Maximum Bather Load

"Maximum Bather load" is the maximum number of patrons permitted to be within the pool enclosure at a time. The pool enclosure is the space within the fence and/or building walls that includes the deck area/s plus the pool or pools.

The maximum bather load shall be calculated using the following table based on the amount of deck area in relation to square feet of water surface area and water depth. "Shallow or wading areas" are 5' deep or less. "Deep areas" are over 5' deep. For a given *pool enclosure*, components A, B, and C must be figured independently and then added together, as shown in the following formula:
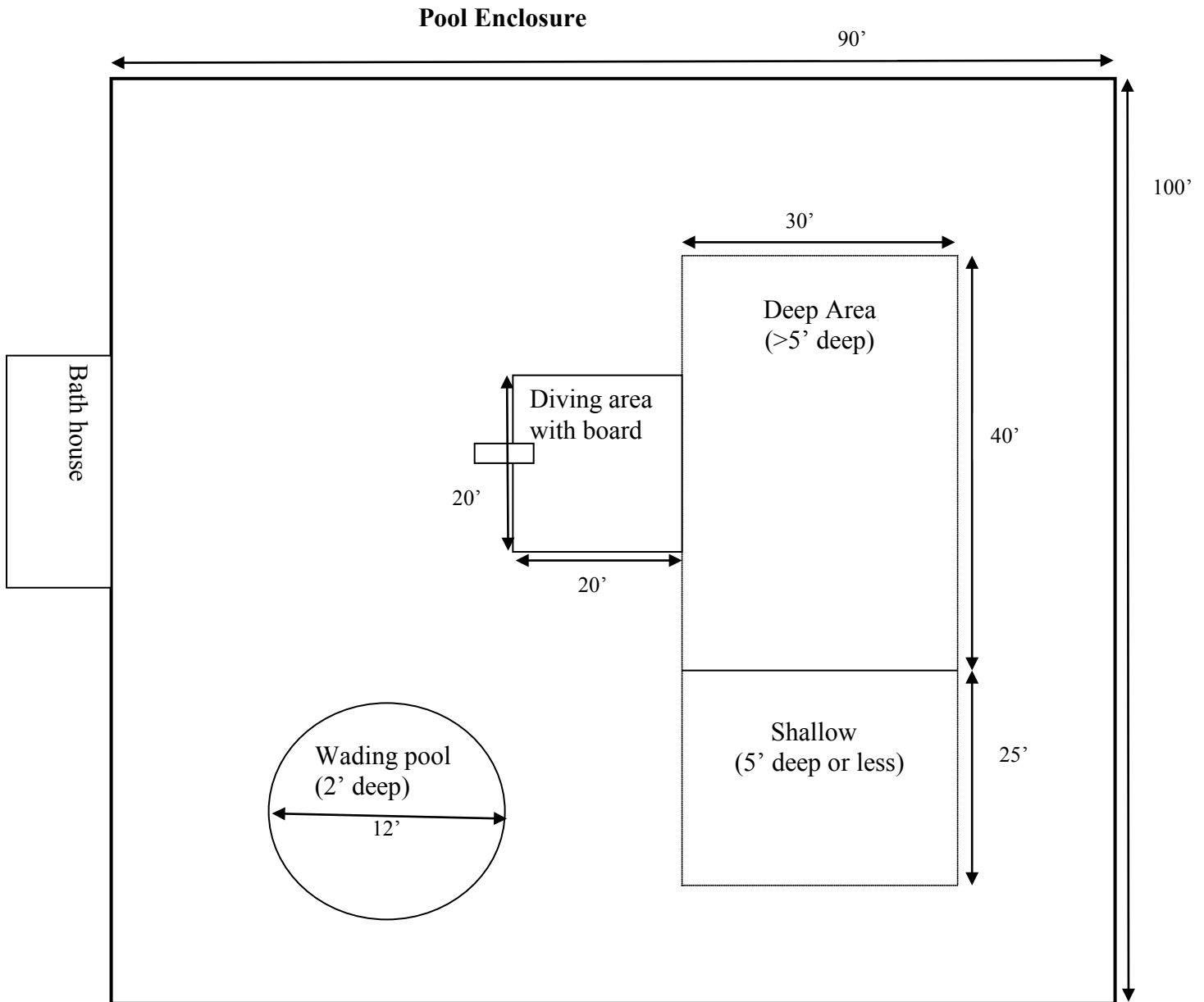
"Maximum Bather Load" = A + B + C

	Shallow + wading areas (A).	**Deep areas, not including diving areas (B)**	**Diving areas (C)**
If the deck is less than the surface area of the pool	15 sq. ft. of pool surface area per bather	20 sq. ft. of pool surface per bather	300 sq. ft. of pool surface area per bather
If the deck is equal to or larger than the surface area of the pool	12 sq. ft. of pool surface area per bather	15 sq. ft. of pool surface per bather	300 sq. ft. of pool surface per bather
If the deck is twice the surface area of the pool	8 sq. ft. of pool surface per bather	10 sq. ft. of pool surface per bather	300 sq. ft of pool surface area per bather

- If the diving board(s) are closed, an additional 10 bathers can be added.

To calculate maximum bather load:

EXAMPLE:

Pool Enclosure

90'

100'

30'

Deep Area
(>5' deep)

40'

Diving area
with board

20'

20'

25'

Shallow
(5' deep or less)

Bath house

Wading pool
(2' deep)

12'

Step 1: **Calculate the total surface area of wading areas plus shallow areas. These include all areas 5' deep or less. See measurements on the drawing. Include areas from *all* pools within the pool enclosure.**

Wading pool surface area of water = radius (r) x radius (r) x 3.14

      Diameter / 2 = radius

      12' diameter as measured / 2 = 6' radius

      6' x 6' x 3.14 = 113.04 square feet (ft^2), which can be rounded off to 113ft^2

 Shallow water surface area of larger pool = length of shallow area x width

      Shallow water surface area = 25' x 30' = 750ft^2

Total water surface area of wading plus shallow areas:

      <u>Wading area surface area + shallow water surface area</u> = 113ft^2 + 750ft^2 = <u>863ft^2</u>

Step 2: **Calculate the total surface area of deep water (over 5' deep) excluding diving areas. Include deep areas from all pools within the enclosure.**

Length x width = 40 x 30 = <u>1200ft^2</u> = <u>deep water surface area excluding diving area</u>

Step 3: **Calculate the total surface area of the diving area.**

Length x width = 20 x 20 = <u>400ft^2</u>

Step 4: **Calculate the <u>total surface area of all water</u>.**

Shallow and wading areas + deep area excluding diving + diving area = total ft^2 of water

863ft^2 + 1200ft^2 + 400ft^2 = <u>2463ft^2</u>

Step 5: **Calculate the total surface area of the enclosure (including water & deck).**

Length x width = 100 x 90 = <u>9000ft^2</u>

Step 6: **Calculate the <u>total area of the deck</u>. Find this by subtracting the total surface area of all water (step 4) from the total surface area of the enclosure (step 5).**

Total surface area of enclosure – total surface area of water = 9000ft^2 – 2463ft^2 = <u>6537ft^2</u>

Step 7: **Compare the total area of the deck to the total surface area of all water. Determine which line on the table given in page 1 (410 IAC 6-2.1-7.5) to use.**

Total deck area = 6537ft^2 Total area of water = 2463ft^2

The deck area is not only larger than the surface area of the pool, it is over two times (2x) larger. Therefore, <u>use the third and final line</u> ("line 3") on the table on page 1 of this document (also found as 410 IAC 6-2.1-7.5).

Step 8: Utilize the total surface area for wading areas + shallow water (5' deep or less) from step 1 and the table on page 1 of this document to determine component "A" of the maximum bather load. Component "A" will be the number of person permitted into the overall pool enclosure based on the amount of shallow water with a corresponding percentage of deck space.

Line 3, column A says to allow one (1) bather to the overall pool enclosure for every 8ft^2 of wading area or shallow water.

863ft^2/ 8ft^2 per bather = 107.8

Round down to the nearest whole number. Component "A" = 107 bathers

Step 9: Utilize the total surface area for deeper water (over 5' deep), excluding diving areas, from step 2, along with the table to determine component "B" of the maximum bather load.

Line 3, column B says to allow one (1) bather to the overall pool enclosure for every 10ft^2 of wading area or shallow water.

1200ft^2 / 10ft^2 per bather = 120 bathers = Component "B"

Step 10: Utilize the total surface area for diving areas, along with the table, to determine component "C" of the maximum bather load.

Line 3, column C says to allow one (1) bather to the overall pool enclosure for every 300ft2 of diving area.

400ft2 of diving area / 300ft2 per bather = 1.3

Round down to the nearest whole number, such that 1 bather = Component "C"

Step 11: Maximum Bather Load is the sum of components A + B + C

Components A + B + C = 107 + 120 + 1 = 228

The max # of patrons permitted in the overall pool enclosure at any one time =

228 = "Maximum Bather Load"