

City of Bainbridge Island

Building Division

2006 Swimming Pool Requirements



PLANNING AND COMMUNITY DEVELOPMENT ● 280 Madison Ave. N ●

Bainbridge Island, WA 98110 ● (206) 842-2552 ● Fax: (206)780-0955

Email: pcd@ci.bainbridge-isl.wa.us

REQUIREMENTS

The following information is needed to process a permit request for an In-Ground Pool.

Submittal Requirements:

- Completed application
- Two copies of the site plan showing stormwater drainage plan
- Two sets of detailed engineered drawings (*See attached*)
- Two sets of detailed drawings showing Barrier Requirements (*See attached*)
- Building Site Clearance (Kitsap Health District 360.337.5285)
- Standard procedure documentation for pool maintenance plan consisting of the following: (*See attached*)
- Fees will be based on the contractor's bid.



THE FOLLOWING CODES ARE NOW IN EFFECT:

- ⇒ 2006 Residential Code (**IRC**)
- ⇒ 2006 International Mechanical Code (**IMC**)
- ⇒ 2006 International Fire Code (**IFC**)
- ⇒ 2006 Uniform Plumbing Code (**UPC**)
- ⇒ 2006 Edition Washington State Energy Code (**WSEC**), WAC 5 1 -II
- ⇒ 2006 Washington State Ventilation and Indoor Air Quality Code (**WSVIAQ**), WAC 51-13

Design Requirements

- ⇒ IRC Table R301.2(1) is amended by filling in the blanks of the table as follows:

Ground Snow Load: <u>25 psf</u>	Frost Line Depth: <u>18 inches</u>
Wind Speed: <u>85 mph (3-Second Gust)</u>	Termite: <u>Slight to Moderate</u>
Wind Exposure: <u>B</u>	Decay: <u>Slight to Moderate</u>
Exception: Within 1,500 feet of the shoreline, the wind exposure category may be C or D in accordance with ASCE 7-02, Section 6.5.6.3, "Exposure Categories".	Winter Design Temp: <u>27 degrees F</u>
Seismic Category: <u>D2</u>	Ice Shield Underlayment Required: <u>No</u>
Weathering: <u>Moderate</u>	Flood Hazards: <u>Per BIMC 15.16</u>
	Air Freezing Index: <u>113</u>
	Mean Annual Temp: <u>53 degrees F</u>

AN APPLICATION MAY REQUIRE FURTHER INFORMATION NECESSARY TO COMPLETE THE REVIEW.
OUR DEPARTMENT WILL NOTIFY YOU IF FURTHER INFORMATION IS NEEDED.

DRAWING REQUIREMENTS

- 1. Plot plans with site grades dimensioned, and drawn to scale of not less than 1/8 inch per foot and showing at least the following:**
 - a. Property lines, easements, right-of-way of record, and overhead utilities adjacent to pool area or over the property.
 - b. Existing structures, fencing, retaining walls, and other relevant characteristics adjacent to pool, spa, or hot tub area.
 - c. The proposed pool, spa or hot tub shape dimensioned and located to show setbacks, side yards, and clearance from existing structures adjacent to pool, spa or hot tub area.
 - d. The proposed mechanical equipment pads, dimensions and location as to setbacks and side yards.
 - e. All deck equipment items, if included.
 - f. The proposed deck work configuration, showing the anticipated drainage
 - g. The anticipated overall drainage of the pool site.

- 2. A structural plan (Manufacturer's specifications) showing at least the following:**
 - a. The type of construction, whether gunite, poured concrete, prefabricated, or other.
 - b. The dimension, including the depth, and adequate cross-sections drawn to scale.
 - c. Computations, stress diagrams, and other data sufficient to show the correctness of the plans, including the reinforcing steel schedule and detail.
 - d. A statement by the applicant concerning the anticipated nature of the soil under and around the pool, spa, or hot tub structure.
 - e. The interior finish details.
 - f. The pool edge details.

- 3. A mechanical plan (Manufacturers specifications) showing at least the following:**
 - a. The volume, system flow rates in gallons per minute, and turnover in hours.
 - b. The type and size of filtration system and means of waste disposal.
 - c. The type and size of size of pool, spa or hot tub heater if included, including the method of venting and provisions for combustion air.
 - d. The pool, spa or hot tub piping layout with all sizes shown and types of materials to be used, and showing the location of the main outlet, surface skimmers, and inlets.
 - e. The rated capacity of the pool pump in gpm (liters/sec.) at the design head with the size and type of motor indicated and identified as to type of pump.
 - f. The means of adding makeup water.
 - g. The size, length from source of heater and routing of the gas line, if applicable.

APPENDIX G
SWIMMING POOLS, SPAS AND HOT TUBS

Section AG105
BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near drownings by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal

members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 13/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.

6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 13/4 inches (44 mm).

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 13/4 inches (44 mm).

8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

8.1. The release mechanism shall be located on the pool side of the gate at

least 3 inches (76 mm) below the top of the gate; and

8.2. The gate and barrier shall have no opening larger than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching

devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:

10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or

10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Item 9.

AG105.4 Prohibited locations. Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.

AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

City of Bainbridge Island
PUBLIC WORKS DEPARTMENT



REQUIREMENTS FOR DISPOSAL OF WATER FROM SWIMMING POOLS AND SPAS

These requirements apply to draining, cleaning and maintenance of all municipal swimming pools, commercially owned swimming pools, and commercially owned spas, including Health Department-regulated facilities (general and limited use). Pools and spas at hotels, motels, apartment and condominium complexes, and other private locations, including single family residences, are also covered here. Older pools and spas must comply with these provisions as well.

Improper disposal of water from pools and spas can lead to severe negative impacts to the environment particularly to fish and downstream property owners. Improper disposal can lead to nutrients, suspended solids, chlorine, abnormal pH, abnormal temperatures, and excessive flows entering the surface water environment. Chemicals used in pool and spa maintenance can also contaminate the environment if they are not stored properly.

MINIMUM REQUIREMENTS

The following Best Management Practices (BMPS), or equivalent measures, methods, or practices, are required of all engaged in swimming pool and spa cleaning and maintenance:

- ◆ Dechlorinate pool and spa water if it is to be discharged to the ground. Neutralizing chemicals are available for this. Letting the pool or spa "sit" with no neutralizing chemicals may reduce chlorine levels; the facility should not be used during this period. Test kits should be used to determine disinfectant concentrations. State law allows discharges of pool water to the ground, not to a water body or storm drainage system, with a chlorine level of up to 3 ppm. However, the water must not cross property lines, and a satisfactory means for distributing the water to the ground must be used so there is no runoff.
- ◆ Regardless of the sanitizing agent used (chlorine, bromine, or ozone), all pool and spa drainage must go to a sanitary sewer or a water treatment system if it cannot be dechlorinated sufficiently. If a sanitary sewer is available, all Health Department-regulated facilities are required to be connected for draining and backwash. Prior to draining, City of Bainbridge Island Public Works-Operations and Maintenance Department must be notified, as there are concerns with the volume of discharge and disinfectant levels. If the pool or spa does not have a drain to accommodate this, water will have to be pumped or drained to a sanitary sewer or water treatment system inflow pipe connection. If a sanitary sewer is not available, do not discharge pool or spa water to a septic system, as it may cause the system to fail. Alternative draining and backwash procedures must be approved by the Bremerton-Kitsap County Department of Public Health in this situation.

- ◆ Diatomaceous earth (commonly used as a filtering agent in pools) cannot be discharged to surface waters, storm drainage, systems, septic systems, or on the ground.

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ADDITIONAL BMPS

The following BMPs are not required, but they can provide improved pollution control:

- ◆ Managers of pools and spas located in sensitive areas or adjacent to shorelines should check with the City of Bainbridge Island Engineering Department to determine if other code requirements apply.
- ◆ Provide drip pans or buckets beneath drain pipe connections to catch leaks. This will be especially pertinent if pool or spa water that has not been dechlorinated is pumped through piping to a discharge location.
- ◆ Hire a professional pool-draining service to collect all pool water for off-site disposal.

Reader Note: The above requirements are minimum required BMPS. If these BMPs fail to prevent discharges to the storm drainage system you are required to take additional measures to correct the continued pollution discharges.