

Public Bathing Place Manual

A Guide for the Preparation of Applications, Reports, and Plans for Public Bathing Place Permits

PART II

General Purpose Recreational Bathing Beaches

Pennsylvania Department of Health

February 2002

Edward G. Rendell, Governor

PREFACE

Safe and healthful bathing places are great assets to our leisure time pursuits. The legal responsibility for the approval of proper construction and safe operation of public bathing places is vested in the Pennsylvania Department of Health (Department or DOH). For this reason it is required that plans for public bathing places be reviewed and approved by the Department and/or the county health department having jurisdiction.

Part II of this manual has been prepared as a guide for those persons responsible for the design and construction of general purpose recreational bathing beaches. Part I of this manual covering general purpose recreational swimming pools, wading pools, and spray pools and Part III covering general purpose recreational hot tubs and spas are also available.

Numerous sources of information were consulted during the writing of this manual but *Recommended Standards for Bathing Beaches* by the Great Lakes—Upper Mississippi River Board of State Sanitary Engineers was the primary reference used to develop this manual.

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1.0 DEFINITIONS

- 1.1 **BATHING BEACH**—A body of natural water impounded or flowing, of such size in relation to the bathing load that the quality and quantity, confined or flowing, need be neither mechanically controlled for the purpose of purification nor contained in an impervious structure.
- 1.2 **SHALL**—The term “shall” in this manual is used where practice is sufficiently standardized to permit specific delineation of requirements or where safeguarding of the public health and safety justifies such definite standards.
- 1.3 **SHOULD**—The term “should” in this manual indicates desirable procedures or standards, with deviations subject to consideration on a case-by-case basis.

2.0 GENERAL INFORMATION—The Public Bathing Law, Act of June 23, 1931, P.L. 899, as amended, regulates public bathing places and all related appurtenances in matters of sanitation, cleanliness and safety, and prescribes penalties for violations. This act makes it unlawful for any person (or persons), club, firm, corporation, partnership, institution, association, municipality, county, or other body to construct, add to, modify, operate, or continue to operate any public bathing place without having first obtained a permit or possess an unrevoked permit issued by the Department. In addition, the permittee is required to notify the Department when construction is complete, to allow inspection of the public bathing place prior to operation.

A permit shall be obtained from the Department prior to any construction or operation of a public bathing place. When the ownership of such public bathing place changes or when the public bathing place is leased by the owner, it shall be the responsibility of the new owner or lessee to secure a permit issued in his/her name.

2.1 THE BUREAU OF COMMUNITY HEALTH SYSTEMS

2.1.1 Function—The Department of Health is the agency that reviews the technical aspects of all permit applications for public bathing places and approves or denies such applications. In Bucks and Erie Counties the Department has delegated application review responsibility to the county health department.

2.1.2 Regulations—The Chapter 18 Public Swimming and Bathing Places Regulations were promulgated by the Department to implement the provisions of the Public Bathing Law. Copies of the act and the Chapter 18 regulations may be obtained at any district office of the Pennsylvania Department of Health.

2.1.3 District Offices—The Department maintains six district offices through which it conducts its fieldwork and permitting responsibilities. Questions concerning the completion of public bathing place applications and/or engineering aspects of such projects may be discussed with personnel in these district offices or in Bucks and Erie County Health Department Offices. Completed applications and all supporting data shall be submitted to the appropriate office for review and approval.

COUNTY HEALTH DEPARTMENTS

Bucks County Department of Health
Neshaminy Manor Center, Bldg. K
Doylestown, PA 18901
Telephone: (215)345-3324

Erie County Health Department
606 West Second Street
Erie, PA 16507
Telephone: (814)451-6700

PENNSYLVANIA DEPARTMENT OF HEALTH
Bureau of Community Health Systems

DISTRICT OFFICES

COUNTIES SERVED

Southeast District Office
 442 Reading State Office Bldg.
 625 Cherry Street
 Reading, PA 19602-1187
 (610) 378-4352—Telephone
 (610) 378-4527—FAX

Berks	Lancaster
Bucks	Montgomery
Chester	Philadelphia
Delaware	Schuylkill

Northeast District Office
 665 Carey Avenue
 Wilkes-Barre, PA 18702-1466
 (570) 826-2062—Telephone
 (570) 826-2238—FAX

Carbon	Northampton
Lackawanna	Pike
Lehigh	Susquehanna
Luzerne	Wayne
Monroe	Wyoming

Northcentral District Office
 Water Tower Square
 1000 Commerce Park Dr., Suite 109
 Williamsport, PA 17701-5996
 (570) 327-3400—Telephone
 (570) 327-3748—FAX

Bradford	Northumberland
Centre	Potter
Clinton	Snyder
Columbia	Sullivan
Lycoming	Tioga
Montour	Union

Southcentral District Office
 30 Kline Plaza
 Harrisburg, PA 17104
 (717) 787-8092—Telephone
 (717) 772-3151—FAX

Adams	Fulton	York
Bedford	Huntingdon	
Blair	Juniata	
Cumberland	Lebanon	
Dauphin	Mifflin	
Franklin	Perry	

Northwest District Office
 19 McQuistan Drive
 Jackson Center, PA 16133
 (724) 662-6068 - Telephone
 (724) 662-6086 - FAX

Cameron	Forest	Warren
Clarion	Jefferson	
Clearfield	Lawrence	
Crawford	McKean	
Elk	Mercer	
Erie	Venango	

Southwest District Office
 514 Pittsburgh State Office Bldg.
 300 Liberty Avenue
 Pittsburgh, PA 15222-1210
 (724) 830-2701—Telephone
 (724) 832-5927—FAX

Allegheny	Greene
Armstrong	Indiana
Beaver	Somerset
Butler	Washington
Cambria	Westmoreland
Fayette	

2.2 SUBMISSION OF APPLICATION

2.2.1 Procedures—To make application for a permit from the Department, the owner or lessee of a public bathing place must submit an application, along with a permit application fee, as specified in Section 5c of the Bathing Place Law, Act 299. The permit application fee submitted as a check or money order is made payable to the Commonwealth of Pennsylvania.

The application must be submitted with duplicate copies of the engineer's report, specifications, and plans showing the pertinent details of the bathing place. The engineer's report shall consist of, but not limited to, the appropriate permit application modules furnished by the Department. The report, specifications and front cover or fly leaf of each set of plans must bear the signature and imprint of the seal of a registered professional engineer or registered architect, legally qualified to practice in Pennsylvania.

In all counties the application and accompanying data, along with the permit application fee check, must be submitted to the appropriate district office as indicated in Section 2.1.3.

If, upon receipt by the district office, the application form is found to be properly completed and the accompanying modules, plan, specifications and check appear to be complete, the application will be accepted for processing. If the application or any supporting data is incomplete, the application will be returned and the applicant will be advised concerning documentation which must be submitted in order to complete the application.

After acceptance of the application, the Department will review the supporting data. If the project is in compliance with the requirements, as defined in Chapter 18 of the Department's Public Swimming and Bathing Places Regulations and this manual, the Department will issue a permit.

If, during review by the Department or county health department additional information or changes are needed to comply with the requirements of the Department, conferences may be held with the designing engineer or architect. If the application does not meet the requirements of the Department and cannot be revised satisfactorily, the permit will be denied. Upon notification of such denial, the applicant may request a hearing.

2.2.2 Engineer's Report—The engineer's report shall consist of, but not be limited to, the appropriate bathing place permit application modules that are available from the district offices. All modules pertaining to the project must be included.

The Department of Environmental Protection's rules and regulations require that an erosion and sedimentation control plan be developed for all earthmoving activities. Contact county offices of the Department of Environmental Protection regarding this plan.

Private sewage disposal systems with stream discharges and individual sewage disposal systems using sub-surface disposal must be approved by the Department of Environmental Protection or the municipal Sewage Enforcement Officer, as appropriate. Approval must first be obtained from the Department of Environmental Protection's Bureau of Water Quality Management, and is based on satisfactory compliance with wastewater disposal regulations. Proof of compliance with these requirements must be submitted with each bathing place permit application when connection to a municipal sewerage disposal system is not proposed.

2.2.3 Specifications—Complete, detailed specifications for the construction of the public bathing place, including bathhouse and all other appurtenances provided in the detailed plans shall be supplied for all phases of the proposed project.

2.2.4 Plans—All plans for public bathing places shall contain the name and location of the bathing place, the name and address of the owner, the scale, north point, date, name, address and professional seal of the design engineer or architect.

Plans shall be legible and shall be drawn to a scale that will permit all necessary information to be correctly and clearly shown. The size of the plans shall not be larger than 36 inches by 50 inches. The front cover of each folio of plans must bear the signature and imprint of the seal of the design engineer or architect. In addition, each plan submitted shall bear an imprint or legible facsimile of such seal.

Detailed plans shall be submitted which consist of a plot plan and the necessary construction or layout plans, which, together with the specifications, provide the working information necessary for the construction of the bathing facility. The plot plan of the property shall indicate the topography of the area, location and logs of test borings, water supply wells, sewerage systems, present and proposed structures and the location of the proposed bathing facility. Construction plans shall consist of plan and elevation views of the proposed bathing facilities.

2.2.5 Revisions of Approved Plans—Any deviation from approved plans or specifications affecting capacity, operating units, or any changes which may affect user health and safety must be approved by the Department and a new permit issued before such changes are made. Revised plans or specifications must be submitted in time to permit the review and approval of such plans

or specifications before any construction work is begun. Contact should be made with the appropriate district office as soon as a change is anticipated to allow timely review of revised plans and specifications.

3.0 SANITARY SURVEY—A sanitary survey of the watershed or appropriate portion of the watershed above the proposed bathing each shall be conducted before construction.

3.1 PURPOSE—The purpose of the sanitary survey is to determine the quality of the proposed bathing water, existing and potential sources of contamination, other hazards to bathers (e.g. boat traffic, currents, etc.) and the rate of flow of water supplying the beach.

3.2 RESPONSIBILITY—The sanitary survey shall be conducted by the applicant and may at the discretion of the Department, be conducted jointly with Department staff.

3.3 SCOPE—The following shall be included:

3.3.1 Extent—The sanitary survey shall include, if possible, the entire watershed upstream of the bathing beach. When the upstream watershed is very large, the area to be surveyed may be limited to the area downstream of a point in the watercourse where sufficient water quality data is available to verify bathing water of consistently acceptable quality, or a point in the watercourse below which no adverse affect on the bathing water would be anticipated, as determined by the Department.

3.3.2 Potential Sources of Contamination—The potential sources of contamination to be surveyed shall include, but are not limited to, the following: streams, unsewered residential areas, wastewater treatment plants, combined sewer and storm drain outlets, industrial outlets, sanitary landfills, open dumps, animal enclosures, and potential high erosion areas.

3.3.2.1 Plot Map—The bathing beach and any potential sources of contamination shall be shown on a plot map drawn to an appropriate scale.

3.3.2.2 Nature and Sources of Contamination—The volume/flow and concentration of potential sources of contamination, existing or anticipated, whether constant or intermittent, that might adversely affect the bathing beach water shall be determined.

3.3.3 Bathing Beach Water Quality—Samples of the proposed bathing water shall be analyzed to determine the physical, chemical and bacteriological quality of the water. Analyses shall be performed by a laboratory certified by the Department of Environmental Protection under the Pennsylvania Safe Drinking Water Regulations to analyze for the specific category of

contaminant of concern (e.g. microbiological, inorganic, organic). Aquatic plant and animal life that may be found in the bathing water shall also be evaluated. Since bather usage will degrade beach water quality, especially for bacteriological contaminants, special consideration must be given when evaluating the acceptability of a proposed beach when the existing water approaches the allowable water quality limit(s).

3.3.3.1 Set of Representative Samples—A minimum of three samples shall be collected along a proposed beach at points no more than 300 feet apart. Samples shall be collected at each end and in the middle of the proposed beach, and at other points where contaminant levels may be expected to be greatest (related to the course of water flow through the beach area, location of point and non-point source pollution, etc.). Samples should be collected just below the water surface at a water depth of about 2 feet, in accordance with sample collection procedures in the latest edition of *Standard Methods for the Examination of Water and Wastewater*.

3.3.3.2 Test Period—The testing period should last eight weeks and take place during the low flow period of the bathing season, the months of July and August. At least five sets of representative samples (as described in Section 3.3.3.1) shall be taken at evenly spaced intervals during each 30-day period and immediately after major rainfall events. Where the proposed beach is near an established bathing beach, or where extensive water quality data is otherwise available on a body of water, a testing period of less than eight weeks may be considered by the Department. Prior approval by the Department of the proposed monitoring schedule is required.

3.3.3.3 Bacteriological Quality—The bacteriological analyses—of not less than five consecutive samples of water taken over not more than a 30-day period—shall show that the fecal coliform density does not exceed a geometric mean of 200 fecal coliform per 100 ml, as specified in Section 18.28 of the Public Swimming and Bathing Places Regulations. In addition, the frequency of individual bacteriological sample results approaching 1000 fecal coliform per 100 ml will be considered along with an anticipated increase in fecal coliform density due to bather load, in determining the bacteriological acceptability of a proposed beach.

3.3.3.4 Physical Quality—A black disc 6 inches in diameter on a white background shall be readily visible from the surface of the water when placed at a water depth of at least 5 feet in the proposed

bathing area. This test shall be performed each time bacteriological samples are collected. Bottom material consistent with the requirements of Section 5.1 shall be provided so that the same disc should be visible from the surface of the water when placed at a depth of 4 feet when the beach is open for use.

3.3.3.5 Biological Quality—Aquatic plant and animal life which could threaten the health or safety of bathers (e.g. toxic blue-green algae, schistosomes: a parasitic worm released by beach snails which causes a skin rash) shall be controlled to limit the hazard to bathers. Departmental approval shall be obtained before any control chemical is used, and chemicals shall not be capable of creating a toxic reaction or irritation to bathers when applied at rates and in conjunction with bather use periods specified by the chemical manufacturer.

3.3.3.6 Chemical Quality—Bathing water is to be analyzed for chemical contaminants that may, based on the findings of the sanitary survey, be expected to occur at levels in excess of drinking water standards or guidelines. A determination of the pH levels is to be made when bacteriological samples are collected and used as an indicator of changes in chemical water quality. If the variation between the highest and lowest pH result exceeds 1 pH unit, the cause of the variation shall be determined. Based on the cause for variations in pH, additional chemical sampling may be required to determine the acceptability of the proposed bathing water. Acceptable chemical quality will be determined on a case-by-case basis considering the number of identified chemical contaminants, the possible adverse health effects, concentration and known routes of entry to the body for each contaminant, and the possibility of contaminant levels increasing.

3.3.4 Persons Contacted—The persons contacted during a survey should include, but not limited to, health officials, water and wastewater plant operators, laboratory personnel, park managers, and appropriate federal agency personnel.

3.3.5 Weather and Topographical Influences—The influence or potential influence of wind, rainfall, current, topography, or unusual factors in the watershed shall be determined.

3.3.6 Water Currents—Bathing shall not be permitted in areas where water currents, as determined during the sanitary survey, normally exceed a velocity of 3 feet per second. Water currents shall be determined and

monitored using a hand flow meter or other method acceptable to the Department. The current in each bathing area (shallow, deep, diving) should be measured at approximately the water depth.

3.3.7 Flow of Water—The flow of water per day supplying a designated bathing beach during the low flow months of July and August must be sufficient to provide at least 500 gallons of water per bather per day. Water velocity is to be measured at an appropriate number of locations along a cross-section of the bathing area. Depending on how much the water velocity varies along the cross-section of the bathing area, the cross-section should be divided into trapezoidal areas (area adjacent to the beach will be a triangle) and the velocity in the center of each trapezoid is to be measured. Then, the measured velocity in each trapezoid is multiplied by the respective measured trapezoid area. Each of these values will then be converted to a 24-hour flow and the sum of all these flows will be the total flow through the bathing beach each day. For whole lake or other beaches that occupy the entire cross-section, the Department may accept flow data for the low flow months from gauging stations, weirs, etc. Dividing this total flow by 500 gallons/day/bather will determine the maximum acceptable bather load based on flow. This value is then to be compared with the maximum allowable bather load based on surface area of the bathing area, as determined in accordance with Sections 4.3.1, 4.3.2, and 4.3.3. Compliance with both the flow and area standards is required.

3.3.8 Boat Traffic—Beaches are prohibited in the immediate area of extensive boat traffic, marinas, and boat docks.

4.0 BEACH SIZE AND USER LOAD—The beach size (designated land and water) is to be based on the estimated maximum number of users which may be frequently expected at any one time in the water and on the land area.

4.1 DESIGNATION OF AREAS—For the purpose of computing user load within the beach area, those portions of the bathing water 5 feet or less in depth shall be designated the “shallow area”. Those portions of the bathing water over 5 feet in depth shall be designated “deep area”.

4.2 POSTING OF USER LOAD—A sign shall be posted at all the entrances to the beach area displaying the maximum number of patrons permitted in the beach area based on the design parameters listed in Section 4.3.

4.3 DESIGN LOADING—Bather design loading is based on the anticipated maximum number of bathers in each of the different areas of the water at one time and shall meet the following guidelines. The design loading of the beach area shall be consistent with the supporting facilities (parking lots, sewage facilities, etc.).

4.3.1 Shallow Area—When calculating user loads in the shallow area (5 feet or less in depth) 25 square feet of water surface area shall be provided each bather.

4.3.2 Deep Area—When calculating user loads in the deep area (greater than 5 feet in depth) 75 square feet of water surface area per bather shall be provided.

4.3.3 Diving Area—Where diving facilities are provided, 300 square feet of water surface area shall be reserved around each diving board or diving platform for a total of three bathers, and this area should not be included in computing the permissible user load of the deep area.

4.3.4 Additional Area Allowance – Additional allowance shall be made on the basis of one additional patron per each 50 square feet of additional picnic and play area within the beach area.

5.0 DESIGN

5.1 BOTTOM MATERIALS—The bathing area bottom shall consist of sand, pea gravel, or other material acceptable to the Department considering bather comfort, turbidity, bacteriological growth, toxicity, etc. A suitable grade bottom material is sand meeting PennDOT “Type A” grading and quality requirements, which has less than 10 percent of the material passing the No. 100 sieve. The bottom material shall contain minimal quantities of silt or clay sized particles.

The bottom material to be used should allow a black disc 6 inches in diameter on a white background to be readily visible from the surface of the water when placed at a water depth of at least 4 feet and bather usage conditions are simulated. The Department will consider other information on the bottom material such as particle size distribution, utilization at existing bathing beaches, etc., in lieu of simulated conditions.

- 5.2 BEACH MATERIAL**—The material in the bathing beach area shall be consistent with the bottom material in the swimming area and consist of sand, pea gravel, or other material acceptable to the Department.
- 5.2.1 Minimum Beach Area**—A clear, unobstructed beach not less than 30 feet wide, measured from the waters edge, and extending 5 feet beyond both outside buoy lines shall be provided (Figure 1).
- 5.2.2 Whole Lake Beach Area**—A whole lake beach (Figure 2) shall have a 30 feet wide, clear, unobstructed beach extending around the entire lake.
- 5.2.3 Cement Edges**—Cement edges joining the lounging and bathing areas are permitted only to prevent erosion. Areas with edges are not to be used for ingress/egress. Cement erosion edges shall not pose a tripping hazard or have sharp edges (Figure 2).
- 5.3 BOTTOM SLOPES**—For depths up to 5 feet, the bottom slope shall be uniform and should not exceed 1 foot vertical to 10 feet horizontal (1V:10H). In no case shall the bottom slopes for shallow areas exceed 1V:6H. For depths greater than 5 feet, the bottom slope shall not exceed 1V:3H.
- 5.4 MAXIMUM DEPTH**—The maximum depth at the deepest portion of the designated bathing area should not exceed 6 feet. In no case shall the maximum depth in the designated bathing area, including diving areas, exceed 13 feet.
- 5.5 DIVING BOARDS AND PLATFORMS**—Where diving facilities are provided, water depths and distances to obstructions shall conform to Table 1 and Figure 3. Diving boards and platforms shall not be greater than 3 meters above the water surface and the water depth shall not exceed 13 feet. All diving facilities are to be constructed on fixed platforms or piers. All platforms shall be constructed with at least a visible 12-inch air space between the bottom of the platform and the water surface. There shall be as little underwater construction as is required for adequate support. All braces and struts shall be designed to prevent entrapment of bathers. The platform shall be of a uniform, easily cleaned, impervious material, and be of slip-resistant construction. No wooden platform surfaces will be allowed. All sides of a platform shall be clearly visible from a lifeguard station(s).

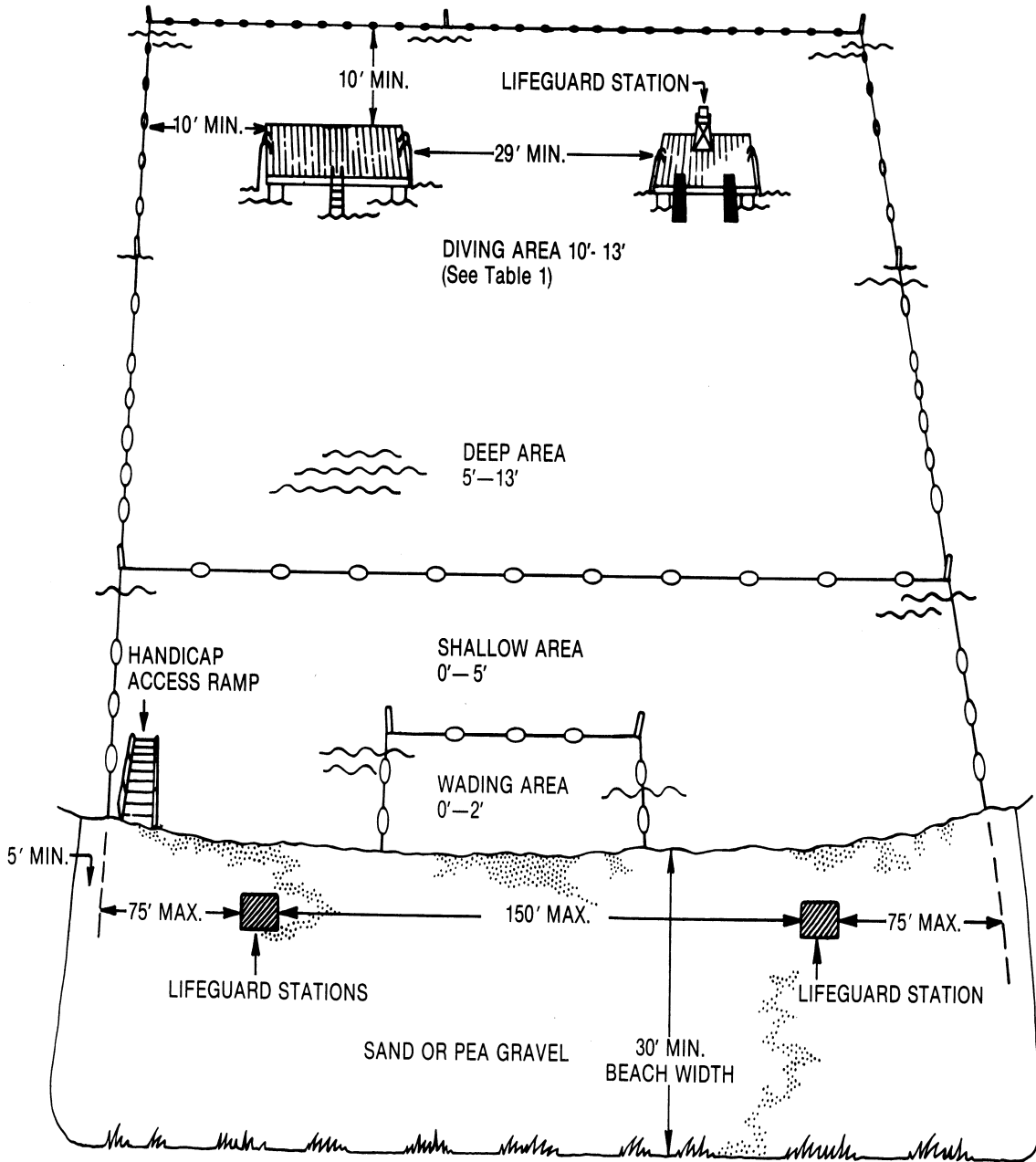
5.5.1 Ladders—All platforms shall be equipped with a ladder at least every 75 feet along the perimeter of the platform. There shall be at least one ladder on all sides of a platform and a ladder provided within 30 feet of the diving/sliding board. All ladders shall be corrosion-resistant, provide handrails and be equipped with slip-resistant treads. There shall be a clearance of not more than 6 inches nor less than 3 inches between any ladder and platform wall (Figure 4).

5.5.2 Steps and Guardrails—Supports and steps for diving boards and platforms shall be of substantial construction and of sufficient structural strength to safely carry the maximum anticipated loads. Steps shall be of corrosion-resistant material, easy to clean, and of slip-resistant design. Handrails shall be provided on both sides of all steps and ladders leading to diving boards or platforms more than 1 meter above the water. All platforms and diving boards shall be protected on both sides with guardrails 30 inches high (measured from the top of the board or platform) extending at least 1 foot out over the water from the edge of the decking (Figure 5). The guard rails for platforms and diving boards higher than 1 meter shall have at least one intermediate rail (Figure 6). Steps leading up to a diving board or platform more than 1 meter above the water surface shall be installed at an angle not greater than 75 degrees from horizontal (Figure 6). Any deck equipment (diving board, slide) shall have space from the base of the ladder of that equipment to the edge of the platform not less than 6 feet wide.

5.5.3 Water Glare—To avoid glare from the sun, diving boards and platforms should face north if possible, with facing east being the second choice.

5.6 HANDICAP ACCESS—Handicap access ramps, if provided, shall be located at the end of the bathing area to prevent other bathers from swimming into or jumping/diving off of the structure. The structure shall have rounded edges and be marked by some means (buoys, etc.) as an underwater hazard. The access will be designed and constructed to minimize the hazard posed to handicapped and non-handicapped bathers.

BEACH DESIGN



Note - Depths shown are maximum allowable
Diving areas are optional

GRASS

Figure 1

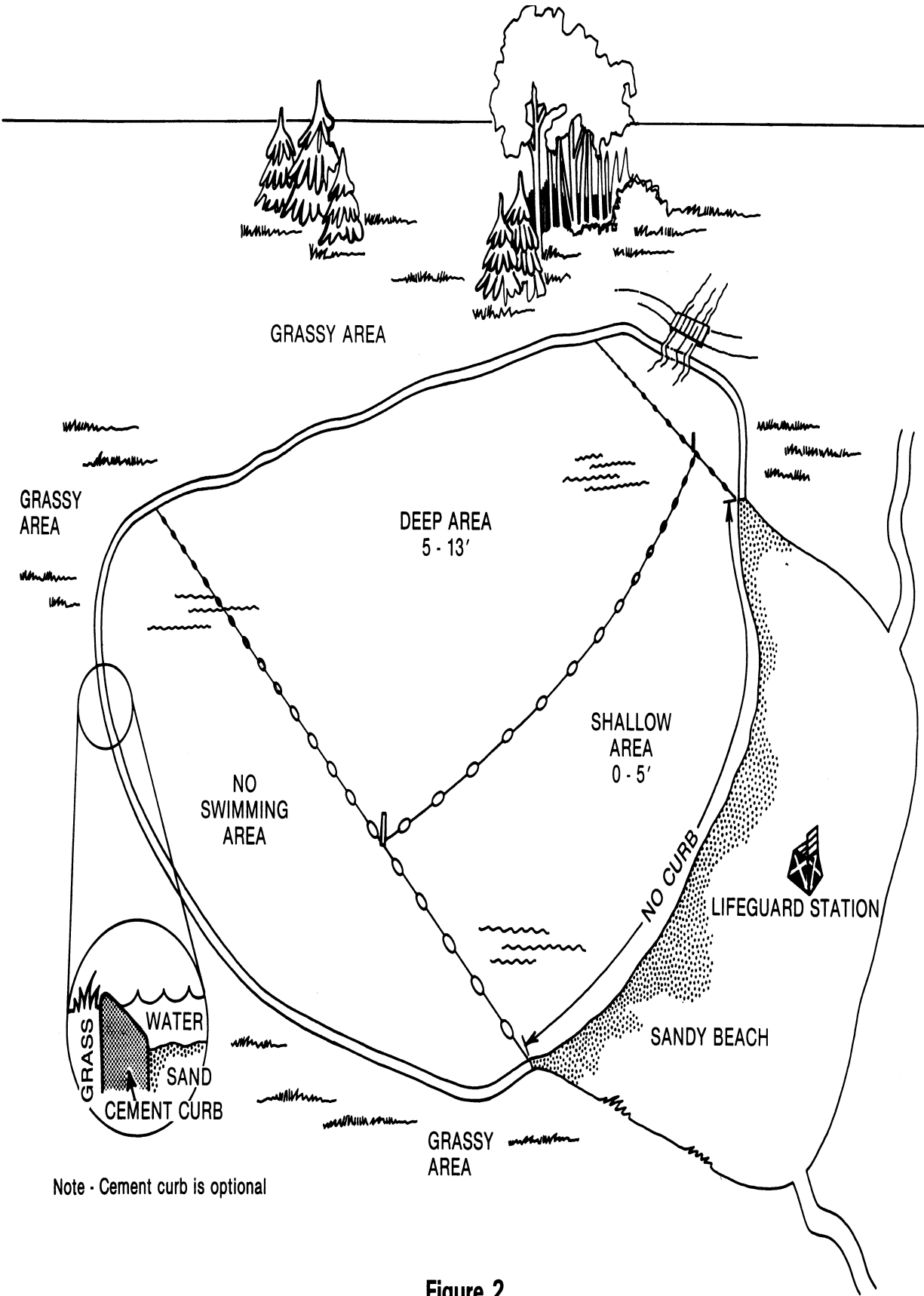
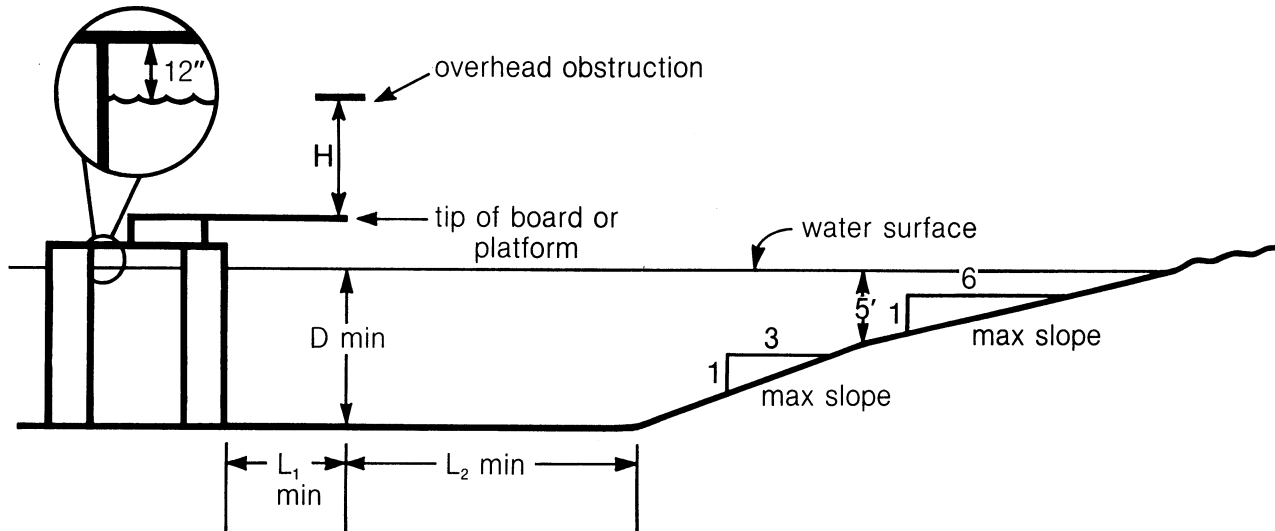


Figure 2

TABLE 1
MINIMUM DIMENSIONS
DIVING EQUIPMENT AT BEACHES

Board/Platform Height Over Water	Diving Boards			Platforms	
	Less than 1M	1M	3M	1M	3M
Max, Diving Board Length - Min. Pit. Area	12'	16'	16'	*5'x16'	*5'x16'
D	10'	12'	13'	12'	13'
L1	3'	6'	6'	5'	5'
L2	16'	20'	20'	17'	20'
H	16'	16'	16'	10'	10'
From Plummets to Safety Maker	10'	12'	12'	10'	10'
From Plummets to Adjacent Plummets on same platform	10'	12'	12'	10'	10'
From Plummets to Platform Ahead-(16' required between non-elevated platforms without a diving board)	29'	29'	34'	29'	34'



*Minimum dimensions recommended by NCAA.

Figure 3

TYPICAL LADDER DESIGN

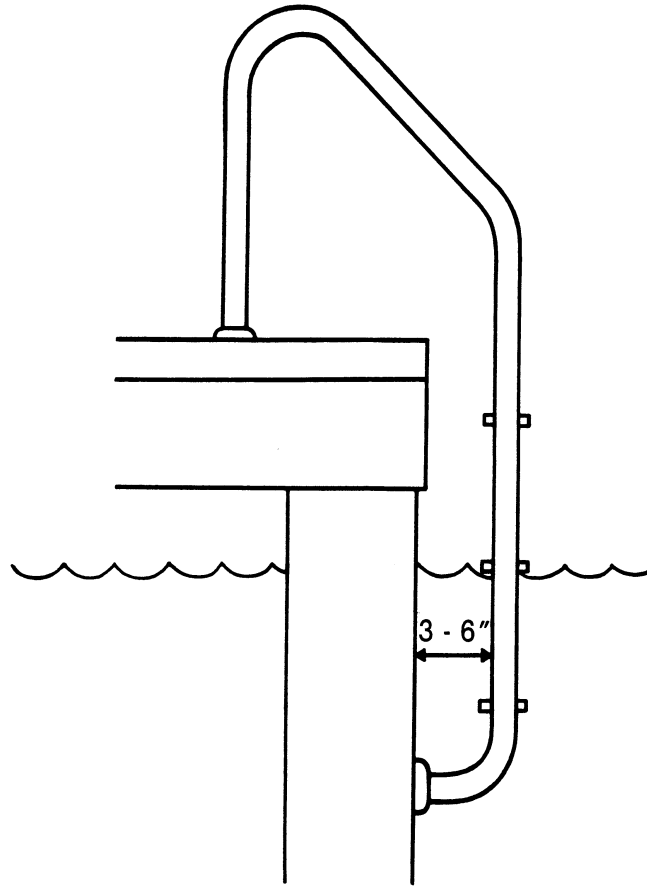


Figure 4

DIVING BOARD

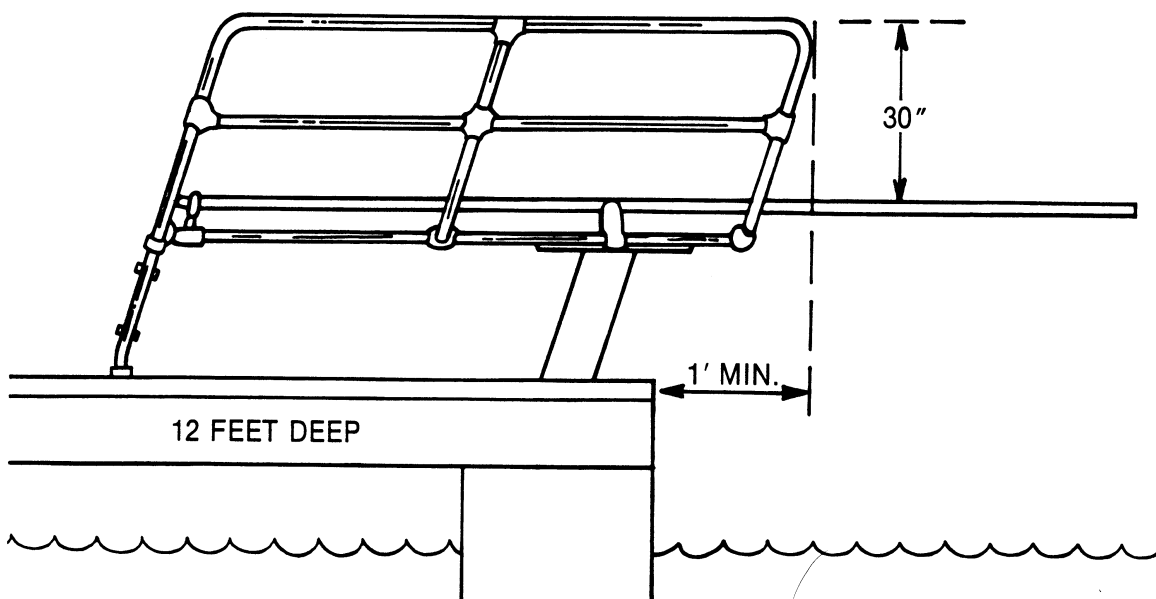


Figure 5

THREE METER DIVING BOARD

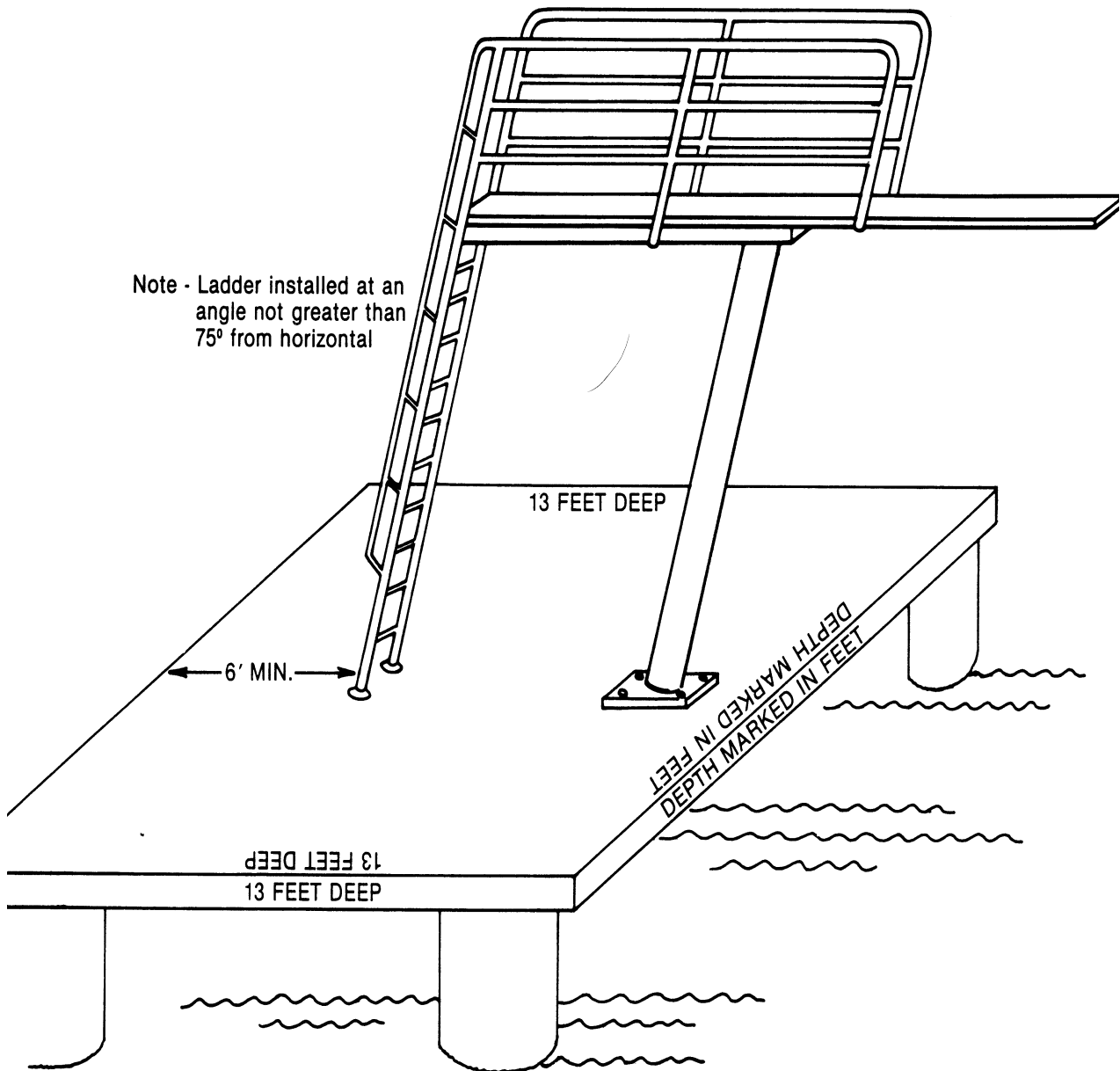


Figure 6

6.0 SAFETY REQUIREMENTS

6.1 SAFETY MARKERS—Lines, buoys, poles, or other markers shall be used to designate wading, shallow, deep, and diving areas of a bathing beach. Marker lines with buoy markers shall be securely anchored. Lines shall have buoys no more than 25 feet apart and at points where lines are joined.

6.1.1 Wading Area—Designated wading areas, if provided, shall be marked by lines with buoys, shall be no more than 2 feet deep and shall be located in front of a lifeguard station.

6.1.2 Shallow Area—Marker lines with buoys shall designate the boundary of the shallow area if there is an increase in bottom slope between the shallow and deep (greater than 5 feet) areas. The marker lines separating the shallow and deep areas shall be located 1 to 2 feet toward the shallow area of the bathing beach from the bottom slope break point. No marker lines separating shallow and deep areas will be required if the bottom slope does not change from the shallow to the deep area. However, if the width of the deep area is more than 15 feet, a marker line separating shallow and deep areas should be provided, even if there is no change in bottom slope.

6.1.3 Diving Area—Marker lines with buoys shall designate the area restricted to diving from platforms or diving boards.

6.1.4 Limits of Bathing Area—The limits of the bathing area will be designated by lines, buoys, and signs indicating that use of the area is limited to swimming and bathing.

6.2 DEPTH MARKERS—Clearly visible depth markers, with at least 6 inch high numbers indicating the water depth in feet (in addition, meters may also be indicated), shall be provided on a color contrasting background with the following units:

- (1) feet or ft.
- (2) inches or in.
- (3) meters or m

The markers shall be placed at or above the water surface at one-foot increments of depth and at no more than 25-foot horizontal intervals. All platforms and similar structures (e.g. deep water lifeguard chairs) shall have depth markings on the deck edges and face plates of the structure.

6.3 LIFEGUARD STATIONS—Under the Public Bathing Law as amended in 1998, lifeguard coverage is required at all bathing beaches that charge a fee for use of the beach whenever it is open to the public, except those located at campgrounds. If

lifeguard coverage is provided, stations should be placed in locations that will minimize sun glare on the water, and in positions that will give complete visual coverage of the bathing area.

6.3.1 Number—A minimum of one lifeguard station for every 150 feet of beach immediately adjacent to the bathing area (Figure 1) shall be provided.

6.3.2 Location and Design—Onshore lifeguard stations shall be located as close as practicable to the bathing area shoreline. Lifeguards shall be isolated from beach crowds by elevated seats or stands high enough to give them a complete and unobstructed view of the bathing and beach area for which they are responsible. Where swimming or diving is permitted more than 150 feet from the shoreline, lifesaving patrol boats or offshore lifesaving stations shall be provided.

6.3.3 Warning Signs - Whenever the beach is opened for use and no lifeguard service is provided, warning signs shall be placed in plain view of the entrances and inside the pool area which state, "WARNING - NO LIFEGUARD ON DUTY" with clearly legible letters at least 4 inches (10 cm) high. In addition, the signs shall also state in clearly legible letters at least 2 inches (5.1 cm) high, "NO SWIMMING ALONE. CHILDREN AND NON-SWIMMERS SHALL NOT USE THE POOL UNLESS ACCOMPANIED BY A RESPONSIBLE ADULT."

6.4 FIRST AID AREA—A bathing beach or group of beaches in close proximity shall have a readily accessible room or area designated and equipped for emergency care. The room or area shall have a cot, sink, and telephone. The room or area should be located so that it is readily accessible to the street or road for easy transport of accident victims.

6.5 EMERGENCY EXIT/ENTRANCE—An emergency exit/entrance from and to the bathing area shall be provided. The entrance shall be designed so that ambulances and other emergency vehicles have easy access to the bathing area and first aid room.

6.6 CLOSURE SIGN—All beaches shall have a sign at a designated location (e.g. behind the lifeguard chair, front gate, etc.) to indicate whether the beach is open or closed. If the beach is closed, the sign shall provide the reason for closure (e.g. no supervision provided, bathing beach contaminated, etc.).

6.7 TELEPHONE – Each bathing beach should have a telephone that is immediately accessible, does not require coins to dial 911 and has appropriate emergency contact numbers posted next to it.

6.8 LIFESAVING EQUIPMENT

6.8.1 Regulatory Requirements – Section 18.43 of Title 28, Chapter 18 of the Pennsylvania Code requirement that all bathing beaches shall have at least one flotation device and one reaching device. The recommendations for each are as follows

6.8.1.1 Flotation Device – A lifeguard rescuer tube or “torpedo” of a type that is approved by the American Red Cross or other lifeguard certifying authority or a U. S. Coast Guard-approved ring, 18-24 inches in diameter, or a throwing buoy.

6.8.1.2 Reaching Device – A length of rope of at least 50 feet in length or a life pole or shepherd’s crook-type pole, with blunted ends and a minimum length of twelve (12) feet.

6.8.2 Location – Lifesaving equipment shall be mounted in conspicuous places, distributed around the swimming pool deck. Whenever lifeguard chairs are provided, each shall be equipped with one unit of lifesaving equipment. A rescue tube “torpedo” may be substituted for a ring buoy at a lifeguard chair.

6.9 FIRST AID EQUIPMENT – Every bathing beach shall be equipped with a first aid kit which contains all of the following materials:

two units - 1-inch (2.5 cm) adhesive compress

two units - 2-inch (5.1 cm) bandage compress two units - 3-inch (7.6 cm) bandage compress two units - 4-inch (10 cm) bandage compress

one unit - 3-inch by 3-inch (7.6 cm by 7.6 cm) plain gauze pad

two units - gauze roller bandage

one unit - eye dressing packet

four units - plain absorbent gauze, ½ square yard (0.42 m²)

three units - plain absorbent gauze, 24 inches (61 cm) by 72 inches (180 cm)

four units - triangular bandages, 40 inches (101.6 cm/1.0m)

one unit - bandage scissors, tweezers

two units - disposable surgical gloves

one unit - CPR face mask

two units - protective face shield

6.10 Spine Board - A spine board with straps and head immobilizers should be provided.

7.0 LIGHTING AND ELECTRICAL REQUIREMENTS

7.1 ELECTRICAL—All wiring shall conform to the applicable sections of Pennsylvania’s Uniform Construction Code current at the time of installation.

7.1.1 Overhead Clearance—No electrical wiring shall pass overhead of the beach (land and water) area within a 30 foot horizontal distance of the water’s edge.

7.2 INSPECTION OF ELECTRICAL SYSTEMS – Prior to the opening of a swimming pool and every three years afterwards, the electrical systems shall be inspected by an acceptable third party agency. An acceptable electrical inspection agency shall be a third party that conducts inspections of electrical systems and all inspectors employed by the agency that perform inspections of public bathing places shall have successfully completed the NCPCCI exam as an Electrical Inspector, Category 2B. The electrical inspection agency shall certify that the electrical systems of the swimming pool meet the standards list in Title 28, Chapter 18 of the Pennsylvania Code and the National Electrical Code (NEC). Upon successful completion of the inspection, the inspector shall forward a copy of the letter of approval to the Department and the pool shall post a copy of the letter of approval in a conspicuous location.

8.0 WATER SUPPLY AND WASTEWATER DISPOSAL

8.1 DRINKING WATER SUPPLY—The quality of the water supplied to all drinking fountains, food concessions, lavatories, and showers shall at all times meet the standards of the Department of Environmental Protection, as defined in the Pennsylvania Safe Drinking Water Regulations.

8.2 SANITARY WASTE—A Department of Environmental Protection approved method for disposing of sanitary sewage shall be provided. Where available, a municipal sanitary sewerage system should be used.

9.0 BATHER PREPARATION FACILITIES

9.1 GENERAL—Adequate lavatories, toilets, and appurtenances for each sex shall be provided for bathers at beaches unless these facilities are otherwise available within

500 feet and no more than one floor above or below the beach. Dressing facilities and showers, though not required by the regulations, are recommended.

9.2 DESIGN CRITERIA

9.2.1 Bathhouse Routing—The layout of the bathhouse shall be such that the patrons, on leaving the dressing area pass the toilets, then the showers (if provided) on route to the bathing place.

9.2.2 Bathhouse Design—Bathhouses to be used by both sexes shall be divided in to two parts, separated by a tight partition and designated for men and women. The entrances and exits shall be screened to break the line of sight. Reasonable dressing rooms should sufficient area for each patron, based on a maximum of 20 percent of the user load, as determined in accordance with Section 4.0, utilizing the bathhouse at one time.

Floors of the bathhouse shall be of smooth, finished material with slip-resistant surfaces, impervious to moisture, easy to clean, and sloped at least 1/4 inch per foot to floor drains. Carpeting shall not be permitted in showers and toilet areas. Junctions between walls and floors shall be coved. Walls and partitions shall be of smooth, impervious materials, free from cracks or open joints. Partitions between dressing cubicles, when provided, shall terminate at least 10 inches above the floor, or shall be placed on continuous raised masonry or concrete bases at least 4 inches high. Lockers, when provided, shall be set either on solid masonry or concrete bases at least 4 inches high or with legs with the bottom of the locker at least 10 inches above the floor. Lockers shall be properly vented.

9.2.3 Fixture Requirements—Bathhouse facilities shall be provided based on a maximum patron load according to the following schedule. For organized camps or similar facilities where all users may enter or leave the beach at about the same time, the number of fixtures should be increased appropriately. At a minimum, each bathhouse shall contain one toilet and one urinal for males and two toilets for females. A baby changing area should be provided for each area designated for men and women.

BATHHOUSE FACILITY SCHEDULE

Fixture	Male User Loading	Female User Loading
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*1 toilet	60	30
*1 urinal	60	
1 lavatory (washbasin)	60	60
1 shower	40	40

*One toilet and one urinal are required for each 60 male users.

*Two toilets are required for each 60 female users.

9.2.3.1 Showers—If provided, showers shall be supplied with water at a temperature of at least 90 °F and no more than 115 °F, and at a flow rate of at least 1.5 gallons per minute for each shower head. All plumbing shall conform to local plumbing codes.

9.2.3.2 Soap—Liquid or powdered soap dispensers shall be provided. Glass dispensers are not acceptable.

9.2.4 Foot Baths—The use of foot baths is prohibited.

9.2.5 Hose Bibs—Hose bibs shall be provided within the bathhouse to enable the entire area to be flushed with a 50-foot hose. Floor drains should be spaced not more than 25 feet apart and the floor shall slope at least ¼ inch per foot towards the floor drains.

9.2.6 Electric Receptacles - All bathhouse electrical outlets shall be protected by ground fault circuit interrupters.

10.0 WAIVERS

10.1 Waiver Requirements - The Department may grant a waiver for portions of this manual. The applicant must show that the waiver of requirement provides the appropriate protection of public health and safety and does not introduce any toxic or hazardous materials to the water nor create a threat of injury, illness, or death.

10.2 Application for a Waiver – The owner or the registered professional engineer or architect of the public swimming pool must submit a written request for a waiver, specifying which section(s) of the manual are requested for waiver and a justification for the waiver, including any hardships that prevent compliance. The engineer or architect shall certify that the requested waiver does not introduce a hazardous or toxic material and not create a threat of injury, illness, or death. The Pennsylvania Department of Health will notify the applicant in writing of its decision whether to approve or deny the waiver.

10.3 Conditions – The Pennsylvania Department of Health may attach conditions for approval of a waiver for which the owner, operator, or registered professional engineer or architect must comply. Failure to comply with said conditions shall be grounds for revoking the waiver and the operating permit of the public swimming facility.

10.4 Revocation of Waiver - If, at any time, the Department finds that the waiver has resulted in a compromise of public health or safety, or if the owner or certified operator of has failed to comply with any conditions attached to the waiver, the Department shall revoke the waiver and the owner or certified operator shall take such action as is required to comply with this manual or with the conditions set forth by the Department in order to reinstate the waiver.

PUBLIC BATHING PLACE

APPLICATION FOR WAIVER OF REQUIREMENT

Instructions: Please complete and forward this application to Pennsylvania Department of Health, Environmental Health Administrator, 628 Health and Welfare Building, Harrisburg, PA 17120. Please respond to ALL of the following questions. Use additional sheets of paper if necessary and attach them to this application.

Facility Information:

Name of Facility: _____

Facility Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Fax: _____ E-mail: _____

Type of Facility (Check One): Swimming Pool Spa or Hot Tub

Bathing Beach Specialty Pool (Describe): _____

Permit Number (For Modification of an Existing Facility): _____

Owner Information:

Owner Name: _____

Owner Address (If Different): _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Fax: _____ E-mail: _____

Applicant Information:

Applicant Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Fax: _____ E-mail: _____

Applicant is (Check One): Professional Engineer Registered Architect

CERTIFICATION

I, _____, hereby certify that the information contained in this application is true and accurate to the best of my knowledge.

Name of Professional Engineer/Architect

Signature

Professional or Notary Seal

Firm or Agency: _____

Telephone: () _____

Name of Notary: _____

Date: _____

QUESTIONNAIRE

1. Section of Manual for which a waiver is sought: Section Number: _____

Title: _____

2. Describe the nature of the waiver sought (Attach Additional Sheets if Necessary):

3. Justification for waiver or hardship that compliance with create (Attach Additional

Sheets if Necessary): _____

4. Will this waiver introduce any hazardous or toxic substances into the water? (Check One): Yes No

5. Will the waiver introduce a physical hazard or an underwater or overhead obstruction to the public bathing place that may cause injury or drowning? (Check One):

 Yes No

6. Will the waiver interfere with the normal circulation of water in the facility? (Check One): Yes No

7. Will the waiver result in the introduction of any unsanitary conditions or conditions that may promote the spread of disease or disease vectors? (Check One):

 Yes No

8. Swimming pools, specialty pools, spas and hot tubs only: Will the waiver result in a reduction in the required disinfectant level or a reduction of the effectiveness of disinfection and oxidation? (Check One): Yes No

9. Swimming pools, specialty pools, spas and hot tubs only: Will the waiver interfere with the required turnover period for the facility? (Check One):

 Yes No

10. Bathing Beaches only: Will the waiver reduce safeguards against hazardous, parasite, or other harmful organisms? (Check One): Yes No

Pennsylvania Department of Health Use Only:

Approve Approved with Conditions (See Below) Denied

Comments/Conditions: _____

Note: Failure to adhere to the conditions for a waiver shall be grounds to revoke the waiver.