safely.
    - DE filter element should be removed and disposed of properly.

Consult a qualified pool professional to learn how to drain the pool and how to start up the pool.

## Option 3

**If Option 1 or 2 is not possible, you could shut down the facility without the pump operating or maintaining water quality.**

**This is the least preferred option because:**

- If you have an outdoor facility in warmer weather, you can have algae and mosquito problems. If this occurs, contact the local health department for advice.
- Regardless of indoor or outdoor, stagnant and/or non-disinfected water will allow bacteria and mold to grow.
- Bacteria that grow in hard-to-reach places (such as inside the pipes and equipment) will be very difficult to remove.
- If the recirculation pump is not operating, no chemicals (disinfectant, acid, or base) should be added to the pool/spa. This can cause a very dangerous situation for possible toxic chemical exposure, fire, and explosion.
- If the pool doesn't have a safety cover, access must be restricted to keep people out of the water. If the pool has a safety cover already installed that meets the ASTM F1346-91, use it.

## Steps to Reopen

**If you have a small facility (spa, wading pool, splash pad)**, you should follow CDC's Legionella Response Guidelines (https://www.cdc.gov/legionella/downloads/hot-tub-disinfection.pdf) to ensure that all germs get inactivated before the facility is reopened. The following steps were taken from the CDC guidance.

- Drain all water from the pool. Dispose of the water to waste or as directed by the local regulatory authority.
- Scrub all pool surfaces, skimming devices, and circulation components. Use water with free chlorine at a minimum concentration of 5 parts per million (ppm) to remove any biofilm (slime). After scrubbing, rinse the pool with clean water and flush to waste.
- Replace filters (for cartridge or diatomaceous earth filters) or filter media (for sand filters). Bag these and dispose as normal solid waste.
- Make any needed repairs. Inspect the pool thoroughly for any broken or poorly functioning components such as valves, sensors, tubing, or disinfectant feeders.

- Refill and hyperchlorinate using 20 ppm free chlorine. Keep the hydrotherapy jets off and let the hyperchlorinated water circulate for 1 hour in all of the components of the hot tub including the compensation/surge tank, filter housing, and piping. Turn on the hydrotherapy jets to circulate the hyperchlorinated water for 9 additional hours. Maintain 20 ppm of free chlorine in the system for the entire 10 hours.
- Flush the entire system. This removes the hyperchlorinated water from all equipment.
- Ensure water quality prior to reopening the pool for use. Ensure that halogen (chlorine or bromine) and pH levels meet the state standards (WAC 246-260).

**If you have a larger swimming pool**, consult a qualified pool professional to find out if your pool is in a condition that requires complete drainage before it can be started.

- If it requires complete drainage, follow the pool professional's instructions.
- If it does not require complete drainage, you may treat the pool as if there had been a diarrhea incident in the pool as follows:
    - Remove all debris from the pool and pool gutter/skimmers.
    - Adjust water level if necessary.

Follow CDC's guideline on how to respond to diarrhea incident, https://www.cdc.gov/healthywater/swimming/pdf/fecal-incident-response-guidelines.pdf.

## Illness Causing Bacteria

There are many different types of bacteria that can grow or survive in untreated pool and spa water. But the bacteria of particular concern, in this context, are *Legionella* and *Pseudomonas*. These bacteria are common and like wet and warm environments. If there is no disinfectant, they are able to multiply in number, and in the right conditions, they can infect people.

***Legionella***

Legionella grow in poorly maintained water. If the water infested with Legionella gets aerosolized (as in hydrotherapy jets and spray features), bathers can inhale the bacteria. Legionella grow inside the lungs, and they can cause a very severe form of pneumonia called Legionnaire's Disease, which has a fatality rate of 10% to 30% depending on the age of the victim and their underlying health conditions.

***Pseudomonas aeruginosa***

Pseudomonas grow in poorly maintained water. If a bather is in the water infested with Pseudomonas, the bacteria can enter the bather's skin through pores and cause folliculitis, an infection of the hair follicles. Though this is usually a self-limiting condition that goes away in several days, it can cause severe infections in some immunocompromised individuals.

## Have Questions?

Contact your local health agency at www.doh.wa.gov/localhealth or our Water Recreation Program at www.doh.wa.gov/watersafetycontact.

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