PUBLIC HEALTH
Prevent • Promote • Protect
BENTON-FRANKLIN HEALTH DISTRICT

POOL CONTAMINATION GUIDELINES

Feces and Vomitus

Pool and spa operators should be aware that fecal matter (stool) or vomitus in the pool poses a potential health risk for all pool users. If contamination should occur, the following is a general guide developed for pool operators by the Washington State Department of Health.

Step 1 – Evacuation
Instruct bathers to exit the pool. Close the pool until all steps in this guideline are completed.

Step 2 – Evaluation
Determine who contaminated the pool.

a. Go to Step 3 if <u>all</u> of these conditions are met:
The stool or vomitus is intact, easily picked up, and illness is not suspected.

b. Go to Step 4 if <u>one or more</u> of these conditions is met:
The stool is loose, the stool or vomitus is not easily picked up, or illness is suspected.

Step 3 – Removal and Disinfection Procedures for Conditions Listed in Step 2a

a. Remove as much of the feces or vomitus as possible. Use of leaf catchers or leaf rakes is helpful.
b. Vacuum the remaining visible material.
c. Small material that is floating on the surface and cannot be removed by use of leaf catchers or leaf rakes should be pushed toward the overflow or skimmers until all visible material is removed.
d. Spot disinfect the area of contamination with a small quantity of available disinfectant,
   - Add one ounce of calcium hypochlorite (or 4 to 5 ounces of sodium hypochlorite) which has been mixed in a small bucket of water to the affected area.
   - Brush the walls and bottom of the pool in the contaminated area.
e. Wait approximately 30 minutes to ensure chlorine levels and pH levels meet the requirements outlined in the water recreation facility regulations, especially in the area where chemicals have been added.
f. Backwash the filter. (Pool operators with vacuum DE (diatomaceous earth) filters may use the Vacuum DE Filter Option on the reverse page.)
g. Reopen the pool.

Step 4 – Removal and Disinfection Procedures for Conditions Listed in Step 2b.

a. Follow all the measures outlined in steps 3 a, b, and c above.
b. Swimming pools; raise the chlorine to a minimum maintained free chlorine residual of 5 PPM and let the water recirculate for a minimum of 24 hours. Spas and wading pools; it is recommended that the spa (and small wading pools) be drained, the sides and bottom brushed with 100 PPM chlorine, and the pool refilled and balanced.
c. Backwash the filter
d. Reopen the pool

Step 5 – Recordkeeping

When incidents of contamination occur, document what you did to correct the situation. Maintain this record with your daily operating records. An "Incident Report" section is provided with this guide.

Blood

If an incident occurs resulting in minor cuts and scrapes to a bather, verify that at the time of the incident the pool's disinfections levels meet the requirements outlined in the water recreation facility regulations.

If there is a serious injury resulting in significant blood loss in the pool, follow the procedures outlined in Steps 1, 3 (d, e, and g) and 5.

High Chlorine Dosage Worksheet
Use only after contamination of pool by feces or vomitus
Fill out the worksheet and keep it in your log book under the incident date

CAUTION:

- You are using this worksheet because your pool has been contaminated by feces or vomitus AND the responsible person is ill or suspected to be ill, or the stool or vomitus is loose or spread into a large area.
- Use this sheet only if the pool cannot be closed for 24 hours (see Step 4b on previous page).
- Be aware that you will be trying to reach a high chlorine residual. After determining the needed chlorine level, you should contact your swimming pool equipment supplier to ensure this level will not have a harmful effect on the pool or equipment.
- Do not use this sheet unless you are familiar with calculating and reaching high chlorine residuals.
- Do not use this sheet unless you understand how to use your chlorine test kit to accurately read high chlorine residuals.
- Do not use this sheet unless you can quickly lower high free chlorine residuals to less than 6 PPM.

Time and Concentration Calculation:
Use this chart to determine the amount of time you wish to keep the pool closed and the minimum concentration of chlorine necessary for that time to ensure bacteria from the incident are killed. Times different from the chart can be calculated by using the formula: 7,200 + T = C or 7,200 + Time in minutes = the Concentration of chlorine in PPM.

Time	4 Hours	6 Hours	8 Hours	10 Hours	12 Hours	14 Hours	16 Hours	18 Hours	20 Hours
Chlorine	30 PPM	20 PPM	15 PPM	12 PPM	10 PPM	9 PPM	8 PPM	7 PPM	6 PPM

Amount of Chlorine Needed:
The amount of chlorine needed to achieve the PPM you have determined will depend on: 1) the volume of water in your pool and, 2) the concentration of the chlorine you are using. Read the product information with the chlorine you are using; or contact your pool equipment supplier. You might consider using chlorine made for shocking which would dissipate quickly. The pool cannot be opened until the free chlorine level is below 6 PPM.

Bromine pools: Use chlorine to obtain the high dosage.

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Vacuum DE Filter Option:
Facilities that take a significant time to backwash may choose this option in lieu of Steps 3 f and g:

- Increase the free available chlorine (FAC) in your filter tank to 20 PPM.
- Reopen the pool.
- Backwash your filter at the end of the day.

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CONTAMINATION INCIDENT REPORT:
Date of Incident: ___/___/___. Material in the pool was (check one): □stool □vomit. Material was □intact □spread into the pool. The person responsible: □was ill □was not ill □was not found. Free chlorine level at the time of the incident: _____PPM. □The pool was not closed. □The pool was closed for _____hours and the free chlorine level was maintained at _____PPM. The amount and type of chlorine added: _____(lbs, ounces, quarts) of _____. The pool was closed at _____AM/PM on ____/____/____. The pool was reopened at _____AM/PM on ____/____/____. The free chlorine level at the time of opening was _____PPM (pools with a free chlorine level above 6 PPM cannot be opened).

Signed: _____