

# 2015

## Recommendations Regarding Aquatic Facilities



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*To: City of Portsmouth Department of  
Parks, Recreation and Leisure Services  
6/2/2015*

The following lists are compiled from confidential notes taken daily while at particular aquatic sites owned by the City of Portsmouth and are not for general release. They include a combination of near term and long term suggestions for facility improvements, equipment purchases, procedural adaptations, and clarifications to provide for better professional standards of care to patrons and employees. It is understood that ultimately implementation will be determined by informed city administrative personnel and in accord with a balance between safety, affordability, and phased, budgeted purchases. As well, while past particular operations may not reflect current recommendations or final adoption, it is understood not to indicate any judgment regarding progress of programs at and facilities in the City of Portsmouth, Department of Park and Recreation, Division of Aquatics. As a suggestion providing clarity, developing cooperation, and confirming completion, implementation of the following might be best approached as a checklist wherein each numbered item is completed at all facilities across the city in a particular day before moving on to another bulleted item or point.

## ALL FACILITIES

1. No running, no diving, and depth marker signs need to be re-painted on the concrete deck around each facility. The signs need to be substantial in size and moderately spaced as they repeat around each of four sides as well as at each entrance and exit. Each of the painted signs should be approximately 10 feet apart. The permanent paint used should have sand or plastic grit mixed in to guard against becoming a slip and fall hazard. Depth marker numbers need to be re-painted or adhered using vinyl stickers inside the pools at closer distances (about 10 feet apart) as well.
2. “No Running” and “No Diving” signs need to be posted on all four walls/fences around and at every entrance and exit to each facility. Additionally, “Caution Wet Floor” signs should be posted at every building entrance and in every locker room. “Shower Before Swimming” signs need to be posted in every locker room and beside each outdoor shower. Large signs listing the rules for each swimming facility needs to be posted both on the outside fence and on the inside fence at appropriate level. Parental supervision, age restrictions or qualifications, cost, hours of operation, location, contact information, and EMS information, should be posted as a separate sign at the entrance to each facility. Some consideration should be given to posting signs restricting food and drink from the pool, recommending against swimming less than 30 minutes after eating, and declaring the city is not responsible for lost or stolen items. Permanent chemical and electrical hazard signs should be posted where appropriate on and in chemical storage and pump rooms. Laminated or permanent pump room pool specification placards and waterproof sleeved chemical logs needs to be posted inside each pump room. Dry erase pool water testing and water quality signs need to be posted at each facility, and kept current with hourly testing while all readings are also recorded in log book binders on hourly, daily, weekly, and monthly report forms. CPO certificates and pool permits need to be framed and posted at each facility in a dry location visible to the public. For the purpose of safety, longevity, and lowered cost, signs would be best on corrugated plastic or aluminum with silk screened print, not Plexiglas. Fast Signs on Virginia Beach Blvd. is a business to secure less



expensive signs from. As well, in the case of framing: inexpensive, all weather, professional quality frames can be bought cheaply from the DAV Thrift Store on Virginia Beach Blvd.

3. Operations Binders have been manufactured for each of the three aquatics facilities. The sections contained therein are in the following order: Identification Page; EMS Information; Chemical Log; Pool Specification Forms; Water Quality Test Results Forms; Rules; Fecal Incident Response; Electrical Storm Response; Calendars; Aquatics Time Sheets (personnel tracking); Weekly Schedules; Daily Rotations; Pool Sign-in Forms (should be revised to include emergency contact phone numbers of each patron); Daily Operations Report Forms (should be revised to reflect the specific needs of each facility); Swimming Pool Daily Checklist Forms (should be revised to reflect the specific needs of each facility); Weekly Operations Report (Monthly, Quarterly, Yearly Operations Report Forms to be added); First Responder Form for Facility Patron Injuries and Water Rescues; Refusal of Treatment Forms; Temporary Signs; Exposure Control Plans; Emergency Action Plans; Auxiliary Material Safety Data Sheets (MSDS), and a clear file with facility records and permits. Primary MSDS Binders are to be kept in each pump room and each facility. The information in the Operations Binders is required by city administrations, city and state authorities, and professional private sector organizations. Those Binders should be kept on deck during operations and in a locking metal filing cabinet nightly, not the same cabinet as chemicals are secured in. The chemical storage cabinet should be within Occupational Safety and Health Administration (OSHA) standards, be kept locked, have appropriate signage, and be kept dry.

4. As a matter of professional standards and limitation of liability adopting and documenting an employee orientation program including explanation of the chain of command, as well as all standard operational procedures, regulations, and responsibilities is advised. Such will require curriculum development that includes acknowledgement of similarities and differences between facilities, in-service training for standardization of American Red Cross (ARC) certifications among aquatic safety personnel, as well as OSHA, Health Department, Center for Disease Control (CDC) and Equal Employment Opportunity Commission (EEOC) requirements. It is also recommended that Department of Parks and Recreation (DPR) attendant personnel who work closely with aquatics become certified in First aid and Cardio-Pulmonary Resuscitation (CPR) similarly. As a matter of safety, each pool should have at very least, one Certified Pool Operator (CPO) and two lifeguards (LG) present during operations. However, ideally, the 4 lifeguard rotation would provide a higher level of professional care and the opportunity for staff members to lower their core body temperatures, as well as take the time to instruct various in water classes. Please refer to both the ARC and CDC websites for recommended standards regarding the frequency, duration, and content of in-service training.

5. Uniform standards should be illustrated, outlined, and distributed as part of printed new employment orientation material. Professional personnel should know clearly what is expected of them without excuse. Such materials need to detail the Job Description, Specific Responsibilities, Duty to Act, Warnings Against Negligence, and Administrative Procedures Deemed Applicable. It is important for aquatics safety personnel to have uniforms that are distinct from attendant uniforms and patterned after first responder dress codes and



functionality. Each lifeguard should be required to bring their own personal hip pack - duty belt (dark blue in color) with standardized first aid supplies in two Ziploc bags including: two rollers of gauze, two military-style compression bandages, 6 large gauze pads, 6 small gauze pads, 6 band aids, antibiotic cream, 4 auxiliary Ziploc bags, pen, paper and EMS contact information. Also in the pack should be a CPR mask in its protective case, bandage scissors, a black whistle (Fox 40 brand), a wrist watch and Personal Protective Equipment. Personal Protective Equipment is contained in two Ziploc bags and includes 6 to 10 latex gloves, 2 dust masks, and expanded coverage sunglasses with safety lenses. Understanding the nature of emergencies, as a foundation each facility needs to include two CPR masks with each first aid kit as soon as possible. Consider implementing the following whistle codes and inform staff accordingly on approval there of: 1 quick blast = regulation; 2 quick blasts = assist or single person rescue; 3 quick blasts = multiple person rescue, deep water rescue, or backboard rescue; and one long blast = clear the pool, coupled with polite articulation.

6. Each facility should have an AED, suction, BVM, and oxygen crash bag. The use of that immediately aforementioned equipment should be certified through in-service training which results in ARC certifications. Earning those certifications will require the purchase of an additional type of equipment, CPR practice mannequins in infant, child and adult. While the expense of bringing the crash bags together may be substantial, it can be done incrementally over a period of time. This understood, the CPR masks and AED should take precedence. Regarding first aid kits and biological hazard clean-up kits that are more useful, better stocked for most likely emergencies, and offer professional quality of care, consider purchasing those supplies through Dollar Tree for cost reduction rather than ordering them from typical supply companies like Granger. As well, it is of the utmost importance that both types of kits are assembled in-house by certified personnel and accompanied by in-service staff training from certified personnel regarding the application of treatment contingencies to a number of most likely emergencies. For the supplies necessary and structuring of kits see Exhibit A. It is important to note that, at this time, there are simple first aid kits on hand at the currently open Portsmouth City aquatic facilities. As well, having an ice machine and Ziploc bags on the premises is a safety issue in that ice is necessary to treat bruises in addition to heat distress, heat exhaustion, and heat stroke. Auxiliary instant ice packs should be held in reserve as part of better first aid kits. Two large round igloo coolers - filled with ice water and with disposable cups should be kept at each facility for the same reason, including dehydration prevention. All replacement supplies should be kept in a quartermaster system, inventoried, and signed for in order to prevent shrinkage for one reason or another.

7. One megaphone (Harbor Freight), one air horn (Dollar Tree), 5 flashlights (Dollar Tree), and three or four rechargeable communications radios are suggested for each site. Radios should be positioned at, lifeguard stand 1, lifeguard stand 2, table, and gate, locker room, pump room, or administration offices. Additional batteries can be bought inexpensively in large packs at Dollar Tree, but pay attention to the expiration dates. Each facility should use a different frequency that does not require licensure and does not interfere with other City operations. Each employee should have a different identifying call number, initials, or name for radio use to allow clear communication, understanding of location and quick professional response. First



responder duty to act and better service to the public require preparation before large crowds and casualty incidents occur.

8. Serious consideration should be given to replacing all current lifeguard stands. While the stainless steel is of great quality, the current design and method employing the ladder to mount the lifeguard stand from behind as well as the dimensions of the equipment require lifeguards to step over or around the chair for mounting and dismounting. Such could contribute to a fall incident, delays in emergency response, and encourage the unsafe practice of jumping into shallow water from a higher, elevated position. While Spectrum brand stainless steel lifeguard stands are recommended, they might be considered cost prohibitive. Tailwind 47, all-weather, white plastic, lifeguard stands are also very good. Shelves for emergency kits and logs can be mounted under the Tailwind 47 through in-house modification. Rather than outright disposal, and in order to save hundreds of dollars, discussing affordable in-house re-design and modification of soon-to-be removed existing lifeguard stands for application elsewhere in the field and at special events should be an option seriously considered. This leads to another possible cost savings and safety issue combined, in that when repairs are needed at an aquatics facility, tools and supplies should be on hand. It is recommended that a secure, locking metal cabinet and quartermaster system be employed for those items and materials bought, donated, and kept on hand. A safe and out of the way wood supply pile should be maintained and not allowed to become a trip hazard. All wood should be processed, removing all metal and sharp edges before it is stored. Only OSHA regulation and trade experienced personnel should be permitted to engage in on-site modification and repair. All repairs must be to code. Regarding OSHA compliance in the operation of machinery and equipment, a lock-out tag-out policy should be developed and implemented by the Aquatics Division as necessary.

9. Regarding pump rooms, it is highly recommended that all emergency cutoff switches in all pump rooms have bright red boxes installed and/or painted around them for easy recognition in an emergency. Nothing may be placed 5 to 7 feet in front of any electrical breaker boxes. Breaker boxes must be labelled. Breaker circuits must be labelled. The flow and operation of pumps have been labelled well in currently open facilities. It is highly recommended that acid be stored separately from all other chemicals, in locking metal cabinets which meet OSHA requirements. Chlorine containers should be stored in a separate room and in accord with OSHA standards. Whether in or out of locking metal cabinets, chemicals should be kept on shelves or pallets no more than 6 to 10 inches off of the ground and have industrial grade plastic covering over them to avoid water exposure and trigger event mixing. If a new pump or chemical room is planned, ventilation fans should be installed. While chemical gloves are in current supply, each pump room is in need of goggles, face shields, dust masks, an industrial canister filter breathing masks (eBay at \$3 to \$4 each), industrial chemical aprons, and OSHA compliant eye wash stations. Buying two or more of all the recommended equipment could make the difference in the event of an accident and is highly recommended. While inspection has not been done regarding the presence and date of fire control equipment, such should be checked as soon as possible, and if necessary brought into compliance. At this time the City of Portsmouth is getting its chemicals from Harper and Company, but by switching to Chesapeake



Pools, Spa, and Billiards (a SWIM vendor) run by Mr. Frame, the cost could be reduced by 30 to 60 percent. As a policy shoes need to be worn in chemical rooms.

10. Each pool needs a compliant Americans with Disabilities Act (ADA) chair lift, shower, and toilet for challenged patrons. Curbs, pathways, entries, exits, and thresholds need to be checked for compliance as well, should modifications need to be made. Railing for ladders and steps needs to be secured, but moreover made compliant with safety codes where railing is within reach on every step and rung, beginning outside the pool and proceeding into the water completely. Double or triple railing, on each of the stairs and/or ladder is recommended as opposed to a singular rail. Holes remaining around the pool need to be filled and construction or landscaping debris removed as the ground is smoothed and grass is planted. No sharp, pointed, or jagged object should be present. As well, some all-weather outdoor chairs and tables or simple benches of significant strength, quality, and water resistance might help challenged or simply fatigued patrons on days when conditions are hot. Also recommended are portable or permanent sun shade picnic pavilions inside the pool area at all facilities for patrons.

11. All gates immediately entering all pools need to be made self-closing and self-latching. Both inner and outer gates should be locked during hours when all facilities are closed. It is highly recommended two ring buoys and one shepherd's crook are present, accessible, and hanging on deck fences at all pools even during hours when pools are closed, as may be seen at the Portsmouth Sportsplex Pool. Such would allow for bystander rescue in the event of a break-in and accident during hours when not in operation. Code only requires one ring buoy and one shepherd's crook. A cost savings could be recognized by transferring the second ring buoy to another site, and by adding a pole to the extra shepherd's crook tool head in the equipment room and transferring it also.

12. In an effort to reduce slip and fall incidents, it is highly recommended that wall mounted, metal, high speed fans (Walmart or Lowe's) be installed and rubber mats purchased for hallways and locker rooms at all swimming facilities. Fans should be accompanied with posted signs ordering, "Do Not Touch." Mop and buckets for controlling standing water are recommended at each location. Four yellow, free-standing "Caution Wet Floor" signs are recommended for each facility. Each facility should have a roll of yellow "Caution" tape on hand, to be used in conjunction with orange cones that are kept accessible for emergencies and guarding off hazards. In the event of a slip and fall incident, on the condition that no immediate threat jeopardizes the victim, a policy of allowing and encouraging the victim to stay where they fell should be adopted. Each pool needs to have at least one backboard with four body straps, one head immobilizer, a chin strap, and a forehead strap. The buckles to the Portsmouth Sportsplex backboard were broken but have been replaced and the equipment is now functional. Each pool needs to have at least one rescue tube. It is recommended that pools have two of the aforementioned rescue equipment in order to stay open, backboard multiple victims, and/or backboard in deeper water.

13. A wheel chair is recommended for each facility, but does not necessarily need to be bought



from a supply company. From time to time, wheel chairs can be purchased at thrift shops for around \$35.00 to \$39.00 each. Recently, in a visit to the Thrift City store on the border between Chesapeake and Portsmouth, it was noted that there were 4 sets of swim fins, masks, and snorkels on sale for \$4.00 a pair, additionally multiple new USCG approved lifejackets in various children's sizes were the same price. Purchasing that equipment and plastic shelving or milk-crate style storage would result in a long term saving. Life vests are ARC required equipment for swimming lessons. Considering alternate supply sources for the same designated products could save the aquatics program thousands over the next few years.

14. It is recommended that each pool have an underwater thermometer, an atmosphere - ambient air temperature thermometer, and a functioning clock in order to aid in the prevention of conditions unsafe to patrons. The purchase and shelf storage in sealed plastic of several Army-Navy or emergency wool blankets and smaller containers of bottled water is recommended for each facility. As well, currently the Portsmouth Sportsplex Pool has a substandard safety line that was built from spare parts and is tied into the pool rather than hooked into the pool that needs replaced. It is recommended that all pools have safety lines adequately thick and with buoys large enough to help support distressed swimmers in an emergency. Additionally, in order to avoid shortages during critical hours of operation, it is suggested that spare dropper bottles of the three most commonly used test kit re-agents be kept on hand at each facility.

15. In an attempt to prevent damage to the pool cover it is recommended that the pool cover be re-folded neatly and stored in a dry place, on pallets, 6 inches away from any walls.

16. While the water clarity and chemical balance preventing initial passing of the State Health Department inspection was solved by contracting pool engineer Ottoniel Larios, who also cleans the pools he contracts once a week, it is recommended that a robot pool vacuum should be purchased from Harper and Company with a service and repair contract. The "Dolphin" is an excellent pool vacuum model.

17. The purchase of an inexpensive pressure washer for particular use at the Portsmouth Splash Park and to clean shower rooms at other aquatics facilities is highly recommended for sanitary and safety reasons. Accompanying this purchase, each aquatic facility should have two lengths of hose, spray nozzles, hand scrub brushes, deck brooms and adequate supply of algae kill for deck cleaning. Cost savings could be realized by purchasing bleach and the scrub brushes from Dollar Tree. Assigning two lifeguards to work together on these details would safeguard against accidents, as one would check the other. These details will help reduce slip and fall incidents and contribute to standards of facility cleanliness. Also mentioned contacts should be made with the CPO of the Splash Park to discuss any need for higher grit paint to be used in resurfacing when hazards go being solved through cleaning.

18. Each facility will need on site access to standard office equipment, especially a photocopier for safety and legal documentation.



## RECOGNIZED PUMP ROOM EQUIPMENT SENSITIVITIES

1. The Portsmouth Splash Park seems susceptible to pump room mechanical malfunction due to water evaporation. It is important to turn on the water feed at the first sign of an air pocket being formed in the hair straining basket or automatic chlorine sensor. The automatic water fill sensor is not dependable. The pump room machinery should be inspected by the installing contractor and replaced where defective.

2. The Portsmouth Sportsplex Pool seems susceptible to large swings in PH and Chlorine. To some degree the condition may be attributed to standard difficulties associated with starting seasonal pool water. Sun, rain, temperature, not having a CO2 buffer system, and other factors may contribute to changes in chemical and PH readings. However, up to this point, with Ash and Acid on hand, balancing water and chemical readings is manageable. Please, carefully consider the suggestions for pump room, chemical handling, and chemical storage improvement in the previous section.

3. Due to what seems to be years of difficulty, Cavalier Manor Pool is in need of significant repair, refitting, and improvement. It should be addressed as a separate project where and when possible. Of note, there is no chlorinator pump present and a serious water leak exists in the pump room. Adding large amounts of chemicals to the pool in the evening to keep the water sanitary would also present additional safety problems. Attention should be given to the security fence and gates around the facility, as well as acquiring all safety equipment necessary.

PENDING:

AQUATIC PERSONNEL PHONE LIST

FIRSTAID KIT INVENTORY

BIOLOGICAL CHEMICAL HAZARD CLEAN UP KIT INVENTORY

GROWING FITNESS PROGRAM RECOMMENDATIONS

DUAL PURPOSE CERTIFICATIONS AND INSERVICE TRAINING



Item	Quantity for Each Facility			Total
	Sportsplex	Splashpark	Cavalier Manor	
No Running / No Diving sign				0
Caution Wet Floor sign				0
Shower Before Swimming sign				0
Pool Rules sign				0
Parental Supervision / Age Restriction sign				0
Cost of Admission sign				0
Hours of Operation sign				0
Contact information sign				0
EMS Information sign				0
No Food / No Drink sign				0
Wait 30 Minutes After Eating to Swim sign				0
City of Portsmouth Not Responsible for Lost/Stolen Items sign				0
Chemical Hazard sign				0
Electrical Hazard sign				0
Chemical Log sign				0
Pump Room Pool Specifications sign				0
Do Not Touch sign (accompanies high speed fan)				0
Dry Erase Boards				0
Frames for CPO Certificates				0
Frames for Pool Permits				0
MSDS binders				0
locking metal filing cabinet				0
CPR masks				0
AED				0
suction				0
BVM				0
oxygen crash bag				0
ziploc bags (boxes of 100)				0
ice machines				0
instant ice packs				0
round igloo coolers				0
disposable cups				0
megaphone				0
air horn				0
flashlights				0
radios				0
batteries				0
plastic covering for chemicals				0
goggles				0
face shield				0
dust mask				0
industrial canister filter breathing mask				0
industrial chemical apron				0
OSHA compliant wash station				0
fire extinguishers				0
ADA chair lift				0
ADA shower				0
ADA toilet				0
chairs / benches				0
umbrellas				0
wall mount high speed fan				0
rubber mats				0
mop and bucket				0
caution tape (roll)				0
orange cone				0
backboard (4 body straps, 1 head immobilizer, 1 forehead strap)				0
rescue tube				0
wheelchair				0
lifevest				0
underwater thermometer				0
atmosphere ambient air temperature thermometer				0
clock				0
emergency wool blanket				0
bottled water				0
safety line				0
test kit dropper bottle re-agents				0
robot pool vacuum				0
power spray washer				0