

Water Recreation Facility Occupancy (Supplemental Guidance)

Background

Different types of Water Recreation Facilities regulated under chapters [70.90 RCW](#), [246-260 WAC](#), and [246-262 WAC](#) (for example, pools, spas, splash pads, and other waterpark type features) are allowed to open in different phases, according to the [DOH guidance on reopening of Water Recreation Facilities](#). This is a supplement to the aforementioned document. This document may be updated in the future as the Governor's orders change or a new situation emerges.

Purpose

The purpose of this document is to guide facility managers to make safe educated decisions on how many people should be allowed at their facilities. It is important to consider each facility's unique challenges when making these decisions. Once completed, the facility manager should include this information in their COVID-19 response plans, and have it ready at the facility for administrative and training purposes as well as in the case the regulatory authority asks for this information.

Modified Phase 1 and Phase 2 Occupancy Requirements

During Modified Phase 1 and Phase 2, the following are the requirements and factors that govern how many people should be allowed in your facility at any given time:

- The total number of patrons (staff excluded) present within the facility at any given time must not exceed:
 - 50 people maximum.
 - The water surface area (square footage) of the pool plus the surface area of the perimeter deck divided by 162.
- **Practice a minimum of six-foot physical distancing at all times regardless of being in or out of the water** except for people from the same household.

Note: All of the above must be satisfied to be in compliance with the Governor's order and to protect the public from COVID-19. The physical distancing requirement shown above in bold is particularly important for preventing the spread of the virus.

Phase 3 Occupancy Requirements

During Phase 3, the following are the requirements and factors that govern how many people should be allowed in your facility at any given time:

- Limit the number of people in each pool to no more than 50% of the normal bather capacity (people in the water);
- Limit the total number of people (patrons) to 50 within the entire facility; and
- **Practice a minimum of six-foot physical distancing at all times regardless of being in or out of the water** except for people from the same household.

Phase 4 Occupancy Requirements

During Phase 4, the only criterion that must be met is the **six-foot physical distancing**. Follow the “Ensuring Easy Physical Distancing” section below to calculate the maximum occupancy.

Helpful Tips for Calculations

More detailed and specific guidelines for each of the above requirements are provided below. The following considerations are important:

1. The physical distancing requirement shown above in bold is particularly important for preventing the spread of the virus in all phases.
2. Start with a conservative number of people and slowly adjust the number of people upwards to see how many people can be comfortably be in the facility without violating the physical distancing requirement.
3. This guidance is theoretical in nature, and the principles provided in this document should be applied carefully to reflect the true environment unique to your facility.

How to Calculate 50% of the Normal Bather Capacity

Maximum bather capacity is calculated using provisions found in chapter 246-260 WAC. These provisions are based on bather safety and water quality maintenance, and they were not developed with COVID-19 transmission and physical distancing in mind. In most cases, 50% of normal bather capacity based on these provisions results in numbers still too high to maintain six-foot physical distancing. Because of this, it is recommended that you calculate the maximum occupancy based on the physical distancing requirement, and not rely on 50% of normal bather capacity. For those who are interested in calculating 50% of bather capacity, more information is provided in Appendix 1.

Limiting the Number of People to 50 within the Facility

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It would be prudent to limit the number of people within the facility to 50. However, if you have a large facility (for example, a large city pool or a waterpark), limiting the number of people to 50 may be neither necessary for ensuring physical distancing nor reasonable because of the large size of the facility. In that case, use the guidelines provided in the next section. It explains physical distancing to calculate what a reasonable maximum occupancy for your facility is. Work with the local health department to decide on a reasonable maximum occupancy specific to your facility. DOH can be available for consultation. There must be COVID-19 specific plans in place to ensure that people do not congregate in a concentrated area at all in Modified Phase 1 and Phase 2. No spectators should be allowed in these phases. Make sure that no more than 50 people congregate in a concentrated area at any time or any place within the facility in Phase 3. Spectators should be kept minimal in this phase to ensure physical distancing.

Ensuring Easy Physical Distancing

Physical distancing (social distancing) between people who are not from the same household is thought to be one of the most effective ways to prevent the spread of COVID-19. It is said that a minimum of six feet is needed for this purpose. How this can be implemented depends on the type of facility and the type of activity. For this reason, different formulas are provided for different types of activities: Stationary, Moderate movement, and Active movement. The information provided below is advisory and theoretical in nature. It is a resource you can use to determine the maximum bather capacity unique to your facility, but always keep in mind that what must be accomplished is physical distancing at all times and not necessarily using the numbers generated by using the formulas in this section.

Stationary: Pools in which bathers are mostly stationary (for example, a spa). Do not use this formula in Modified Phase 1 and Phase 2.

If bathers are mostly stationary, a minimum of 6 feet between each bather is recommended. If we imagine a bubble around each person with a 3 foot radius, and say that the bubbles must not overlap except for occasional passing-by for entering and exiting, each person will need 36 square feet with a little bit of wiggle space. According to this, maximum bather capacity for a spa should be:

$$\text{Maximum bather capacity} = \text{Surface area of the spa (square feet)} \div 36$$

More detailed information about this concept is provided in Appendix 2.

Moderate movement: Pools in which bathers are moving but in a coordinated fashion (for example, a water aerobics class). Do not use this formula in Modified Phase 1 and Phase 2.

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If bathers are moving around but mostly in a coordinated fashion, there should be some space around each person to allow for the movements. If we imagine a bubble around each person with a 3 foot radius, and say that the bubbles must not overlap as people move between each other, each person will need 72 square feet with no wiggle space as shown below. According to this, maximum bather capacity for a pool/activity like this should be:

$$\text{Maximum bather capacity} = \text{Surface area of the pool}^* (\text{square feet}) \div 72$$

*Surface area in this case may be the entire pool surface if the entire pool is used for this activity or a portion of the pool if only a portion of the pool is used for this activity.

More information about this concept is provided in Appendix 3.

Active movement: Pools in which people move around freely with no order. Use this formula in Modified Phase 1 and Phase 2.

Most pools and splash pads would fall under this category where people are freely moving around in the water. This situation calls for more wiggle space around each person to allow for easy physical distancing between them. If we imagine a bubble around each person with a 3 foot radius with a minimum of 3 foot wiggle space in all directions at any time as they move between people, each person will need 162 square feet as shown below. According to this, maximum bather capacity for this type of pool/activity should be:

$$\text{Maximum bather capacity} = \text{Surface area of the pool} (\text{square feet}) \div 162$$

More information about this concept is provided in Appendix 4.

Pool decks where some people are moving around and others are sitting

Typically on the pool deck, some people are freely moving around and others are sitting quietly. Based on your experience, identify how many percent of people are freely walking around: **A**% and how many percent of people are sitting: **B**% on the pool deck at any given time. **A** plus **B** must equal 100%. In Modified Phase 1 and Phase 2, assume that everyone is freely walking around on the deck (**A**=100%, and **B**=0%) Find out how much deck space you have available in square feet: **S**. Do not include deck space typically not used by patrons/staff. For this calculation we determine that each person moving around requires 162 square feet and each person sitting requires 36 square feet. Then the maximum number of people who can be on the deck is as follows:

$$\text{Maximum occupancy on deck} = \frac{100 \times S}{(162 \times A) + (36 \times B)}$$

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Here is the same formula explained in words instead of a mathematical expression:

Step 1: Measure the square footage (**S**) of the deck in square feet: _____ (a)

Step 2: Multiply (a) by 100: _____ (b)

Step 3: Identify the percentage (**A%**) of people freely walking around on the deck:
_____ (c)

Step 4: Multiply (c) by 162: _____ (d)

Step 5: Identify the percentage (**B%**) of people sitting on the deck: _____ (e)

Step 6: Multiply (e) by 36: _____ (f)

Step 7: Add (d) and (f) together: _____ (g)

Step 8: Divide (b) by (g): This is the maximum occupancy for your deck

Total Maximum Occupancy during Phase 3

The total theoretical maximum occupancy for the entire facility would be the sum of maximum bather capacity and the maximum deck occupancy using the formulas above. However, it is recommended that facility owners and managers start with a number that is more conservative than the number you obtain from doing the above calculations and slowly increase the number to see what a reasonable number is. Consider the following when deciding on the number:

1. Adjust the number to reflect what is actually happening within your facility to minimize the spread of COVID-19.
2. Consider the possibility that adequate space is required on the deck if people need to be evacuated out of the water and everyone is on the pool deck (for example, a diarrhea or drowning incident in pool).
3. Physical distancing of 6 feet or greater is the most important criterion that must be followed.
4. Keeping up with [cleaning and disinfecting needs](#).
5. The number of people who are in locker rooms, shower rooms, and rest rooms.

An example scenario and calculations are provided in Appendix 5.

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More COVID-19 Information and Resources

Stay up-to-date on the [current COVID-19 situation in Washington](#), [Governor Inslee's proclamations](#), [symptoms](#), [how it spreads](#), and [how and when people should get tested](#). See our [Frequently Asked Questions](#) for more information.

The risk of COVID-19 is not connected to race, ethnicity or nationality. [Stigma will not help to fight the illness](#). Share accurate information with others to keep rumors and misinformation from spreading.

- [COVID-19 Prevention Guidance and Reopening of Water Recreation Facilities in Phases](#)
- [WA State Department of Health 2019 Novel Coronavirus Outbreak \(COVID-19\)](#)
- [WA State Coronavirus Response \(COVID-19\)](#)
- [Find Your Local Health Department or District](#)
- [CDC Coronavirus \(COVID-19\)](#)
- [CDC Guidance for Public Pools, Hot Tubs, and Water Playgrounds During COVID-19](#)
- [Stigma Reduction Resources](#)

Have more questions about COVID-19? Call our hotline: **1-800-525-0127**. For interpretative services, **press #** when they answer and **say your language**. (Open from 6 a.m. to 10 p.m.) For questions about your own health, COVID-19 testing, or testing results, please contact your health care provider.

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Appendix 1: How to calculate 50% of normal bather capacity

First, it is important to know what the normal maximum bather capacity is for your facility, then divide that number by 2 to obtain 50% of the normal bather capacity. Use the table below to calculate 100% and 50% of the normal bather capacity for each pool. If you have multiple pools within the same enclosure, add up the answers to find 50% of the total bather capacity for all of the pools.

*Maximum bather capacity calculation chart

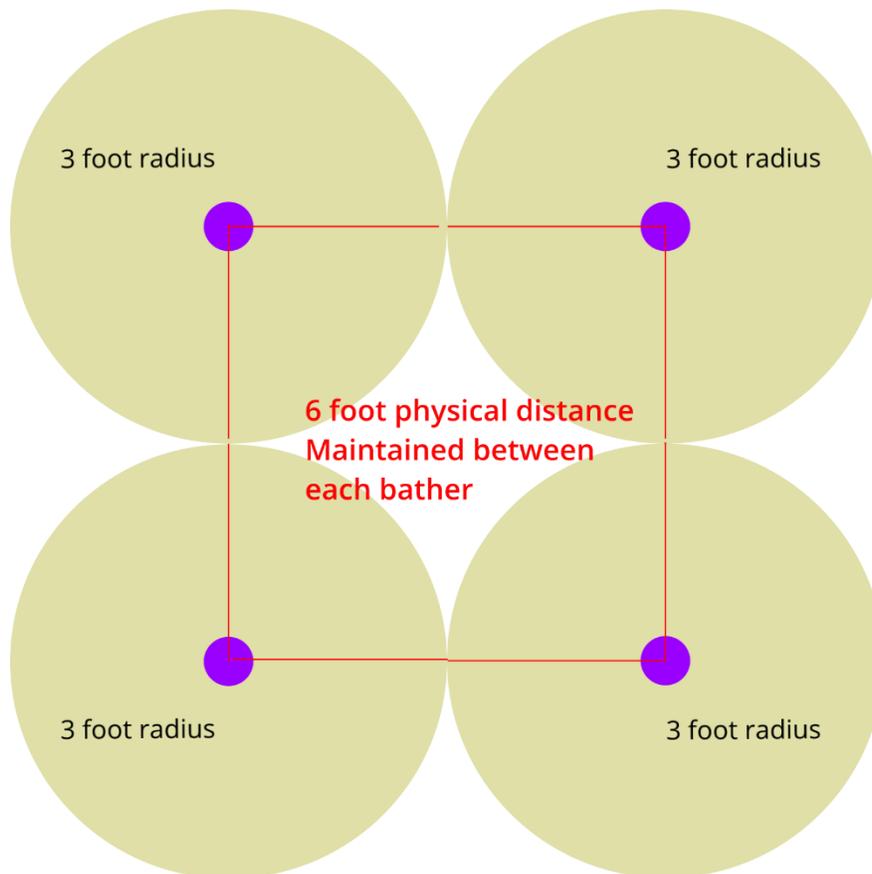
Facility Type	Information needed	100% capacity	50% Capacity
Swimming pool WAC 246-260-041(10)	<ul style="list-style-type: none"> Find the area where the water depth is 5 feet or less in square feet (A) Find the area where the water is deeper than 5 feet in square feet (B) 	For outdoor pool: $A/15 + B/30$	Divide the answer by 2
		For indoor pool: $A/25 + B/30$	Divide the answer by 2
Spa WAC 246-260-051(3) and (4)	Calculation of bather capacity for spas is very complex. For the purpose of this document, use the following simplified requirement. <ul style="list-style-type: none"> Find the surface area of the spa in square feet (A) 	Calculate: $A/10$	Divide the answer by 2
Wading pool WAC 246-260-071(6)	<ul style="list-style-type: none"> Find the surface area of the wading pool in square feet (A) 	Calculate: $A/7$	Divide the answer by 2
Splash pad	WAC 246-260 does not specify how to calculate bather capacity for splash pads. However, other standards suggest this: <ul style="list-style-type: none"> Find the surface of the splash pad (wet area) in square feet (A) 	Calculate: $A/15$	Divide the answer by 2

*If you are aware of the 100% maximum bather capacity for your facility provided by the pool designer/builder, use that number instead of doing calculations as described above.

Appendix 2: Calculating maximum occupancy for pools in which bathers are mostly stationary

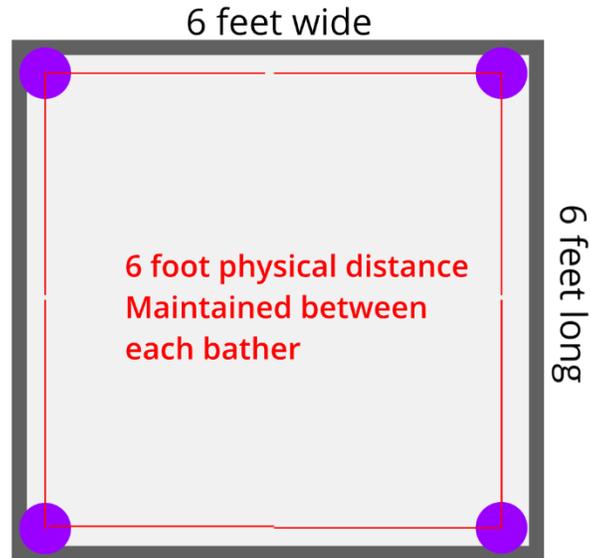
If bathers are mostly stationary, 6 feet between each bather is all that's needed. If we imagine a bubble around each person with a 3 foot radius, and say that the bubbles must not overlap except for occasional passing-by for entering and exiting, each person will need 36 square feet with a little bit of wiggle space as shown below.

$$\text{Maximum bather capacity} = \text{Surface area of the spa (square feet)} \div 36$$



However, many spas are very small, and the actual scenarios may look quite different. For example, if you have a spa in a square shape with one side measuring 6 feet in length, you could place four people on the four corners of the spa and still maintain 6 foot physical distancing between them though you have a surface area of only 36 square feet as shown below.

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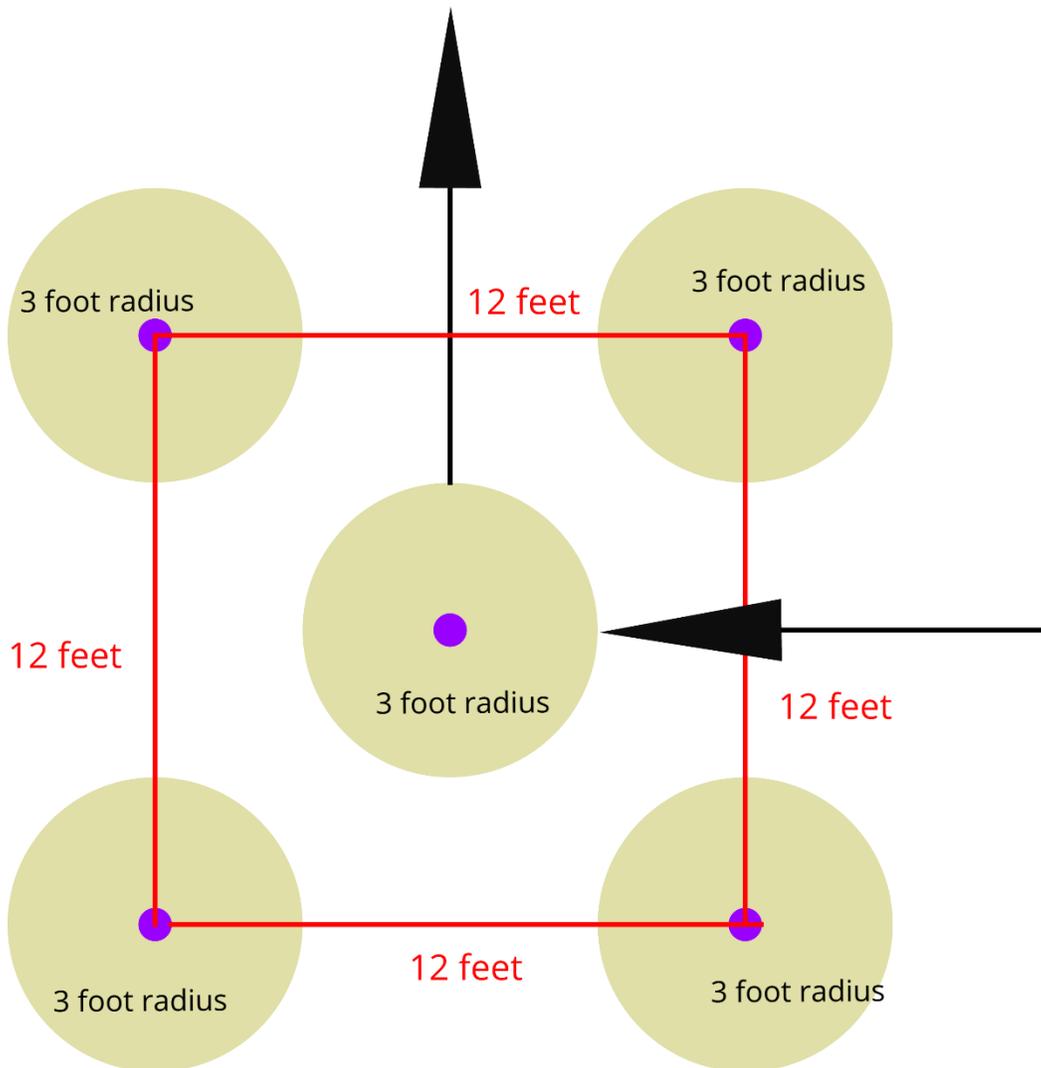
According to the formula above, you can have only one person in this spa ($36 \div 36 = 1$). But if the physical distancing is the true criterion, you should be able to have up to four people as in the diagram above. However, the criterion for “less than 50% normal capacity” must also be followed. According to the normal bather capacity calculation provided for spas above, 50% of the normal bather capacity in this case would be (1.8 people), which is more restrictive than four people. Because the requirement from the Governor’s Office calls for less than 50% of normal bather capacity, if the result contains a decimal number, it should be rounded down to the closest whole number (in this case only one person is allowed in this spa at a time).

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Appendix 3: Calculating maximum occupancy for pools in which people are moving in a coordinated fashion

If bathers are moving around but mostly in a coordinated fashion, there should be some space around each person to allow for the movements. If we imagine a bubble around each person with a 3 foot radius, and say that the bubbles must not overlap as people move between each other, each person will need 72 square feet with no wiggle space as shown below. According to this, maximum bather capacity for a pool/activity like this should be:

$$\text{Maximum bather capacity} = \text{Surface area of the pool (square feet)} \div 144 \times 2$$



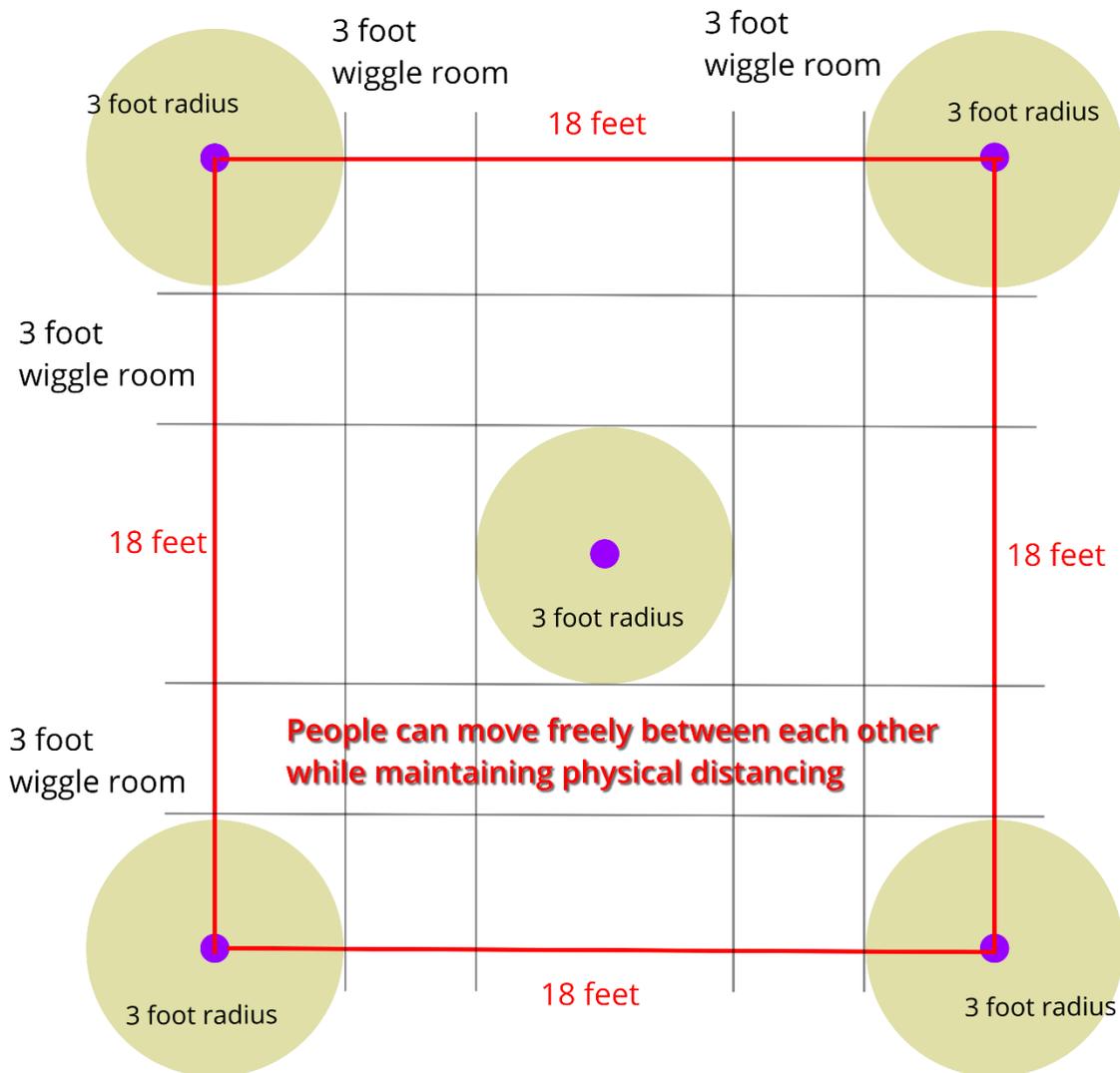
People can move between each other while maintaining physical distancing

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Appendix 4: Calculating maximum occupancy for pools in which people move actively and freely

This situation calls for more wiggle space around each person to allow for easy physical distancing between them. If we imagine a bubble around each person with a 3 foot radius with a minimum of 3 foot wiggle space in all directions at any time as they move between people, each person will need 324 square feet as shown below. According to this, maximum bather capacity for this type of pool/activity should be:

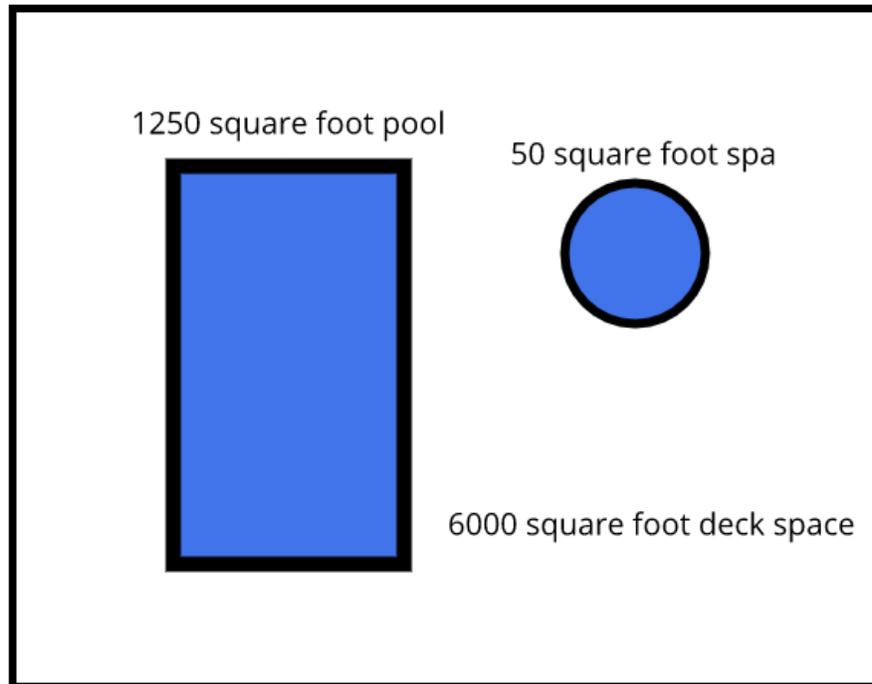
$$\text{Maximum bather capacity} = \text{Surface area of the pool (square feet)} \div 324 \times 2$$



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Appendix 5: Example Scenario

Provided below is a hypothetical scenario to further illustrate and clarify the guidelines in this document.



Say this facility is outdoor and the entire pool is 5 feet deep or shallower.

Pool maximum capacity:

- According to the “less than 50% normal capacity” criterion, the maximum is:

$$\text{Maximum bather capacity} = 1250 \div 15 \div 2 = \mathbf{41 \text{ people maximum}}$$

- The above number is less than 50 people total. Skip to the next step.
- According to the “Easy Physical Distancing” criterion, the maximum is:

$$\text{Maximum bather capacity} = 1250 \div 324 \times 2 = \mathbf{7 \text{ people maximum}}$$

- In this case, the “Easy Physical Distancing” criterion led to a very conservative number. This number would be a good starting point, and the number of bathers may be increased slowly until physical distancing is no longer easy.

Spa Maximum capacity:

- According to the “Less than 50% Normal Capacity” criterion, the maximum is:

$$\text{Maximum bather capacity} = 50 \div 10 \div 2 = \mathbf{2 \text{ people maximum}}$$

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- The above number is less than 50 people total. Skip to the next step.
- According to the “Easy Physical Distancing” criterion, the maximum is:

$$\text{Maximum bather capacity} = 50 \div 36 = \mathbf{1 \text{ person maximum}}$$

- In this case, we can easily see two people sitting in the spa on opposite sides from each other. Two people would be a reasonable number.

Deck maximum capacity:

- Say 40% of people on the deck are walking around, and 60% of them are sitting.
- According to the “Easy Physical Distancing” criterion, the maximum is:

$$\text{Maximum capacity on deck} = \frac{100 \times 6000}{(162 \times 40) + (36 \times 60)} = \mathbf{69 \text{ people maximum}}$$

Total theoretical occupancy:

- The total is the sum of the three numbers above:

$$\text{Total theoretical occupancy} = 7 + 2 + 69 = \mathbf{78 \text{ people maximum}}$$
- In this case, the total exceeded 50 people. When this happens, consult with the local health department to agree on a reasonable number. If the local health department is not available for consultation, it may be best to limit the number to 50 people total.
- It is up to the facility owner and manager to encourage both patrons and staff to practice physical distancing at all times between people from different households.