

Hot Tubs in Alaska's Bed and Breakfast Establishments

Why is my hot tub regulated?

For many years, the Department of Environmental Conservation has regulated public pools and hot tubs to be sure they are safely designed and operated. Because hot tubs are operated at temperatures close to human body temperature, harmful bacteria can quickly reach unsafe levels in hot tubs. The high temperatures, water agitation, and the relatively small amount of water mean that disinfectant levels can quickly drop to unsafe levels during periods of use. If water quality is not properly maintained, serious health hazards may result.

The information presented here is intended for bed & breakfast facilities in Alaska that have five or fewer guest rooms. The department recognizes that because of their smaller size, these facilities will usually have fewer users. Because of this, the department is willing to consider waivers of some of the provisions of the pool and spa regulations to allow the use of residential hot tubs under certain alternative conditions as outlined below.

What if I have more than five guest rooms?

Bed and breakfasts that have more than five guest rooms are considered public accommodations, may require food service permits, and must comply with additional fire and life safety requirements, as well as provisions of the Americans With Disabilities Act. These larger facilities must also comply with all of the provisions of the pool and spa regulations.

What if my hot tub is in a guest room and guests use it like a bathtub?

If you have a water-jet style bath tub which is drained after every use, it is not regulated. Follow the same sanitation practices you would for cleaning toilets, sinks, and tubs.

Requirements	Alternative
30-minute turnover rate 18 AAC 30.580 (a)	1-hour turnover rate - calculated by dividing the volume of water in your hot tub by the gallons per minute that your pump is pumping. You may have to contact the manufacturer of your spa to find out the pump capacity. This information is not always included in the literature that comes with the spa.
24 hour a day, continuous circulation 18 AAC 30.580 (a)	Operate the circulation system during all hours the hot tub is available for use by your guests, up to a maximum of eight hours, plus a minimum of two turnovers before opening and two turnovers after closing.
Frequency of changing water 18 AAC 30.580 (l)	The hot tub must be drained and refilled once a week for hot tubs with a volume of 250 gallons or less, or every two weeks for hot tubs with a volume greater than 250 gallons. This is because most residential hot tubs do not provide 100% filtration. (some water bypasses the filters)
Filter cleaning 18 AAC 30.580 (a)	Clean the filters every time the hot tub water is drained. Residential hot tubs do not have the pressure gauges that indicate the filter is dirty. This

	will allow the filters to function as effectively as possible.
Disinfectant level must be maintained between 2.0 ppm - 10 ppm. 18 AAC 580 (e)	Maintain disinfectant levels of 6-10 ppm free chlorine or bromine. Higher disinfectant levels help to compensate for incomplete filtration.
Automatic sensor control for disinfectant and pH 18 AAC 30.580 (c)	Disinfectant level of 6-10 ppm free chlorine or bromine must be maintained, as well as limiting operation to no more than 8 consecutive hours per day, (e.g, 4 pm to midnight). (Note the testing requirement.) Because it is difficult to maintain constant disinfectant levels manually, automatic sensor control is recommended.
Continuous disinfection 18 AAC 30.580 (b)	May not be waived. Disinfectant must be mechanically dispensed to a hot tub by a continuous disinfection system, consisting of a chemical tank, chemical feeder, and device to regulate the flow of disinfectant into a hot tub water return line.
Erosion feeders are prohibited. 18 AAC 30.550 (h)(3)	May not be waived. Dispensers that float in the skimmer or on the surface of the hot tub water are not acceptable. Feeding equipment is required and it must be capable of providing the required quantity of disinfecting agent into the hot tub water.
Hot tubs with wood interiors are prohibited. 18 AAC 30.580 (k)	May not be waived. These tubs provide a breeding environment for bacteria and algae.

Operation and Safety

Testing and Record Keeping

18 AAC 30.545, 550, 580

The Department has log sheets available to you for recording hot tub information. We can also send you the Hygiene and Caution signs on letter-size paper for posting near your hot tub.

Daily testing must be done and recorded according to the schedule listed in the table below.

Notes: 1 mg/l = 1 ppm

TAC = Total Available Chlorine

FAC = Free Available Chlorine

FAB = Free Available Bromine

A hot tub manual must be available on site, and must include the following:

- Instructions for the care of each filter, pump, and other hot tub equipment
- Drawings, illustrations, charts, and operating instructions
- Parts list for all equipment
- Information on all chemicals used in hot tub operation

EVERY OTHER HOUR SPA IS OPEN	RANGE
pH (to the nearest 0.2 units)	7.2 - 7.6
FAC (to the nearest 0.2 mg/l) note: FAC must be greater than 1/2 of TAC for proper disinfection	6.0 - 10.0 mg/l
FAB (to the nearest 0.2 mg/l)	6.0 - 10.0 mg/l
Number of users	(based on spa volume)
Water temperature	less than or = 104 degrees F.
DAILY	
TAC (to nearest 0.2 mg/l)	6.0 - 10.0 mg/l
Flow rate; pressure/vacuum readings; hours pumps/filters in operation	
Number of users	
Hours of operation	
Amount of water/chemicals added	
Any equipment failures or repair	
Date each filter backwashed or cleaned	
WEEKLY (depending on whether or not chemicals are routinely added to maintain water quality)	
Alkalinity (to nearest 5 mg/l)	100 - 140 mg/l
Calcium Hardness (to nearest 2 mg/l)	150 - 500 mg/l
Langlier or Saturation Index	+ or - 0.5
MONTHLY	
Submit water sample for bacterial analysis to lab	

Test strips may be used for daily testing of pH, chlorine, or bromine.

Test kits are needed to provide the range and accuracy for weekly testing of alkalinity and hardness and balancing the water.

To Clean Cartridge Fillers: Follow manufacturer's recommendation to stop pump. Remove cartridges and direct jet spray from hose to the outside of cartridges to remove dirt. To remove oils, soak in trisodium phosphate (TSP). Do not brush. After oil is removed, use a 10-1 diluted solution of muriatic acid to remove calcium or scale, if present.

CAUTION: Do not use acid first - it will set oils. Do not use Diatomaceous Earth (D.E.); it tears the filter.

Requirements	Alternative
Daily Shock 18 AAC 30.580 (a)	The hot tub water must be shocked at the end of daily use with an oxidizer. A chlorine or a non-chlorine oxidizer may be added per the manufacturers recommendations. If you use chlorine, this will remove bacteria and organics left by users. If you use a non-chlorine oxidizer, you will only remove the organic material.
Posting of health information	The bather load must be posted. Calculate the bather load by dividing the square feet of surface area by 10.

18 AAC 30.580 (a)	<p>Example: If your hot tub is square, say 6'x6', multiply 6x6=36sqft. Then divided 36 by 10 to determine 3 as the bather load. (Round off to the lower number.) If your hot tub is round, say 6 feet in diameter, then take half the diameter or 3 (the radius), and square it (3x3=9). Then multiply 9 times 3.14 (pi). (9x3.14= 28.26) Divide 28.26 by 10 to get a bather load of 2.</p> <p>A sign must be posted directing each user to shower prior to entering the hot tub along with other hygiene requirements (see below).</p>
Posting of Cautions 18 AAC 30.580 (a)	A caution sign must be mounted adjacent to the entrance to the hot tub containing the warnings listed below.
Certified Operator 18 AAC 30.545 (e)	Waived for hot tubs at bed and breakfast facilities with 5 or fewer guest rooms.

Caution!

1. Do not use when alone.
2. Pregnant women; elderly persons; and persons suffering from heart disease, diabetes, or high or low blood pressure should not enter the spa/hot tub without prior medical consultation and permission from their doctor.
3. Do not use the spa/hot tub while under the influence of alcohol, tranquilizers, or other drugs that cause drowsiness or that raise or lower blood pressure.
4. Do not use at water temperatures greater than 104 degrees F.
5. Unsupervised use by children is prohibited.
6. Enter and exit slowly.
7. Observe reasonable time limits (that is, 10-15 minutes), then leave the water and cool down before returning for another brief stay.
8. Long exposure may result in nausea, dizziness or fainting.
9. Keep all breakable objects out of the area.

A sign must be mounted adjacent to the entrance to the hot tub containing hygiene requirements as presented below:

Hygiene Requirements

- Bathers must shower before entering hot tub.

- **No persons allowed with:**
 - a communicable disease;
 - skin lesions or sores;
 - inflamed eyes caused by a communicable disease; and
 - mouth, nose, or ear discharges.

- **No person may urinate, spit, blow nose or deposit foreign material in hot tub.**

Emergencies

A sign should be posted in the immediate vicinity of the spa or hot tub stating the location of the nearest telephone and indicating that emergency telephone numbers are posted at that location. Those emergency telephone numbers should include the name and phone number of the nearest available police, fire and/or rescue unit, physician, ambulance service, and hospital

Definitions

Chemical Feeder - a device that dispenses chemicals into hot tub water at a predictable rate.

Oxidize, oxidation - the process of chemically removing organic debris, such as body waste or perspiration, from the water. The process is similar to burning trash in the air; the chlorine chemically "burns" the impurities out of the water.

Shock - treatment used to oxidize the organic debris and restore water quality. A chlorine or a non-chlorine oxidizer may be added per the manufacturer's recommendations.

Turnover - the amount of time for the quantity of water the hot tub contains to pass through the filters.