1.0 DEFINITION

"Other Bathing Area" means any body of water used for swimming, diving, or recreational bathing and not contained within a lake impoundments, ponds, rivers and streams, and similar outdoor facilities which are partially natural in character, together with buildings, equipment and appurtenances pertaining thereto, irrespective of whether a fee is charged for the use thereof.

2.0 SUBMISSION OF PLANS

2.1 GENERAL

All reports, final plans and specifications should be submitted at least 30 days prior to the date on which action by the regulatory agency is desired. Preliminary plans and the engineer's report should be submitted for review prior to the preparation of final plans. No approval for construction shall be issued until final, complete, detailed plans and specifications have been submitted to the regulatory agency and found to be satisfactory. Documents submitted for formal approval shall contain sufficient information to demonstrate improvements thereto, will meet the standards contained herein and shall include but not be limited to:

2.2 General Layout

2.2.1 Detailed description of the watershed with location and identification of all potential sources of contamination including any anticipated future development.

2.2.2 Location of access roads, parking building, water supplies, sanitary and storm sewers, electrical and telephone services and the proposed facilities relative to existing facilities.

2.2.3 Location relative to nearest population center with service facilities such as medical, fire protection and communication.

2.3 Basis of Design

2.3.1 Maximum and average attendance and swimmer loads.

2.3.2 Source, quality, quantity and characteristics of water.

2.3.3 Refer to 5.0 for specific design criteria.

2.4 Operational Detail

2.4.1 Dates when other bathing areas will be operated.

2.4.2 Training, experience and number of on-site management, supervisory and lifeguard personnel.

3.0 SUBMISSION OF PLANS

3.1 Frequency

3.1.1 Existing Beaches – a sanitary survey should be conducted annually before the bathing season opens, or more frequently if indicated.

3.1.2 Proposed Beaches – On proposed bathing areas, a sanitary survey shall be conducted before construction or expansion.

3.2 Responsibility

The sanitary survey shall be conducted by the official agency regulating the bathing area or by a person or persons acceptable to that agency.

3.3 Scope

The following shall be included:

3.3.1 *Extent of Watershed* to include – the sanitary survey shall include the entire watershed if possible. In the instance of a large watershed, the area to be covered shall be determined based on knowledge of the area.

3.3.2 *Potential Sources of Contamination* – the potential sources of contamination 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 *Nature and Sources of Contamination* – the nature of potential sources of contamination, existing or proposed, whether constant or intermittent, volume, occurring only with specific weather conditions, and the concentration of the materials in the effluent that might adversely affect the bathing area water.

3.3.3 *Weather and Topographical Influences* – the influence of potential influence of wind, rainfall, current, topography, or unusual factors in the watershed.

3.3.4 *Bathing Beach Water Quality*

3.3.4.1 *Existing Beaches* – the history of the bacteriological quality, the pH, and the turbidity.

3.3.4.2 *Proposed Beaches* – the results of at least one set of representative bacterial samples, pH tests, and turbidity tests each week for a period of eight weeks. The regulatory agency shall determine the testing locations and times. Testing should be done during the normal bathing season and include sampling after at least one heavy rainfall.

3.3.5 *Physical and Chemical* – the physical and chemical quality of the existing or proposed bathing area water including objectionable color, odor, taste and substances capable of producing quality problems. A history of any quality problems encountered in the bathing water should be included.

3.3.6 *Biological* – the biological quality of the existing or proposed bathing area water including objectionable vegetation, infectious snails, and poisonous or dangerous animals.

3.3.7 *Depth and Slope of Bottom* – the depth of water in the swimming area and the existence of any dangerous slopes or dropoffs.

3.3.8 *Safety* – the physical condition and safety of construction of any floating platforms, diving towers or lifeguard towers located in the water, the condition of the bathhouse and appurtenances on the beach.

3.3.9 *Sanitation* – the number, location, and condition of water sources and sewage treatment devices serving the beach area.

3.3.10 *Water Level* – seasonal or anticipated water level variations.

3.3.11 *Bather Load* – history of average and peak bather load. On proposed beaches anticipated bather load.

3.3.12 *Other* – Any other notable characteristics in the watershed or bathing beach.

3.4 Prohibitions from Establishing New Bathing Beaches

New bathing beaches may be prohibited when contamination from sources outlined in section 3.3.2 is likely as determined by the regulatory agency and shall be prohibited where the following conditions exist:

3.4.1 *Wastewater Treatment Plant Effluent Limitations* – discharges from sewage treatment plants within 750 feet (228 m) of the bathing beach or any discharge that will or may have an adverse physiological effect on the bathers.

3.4.2 *Boat Traffic* – extensive boat traffic, marinas or boat dockage in the immediate area of the proposed bathing beach.

3.4.3 *Water Current* – where current exceeds three feet (0.9 m) per second.

3.4.4 *Water Quality* – when the water quality standards in section 4.0 cannot be reasonably met.

4.0 WATER QUALITY STANDARDS

4.1 Bacteriological Quality

4.1.1 The bathing beach shall be closed when the fecal coliform density five successive daily sets of samples collected on five different days within a 30-day period exceeds a geometric mean of 200 per 100 milliliters (mL) or when the fecal coliform density of any sample exceeds 1,000 per 100 mL.

4.1.2 Daily sets of samples shall be collected and analyzed while the bathing beach is closed. The beach may be reopened if the fecal coliform density in a daily set of samples is less than 200 per 100 mL and a satisfactory sanitary survey has been conducted.

4.1.3 As an alternate to 4.4.1 above, the United States Environmental Protection Agency (USEPA) has suggested that the E. coli or enterococci organisms be used instead of fecal coliform as indicators of contamination. A geometric mean of five samples should not exceed 126 E. coli organisms per 100 mL or 33 enterococci organisms per 100 mL. A single sample should not exceed 235 E. coli or 61 enterococci organisms per 100 mL.

4.2 Chemical Quality

4.2.1 The water shall be free of chemical substances capable of creating toxic reactions, including skin or membrane irritations.

4.3 Physical Quality

4.3.1 Turbidity and Color – a black disc at least six inches (15cm) in diameter on a white field placed at a depth of at least four feet (1.2m) of water should be readily visible from the surface of the water whenever the beach is open for use.

4.3.2 Physical determinations shall show the water to be free of deposit, growths, oils, greases or other substances capable of creating a health or safety hazard.

4.4 Biological Quality

4.4.1 Algae and aquatic vegetation shall be controlled so that no hazard to bathers results.

4.4.2 Where schistosome dermatitis (swimmers itch) is known to exist, appropriate measures shall be taken to protect bathers. Such measures may include posting of warning signs, chemical treatment, or closing of the beach.

4.4.3 Chemicals used for water treatment shall be acceptable to the regulatory agency and shall be applied by properly trained applicators. Any chemical used, when properly applied, shall not be capable of creating toxic reactions, including skin or membrane irritations when the beach is in operation.

4.5 Laboratory Analysis

4.5.1 All laboratory analyses shall be conducted according to procedures acceptable to the regulatory agency.

5.0 DESIGN

5.1 Location – the suitability of the site shall be established by a sanitary survey.

5.2 Area – a bathing beach shall not be established or operated on a body of water with a surface area of less than one acre (0.4 hectare). When the area is less than two acres (0.8 hectare) and natural flowthrough is lacking, a source of dilution water acceptable to the regulatory agency of at least 100 gallons (380 liters) per bather per day should be provided.

5.3 Bather Load – a minimum of 25 square feet (2.3 sq. m.) of water surface per bather shall be provided. At least 75 square feet (7.0 sq. m) per bather shall be provided in the area over four feet (1.2 m) deep.

5.4 Land Area – at least 35 square feet (3.3 sq. m) of land area per bather should be provided.

5.5 Bottom Slopes – for depths up to four feet (1.2 m), the slope shall be uniform and not exceed 1:10 and should not exceed 1:15. For greater depths, the slope should not exceed 1:3.

5.6 Bottom Materials – the bottom up to a water depth of six feet (1.8 m) shall consist of sand, pea gravel or other material acceptable to the regulatory agency. The bottom material shall be consistent with efforts to meet the turbidity standards of section 4.3.1.

5.7 Area designations

5.7.1 *Location of lines* – marker lines with floats shall be provided to designate the perimeter, the separation of shallow and deep areas at a depth of three to four feet (0.9 to 1.2m), the diving area, dropoffs, and underwater obstruction. A separate wading area up to two feet (0.6 m) deep, designated by lines, should be provided.

5.7.2 *Installation* – lines shall be securely anchored and have buoys no more than 25 feet (7.6 m) apart and at points where lines are joined.

5.8 Diving Facilities – floating diving piers and fixed platforms shall be constructed with a visible 12-inch (0.3m) air space under maximum feasible load. There shall be as little underwater construction as is consistent with adequate support. All braces and struts shall be designed to prevent entrapment of bathers.

5.9 Water Depths

5.9.1 *Minimum depths* – the minimum water depth for a distance of at least twelve feet (3.7 m) from the edge of a diving platform shall be at least eight

feet (2.4 m). If a diving board is provided that is three or less feet (0.9 m) above the water, the water depth at the end of the diving board, and for at least twelve feet (3.7 m) beyond the end and sides of the board, shall be at least ten feet (3.0 m). if a diving board is provided that is more than three feet (0.9m) above the water, the water depth at the end of the diving board, and for at least twelve feet (3.7 m) beyond the end and sides of the diving board, shall be at least twelve feet (3.7 m). No diving board or platform which is more than ten feet (3.0 m) above the water shall be installed.

5.9.2 *Maximum depths* – the maximum depth for any bathing area shall be twelve feet except for designated diving areas with three meter boards.

5.10 Playground Equipment
If playground equipment is to be provided, it shall be acceptable to the regulatory agency.

5.11 Water supply

5.11.1 *Potable Water* – a potable water supply should be provided. If provided, it shall be in accord with the appropriate regulatory agency standards. A pressure potable water supply system shall be provided at a beach capable of accommodating 500 persons. The water shall be obtained from a municipal water supply when available.

5.11.2 *Hose Bibs* – hose bibs shall be protected against backflow.

5.12 Wastewater Disposal – wastewater from a bathhouse or related facilities shall be discharged to a municipal sewerage system when available. If a municipal sewerage system is not available, the wastewater shall be discharged to a sewerage or treatment system acceptable to the regulatory agency.

5.13 Toilet Facilities – toilet facilities shall be provided within 500 feet (150 m) of public bathing beach as follows:

PLUMBING FIXTURES REQUIRED

Water Closets

Number of Fixtures	Males	Females
1	1 – 99	1 – 99
2	200-399	100-199
3	400-600	200-399
4		400-600

Over 600, one fixture for each additional 300 females and males.

5.14 Lavatories – where flush toilets are available, lavatories shall be provided as follows:

Number of Fixtures per Sex	Bathers
1	1-199
2	200-399
3	400-750

Over 750, one for each additional 500 persons

5.15 Showers – one shower for each 100 users or fraction thereof for each sex should be provided (with new bathing beach).

5.16 Dressing Facilities – adequate dressing facilities should be provided for each sex.

5.17 Bathhouse Construction – floors shall be easily cleaned, slip resistant, impervious material, sloped to drains. Wall and floor junctions shall be coved. Walls and partitions shall be smooth, easily cleaned, durable material, free from cracks or open joints.

5.18 Treatment of Bathing Beach Water – if the water quality standards cannot be met, the regulatory agency shall be consulted about the feasibility of treatment to overcome the deficiencies.

6.0 SAFETY REQUIREMENTS

6.1 Lifeguards

6.1.1 *Number* – one or more certified lifeguards should be on duty during all bathing hours. A minimum of one lifeguard to every 150 feet (46 m) of beach immediately adjacent to occupied bathing area should be provided.

6.1.2 *Qualifications* – lifeguards shall be capable swimmers, competent in lifesaving methods and in methods of artificial resuscitation. Lifeguards shall be certified. Acceptable certification for a lifeguard shall include but is not limited to holding current valid certificates from the American Red Cross in Lifeguard Training, Basic Life Support and Cardiopulmonary Resuscitation or other equivalent certificates.

6.1.3 *Locations* – onshore lifeguard stations shall be located as close as practicable to the bathing area shoreline and shall at no time be more than 30 feet (9 m) from the shoreline. Lifeguards shall be isolated from beach crowds by occupying elevated seats or stands, just 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 (46 m) from the shoreline, lifesaving patrol boats or offshore lifesaving stations shall be provided.

6.1.4 *Identification* – all lifeguards on duty shall be identified by distinguishing apparel or emblem.

6.1.5 *Limitation of Activity* – when on duty, lifeguards shall not perform any other duties and shall not be in the water except in the line of duty.

6.1.6 *Training* – each bathing beach shall provide a lifeguard training program annually and when new guards are employed.

6.1.7 *Equipment* – each lifeguard should be equipped with a whistle or megaphone, umbrella, sunglasses and a helmet.

6.2 Signs – when no lifeguard is on duty at a beach, a legible sign or signs stating "NO LIFEGUARD ON DUTY" shall be posted. At times when swimming is prohibited, the sign(s) shall also include the wording "SWIMMING PROHIBITED". When no lifeguard is on duty and swimming is not prohibited, the sign(s) shall also include "USE BUDDY SYSTEM".

6.3 Safety Equipment

6.3.1 *First Aid* – at least one American Red Cross 24 unit or equivalent first aid kit shall be provided.

6.3.2 *Spineboard* – a long spineboard or rescue board with collar and ties shall be provided.

6.3.3 Boats – where bathing is permitted a distance greater than 150 feet (46 m) from the bathing shoreline, at least one square stern boat from every 900 feet (275 m) of shoreline shall be provided. Each such boat shall be at least 12 feet (3.7 m) long, equipped with pin oars, and one ring buoy. Such boats shall be located so as to be immediately available and shall be used for their intended purposes only. A rescue board, of a type acceptable to the regulatory agency, may be provided in lieu of a boat.

6.3.4 *Equipment at Lifeguard Station* – the regulatory agency may require first aid equipment, rescue pole or throwing rope attached to a ring buoy, or both, at a lifeguard station.

6.3.5 *Maintenance* – safety equipment shall have its function plainly marked, and shall be kept in good repair and in ready condition. Bathers or others shall not be permitted to tamper with, use for any purpose other than that for which it was intended, or remove such equipment from its established location.

6.4 Communication – a telephone or other means of communication with numbers posted of nearest rescue squad, physician, ambulance, police agency and hospital shall be provided.

6.5 Night Bathing – no night bathing shall be permitted.

6.6 Swimming during Inclement Weather – bathing shall not be permitted during an electrical storm or during periods of high wind.

7.0 OPERATION

7.1 Inspection – the regulatory agency shall conduct a minimum of one pre-operational inspection annually, with at least one monthly operational inspection.

7.2 Records – the beach operator shall keep records including but not limited to the following: 1) name of beach; 2) date; 3) name of responsible person or persons on duty; 4) general weather conditions; 5) number of swimmers and bathers; 6) water analyses reports; 7) number of lifeguards on duty; 8) rescues performed; 9) injuries treated; and 10) unusual occurrences. The operator shall keep these records on file for at least three years and make them available to the regulatory agency upon request.

7.3 Supervision

7.3.1 *Responsible Person on Duty* – the operator or another responsible person, familiar with both the principle and operation of the various beach equipment and facilities, shall be on duty at all times the bathing place is open.

7.3.2 *Rules* – the operator shall establish and post in conspicuous places rules such as personal conduct and hours of operation.

7.3.3. *Reasons for Closing Beaches* – the operator shall close the beach when requested by the regulatory agency or for the following reasons:

7.3.3.1 *Accidents or Spills* – obvious contamination of the beach
7.3.3.2 *Water Quality* – bathing beach water quality not meeting bacteriological, chemical, physical or biological standards.
7.3.3.3 *Safety* – inadequate lifeguards or safety equipment, inclement weather conditions, or other hazardous conditions.

7.4 Safety

7.4.1 *Traffic on Beach* – no motorized vehicles except emergency and maintenance vehicles shall be permitted on the beach.

7.4.2 *Nonswimming Activity in Water* – no boating, water skiing or surfboarding shall be permitted in the swimming and bathing area.

7.4.3 *Chemical Additives* – no chemicals shall be added to the bathing beach water without the consent of the regulatory agency.

7.4.4 *Dangerous Objects on Beach* – no glass or metal containers for beverages shall be permitted on the beach.

7.5 Sanitation

7.5.1 *Cleanliness and Repair* – a bathing beach shall be maintained in a clean, sanitary and safe condition. Diving towers, springboards, floats, slides and other equipment shall be property maintained.

7.5.2 *Bathhouse* – the bathhouse and toilet facilities shall be maintained in clean and sanitary manner and kept in good repair.

7.5.3 *Rental Suits and Towels* – all bathing suits and towels furnished or rented by the operator or concessionaire shall be washed and sanitized after each use.

7.5.4 *Solid Waste* – an adequate number of leakproof solid waste receptacles with self-closing lids shall be placed in the beach area. They shall be emptied twice weekly r more frequently if necessary, and the contents disposed of in a manner consistent with solid waste disposal laws. Plastic or paper bags suspended on racks or stands may be used in place of receptacles if there is daily removal from the beach area.

7.5.6 *Pets and Other Animals* – pets and other domestic animals shall not be permitted in the water or on the land at the bathing beach, or in buildings serving the beach. Efforts shall be made to discourage the presence of wildlife which may cause a nuisance or unsanitary conditions. This includes prohibition of feeding or other enticement of wildlife to a beach.

7.5.7 *Food and Beverage* – food and beverage should be allowed only in areas designed and located to minimize unsanitary conditions on the beach and in the water.