Chapter Comm 90

APPENDIX

The material contained in this appendix is for clarification purposes only. The notes, illustrations, etc., are numbered to correspond to the number of the rule as it appears in the text of the code.

A–90.03 (23) Plan submittal and fees.

The following is a listing of when the department may waive submittal of pool plans and fees for the reconstruction and alteration of existing pools. This listing is based upon SPGL–7, Guidelines for Pool Designers, June 22, 1992, issued by Department of Health and Family Services.

1. A disinfection system equipped with a positive displacement pump is replaced by an approved pass–through (erosion) type system or visa versa, the replacement of a gas chlorine system with a positive displacement pump or approved pass–though feeder.

Note: The installation of a gas chlorine system will require plan submittal and a fee.

2. A recirculation pump is replaced by another pump from a different manufacturer provided that the capacity of the new pump is at least equal to the pump which is replaced.

3. A filter is replaced with an approved filter of the same type but with greater filter media surface.

4. The replacement of metal piping and fittings with the same size PVC piping and fittings.

5. A supplemental disinfecting system is installed (e.g. Ozone, etc.) provided that the halogen residual is maintained as stated in ch. HFS 172 and that there is no decrease in the required water recirculation flow rate.

6. For the installation of a slide 6–foot or less in height, no slide plan review in accordance with ch. Comm 61 is required. Such installations shall meet the guidelines listed in Tables 90.30–1 and 90.30–2.

A–90.04 (6)–1. Authorized Representatives of the Department. In addition to department staff, the department has designated the following authorized representatives the authority to conduct inspections of construction or modification of any public swimming pool or water attraction for those installations located within the boundary limits of the municipality and which require approval under s. Comm 90.04.

Note: This list is maintained by the department and is subject to change.

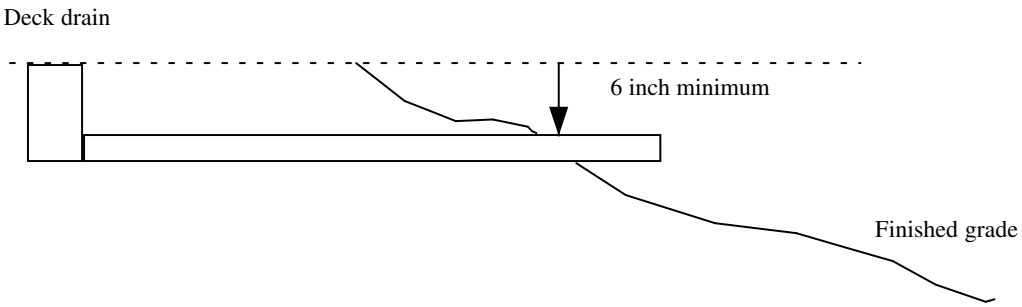
Madison, City of
Madison Department of Public Health
210 ML King Jr. Blvd., Rm. 507
Madison WI 53703–3346
Phone: (608) 294–5335
Fax: (608) 266–4858

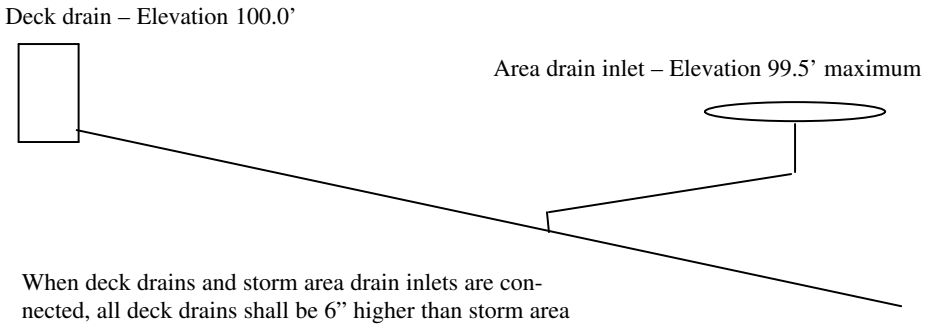
Milwaukee, City of
City of Milwaukee
Dept. of Neighborhood Services
4001 S. 6th St. 2nd Fl.
Milwaukee, WI 53221
Phone: (414) 286–8674

Portage, County of
Portage County Health & Human Services
817 Whiting Avenue
Stevens Point, WI 54481–5292
Phone: (715) 345 5350
Fax: (715) 345 5966

Racine, City of
Environmental Health Division
Racine Health Department
730 Washington Avenue
Racine WI 53403
Phone (262) 636–9203
Fax: (262) 636–6195

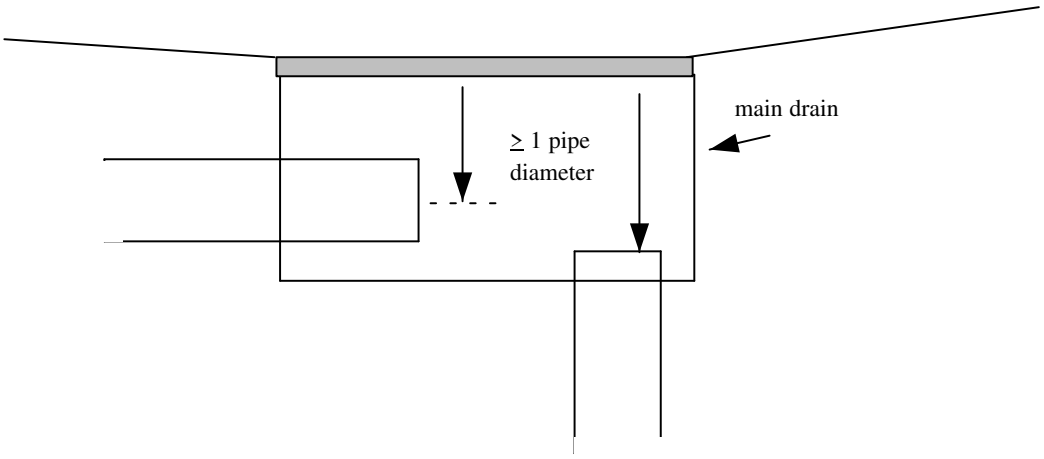
A–90.09 (2) (b) Outdoor pool deck drain discharge point.





When deck drains and storm area drain inlets are connected, all deck drains shall be 6" higher than storm area drain inlets. It must be demonstrated that regardless of the location of any clogged drain, wastewater would discharge from the area drain inlet prior to ponding on the deck of the pool.

A–90.11 (6) (b) Main drain piping.



A–90.16 (1) Minimum number of plumbing facilities. Sections 1003.2.2.2, 1003.2.2.9, and 2902.1 of the IBC, Tables 1003.2.2.2 (partial) and 2902.1 (partial) and respective text are reprinted for use within s. Comm 90.16. These tables and respective text are contained in the Commercial Building Code, chs. Comm 61 to 65.

Table 1003.2.2.2 (partial)
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross

Section 1003.2.2.9 Fixed seating. For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein.

For areas having fixed seating without dividing arms, the occupant load shall not be less than the number of seats based on one person for each 18 inches (457 mm) of seating length.

The occupant load of seating booths shall be based on one person for each 24 inches (610 mm) of booth seat length measured at the backrest of the seating booth.

Table 2902.1 (partial)
MINIMUM NUMBER OF PLUMBING FACILITIES [a]

OCCUPANCY	WATER CLOSETS (see s. Comm 62.2902(1) for urinals)		LAVATORIES	BATHTUBS/ SHOWERS	DRINKING FOUNTAINS (see the *International Plumbing Code*)	OTHERS
	Male	Female				
Theatres, halls, museums, etc. [+]	1 per 100	1 per 75	1 per 200	—	1 per 500	1 service sink

[+] Public swimming pools and water attractions are included here.

A–90.16 (2)–2. Nationally Recognized Listing Agencies Acceptable to the Department.

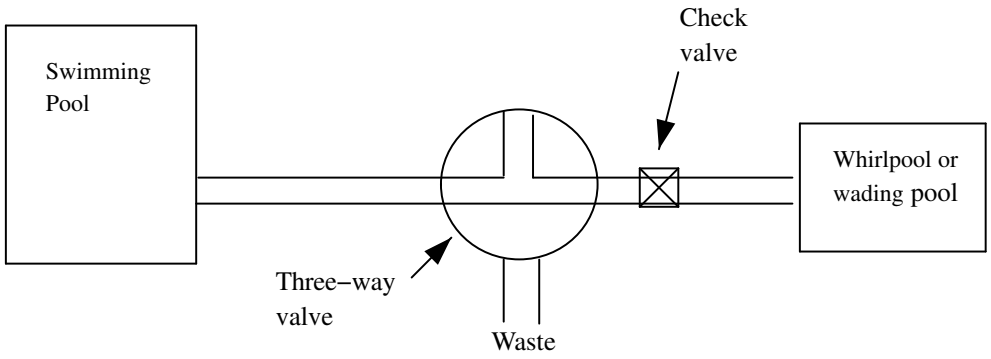
American Gas Association (AGA)
400 N. Capitol Street, N.W.
Washington, DC 20001
Phone: (202) 824–7000
Fax: (202) 824–7115
Web page: http://www.aga.org

American Society of Mechanical Engineers
ASME International
1828 L Street, NW, Ste. 906
Washington, DC 20036
Phone: (202) 785–3756
Fax: (202) 429–9417
Web page: http://www.inforcentral@asme.org

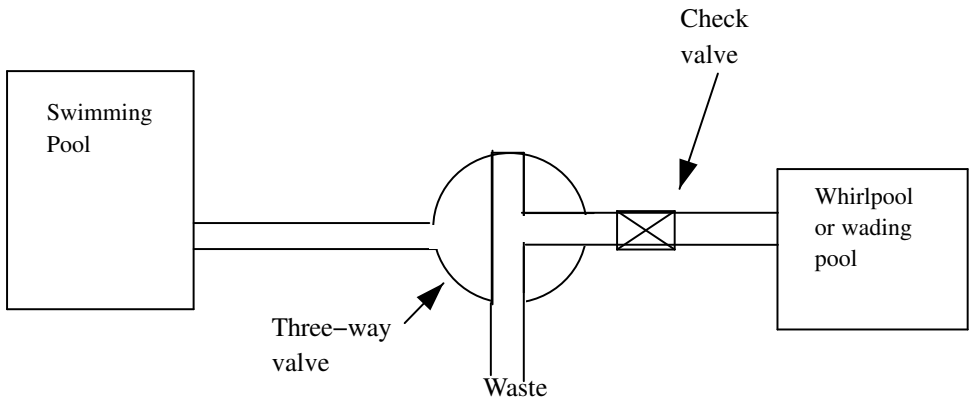
ETL Intertek Testing Services NA, Inc. (ITS)
3233 US Route 11
Cortland, NY 13045
Phone: (607) 753–6711
Web page: www.intertek–testing.com

Underwriters Laboratories Inc. (UL)
333 Pfingsten Road
Northbrook, IL 60062–2096 USA
Phone: (847) 272–8800
Fax: (847) 272–8129
E–mail: northbrook@us.ul.com
Web page: http://www.ul.org/

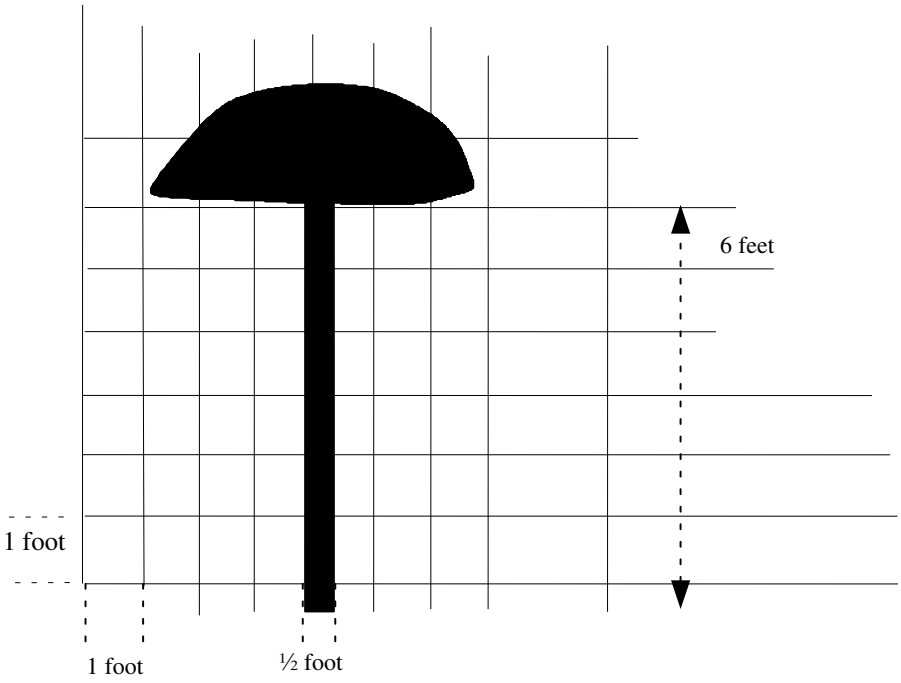
A– 90.18 (2)–1. Filling options for wading pool or whirlpool from a swimming pool.



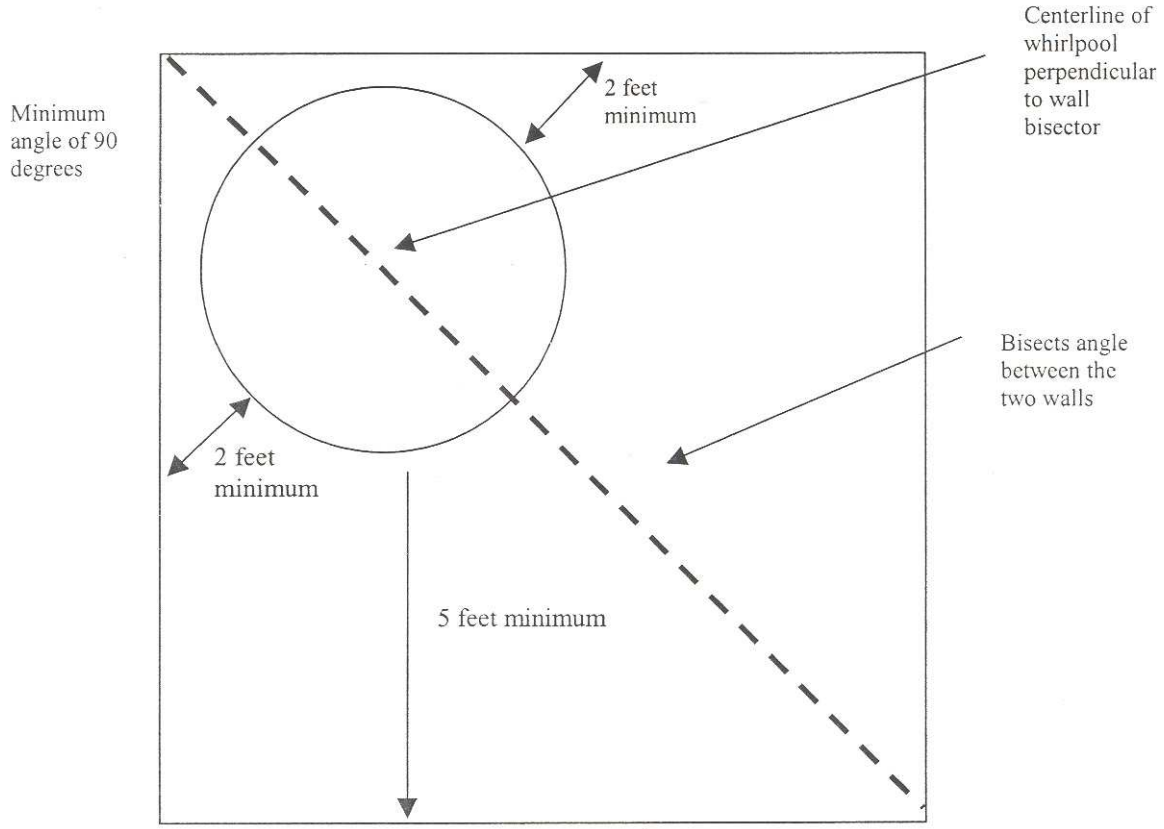
A– 90.18 (2)–2. Operational position option for a three–way valve filling wading pool or whirlpool from a swimming pool.



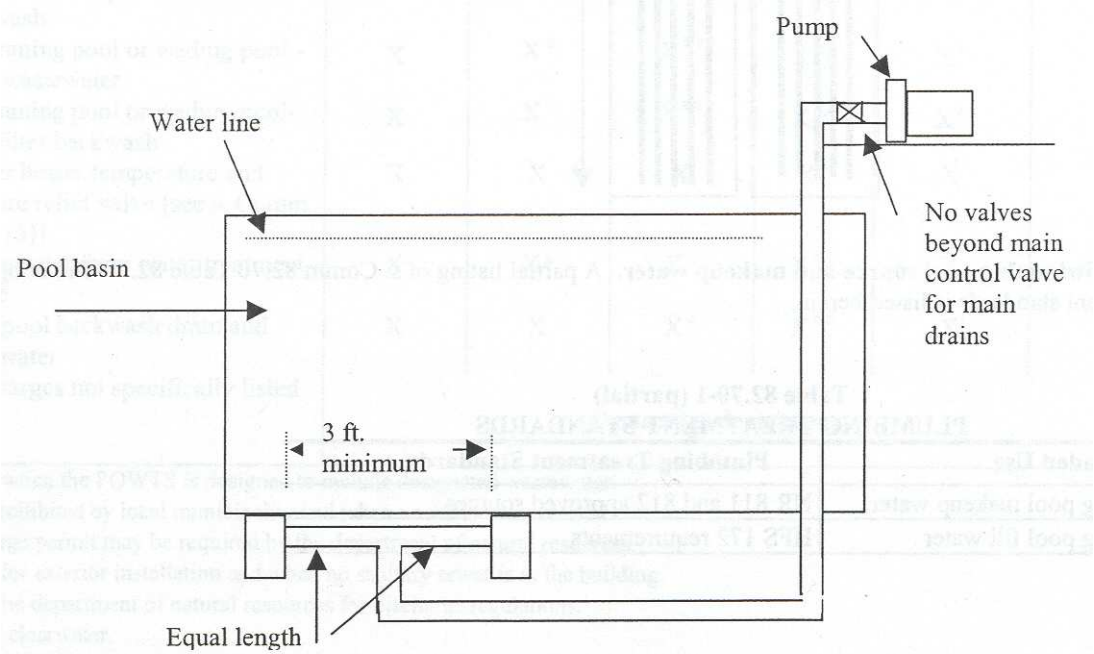
A–90.18 (3) Obstructions extending from the bottom of a wading pool. In this sample sketch, the obstructed area between the water level to a height of 6 feet (using ½ foot as the width of the obstruction) equals 3 square feet. As provided in s. Comm 90.18, this obstruction would be permitted in a wading pool without a lifeguard staffing plan.



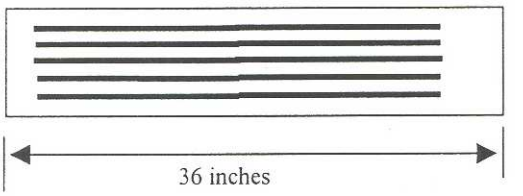
A–90.19 (6) Whirlpool location. Sample sketch depicting whirlpool location and measurements for access, as specified in s. Comm 90.19 (6) (a) 2.



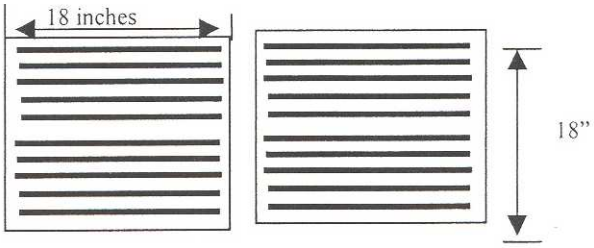
A–90.20 (8)–1. Drain layout details for suction fittings.



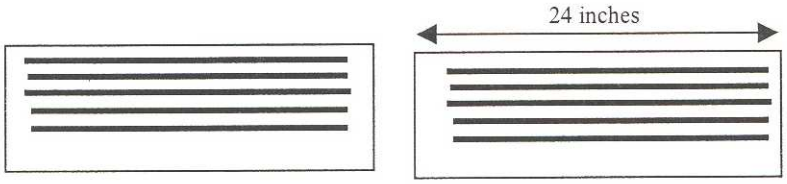
A–90.20 (8)–2. Suction outlet options.



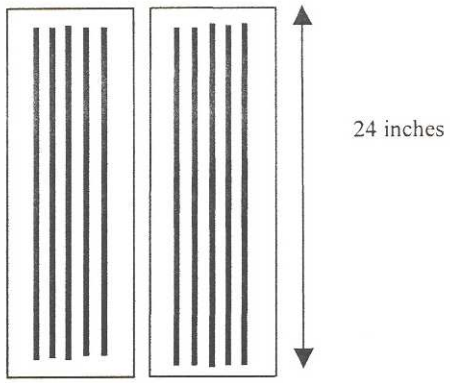
A single suction outlet is permitted providing one of the dimensions (length or width) is at least 36 inches.



Two suction fittings 18" X 18" may be closer than 3 feet apart.



Two suction fittings that have at least one dimension (length or width) that is 24" or more, may be located within 3 feet of one another.



A–90.20 (12) Swimming pool source and makeup water. A partial listing of s. Comm 82.70 Table 82.70–1 relating to plumbing treatment standards is listed herein.

Table 82.70–1 (partial)
PLUMBING TREATMENT STANDARDS

Intended Use	Plumbing Treatment Standards
4. Swimming pool makeup water	NR 811 and 812 approved sources
5. Swimming pool fill water	HFS 172 requirements

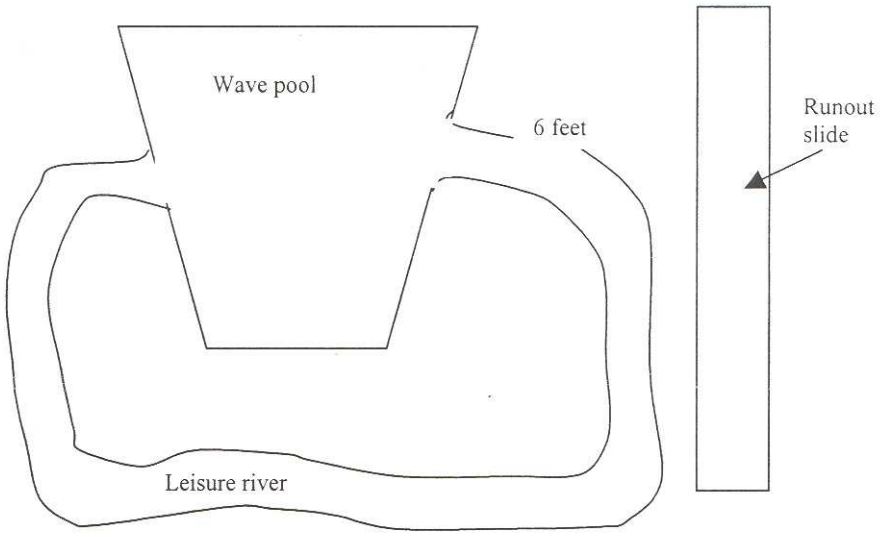
A–90.20 (13) Allowable discharge points for pool wastewater. The following table has been copied from ch. Comm 82 relating to allowable discharge points for public swimming pools.

Table 82.38 – 1
ALLOWABLE DISCHARGE POINTS BY FIXTURE OR SPECIFIC USES

Use or Fixture	Allowable Discharge Points					
	POWTS [a]	Municipal Sanitary Sewer	Municipal Storm Sewer	Ground Surface	Combined Sanitary–Storm Sewer	Subsurface Dispersal [i]
1. Cross connection control device or assembly [see s. Comm 82.33 (9) (k)]	X	X		X [b, c, e]	X	
2. Domestic wastewater	X	X			X	
3. Condensate from high efficiency furnace or water heater	X	X			X	
4. Drinking fountain	X	X	X	X [b]	X	X
5. Elevator pit drain [see s. Comm 82.33 (9) (f)]			X	X [b]	X	X
6. Enclosed public parking levels	X	X		X [b]	X	X
7. Industrial wastewater [h]	X [f]	X			X	
8. Municipal well pump house floor drain and sink	X	X		X [b]	X	X
9. One– and 2–family garage floor area [see s. Comm 82.34 (4) (b)]	X	X		X [b]	X	
10. Storm water, groundwater and clear water	X	X [g]	X [c]	X [b]	X	X
11. Swimming pool or wading pool–– diatomaceous earth filter backwash	X	X			X	
12. Swimming pool or wading pool–– drain wastewater	X	X [b]	X [b,c]	X [b,c]	X [b]	X
13. Swimming pool or wading pool–– sand filter backwash	X	X [b]	X [b,c]	X [b,c]	X [b]	X
14. Water heater temperature and pressure relief valve [see s. Comm 82.40 (5)]	X	X	X	X [b]	X	X
15. Wastewater from water treatment device	X	X [g]	X [c]	X [b,c]	X	X
16. Whirlpool backwash drain and wastewater	X	X	X [c]	X [b,c]	X	
17. Discharges not specifically listed above	Contact the department					

[a] Allowed when the POWTS is designed to include designated wastewater.
[b] Unless prohibited by local municipality and when no nuisance is created.
[c] A discharge permit may be required by the department of natural resources.
[e] Allowed for exterior installation and when no sanitary sewer is in the building.
[f] Refer to the department of natural resources for discharge regulations.
[g] Fifty gpd clearwater.
[h] The department of natural resources may require WPDES permits for industrial discharges and may allow other options.
[i] Subsurface dispersal must comply with s. Comm 82.365.

A–90.20 (4) Calculating turnover times.



Where a runout slide is connected to a pool basin, the following method is used to calculate turnover time.

Leisure river = 40,000 gallons at a turnover time of 2 hours
Wave pool = 50,000 gallons at a turnover time of 2 hours
Basin requires a turnover time of 2 hours for 90,000 gallons

The first runout slide connected to a basin requires that an "imaginary plunge pool" volume is considered in the calculation. That volume must be turned over at a one–hour turnover time, as provided in Table Comm 90.20–3. Subsequent runout slides are calculated with an additional 4,500 gallons per slide.

This 'imaginary volume' is subtracted from the total volume of the basin:
As an example, a volume of 6,700 gallons is subtracted from the total volume of the basin.

90,000 gallons – 6,700 gallons = 83,300 gallons

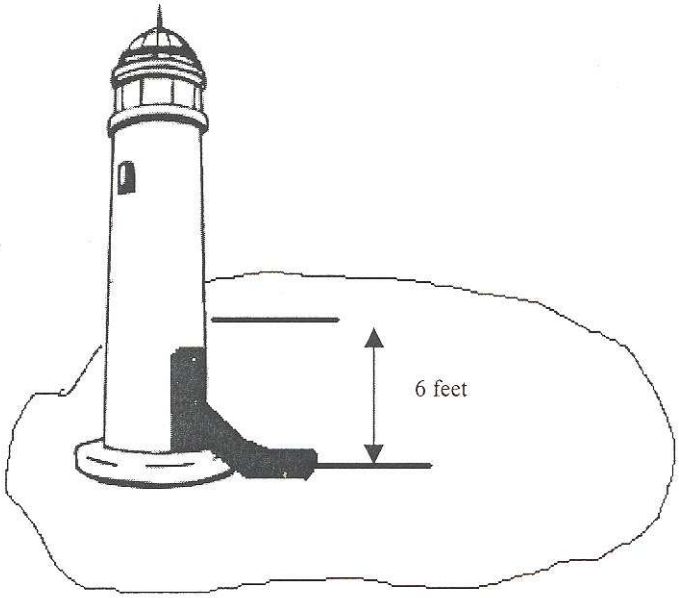
The remainder of the basin (83,300 gallons) will have a turnover time of 2 hours, while the 6,700 gallons will be turned over in one hour.

83,300 at 2–hour turnover time requires a pump with a discharge rate of 695 gpm (83,300/120)
6,700 at one–hour turnover time requires a pump with a discharge rate of 112 gpm (6,700/60)

The pump capacity at the total dynamic head required is 807 gpm.

The basin plus the runout slide turnover time for this example is: 90,000 gallons/807 gpm or 1.86 hours.

A–90.30 (3) (a) Children's slide obstructions in wading pools.



The square footage of the obstruction between the water level to a height of 6 feet for the obstruction shown is 48 square feet. This obstruction is code compliant, as provided in s. Comm 90.30, without a lifeguard staffing plan.