



NORTHERN KENTUCKY
INDEPENDENT DISTRICT
HEALTH DEPARTMENT



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Mission

The Northern Kentucky Health Department is the public agency charged with performing mandated public health services and addressing priority community health needs.

We prevent disease, promote wellness and protect against health threats.



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Public Swimming and Bathing Facilities Operators Guide



**NORTHERN KENTUCKY
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The Inspection Form

(* Denotes critical violation on inspection)

DF3-349 (Rev. 12-88)

CABINET FOR HEALTH SERVICES
DEPARTMENT FOR PUBLIC HEALTH
PUBLIC SWIMMING AND BATHING FACILITIES
INSPECTION FORM

Regular (1) Survey (6)
 Follow-up (2) Complaint
 Complaint (3) Other (5)
 (Items 24-31)
 Seasonal Indoor
 Continuous Outdoor

Estab. No. _____ San. Code _____
 Start Time _____ End Time _____ County or District Health Department _____
 Facility Name: _____ Owner: _____
 Address: _____ Address: _____
 Operator: _____ Phone: _____
 Facility Phone: _____ Date Built: _____ Gal. Cap: _____ Required Gal. Per Minute: _____ Actual Gal. Per Minute: _____
 Facility Type: Swimming Pool Swimming/Diving Pool Diving Pool Wave Pool Water Slide
 Wading Pool Spray Pool Spa Other

WATER SUPPLY & WASTEWATER DISPOSAL

*1. Water supply, approved source, entry method, cross-connections, adequate supply 3
 *2. Approved sewage disposal, satisfactory operation 2
 3. Deck drainage, deck drains, backwash wastewater disposal 2

REFUSE DISPOSAL

*4. Approved disposal 3
 5. Approved receptacles and bulk storage area, clean, good repair, adequate 2

FACILITY MAINTENANCE

*6. Bottom, Sidewalls, Decks: Growths, scum build-up, clean, good repair 2
 *7. Perimeter overflow system, skimmers, inlets, main drains, water level, operating, clean, good repair 3
 8. Ladders, steps, handrails, diving boards, lifelines and floats in good repair 2
 9. Depth Markings and Lane Lines: properly located, spaced, stired, contrasting color, good repair 2
 10. Lighting, underwater and Deck: adequate, operating, good repair 1

EQUIPMENT ROOM & TREATMENT SYSTEM

11. Equipment Room: adequate space, floor drains, lighting, ventilation, non-essential materials, clean, good repair 2
 *12. Pumps: approved type, capacity, gauges, valving, trainer, operating, good repair 3
 13. Flow Meter: installation, accessibility, operating, good repair 2
 *14. Turnover rate _____ hrs. (min) 2
 15. Recirculating Filtration: identified, approved materials, good repair 2
 *16. Water Heaters: approved type, thermostats, temperature limiting device, operating, good repair 3
 *17. Filter: type _____ valves, sight glass, air release, gauges, operating, good repair 3
 *18. Disinfectant System: type _____ installation, capacity, operating, good repair 3
 *19. pH Control, Chemical Feed Equipment: types _____ installation, capacity, operating, good repair 3
 20. Surge Tank, Backwash Sump, Other Equipment: adequate, installation, operating, good repair 2
 21. Chemicals Stock: adequate, fresh, storage, usage 2

*22. Test Kits: provided, proper types, fresh reagents, maintained, proper usage 3
 23. Vacuum System: installation, operating, good repair 2

WATER QUALITY			
	Shallow End	Deep End	
*24. Disinfectant free residual	ppm	ppm	3 <input type="checkbox"/>
*25. Disinfectant combined residual	ppm	ppm	3 <input type="checkbox"/>
*26. pH (7.2-7.8)	ppm	ppm	3 <input type="checkbox"/>
*27. Cyanuric acid (25-50 ppm)	ppm	ppm	3 <input type="checkbox"/>
*28. Turbidity	ppm	ppm	2 <input type="checkbox"/>
29. Total alkalinity (50-100 ppm)	ppm	ppm	2 <input type="checkbox"/>
30. Temperature (heated facilities)	°F	°F	2 <input type="checkbox"/>
31. Operator testing frequency, log sheets maintained			2 <input type="checkbox"/>

BATH HOUSES & ATTENDANT STRUCTURES

32. Structures, Decks, Furnishings: good repair, clean 2
 33. Toilet, Shower, Locker Facilities: clean, lighting, ventilation, good repair 2
 34. Toilet tissue, hand-drying, towels, soap provided 1

SAFETY

*35. Lifeguard(s) on duty: sign posted, lifeguard chair, adequate, good repair 3
 *36. First Aid, Safety Equipment, Spa Timer Switch, Telephone: readily accessible, adequate, maintained, good repair 3
 37. Warning signs, facility regulations posted, conspicuous, good repair 2
 *38. Gas Chlorinator: installation, operation, protection, ventilation, breathing apparatus (SCBA) accessible, operational, staff trained in use, emergency procedures 3
 *39. Facility Enclosure: adequate, self closing gate, good repair 3

GENERAL FACILITY OPERATION

40. Facility regulations enforced 2
 41. Premises maintained free of debris, refuse 1
 42. Bathing Suits, Towels, Other Items Provided by Facility: properly cleaned, stored 1

RATING

ORDER OF IMMEDIATE CLOSURE OF FACILITY (ACTION CODE 2)
 *CRITICAL ITEM

COMMENTS: _____

Items marked are considered to be in violation of KRS 211.180 and Public Swimming and Bathing Facilities Regulations (902 KAR 10:120) and must be corrected. by next routine inspection or within _____ days. Failure to correct the violations as listed will result in further action as provided by KRS 211.590(2). An opportunity for an appeal from any notice or inspection finding will be provided if you file a written request for a hearing with the department within the period of time specified by the applicable regulation.

Received By: _____ Inspected By: _____ Health Authority _____
 Date: _____ Local State



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Facility Maintenance

- **Skimmer weir doors in place and properly operating***
- **Skimmer baskets/gutter grates present, clean and in good repair***
- **Valves provided for skimmers and main drain to allow for the adjustment of flow***



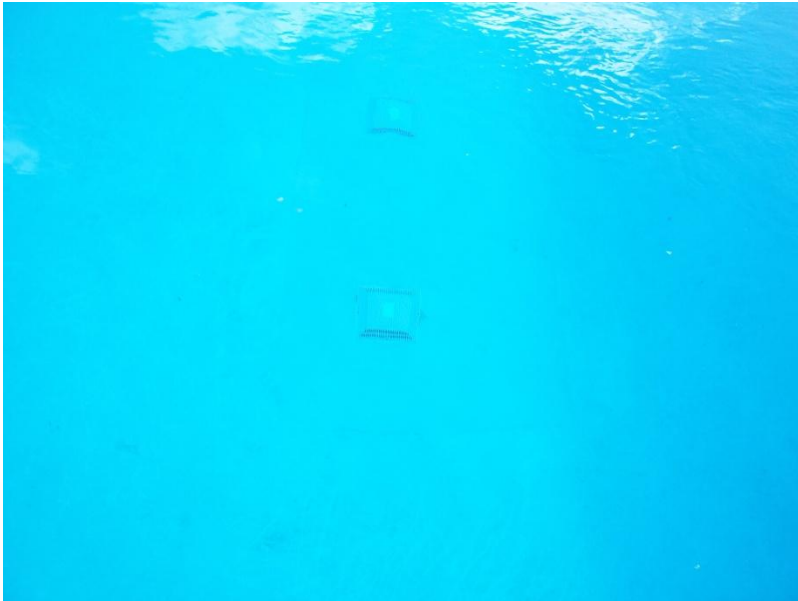
Facility Maintenance

- **Return inlets properly operating and equipped with directional eyes***
- **Virginia Graeme Baker Pool & Spa Safety Act compliant covers on main drain and skimmer equalizer lines***



Facility Maintenance

**Virginia Graeme Baker
Compliant
Main Drain Covers**



**Non-Compliant
Main Drain Covers**



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Facility Maintenance

- **Approved safety vacuum release system installed/maintained on pools with a single main drain and pools with two main drains less than 36” apart***



Equipment Room and Treatment System

- **Pump properly operating and meeting required turnover rate***
- **Flow meter operating properly***
- **Flow meter properly sized for diameter of pipe***



Equipment Room and Treatment System

- **Positive displacement pumps must be variable flow type and able to feed the amount of disinfectant solution required***
- **Equipment used for supplying chlorine not controlled by a day-date clock***
- **Injection point for disinfectant placed on the discharge side of pump and downstream of the flow meter***



Equipment Room and Treatment System

- Hand feeding, skimmer feeding or float feeding of chlorine or any other disinfectant is prohibited*
- Use of stabilized chlorine (dichlor and trichlor) is prohibited*
- Disinfectant (liquid chlorine) storage container capable of holding daily requirement of disinfectant needed*



Equipment Room and Treatment System

- **Positive displacement style pump required for controlling pH within the range of 7.2-7.8 on pools with a volume greater than 100,000 gallons***
- **Solution tank for pH control of at least 40 gallon capacity provided on pools with a volume greater than 100,000 gallons***



Equipment Room and Treatment System

- **Complete Diethyl-P-Phenylene Diamine (DPD) colorimetric test kit present at all swimming facilities***
- **Test kit maintained with fresh reagents within manufacturer expiration date***



Equipment Room and Treatment System

- **Facilities using cyanurates for stabilization shall have a test kit to measure the cyanuric acid concentration***
- **Test kits using orthotolidine (OTO) reagents are not acceptable for use***



Water Quality

- **Disinfectant free residuals of chlorine and/or bromine shall be maintained between 1.0 ppm-2.5 ppm in swimming pools***
- **Disinfectant free residuals of chlorine and/or bromine shall be maintained between 2.0 ppm-3.0 ppm in spas***



Water Quality

- **Chloramines/combined residual to not exceed 0.2 ppm***
- Ways to address high combined residual
 - Super chlorination
 - Daily skimmer basket cleaning
 - Daily backwashing of filter
 - Increasing air flow across the surface of water
 - Water removal
 - Routine cleaning of pool scum line



Water Quality

- **The pH of water shall be maintained within a range of 7.2-7.8 ***
- Maintaining pH at 7.4 helps maximize the disinfection rate of chlorine



Water Quality

- **If using cyanurates for stabilization, cyanuric acid level must be maintained below 50 ppm***
- **Only outdoor pools may be stabilized with cyanuric acid (not to be used on indoor facilities)***



Water Quality

Facility water shall have sufficient clarity at all times to meet one of the following:

- **A black disc, 6 inches in diameter, is readily visible when placed on a white field at the deepest point of the pool***
- **The openings of the main drain outlet grates are clearly visible from the deck of the pool***
- **For wading pools, the bottom of the pool shall be clearly visible***



Water Quality

- Alkalinity of the facility water shall not be less than 50 nor more than 180 ppm
- Maintaining the alkalinity of the facility water within 80-120 ppm will help control the pH level of the pool



Water Quality

- Facility operator shall perform tests for all water quality characteristics previously listed before opening of facility and during all hours of operation
- All test results must be recorded on a daily operational log sheet and maintained onsite



Water Quality

- Disinfectant residual, combined residual, and pH must be checked at least 3 times daily with a greater frequency if bather load or climatic conditions warrant
- Cyanuric acid level to be checked weekly if stabilizer is used
- Turbidity to be checked daily



Water Quality

- Total alkalinity to be checked weekly
- Temperature of water at heated facilities (spas and/or indoor facilities) to be checked daily
- All spas shall be completely drained, thoroughly cleaned, and refilled with potable water at least once per week



Safety

- **A lifeguard, or lifeguards, shall be provided at all facilities which allow bathers 16 years of age or under to enter the facility area without a responsible person 17 years of age or older present***
- **All facilities which do not provide a lifeguard must prominently post and enforce the following rule: “No person may enter the facility area alone or swim alone”***



Safety

- **All facilities which are not required to provide lifeguards must prominently post a “No lifeguard on duty” sign in the pool area with the statement that anyone 16 years of age or younger must be accompanied by a responsible person 17 years or older***



Safety

- **If lifeguards are required, lifeguards shall have a current life-saving certificate issued by the American Red Cross, YMCA or equivalent. This certificate of competency shall be prominently posted***



Safety

- **Facilities must have a minimum of two lifeguards on duty at all times at large facilities which are over 2,000 square feet of water surface area or have a large number of bathers***
- **A “No Lifeguard on Duty” sign or “Do not enter alone or swim alone” sign cannot be used in lieu of lifeguards at facilities where lifeguards are mandated by size and/or bather load***



Safety

- **Facilities having an area of more than 2,000 square feet of water surface area shall be provided with an elevated lifeguard chair. An additional lifeguard chair shall be provided for each additional 2,000 square feet or major fraction more than half thereof***
- **Elevated lifeguard chairs must be located to provide a clear view of the facility bottom in the area under surveillance**



Safety

- **A U.S. Coast Guard-approved ring buoy not more than 15 inches in diameter to which shall be attached a 3/16-inch rope of length 1.5 times the maximum pool width present in pool area***
- **A life pole or shepherd's crook type of pole having blunted ends with a minimum length of 12 feet present in pool area***



Safety

- **A backboard with straps, made to the specifications of the American Red Cross for back and neck injuries, present in the pool area***
- **All facilities shall be equipped with a minimum of one standard 24-unit first aid kit or its equivalent, which shall be kept filled and ready for use***



Safety

- **One approved ring buoy with rope attached, shepherd's crook, and first aid kit required for each 2,000 square feet of facility water surface area***
- **Lifesaving equipment shall be mounted in conspicuous places at lifeguard chairs or other readily accessible locations. This equipment shall be kept in good repair and ready to use condition***



Safety

- **All facilities shall have a non-pay, land line telephone conspicuously located in the facility area that will allow for direct contact to an emergency medical service***
- **The telephone number of a police, fire department, emergency medical service, or a hospital shall be posted in a conspicuous place near the telephone***



Safety

- **The hydrojet auxiliary air or water pump for a spa shall be controlled by an on-off switch with a 15-minute timer located and labeled at least 5 feet away from the spa***
- **Facilities shall have a smoothly contoured handhold coping not over 2.5” thick for the outer 2” or an equivalent approved handhold. The handhold shall be no more than 9” above the normal water line***



Safety

- **All drownings and injuries requiring hospitalization shall be immediately reported to the local health department***



Safety

- **All public swimming facilities shall have adequate enclosures/fencing that meet the specifications of Department of Housing, Building, and Construction***
- **Doors or gates leading to the facility area shall be self closing and self latching. These doors or gates shall be kept closed and locked if the facility is closed***
- **Fencing and gates shall be kept in good repair***



Equipment Changes/ Plan Submittal Process

- Per Kentucky Swimming and Bathing Facilities Regulation (Section 3 (7)): No change in location, construction, design materials, or equipment shall be made to approved plans or the facility without the written approval of the cabinet and all other agencies having jurisdiction.



Equipment Changes/ Plan Submittal Process

- Per Kentucky Swimming and Bathing Facilities Regulation (Section 21 (2)): If existing equipment, components, piping, or fittings involved in the facility water treatment system are replaced to effect repairs, the replacement equipment, components, piping, or fittings shall meet the requirements of this administrative regulation. If replacement occurs, it shall be the owner's or operator's responsibility to notify the cabinet as to what was replaced and what was used for a replacement.



Equipment Changes/ Plan Submittal Process

- Plans for “new/major” pool construction must have:
 - Five sets of plans
 - A completed plan application form
 - Check made out to Kentucky State Treasurer (New construction plan review fee is \$400 for skimmer pools and \$550 for gutter pools)
- Be submitted to Northern Kentucky Health Department for plan application signature and expediting to Kentucky Public Safety Branch for review



Equipment Changes/ Plan Submittal Process

- Plans for “minor” reconstruction or part replacement must have:
 - One set of plans/product specification sheet
 - A completed plan application form
 - Check made out to Kentucky State Treasurer (Minor reconstruction/part replacement review fee is \$250 for all pools)
- Be submitted to Northern Kentucky Health Department for plan application signature and expediting to Kentucky Public Safety Branch for review



Fecal/Vomit Incident Response

- Fecal incidents are a concern and an inconvenience to both pool operators and patrons
- Understand that pool closure is necessary for proper disinfection and protection of the health and safety of swimmers
 - Pool closures allow chlorine to do its job—to kill germs and help prevent recreational water illnesses (RWIs)



Fecal/Vomit Incident Response

Formed stool or vomit in pool:

- Close the pool to swimmers (if you have multiple pools that use the same filtration system----all pools will have to be closed)
- Remove as much of the fecal material from the pool as possible using a net or bucket.
 - Dispose of fecal material in a sanitary manner.
 - Clean and disinfect the item used to remove the fecal material.



Fecal/Vomit Incident Response

Formed stool or vomit in pool:

- Raise the free chlorine to 2 ppm and ensure pH is 7.5 or less
- Maintain free chlorine concentration at 2 ppm and pH at 7.5 or less for at least 25 minutes before reopening the pool
- Ensure that the filtration system is operating while the pool reaches and maintains the proper free chlorine concentration during the disinfection process



Fecal/Vomit Incident Response

Diarrhea in pool:

- Close the pool to swimmers (if you have multiple pools that use the same filtration system----all pools will have to be closed)
- Remove as much of the fecal material from the pool as possible using a net or bucket.
 - Dispose of fecal material in a sanitary manner.
 - Clean and disinfect the item used to remove the fecal material.



Fecal/Vomit Incident Response

Diarrhea in pool:

- Raise the free chlorine to 20 ppm and ensure pH is 7.5 or less
- Maintain free chlorine concentration at 20 ppm and pH at 7.5 or less for at least 12.75 hours before reopening the pool
- Ensure that the filtration system is operating while the water reaches, and is maintained, at the proper chlorine level for disinfection



Fecal/Vomit Incident Response

Diarrhea in pool:

- Backwash the filter after reaching the proper superchlorination concentration parameters. Ensure that the effluent is discharged directly to waste.
- Allow swimmers back into the water only after the proper superchlorination concentration parameters have been met and free chlorine and pH levels have been returned to normal operating range



Virginia Graeme Baker Pool and Spa Safety Act Compliance

- All public pools and spas, both new and existing, shall be equipped with drain covers compliant with the ASME/ANSI A112.19.8 2007 standard
- All public pools and spas with a single main drain (other than single main drain pools utilizing a surge tank) shall also employ the use of a safety vacuum release system (SVRS), automatic pump shutoff, or equivalent system determined by the Consumer Product Safety Commission (CPSC)



Virginia Graeme Baker Pool and Spa Safety Act Compliance

- It is the responsibility of the pool operator to replace the VGB compliant drain covers prior to manufacturer expiration, maintain drain covers in good working repair, and to maintain product specification compliance sheet for drain covers per Consumer Product Safety Commission (CPSC)



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Causes for Closure

If a health department representative observes any of the following conditions, he/she may immediately close the facility to prohibit any person from using it:

- Conditions at a facility create an immediate danger to health and safety
 - Examples: Emergency phone not working, sewage back up, main drain grate missing/broken
- The results of bacteriological analyses of water samples collected finds that the water does not conform to the bacteriological standards for proper swimming and bathing water quality
 - Example: High bacteria load count in recreational water from beach area



Causes for Closure

- If an environmental survey of an area shows evidence of sewage or other sources of pollution being discharged from tributary water **to a beach** creating an immediate danger to health or safety
- If turbidity levels of facility water do not meet the requirements of Section 10(4) of the Kentucky Swimming and Bathing Facilities Regulations
 - Example: Cloudy pool water where main drain outlet grates are not clearly visible from the deck of the pool
- If disinfectant combined residual of facility water is at 1.0 ppm or above



Causes for Closure

- If disinfectant is absent, disinfectant level is below required minimum, or unapproved disinfectant is being used
 - Example: No chlorine present at facility
- Any instance where the owner, operator or any other representative of the owner interferes with duly authorized agents of the health department in the performance of their duties
- If recirculation system, filtration system or disinfectant system are not in operation (Exceptions for maintenance and seasonal shut down)
- If serious or repeated violations of any of the requirements of the regulations are found



Remember, YOU are the operator of the facility.... it is YOUR responsibility to maintain the pool facility in a safe and sanitary manner.



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Questions?

**Northern Kentucky Health Department
Environmental Health and Safety
859.341.4151**



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