

TOWN OF CHAPEL HILL SPLASH PAD AND INCLUSIVE PLAYGROUND SITE FEASIBILITY STUDY

PRELIMINARY REPORT
28 September 2022

Prepared by



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Planning for the Future



For
Town of Chapel Hill
Parks & Recreation Department



ACKNOWLEDGEMENTS

CJT PA and 80 West Group acknowledge the contribution of the following individuals for providing their time, insight, expertise, and efforts to advise the analysis, and production of this project.

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**PRELIMINARY REPORT
FOCUS OF STUDY**

The Town of Chapel Hill contracted with CJT PA and 80 West Group to study 8 Town-owned properties and analyze their suitability for installation of a splash pad facility and/or installation of an accessible playground facility. The consultant was also to provide concept plans for such facilities with cost estimates. Recognizing an opportunity to examine options for both amenities collectively, this study was commissioned.

CJT, a Durham-based Landscape Architecture and Civil Engineering firm partnered with 80 West Group to study the sites with respect to splash pad use feasibility.

OVERVIEW

The Town of Chapel Hill contracted with CJT PA and 80 West Group to study 8 Town-owned properties and analyze their suitability for installation of a splash pad facility and/or a playground with both inclusive and splash pad features to increase outdoor summer activities that include staying cool. The sites assessed are:

- Cedar Falls Park - 501 Weaver Dairy Road
- Community Center Park - 120 S Estes Drive
- Hargraves Center - 216 N Roberson Street
- Homestead Park - 100 Aquatic Drive
- Southern Community Park - 1000 Sumac Road
- Umstead Park - 399 Umstead Drive
- Eastwood Public Housing Community - NE corner Piney Mountain Road and Eastwood Road
- Oakwood Public Housing Community - 605 Oak Avenue

CJT, a Durham-based Landscape Architecture and Civil Engineering firm partnered with 80 West Group to study the sites with respect to splash pad use feasibility. 80 West Group has been involved with design and installation of over 200 splash pad facilities in the past 20 years.

The Town was interested in investigating the possibility of adding one or more splash pad facilities to expand the recreational opportunities for the residents of Chapel Hill. At the same time, the Parks Department had planned to install an accessible playground at Cedar Falls Park, but plans have only been partially completed.

In 2021, a petition with over 800 signatures in support of construction a splash pad was provided to the Town Council. The Town established a splash pad work group to further explore options for construction in Chapel Hill. The consultant team has looked at the 8 Town owned sites with respect to their suitability for both splash pad and inclusive accessible playground facilities. Additional content will be added to this report as it is completed; for example, community/public input summary information.

PROJECT CRITERIA

The consultant is charged with analysis of select Town-owned parcels to be considering for locating a large splash pad facility , a smaller pocket park splash pad facility, an accessible playground, or some

combination of those elements. Also, the consultant is to provide concept plans for such facilities with cost.

Per our commitment to the One Orange Racial Equity Plan, we will give preference to locations for these amenities that expand rights and choices for marginalized populations, mitigate historical inequities, and reduce disparities in access to parks and recreation facilities. We have and will continue to use several tools to identify neighborhoods most impacted by these disparities and historical inequities.

Qualified Census Tracts are a vital indicator of areas affected by historical segregation and disinvestment and increasing access to amenities in these areas is our priority. Other data we consider as signifiers of historical disinvestment include access to public transit, walkability, and proximity to Public Housing.

We are committed to using the Racial Equity Toolkit developed through One Orange to evaluate the impact on marginalized communities for any potential Splash Pad and Inclusive Playground locations we will have.

The selection criteria for the proposed facilities were developed using the Town's Goals including:

- Connected Community
- Environmental Stewardship
- Vibrant and Inclusive Community

Advise on Accessible vs. Inclusive and Accessible Playgrounds, Pocket Park vs. Destination Splash Pads

- Park location assessment includes the following criteria:
 - Diversity, equity and inclusion such as
 - A location that allows people throughout the community to walk, bike and/or ride the bus to enjoy these amenities
 - A location that provides an investment in facilities that are at or near the end of their life span, or that have not seen significant financial improvements such as older or underutilized parks with fewer recreational amenities
 - Adequate site size
 - Access and connectivity (public transit, pedestrian, bicycle)
 - Availability of parking
 - Infrastructure
 - Availability of utilities
 - Restrooms
 - Shelter
 - Socioeconomic data of nearby neighborhoods
 - Proximity to other parks and Town amenities (shopping, restaurants, etc.)
 - Site impacts (utility relocation, environmental, cultural and natural resources, etc.)
 - Evaluation of splash pad system types and pros and cons of recirculated water system versus a flow-through system
 - Estimated design and construction, start-up, operations, and maintenance costs
 - Community input options / processes
 - Identification of most feasible build-out/phases of development

PROCESS AND METHODOLOGY

At the start of the study, the consultant team, with Town staff, made visits to all sites to get an overall view and impression of the facilities at each site and to talk to the staff about perceived assets and deficiencies with respect to additional facilities. Specifically, the team looked at site size and open space development availability, parking, restrooms, shelters, existing pedestrian connectivity, and utilities. At this time the consultant team also scanned the sites for appropriate locations for large- and small-scale splash pad facilities, and for appropriateness of accessible playgrounds.

Following these visits, the consultant team reviewed OWASA supply information, site accessibility, demographics, and through doing so gained a deeper understanding and analysis of each site's assets and deficiencies. Criteria used in analyzing suitability of each site includes:

- Park size and location
- Accessibility of the park
- Suitability of existing amenities to complement the proposed splash pad/playground
- Capacity of required amenities such as parking and restrooms
- Availability of splash pad space near parking and restrooms
- Capacity of existing utilities
- Staffing on site
- Age of existing facilities and whether they are due for replacement

The splash pad consultant investigated nearby splash pad facilities to analyze the product offered and installation costs for those projects. They have also investigated general costs for installing splash facilities in Chapel Hill parks, working with OWASA construction and operating costs used as a basis to compare different water circulation systems.

SECTION 3 – Site Investigation and Site-Specific Recommendations

CHAPEL HILL DEMOGRAPHICS

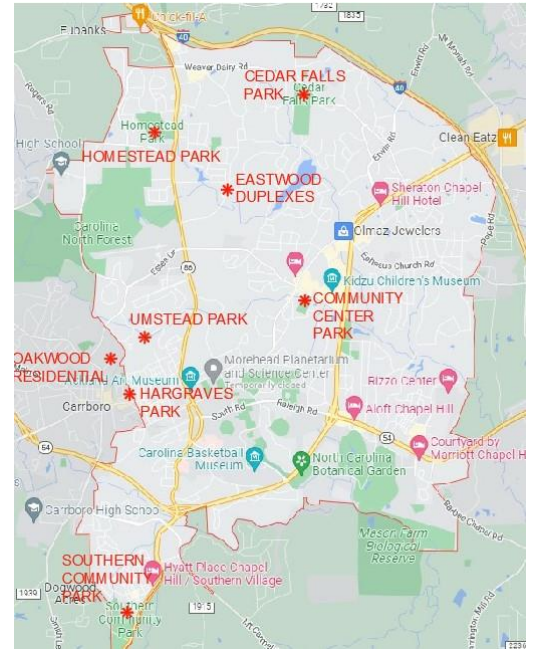
The Parks and Recreation Department asked the consultants to consider 8 sites, 6 of which are existing parks and 2 of which are Town owned public housing communities. The consultant team along with Town staff visited all 8 sites on August 4, 2022.

Census data reports that as of April 2020 Chapel Hill had a population of 61,906. By age the breakdown is:

- 3.8% under 5 years – approx. 2,355
- 17.1% under 18 years – approx. 10,600

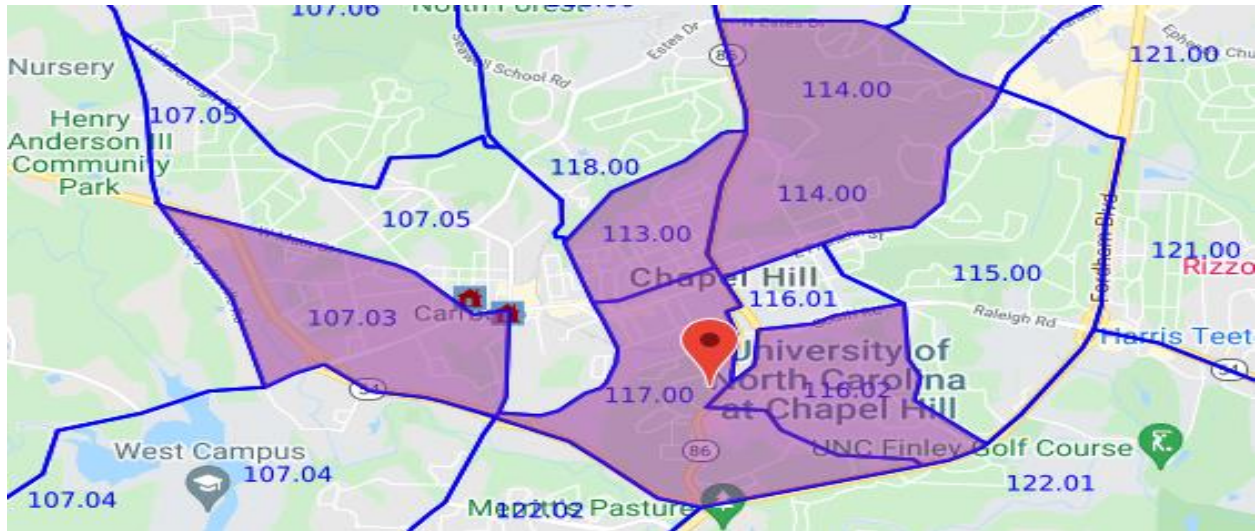
The parks investigated are concentrated along the western part of town, and also included Cedar Falls Park to the north and the Community Center Park just off Fordham Blvd.

Each of the park sites has different accessibility aspects related to their location, which will influence how easily users can get to the proposed new facilities. One quarter mile is a distance easily accessible on foot for most users. This is a distance frequently used by studies as an acceptable range that the average person will routinely walk to get to desired destinations. The following table breaks out uses and facilities within a quarter mile of each of the sites investigated.



<u>Town Site</u>	<u># Households within ¼ mile</u>	<u>Nearby Facilities</u>
Cedar Falls Park:	262	high school, restaurants, gas station
Community Center Park:	486	University Place, restaurants, retail, greenway trail
Eastwood Community:	299	n/a
Hargraves Park:	1286	elementary school, daycare, downtown restaurants and services, greenway trail
Homestead Park:	582	limited retail, daycare, multiple new residential projects proposed for the area, greenway trail
Oakwood Community:	785	Wilson Park and bike trail
Southern Community Park:	340	Elementary school, daycare, transit hub, Southern Village retail and restaurants, greenway trail
Umstead Park:	1252	Elementary school, greenway trail

This plan illustrates the census tracts within Chapel Hill where more than 50% of households are at an income level less than 60 % of the area’s gross median income. In the summary chart on page 14 it has been noted which of the Town properties considered are in one of these qualifying census tracts.



Census tract plan from the American Rescue Plan Act Program website.

There is a summary of the facilities found at each park on the following pages.

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CEDAR FALLS PARK

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CHAPEL HILL COMMUNITY CENTER PARK

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HARGRAVES PARK

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HOMESTEAD COMMUNITY PARK

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SOUTHERN COMMUNITY PARK

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UMSTEAD PARK

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EASTWOOD DUPLEXES

OAKWOOD HOUSING

Where there is some accommodation for accessible playgrounds

SITE SUMMARY TABLE

The chart below summarizes some of the basic park facility and location data from each of 8 Town owned properties under consideration for a new splash pad/and or inclusive playground facility.

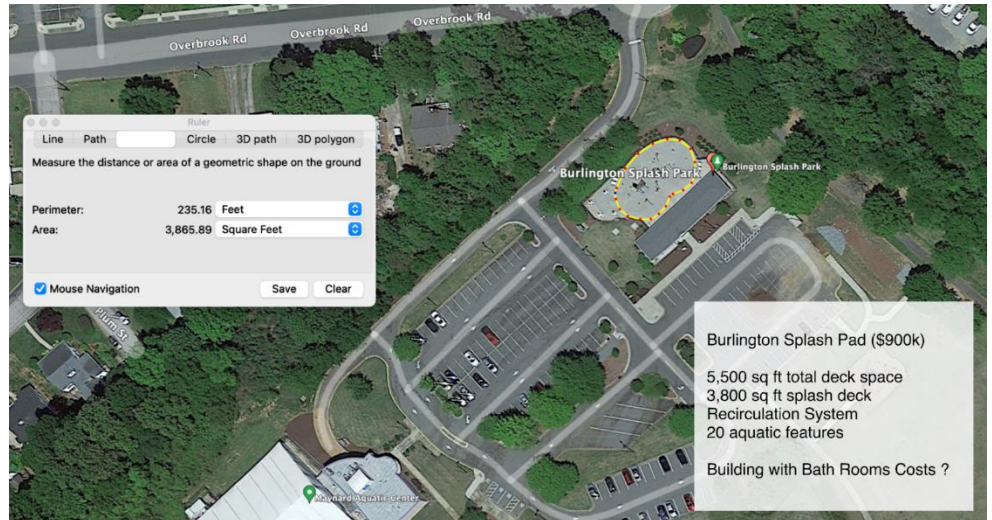
Property	Size (acres)	Public Transit	Households within 1/4 mile	Water Service	Sanitary Sewer Service	Playground	Restrooms	Staff On-Site/Pool	Public Parking (Number of Spaces)	Affordable Housing Community Within Walking Distance	Property Site in Qualifying Census Tract
Cedar Falls Park	66.6	Y	262	Y	N	Y	Y	N	180	UNK	N
Community Center Park	12	Y	486	Y	Y	Y	Y	Y	66	Y	N
Hargraves Park	6.8	Y	1285	Y	Y	Y	Y	Y	60	Y	Y
Homestead Park	43.6	Y	582	Y	Y	Y	Y	Y	288	Y	N
Southern Community Park	71	Y	340	Y	Y	Y	Y	N	157	N	N
Umstead Park	23.7	Y	1252	Y	Y	Y	Y	N	42	Y	Y
Eastwood Public Housing	5.5	N	299	Y	Y	Y	N	N	N	Y	N
Oakwood Public Housing	6	Y	785	Y	Y	Y	N	N	N	Y	N

SECTION 4 – Splash Pad Options

SAMPLING OF NEARBY EXISTING FACILITIES

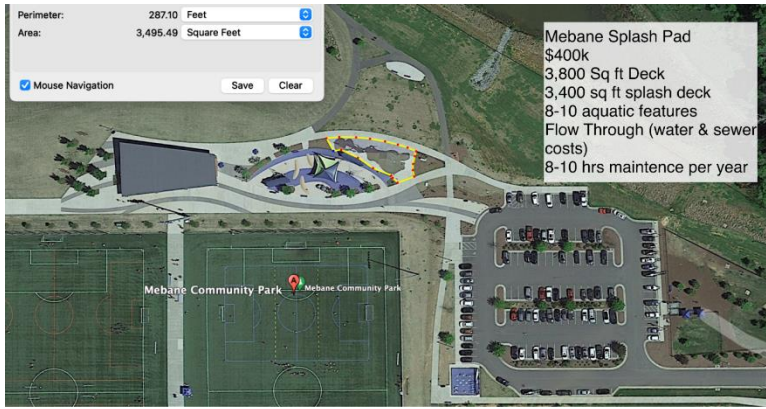
Prior to the start of this study, Town staff toured some nearby splash pad facilities in Burlington, Mebane, and Pittsboro. Details of these facilities have been included in the splash pad examples below.

Burlington Splash Pad has about 5,500 sq ft of total deck space and 3,800 sq ft of that as a splash deck. Their aquatic features and recirculation system and installation was approximately \$900,000. The cost of the building attached is unknown, but it houses an approved recirculation system design. System start-up for season approx. 1.5 days and shut-down 1 day for a recirculation system. A splash pad like this would require daily water sample log and daily maintenance checks. Expect 10-15 minutes on operation days to log water levels, calibrate systems, check and test features, and run a sequence.



Pittsboro Splash Pad has about 2,600 sq ft of splash deck and 2,800 of deck space. Their turn-key project cost approximately \$750,000. The building housing the recirculation system costs are unknown. The same maintenance listed for Burlington would apply to Pittsboro. The costs to budget for yearly operation would be hourly maintenance rates, water, sewer and electrical, and under proper operation and maintenance systems should last 8-15+ years well past newer technology to make systems operate with more automation and less staff maintenance.

Mebane Splash Pad has about 3,400 sq ft of splash deck and 3,800 sq ft of deck space. This project is estimated turn-key around \$400,000. This is a pocket park design for low flow drain to waste systems. This does not require a health department permit, because water is not being captured and reused for



human contact. Owner is paying for water and sewer costs associated with the gallons per minute required to operate for the hours of operation and sometimes costly main water and sewer taps. 8-10 hours maintenance checks per year. (once weekly to check sequence and aquatic feature functions).

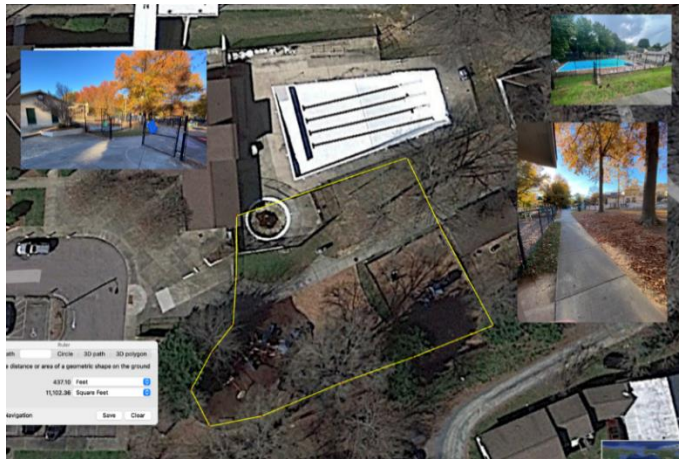
DESTINATION SPLASH PAD FACILITY DEFINITION

Destination splash pads are aquatic spaces that are worth packing up the crew and making the afternoon of it. Typically, larger spaces and an array of water effects and experiences for all ages and abilities. These designs almost always have a system to capture the water, filter, and treat the water for reuse. Recirculated splash pads in North Carolina are regulated by the state health department.



SUITABILITY OF CHAPEL HILL PARKS FOR A DESTINATION SPLASH PAD

Three Chapel Hill parks can be feasible locations for any size splash pad from destination to pocket park. All have aquatic staff and/or staff on site, available space, utilities from existing building (Tap fees).

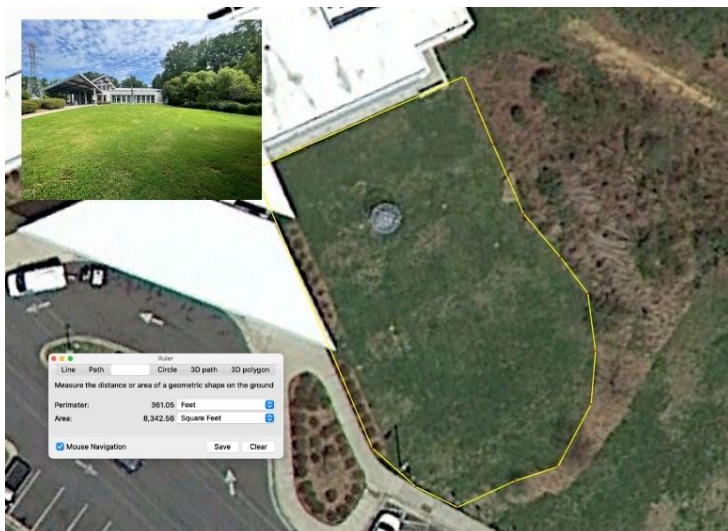


Hargraves Park / AD Clark Pool

Hargraves Park is recommended to accommodate any size splash pad up to 4,000 sq ft with the existing playground for a total of over 11,000 sq ft. This park also has older facilities so a splash park would contribute to updating some of the auxiliary facilities (access, play areas) and would provide water play in the event that the pool needs major repairs or replacement which would preclude use during a summer season.

Chapel Hill Community Center/Pool

Chapel Hill Community Center has current outdoor pool deck space over 6,000 sq ft and could accommodate any design up to 8,000 sq ft. This site is central in Town, and historically has had shorter pool hours due to staffing shortages. A splash park would provide a cooling water feature to extend outdoor recreation play time for Town residents. The splash pad would be located close to the playground and would provide some auxiliary amenities (such as accessible restroom) which would benefit other park facilities.



Homestead Aquatic Center

Homestead Aquatic Center has an 8,000+ sq ft cleared grassy area in front of the building to accommodate a new aquatic play space. Previously this was envisioned as the future location of a gym. It is somewhat removed from the playground area.

SMALL POCKET PARK OR MEDIUM SIZED SPLASH PAD FACILITIES

Pocket park splash pads are typically smaller - from 3-8 features - and usually low flow (less than 72 gpm). Medium sized pads range from 8-16 features and usually low flow (60-150+ gpm). Pocket or Medium pads have one big question to answer with several factors to weigh. Should I pay for water and sewer or recirculate?

Single Use:

- - Water and sewer costs are important to calculate during the design phase.
 - Hours of operation and sequences are ways to control water budget.
- For maintenance expect 2-3 visits weekly (10-15 minutes per visit for splash pad duties) Depending on use, add time for items like trash and clean-up, 1-2-hour season start-up and 1-2-hour season shut down.
- Here are a few examples project budgets for pocket parks with your water and sewer costs calculated.

EXAMPLE 1:

This flow through design is 800 sq ft with one above grade spray feature and 7 ground sprays. This design would need 7,000-15,000 gallons per day of use sequenced between 5-10 hours or cost \$126-\$251 per day. (37 GPM)

Turn-Key Splash Pad Estimated \$180k +site prep and utility connection.



EXAMPLE 2

This single use Pad is 970 sq ft with a couple of tall features and 6 ground sprays. This design would use 13k-26k gallons of water per day or cost \$200-\$420 per day. (60 GPM)

Turn-Key Splash Pad Estimated \$210k +site prep and utility connection.





EXAMPLE 3

This 1,110 sq ft design pass through has 4 above grade features and 4 ground level sprays. This would use 16k-33k gallons of water per day or cost \$270-\$540 per day. (80 GPM)

Turn-Key Splash Pad Estimated \$225k +site prep and utility connection.

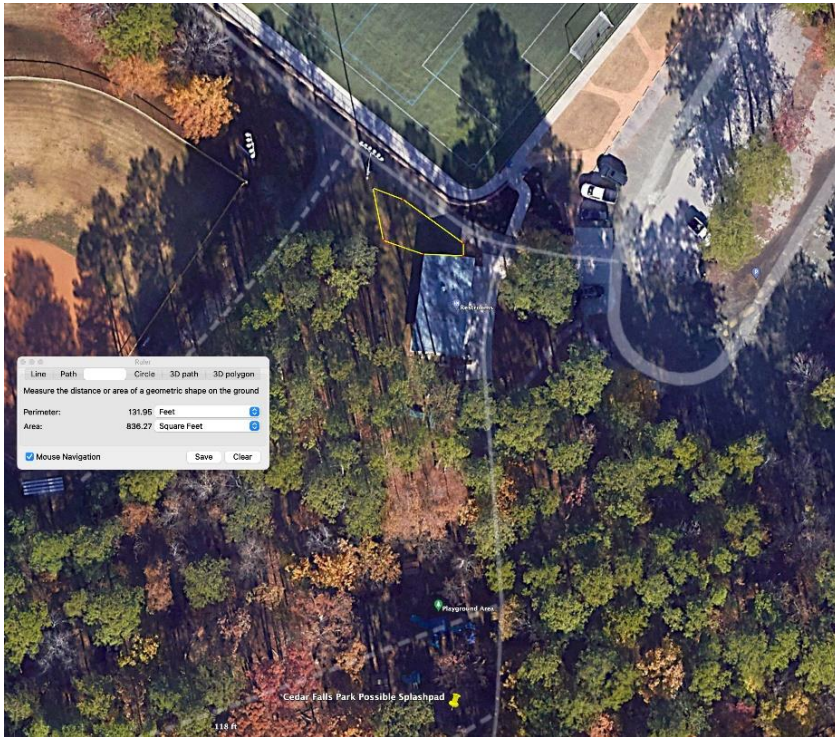
Recirculate:

- The State Health Department dictates the requirements for each design and must give approval for order of equipment.
 - Highlights
 - (3) "Public swimming pool" means public swimming pool as defined in G.S. 130A-280. Public swimming pools are divided into five types:
 - (d) "Water recreation attractions" are pools designed for special purposes that differentiate them from swimming pools, wading pools, and spas. They include:
 - (i) water slide plunge pools and run out lanes, which transfer the kinetic energy of the users' velocity through friction to the slide.
 - (ii) wave pools.
 - (iii) rapid rides.
 - (iv) lazy rivers.
 - (v) interactive play attractions that incorporate devices using sprayed, jetted, or other water sources contacting the users and that do not incorporate standing or captured water as part of the user activity area.
- Higher initial costs, with minimal operating costs
- Many more design capabilities for 8-16 features and range in sizes from 2k-4k sq ft
- Expect 15-20 minutes daily to sample and log water sample, perform backwash or swap out cartridge filter
- See page 35 for the section in the NC Public Swimming Pool Code for Water Recreation Attractions

SUITABILITY OF CHAPEL HILL PARKS FOR A POCKET PARK SPLASH PAD

Seven of the eight sites visited would be appropriate places to install a smaller splash pad facility. The single location where even a small splash facility would not be practical is the Oakwood Public Housing site. At this site there is no green space which truly feels like community space. All the open space at this location is either right next to a parking lot or feels part of individual residential unit outdoor space. There is also no public parking at this location, and not much local street parking.

Cedar Falls Park

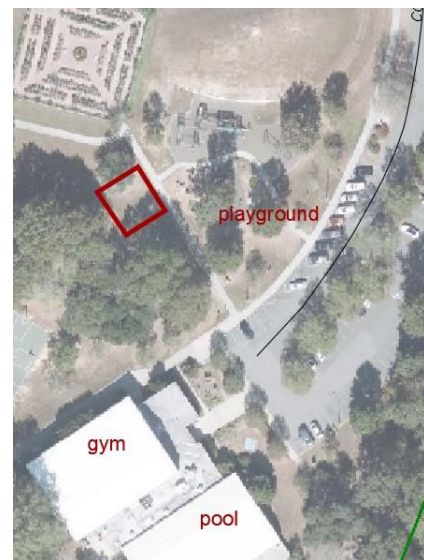


A pocket park sized facility would be appropriate at this location. A small splash facility near the restrooms or near the existing playground would provide a welcome cooling spot for families enjoying the playground or the tennis courts, and misters would provide a very beneficial amenity for the same group as well as athletes and spectators at the play fields.

This park does not currently have OWASA sanitary sewer service, and the existing septic field does not function properly when the park is overcrowded or when there has been a large rain event. The small splash area or misting station would not require sanitary sewer facilities, and though it would act as an amenity for park users, it would be unlikely to attract a larger user group.

Community Center Park

A small splash facility could be accommodated near the playground and act as a beneficial extension of that play area. This is the most used playground in Town and adding a water feature would provide a feature that would extend users' time at the park.



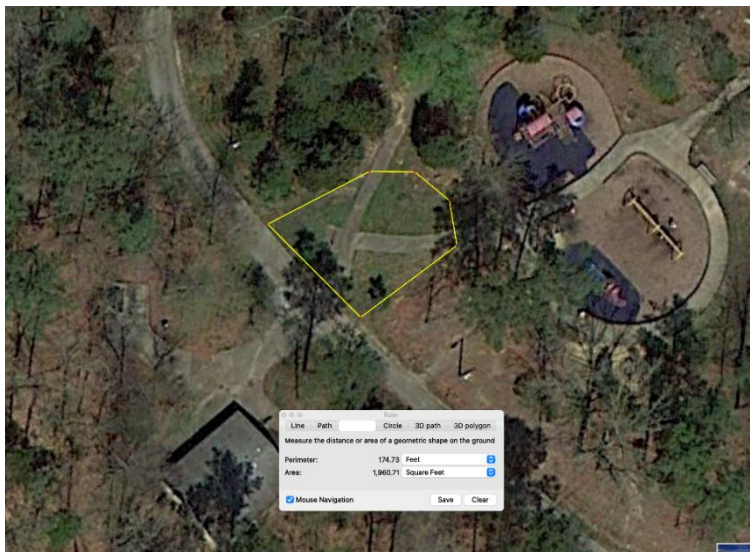
Eastwood Public Housing

There are two locations at the Eastwood development appropriate for a small splash feature. In the center of the community there is an older basketball half court which is in disrepair. This feature could be removed and provide a space for a smaller splash facility. There is also a large grassy space on the Eastwood Road frontage which is handy to the water utility service. Development of a small splash feature at this location would feel more like a public park and would be visible but slightly screened from the street. There is some availability of public street parking in this neighborhood. The argument against a facility in this location is that there is no public transportation available, and all nearby streets are residential and may not be appropriate for increased park traffic.



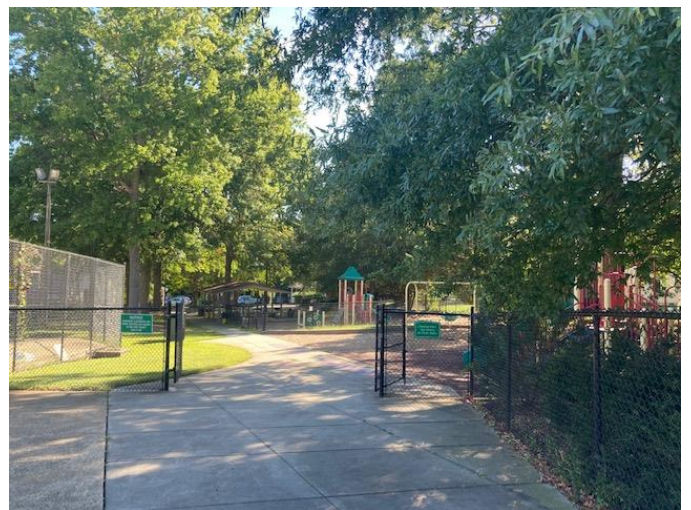
Homestead Park

There is a suitable location near the playground and restroom area for a small splash facility in this park. The restroom building contains an extension which is a sheltered picnic area. There are also many playfields at this park which see routine and tournament type use. A small splash facility in this park would also serve the athletes and spectators on the baseball and soccer fields.



Hargraves Park

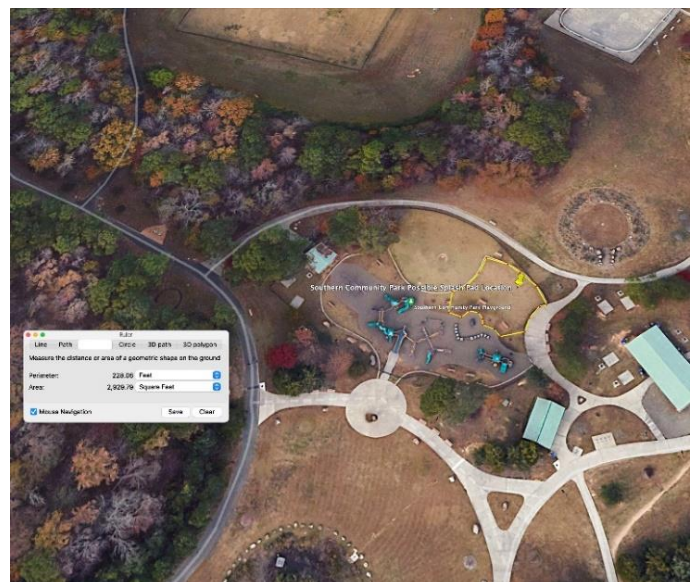
Hargraves Park has an opportunity for a small or medium sized splash facility between the pool and the playground areas. This park has the highest number of households within walking distance, is close to downtown and public transit, and has multiple options/locations for parking. This park is older - the pool was built in the 1960's - and the neighborhood has been underserved historically. A splash facility at this location would provide an additional amenity at a popular community park.



Southern Community Center Park

Southern Community Park has a master plan which includes a splash feature, though this amenity was not built. There is space within a fenced playground area which could easily accommodate a small or medium size splash pad, which would be a complementary amenity to the playground, shelters, and walking trails already in place.

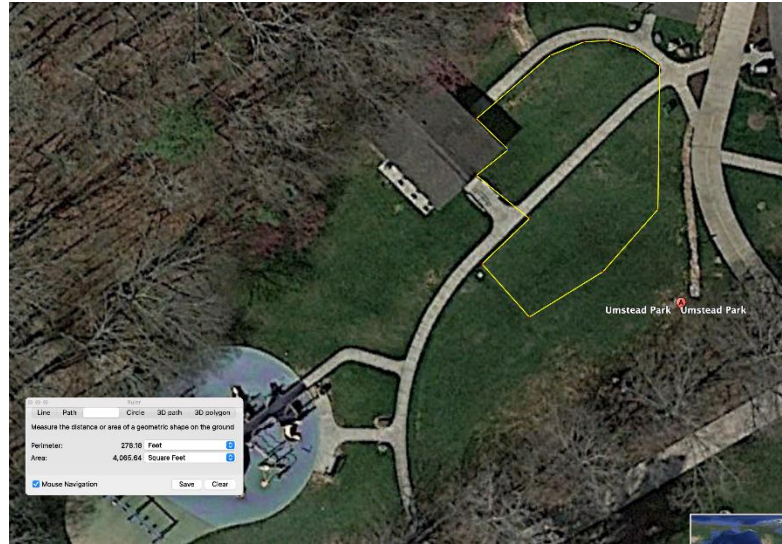
Like Cedar Falls and Homestead Parks, this park also has multiple playfields which attract large groups, and a small splash feature or mister located between the shelter and playfields would be a welcome amenity to field users as well as to families using the playground and picnic facilities here.



Umstead Park

There is a new very accessible playground at Umstead Park. This would be an appropriate place for a small to medium splash facility as a complimentary facility to the playground. This location has walking accessibility for almost as many households as the Hargraves Center Park and is located on the Tanyard Branch Greenway Trail.

There is an existing restroom building with picnic shelter.



SECTION 5 – Inclusive Playground Options

ACCESSIBLE PLAYGROUNDS

The Americans with Disabilities Act (ADA) requires that newly constructed and altered local government facilities be readily accessible to and usable by individuals with disabilities. This generally focuses on designing for people with physical accessibility issues. The minimum requirements to meet ADA compliance include:

- An accessible route from accessible parking to the playground facility must be at least 60" wide with a running slope of 5% or less and a cross slope of 2% or less. Accessible routes must be in the same area as the general circulation path.
- Within the play area accessible routes must be at least 36" wide, with the maximum 5% slope/2% cross slope, and overhead clearance of 80". At least one accessible route shall be provided within the play area connecting ground level play components and elevation play components, including entry and exit point of the play components.
- Within the play area safety surfacing allowing wheelchair maneuverability is required between the accessible route from entry to the play areas to at least one connection to each accessible play component, including any clear space requirement adjacent to accessible play components.
- Transfer stations shall be permitted to connect elevated play components where there are fewer than 20 elevated components. Larger number of elevated components requires direct access to 25% of those components. Transfer stations must be at least 24" wide x 14" deep, between 11" and 18" from the surface below, with a minimum 24" x 48" landing along the length of the transfer station and at least 1 means of support for transferring.

Playground companies offer a wide range of play products which are ADA compliant, and which can be combined with additional non-ADA compliant elements. Playground designers can ensure compliance in all elements of a new or modified play system, including the play element, railings, landings, access, and fall zones.

When existing playgrounds are not accessible, some modifications can be made to make these spaces more accessible including:



Landscape Structure, glider swing

- Safety surfacing from the access sidewalk to the equipment
- Modified swings – this can range from saucer type swings to swing seats that have back support and a harness
- Addition of ground level activities to be accessed from an accessible surface
- Include some brightly colored or color contrasting equipment to help children with vision problems see the equipment from a distance

Elements not included in the ADA requirements, but which would encourage people with disabilities to use the space include handicap accessible bathrooms close to the playground, seating, paved spaces for wheelchair seating adjacent to standard benches,

SAFETY SURFACE OPTIONS

- Poured in place rubber – This surface requires the least maintenance but is the most expensive option
- Tiles – bonded rubber in 2’x2’ tiles with interlocking sides
- Engineered wood chips – processed wood ground to a fibrous consistency, randomly sized with a maximum length of 2”. This is not the same as wood chips.

DEFINITION OF INCLUSIVE PLAYGROUNDS

Building to ADA code is a requirement for new playground installation. But the ADA code does not generally promote design requirements for people with disabilities other than accessibility related disabilities. For example, the ADA does not regulate to accommodate children with Down syndrome, sensory disorders, intellectual disabilities, or sight and hearing impairments. Inclusive playgrounds allow all children and their caregivers to play with their peers regardless of physical or social or cognitive needs. Playgrounds which are defined as inclusive include both the elements required to meet the Americans with Disabilities Act (ADA) and also to cater to children with social and sensory issues. Creating an inclusive playground does not necessarily mean removing an existing facility and starting from scratch. Many existing playgrounds can be modified and adapted to allow increased accessibility and inclusiveness. Inclusive playground elements should be incorporated into the main playground, not to be in a separate area of the park

INCLUSIVE PLAYGROUND COMPONENTS

- Include a variety of materials and textures available for touch – for example activity boards, sandy spaces for play, water play
- Incorporate music panels or instruments and other sensory play items
- Include elements with sliding, spinning, and swinging components
- Include cozy spaces for a small group of children
- Provide a calm quiet place to escape the busy playground
- Stress relief elements – equipment with kick or punch pads for kids to relieve stress
- Include gathering areas that can accommodate large groups of children
- ground level activities
- wide even spaces
- Facilities that can be used with a friend, such as extra wide slides
- Alter heights of equipment to accommodate different ages and risk levels
- Shade and seating



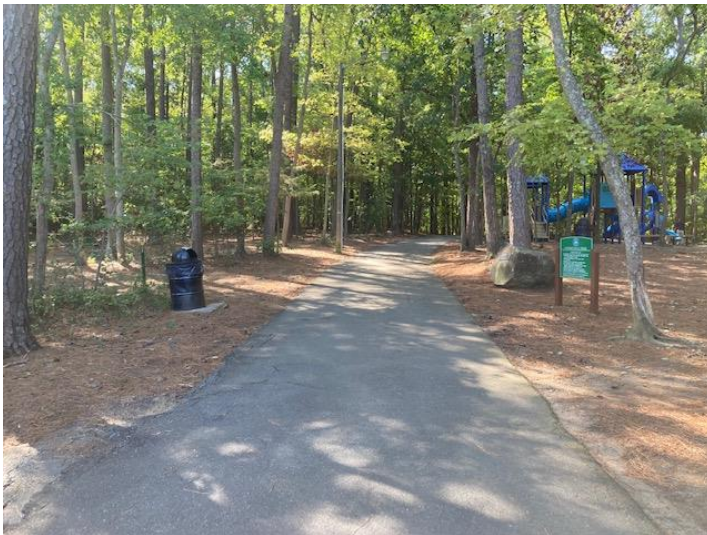
EXISTING FACILITIES IN CHAPEL HILL

The consultant team examined play structures and space at 6 parks in Chapel Hill. Umstead Park and Southern Community Park are two of the playgrounds which included many accessible elements. They could easily have a few more components added to make them more inclusive. The other parks would need more extensive overhauls to make them accessible, and all the parks really need additional elements to make them more inclusive.

All of these facilities would be appropriate for a combination playground /splash area. Any of these parks could have splash pad features included with reconstruction of a new playground, or with expansion of existing well-functioning playgrounds.

Cedar Falls Park

Cedar Falls has a recently installed playground which is not inclusive and not completely accessible. There were plans to add an accessible playground adjacent to the existing facility. Though there is a lot of space at this park and the new playground could be located here, the accessible/inclusive playground shouldn't be a separate play space from where all other children can play. The existing playground does have some real benefits – it is shaded and wooded, the surfacing appears ADA compliant, and some of the equipment has transfer stations. This playground could be made more accessible and inclusive with improvements to the access route from the parking lot, expansion of and small adjustments to improve access into the play area, and replacement of bathroom facilities to be fully ADA compliant which should be done anyway to serve the other park facilities. One option would be to expand the playground area and to reconfigure the trail to make it fully ADA compliant. This would allow continued use of the existing playground equipment while incorporating/adding inclusive and accessible features.



Trail from Cedar Falls parking lot to the playground. Trail could be relocated to the left to make it ADA compliant and to enlarge the playground area for expansion of inclusive equipment.

Elements required to improve this playground space:

- Clearing, regrading, and relocation of access trail:
- Expansion of playground facilities and surfacing
- Addition of an adaptive swing
- Accessible bathrooms:
- Sanitary sewer service:

Community Center Park

The playground at the Community Center Park is due for replacement and would be an ideal place for a very inclusive playground. This is a well-used park with good accessibility – it is close to the parking lot, there are some adjacent facilities such as the rose garden and gazebo that extend and expand the play experience, and there is some existing shade from mature trees. There is also a great hill adjacent to the playground which could be the basis for some embankment elements.



Landscape Structures embankment climber



Museum of Life and Science, Durham

Accessible bathrooms are available depending on hours of Center operation, are located inside the gym/pool building. Staff has noted that the bathroom facilities are insufficient for the number of people using the playground and other park facilities. There are single stall restrooms available for all park users. The additional restroom facilities are located in the pool changeroom area and are not available to the general public. Staff has also noted the parking lot is overfull frequently.

Elements required to improve this playground space:

- Replacement of playground facilities and surfacing
- Additional accessible restroom facility

Hargraves Park

The playground area at Hargraves would be suitable for an inclusive/accessible park. There is good accessibility from the west within the park which is nicely shaded and already has a picnic shelter. There are bathrooms about 300 feet away from the playground. Some adjustments to the site might be needed to provide compliant accessibility along the walkway that runs between the pool and the playground. Parking is available from two locations close to the playground area, but ADA compliant access is available only from the west. Holmes Childcare currently utilizes the park during specific weekday hours.

There is a mid-age playground which has good surfacing, shade, benches. There is a need for better transfer stations in that playground. The elementary playground area is not accessible. The surfacing is woodchip and gates are not accessible.

Elements required to improve this playground space:

- Replacement of sidewalk to provide ADA compliant access to all playgrounds and shelter
- Expansion of playground facilities

- Addition of adaptive swing
- Surfacing in under 5-year-old playground



Under 5 y-o play area, Hargraves Park



5-12 y-o play area, Hargraves Park

Homestead Park

Homestead Park would be an ideal place for a new inclusive accessible park. There is an existing playground at the park which is more accessible from the Stateside parking lot than the larger park lot. The playground is at least 15 years old and may be nearing the end of its useful life and when it is replaced it should include accessible and inclusive elements. This playground seems old enough that improvement to fully accessible and inclusive facility should be replacement of the whole playground. The playground is surrounded by trees which allows for some shade and nearby play in the woods. There are also nearby bathrooms and a shelter. There is more parking at this facility than at any other park in Chapel Hill.

Elements required to improve this playground space:

- Replacement of playground equipment and surfacing
- ADA compliant bathroom facilities



Homestead Park – wooded area adjacent to playground

Southern Community Park

This park contains a nicely fenced playground which has many accessible play elements and incorporates a picnic shelter. As well as playground equipment which is in good condition, there are shady and grassy areas for quiet or separate play. Some additional transition zones would help make more of the equipment accessible. The playground is large enough that additional features could be added. With replacement of some swings and additional equipment, this site would be ideal for a fully accessible and inclusive playground.



Southern Community Park - swings



There is sufficient parking at this site, and good accessibility from the parking lot. The bathrooms need improvement to meet ADA code and to be useful and fully inclusive. The ramp to the largest piece of equipment is accessible only by leaving the playground and coming back through a different gate – accessibility to each piece of equipment needs to be reworked so all equipment is accessible without going through gates or leaving the playground area.

Elements required to improve this playground space:

- Improvement of access to playground ramps
- Expansion of transfer stations
- Adaptive swing
- Accessible toilet facilities

Southern Community Park – accessible ramp to play structure

Umstead Park



Umstead Park also has a relatively new playground facility, which appears to be ADA compliant. There are appropriate handicap parking spaces, and a paved sidewalk between those spaces and the playground area approximately 250 feet away. The playground has been located outside of the RCD area and is close to existing bathrooms and a picnic shelter. The bathrooms are not ADA compliant.

Elements required to improve this playground space:

- Improvement of access to playstructure ramp
- Addition of adaptive swing
- Accessible toilet facilities

Umstead Park play structure

DEFICIENCIES AT EXISTING PARKS

A general shortfall at all the parks visited is the lack of truly accessible bathroom facilities. Many of the facilities are older (built in the 1970's or 1980's) and have tight spaces within which don't allow for turning and which don't have space to allow for an adult to help a disabled child. Nor are there any "family" restrooms to allow older children to be attended by a caregiver of a different gender. Additionally, none of the park bathroom facilities have door openers.

Swings are some of the most popular playground elements, and none of the parks visited have adaptive swing equipment. This equipment can be added, or swings on existing equipment can be replaced with adaptive swings.

Park staff identified parking shortages the Community Center and Umstead parks. Any addition of facilities at these parks should include parking accommodation.

PERMITTING

Improvements made at any of the parks or housing sites will involve getting permits from the Town and Orange County.

Improvements to the parks which do not include more than 2,500 sf of new building square footage could generally be permitted through a Zoning Compliance Permit. This permit takes between 3 and 6 months depending on the size of the project. The time frame would be at the low end for a pocket park splash pad but would be at the long end for a facility that included a new bathroom or equipment building and storm management facility.

SCHEDULES

Pocket Park Splash Pad

The time frame for permitting and construction of a pocket park splash pad would be about ___ months.

Starting the process, the Town could expect the design of a pocket park to take about a month before it would be sufficiently detailed to apply for permits. A simple park would require the following permits:

- Admin ZCP approval through Town of Chapel Hill – Approximately 3 months
- Erosion Control permit through Orange County – concurrent with ZCP

A flow-through system would not require Health Department permits.

The construction of a small park could be completed in about ___ weeks.

Destination Splash Pad Park

The time frame for permitting and construction of a destination splash pad park would be about ___ months.

Starting the process, the Town could expect the design of a destination park to take about 2 months before it would be sufficiently detailed to apply for permits. A destination park would be more likely to have buildings, increases in impervious surface, additional parking, and stormwater management facility requirements. It would require the following permits:

- ZCP approval through Town of Chapel Hill – Approximately 5-6 months
- Erosion Control permit through Orange County – approximately 2 months concurrent with ZCP
- Health Department Approvals – State level – approximately 1 month concurrent with ZCP

The construction of a destination park could be completed in about ___ weeks.

SPLASH PAD – DESTINATION PARK

Assumes the inclusion of these elements:

- Splash pad surface and features
- Small building for equipment
- Service connection for water (assumes nearby main or water source)
- Recirculation system
- Drainage to sanitary sewer or a leach field
- Construction of accessible sidewalks
- Possibly includes construction of a new restroom/change facility
- Possibly includes construction of additional parking
- Possibly includes construction of a stormwater mitigation facility



Sample small destination splash park



Sample large destination splash park

Cost for a large destination splash pad would be in the \$ 2,020,000 - \$ 2,220,000 range.

Splash facility including equipment building,	
Surfacing, 24+ spray features:	1,000,000-1,200,000
Restroom/change facility:	600,000
Parking Expansion:	200,000
Pedestrian access improvements:	15,000
Shade and seating:	105,000
Bioretention/Storm mitigation:	100,000

Cost for a medium destination splash pad would be in the \$ 1,670,000 - \$ 1,770,000 range.

Splash facility including equipment building,	
Surfacing, 16-24 spray features:	650,000-750,000
Restroom/change facility:	600,000
Parking Expansion:	200,000
Pedestrian access improvements:	15,000
Shade and seating:	105,000
Bioretention/Storm mitigation:	100,000

SPLASH PAD – POCKET PARK

Assumes the inclusion of these elements:

- Splash pad surface and features
- Small shelter for equipment
- Service connection for water (assumes nearby main or water source)
- Drainage to sanitary sewer or a leach field
- Pedestrian access
- Possibly includes construction of a stormwater mitigation facility



Pocket Splash Pad example

Cost for a pocket park size splash pad would be in the \$ 430,000 - \$ 530,000 range.

Splash pad with 5-10 spray features:	170,000-250-000
Dedicated water / sewer taps:	165,000 – 185,000
Pedestrian access improvements:	15,000
Bioretention/Storm mitigation:	80,000

ACCESSIBLE INCLUSIVE PLAYGROUND – NEW CONSTRUCTION

Assumes the inclusion of these elements:

- Playground equipment equivalent to the size of the playground at Southern Community Park
 - o Approx. 15,000 sf
 - o Approx 30-40 play elements
- Safety surfacing
- Benches and picnic tables
- Tree and shrub installation
- A tent style shade structure
- Accessible sidewalks
- Possibly includes construction of additional parking
- Possibly includes construction of improved bathroom facilities
- Possibly includes construction of a stormwater mitigation facility

Cost for a new inclusive playground would be in the \$ 1,040,000 - \$ 1,165,000 range.

New playground and surfacing, and miscellaneous site work (grading, plantings, etc.):	325,000-450-000
Restroom/change facility:	600,000
Pedestrian access improvements:	15,000
Bioretention/Storm mitigation:	100,000

ACCESSIBLE INCLUSIVE PLAYGROUND – EXISTING FACILITY EXPANSION/ADAPTATION

Assumes the inclusion of these elements:

- Additional Playground equipment and associated safety surfacing
- Benches
- Tree and shrub installation
- Accessible sidewalks

Cost for an inclusive accessible playground adaptation would be in the \$ 50,000 + range.

New playground equipment:	35,000
Pedestrian access improvements:	15,000

APPENDIX A – Water Attraction Specification

SECTION .2500 - PUBLIC SWIMMING POOLS

15A NCAC 18A .2543 WATER RECREATION ATTRACTIONS

(a) Upon written request and approval by the Department, water recreation attractions including water slides, wave pools, rapid rides, lazy rivers, artificial swimming lagoons, and other similar features may deviate from the requirements of this Section with respect to pool profile, depth, freeboard, flow dynamics and surface skimming systems. The Department shall approve the request upon a showing that such deviation performs in a manner equally to or more protective of public health than the requirements of this Section based upon design plans and technical specifications by the designing engineer or equipment manufacturer. Water recreation attractions shall meet all other requirements of this Section.

(b) Water slide landing pools with a capacity of less than 60,000 gallons shall have a circulation and filtration system capable of turning over the entire pool capacity every two hours. Where automatic chemical controllers are used the turnover time shall be no more than three hours. Landing pool dimensions shall be consistent with the slide manufacturer's recommendation.

(c) When waterfalls are incorporated in water recreation attractions, they shall be constructed with no handholds or footholds to a height of four feet to discourage climbing.

(d) Interactive play attractions shall be constructed and operated in accordance with the rules of this Section and shall comply with the following:

- (1) The recirculation system shall contain a water capacity equal to at least three minutes of maximum flow of all feature pumps and filter circulation pumps combined and shall not be less than 1,000 gallons. Where the water capacity exceeds 10,000 gallons, the minimum capacity shall be based on the lesser of three minutes of maximum feature flow or 7.5 gallons per square foot of splash zone watershed drained to the surge container.
- (2) Access shall be provided to the surge water container.
- (3) A filter circulation system shall be provided and shall be separate from the feature pump system except that both systems can draw water from a common drainpipe if the drain and pipe are sized to handle the flow of all pumps without exceeding the flow velocities specified in Rule .2518 of this Section.
- (4) The filter circulation system shall draw water from the surge container through a variable height surface skimmer and a bottom drain located no more than 6 inches from the bottom of the container.
- (5) The filter circulation system shall filter and return the entire water capacity in no more than 30 minutes and shall operate 24 hours a day.
- (6) Automatic chemical controllers shall be provided to monitor and adjust the disinfectant residual and pH of the water contained in the system.
- (7) The disinfectant residual in interactive play attractions shall be maintained at a level of at least two parts per million of free chlorine. Chlorine feeders shall be capable of producing 12 parts per million of free chlorine in the filter circulation piping.
- (8) Valves shall be provided to control water flow to the features in accordance with the manufacturers' specifications.
- (9) Splash zones shall be sloped to drains sized and located to remove all feature water to the surge tank without water accumulating on the surface.
- (10) Deck or walkway space is not required outside the splash zone.
- (11) Dressing and sanitary facilities shall not be required.
- (12) Interactive play features shall not be required to have a fence except the wading pool fence requirements shall apply to interactive play features located inside a swimming pool enclosure.

- (13) The safety provisions of Rule .2530 of this Section shall not apply except a sign shall be posted prohibiting pets and glass containers.
- (14) Interactive play attractions built prior to April 1, 2004, that do not comply with this design and construction requirements shall be permitted to operate as built if no water quality or safety violations occur under Rules .2535 and .2537 of this Section.

(e) Training pools shall meet the requirements for swimming pools with the following exceptions:

(1) Training pools shall be equipped with a filter circulation system that filters and returns the entire pool capacity in no more than two hours.

(2) The free chlorine residual in training pools shall be maintained at no less than two parts per million. (f) Artificial swimming lagoons shall meet the requirements for public swimming pools except as specified in this Rule:

- (1) Pool shells shall not be required. Liners shall meet the requirements of Rule .2514 of this Section.
- (2) Underwater components of the artificial swimming lagoon or float lines with openings greater than one-half inch shall not be allowed in swimming zones.
- (3) All swimming zone float rope components shall be a color contrasting with the pool liner. Artificial swimming lagoons are not required to meet the float rope location requirements of Rule .2523(e) of this Section regarding breakpoint and slope. A contrasting color band shall not be required on the liner under the rope.
- (4) Each swimming zone and water feature shall meet water quality standards as required in Rule .2535 of this Section. If the water quality of a swimming zone or water feature does not meet the requirements of Rule .2535 of this Section, the operator shall close the swimming zone or water feature and post a sign at the entrance of the swimming zone with legible letters of at least four inches (10 cm) in height stating "ATTENTION: THE SWIMMING ZONE IS CLOSED. SWIMMING IN THIS AREA IS NOT PERMITTED AT THIS TIME." The swimming zone or water feature shall remain closed until the water quality in the swimming zone or water feature complies with the requirements of Rule .2535 of this Section.
- (5) All non-swimming zones shall be maintained so the bottom of the lagoon is visible in all areas.
- (6) A sign shall be posted at all entrances to the artificial swimming lagoon with legible letters of at least four inches (10 cm) in height stating "NOTICE – NO SWIMMING ALLOWED OUTSIDE OF DESIGNATED SWIMMING ZONES."
- (7) Signage shall be posted indicating swimming zones.
- (8) Depth markings and no diving markers shall be provided on decks in swimming zones as required in Rule .2523 of this Section. Signs shall be posted at all entrances to swimming zones with legible letters of at least four inches (10cm) in height stating, "NO DIVING" and stating the maximum depth of the swimming zone in Arabic numerals and shall include the word "feet" or the symbol "ft" to indicate the unit of measure.
- (9) Decks at zero entry areas located within swimming zones are not required to meet the minimum deck area requirements in Rule .2522 of this Section. Access to swimming zones shall be provided for emergency vehicles and personnel. No decks shall be required in non-swimming zones. The requirements of Rule .2515(g)(1) of this Section shall not apply to swimming zones and Rule .2515(g) of this Section shall not apply to non-swimming zones.
- (10) Swimming zones shall meet all safety provisions as set out in Rule .2530 of this Section. Where swimming zones are separated by more than 75 feet, each swimming zone shall separately meet all safety provisions. Non-swimming zones are exempt from the requirements in Rule .2530 of this Section.
- (11) A water treatment system that does not meet the requirements of Rules .2518 and .2519 of this Section shall be approved by the Environmental Health Section of the Department's Division of Public Health when the treatment system performs in a manner equal or superior to the systems described in Rules .2518 and .2519 of this Section in terms of water clarification, disinfection, and removal of debris, and results in a disinfectant residual and pH level as required in Subparagraph (f)(4) of this Rule.
- (12) The requirements of Rule .2529 of this Section and Rule .2526(e)–(h) of this Section shall not apply. Sanitary facility requirements shall comply with the 2018 North Carolina State Building Code: Plumbing

Code, which is incorporated by reference, including any subsequent amendments or editions and available free of charge at: <https://codes.iccsafe.org/content/NCPC2018>.

- (13) Bacteriological samples shall be collected by the operator in non-swimming zones and tested weekly. One sample shall be collected for every 250 feet of shoreline, with no more than 300 feet and no less than 25 feet between any two sampling locations. The samples shall be collected at least one foot below the surface, in at least three feet of water. The samples shall be analyzed by a laboratory accredited by the North Carolina Drinking Water Laboratory Certification Program, the North Carolina Wastewater/Groundwater Laboratory Certification Program, or the National Environmental Laboratory Accreditation Program. The test results shall be maintained as part of the records required in Rule .2535(11) of this Section.
- (14) When the result of any test required by Subparagraph (f)(13) of this Rule exceeds the standards in Rule .3402(a) of this Subchapter, the operator shall:
 - (A) notify the local health department that permitted the artificial swimming lagoon and resample the water within 24 hours of receipt of the result from the laboratory; and
 - (B) close all non-swimming zones and post a sign at all non-swimming zone entrances with legible letters of at least four inches (10 cm) in height stating "ATTENTION: ALL NON- SWIMMING ZONES ARE CLOSED. RECREATIONAL ACTIVITIES IN THIS AREA ARE NOT PERMITTED AT THIS TIME." This sign shall remain posted until resampling determines that bacterial levels do not exceed the standards in Rule .3402(a) of this Subchapter.
- (15) Non-swimming zones shall not be required to comply with the lighting requirements of Rule .2524 of this Section. When night swimming is allowed, the operator shall provide lighting in swimming zones as required for public swimming pools.
- (16) The requirements of Rule .2537(b)(16) of this Section shall not apply. Submersible pumps or mechanical pool cleaning equipment shall not be used in swimming zones or within 25 feet of swimming zones when a swimming zone is open to bathers. If submersible pumps or mechanical pool cleaning equipment are used in non-swimming zones when a non-swimming zone is open to users, the following conditions shall apply:

(17)

History Note:

- (A) A registered design professional shall provide design plans or technical specifications that demonstrate that any underwater suction outlets perform in a manner that is equally protective or more protective than the Pool and Hot Tub Alliance's ANSI/APSP/ICC-7 2013 Standard for Suction Entrapment Avoidance in Swimming Pools, which is incorporated by reference, including any subsequent amendments or editions, and available for a fee of one hundred sixty-five dollars (\$165.00) at <https://www.apsp.org/store1>; and
- (B) All floating components of submersible pumps or mechanical pool cleaning equipment shall be labeled with a sign above the water line with legible letters of at least four inches (10 cm) in a contrasting color stating: "DANGER: MECHANICAL EQUIPMENT IN USE. STAY BACK 25 FEET."

The requirements of Rules .2521 and .2516(f)(1) of this Section shall not apply to non-swimming zones.

Authority G.S. 130A-280; 130A-282; S.L. 2011-39; S.L. 2019-88.

Eff. April 1, 1999.

Amended Eff. March 1, 2004.

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

Temporary Amendment Eff. December 3, 2019; Amended Eff. October 1, 2020.

15A NCAC 18A .2544 SPECIAL PURPOSE AND THERAPY POOLS

(a) Special purpose and therapy pools shall comply with the requirements for public swimming pools and spas except as specified in this Rule.

(b) Float tanks:

- (1) The requirement in Rule .2522 of this Section for a deck or walkway continuous with the top of the pool wall does not apply to isolation float tanks where a clear floor space of at least eight feet by four feet is provided adjacent to the entrance to the tank.
- (2) The requirement in Rule .2532 of this Section for the minimum ceiling height of 7 1/2 feet above the rim of the pool does not preclude use of a canopy of a lower height to enclose an isolation float tank provided the canopy can be opened to allow users a standing entry and exit from the float tank.
- (3) The minimum lighting requirement in Rule .2524 of this Section does not apply to float tanks provided lighting is available for cleaning and is sufficient to provide visibility for entry and exit from the float tank.
- (4) The requirements in Rule .2518 of this Section that recirculation pumps operate 24 hours per day do not preclude turning off the pump during float sessions when a sanitizing cycle is provided that filters and disinfects the entire capacity of the float tank system at least twice before every user

enters the pool. When the float tank is not being used, the pump shall either operate continuously or

intermittently to filter and disinfect the capacity of the pool twice every hour.

- (5) The requirement in Rule .2518 of this Section that pool pumps three horsepower or smaller meet NSF/ANSI Standard 50 is not applicable when the mineral content of the brine in a float tank is incompatible with standard pool pumps. Pumps that do not meet NSF/ANSI standard 50 shall be approved by the Department when the viscosity of the mineral solution in the float tank requires a pump impeller or magnetic coupling designed to pump viscous liquids. Electrical safety of such pumps shall be verified by an independent third-party testing lab to meet applicable Underwriters Laboratories (UL) Standards.
- (6) The requirement in Rule .2532 of this Section for a caution sign at spas with a water temperature above 90 degrees Fahrenheit is not applicable to float tanks that do not exceed an operating temperature of 95 degrees Fahrenheit. Float tanks that exceed an operating temperature of 95 degrees Fahrenheit shall have a posted sign with the same warnings required for hot spas except references to spas may be reworded to reference float tanks or float spas.

15A NCAC 18A .2543 WATER RECREATION ATTRACTIONS

(a) Upon written request and approval by the Department, water recreation attractions including water slides, wave pools, rapid rides, lazy rivers, artificial swimming lagoons, and other similar features may deviate from the requirements of this Section with respect to pool profile, depth, freeboard, flow dynamics and surface skimming systems. The Department shall approve the request upon a showing that such deviation performs in a manner equally to or more protective of public health than the requirements of this Section based upon design plans and technical specifications by the designing engineer or equipment manufacturer. Water recreation attractions shall meet all other requirements of this Section.

(b) Water slide landing pools with a capacity of less than 60,000 gallons shall have a circulation and filtration system capable of turning over the entire pool capacity every two hours. Where automatic chemical controllers are used the turnover time shall be no more than three hours. Landing pool dimensions shall be consistent with the slide manufacturer's recommendation.

(c) When waterfalls are incorporated in water recreation attractions, they shall be constructed with no handholds or footholds to a height of four feet to discourage climbing.

(d) Interactive play attractions shall be constructed and operated in accordance with the rules of this Section and shall comply with the following:

- (1) The recirculation system shall contain a water capacity equal to at least three minutes of maximum flow of all feature pumps and filter circulation pumps combined and shall not be less than 1,000 gallons. Where the water capacity exceeds 10,000 gallons, the minimum capacity shall be based on the lesser of three minutes of maximum feature flow or 7.5 gallons per square foot of splash zone watershed drained to the surge container.
- (2) Access shall be provided to the surge water container.
- (3) A filter circulation system shall be provided and shall be separate from the feature pump system except that both systems can draw water from a common drainpipe if the drain and pipe are sized to handle the flow of all pumps without exceeding the flow velocities specified in Rule .2518 of this Section.
- (4) The filter circulation system shall draw water from the surge container through a variable height surface skimmer and a bottom drain located no more than 6 inches from the bottom of the container.
- (5) The filter circulation system shall filter and return the entire water capacity in no more than 30 minutes and shall operate 24 hours a day.
- (6) Automatic chemical controllers shall be provided to monitor and adjust the disinfectant residual and pH of the water contained in the system.
- (7) The disinfectant residual in interactive play attractions shall be maintained at a level of at least two parts per million of free chlorine. Chlorine feeders shall be capable of producing 12 parts per million of free chlorine in the filter circulation piping.
- (8) Valves shall be provided to control water flow to the features in accordance with the manufacturers' specifications.
- (9) Splash zones shall be sloped to drains sized and located to remove all feature water to the surge tank without water accumulating on the surface.
- (10) Deck or walkway space is not required outside the splash zone.
- (11) Dressing and sanitary facilities shall not be required.
- (12) Interactive play features shall not be required to have a fence except the wading pool fence requirements shall apply to interactive play features located inside a swimming pool enclosure.
- (13) The safety provisions of Rule .2530 of this Section shall not apply except a sign shall be posted prohibiting pets and glass containers.
- (14) Interactive play attractions built prior to April 1, 2004, that do not comply with this design and construction requirements shall be permitted to operate as built if no water quality or safety violations occur under Rules .2535 and .2537 of this Section.

(e) Training pools shall meet the requirements for swimming pools with the following exceptions:

(1) Training pools shall be equipped with a filter circulation system that filters and returns the entire pool capacity in no more than two hours.

(2) The free chlorine residual in training pools shall be maintained at no less than two parts per million. (f) Artificial swimming lagoons shall meet the requirements for public swimming pools except as specified in this Rule:

- (1) Pool shells shall not be required. Liners shall meet the requirements of Rule .2514 of this Section.
- (2) Underwater components of the artificial swimming lagoon or float lines with openings greater than one-half inch shall not be allowed in swimming zones.
- (3) All swimming zone float rope components shall be a color contrasting with the pool liner. Artificial swimming lagoons are not required to meet the float rope location requirements of Rule .2523(e) of this Section regarding breakpoint and slope. A contrasting color band shall not be required on the liner under the rope.
- (4) Each swimming zone and water feature shall meet water quality standards as required in Rule .2535 of this Section. If the water quality of a swimming zone or water feature does not meet the requirements of Rule .2535 of this Section, the operator shall close the swimming zone or water feature and post a sign at the entrance of the swimming zone with legible letters of at least four inches (10 cm) in height stating

"ATTENTION: THE SWIMMING ZONE IS CLOSED. SWIMMING IN THIS AREA IS NOT PERMITTED AT THIS TIME." The swimming zone or water feature shall remain closed until the water quality in the swimming zone or water feature complies with the requirements of Rule .2535 of this Section.

- (5) All non-swimming zones shall be maintained so the bottom of the lagoon is visible in all areas.
- (6) A sign shall be posted at all entrances to the artificial swimming lagoon with legible letters of at least four inches (10 cm) in height stating "NOTICE – NO SWIMMING ALLOWED OUTSIDE OF DESIGNATED SWIMMING ZONES."
- (7) Signage shall be posted indicating swimming zones.
- (8) Depth markings and no diving markers shall be provided on decks in swimming zones as required in Rule .2523 of this Section. Signs shall be posted at all entrances to swimming zones with legible letters of at least four inches (10cm) in height stating, "NO DIVING" and stating the maximum depth of the swimming zone in Arabic numerals and shall include the word "feet" or the symbol "ft" to indicate the unit of measure.
- (9) Decks at zero entry areas located within swimming zones are not required to meet the minimum deck area requirements in Rule .2522 of this Section. Access to swimming zones shall be provided for emergency vehicles and personnel. No decks shall be required in non-swimming zones. The requirements of Rule .2515(g)(1) of this Section shall not apply to swimming zones and Rule .2515(g) of this Section shall not apply to non-swimming zones.
- (10) Swimming zones shall meet all safety provisions as set out in Rule .2530 of this Section. Where swimming zones are separated by more than 75 feet, each swimming zone shall separately meet all safety provisions. Non-swimming zones are exempt from the requirements in Rule .2530 of this Section.
- (11) A water treatment system that does not meet the requirements of Rules .2518 and .2519 of this Section shall be approved by the Environmental Health Section of the Department's Division of Public Health when the treatment system performs in a manner equal or superior to the systems described in Rules .2518 and .2519 of this Section in terms of water clarification, disinfection, and removal of debris, and results in a disinfectant residual and pH level as required in Subparagraph (f)(4) of this Rule.
- (12) The requirements of Rule .2529 of this Section and Rule .2526(e)–(h) of this Section shall not apply. Sanitary facility requirements shall comply with the 2018 North Carolina State Building Code: Plumbing Code, which is incorporated by reference, including any subsequent amendments or editions and available free of charge at: <https://codes.iccsafe.org/content/NCPC2018>.
- (13) Bacteriological samples shall be collected by the operator in non-swimming zones and tested weekly. One sample shall be collected for every 250 feet of shoreline, with no more than 300 feet and no less than 25 feet between any two sampling locations. The samples shall be collected at least one foot below the surface, in at least three feet of water. The samples shall be analyzed by a laboratory accredited by the North Carolina Drinking Water Laboratory Certification Program, the North Carolina Wastewater/Groundwater Laboratory Certification Program, or the National Environmental Laboratory Accreditation Program. The test results shall be maintained as part of the records required in Rule .2535(11) of this Section.
- (14) When the result of any test required by Subparagraph (f)(13) of this Rule exceeds the standards in Rule .3402(a) of this Subchapter, the operator shall:
 - (A) notify the local health department that permitted the artificial swimming lagoon and resample the water within 24 hours of receipt of the result from the laboratory; and
 - (B) close all non-swimming zones and post a sign at all non-swimming zone entrances with legible letters of at least four inches (10 cm) in height stating "ATTENTION: ALL NON- SWIMMING ZONES ARE CLOSED. RECREATIONAL ACTIVITIES IN THIS AREA ARE NOT PERMITTED AT THIS TIME." This sign shall remain posted until resampling determines that bacterial levels do not exceed the standards in Rule .3402(a) of this Subchapter.
- (15) Non-swimming zones shall not be required to comply with the lighting requirements of Rule .2524 of this Section. When night swimming is allowed, the operator shall provide lighting in swimming zones as required for public swimming pools.
- (16) The requirements of Rule .2537(b)(16) of this Section shall not apply. Submersible pumps or mechanical pool cleaning equipment shall not be used in swimming zones or within 25 feet of swimming zones when a swimming zone is open to bathers. If submersible pumps or mechanical pool cleaning

equipment are used in non-swimming zones when a non-swimming zone is open to users, the following conditions shall apply:

(17)

History Note:

- (A) A registered design professional shall provide design plans or technical specifications that demonstrate that any underwater suction outlets perform in a manner that is equally protective or more protective than the Pool and Hot Tub Alliance's ANSI/APSP/ICC-7 2013 Standard for Suction Entrapment Avoidance in Swimming Pools, which is incorporated by reference, including any subsequent amendments or editions, and available for a fee of one hundred sixty-five dollars (\$165.00) at <https://www.apsp.org/store1>; and
- (B) All floating components of submersible pumps or mechanical pool cleaning equipment shall be labeled with a sign above the water line with legible letters of at least four inches (10 cm) in a contrasting color stating: "DANGER: MECHANICAL EQUIPMENT IN USE. STAY BACK 25 FEET."

The requirements of Rules .2521 and .2516(f)(1) of this Section shall not apply to non-swimming zones.

Authority G.S. 130A-280; 130A-282; S.L. 2011-39; S.L. 2019-88.

Eff. April 1, 1999.

Amended Eff. March 1, 2004.

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 20, 2019.

Temporary Amendment Eff. December 3, 2019; Amended Eff. October 1, 2020.

15A NCAC 18A .2544 SPECIAL PURPOSE AND THERAPY POOLS

(a) Special purpose and therapy pools shall comply with the requirements for public swimming pools and spas except as specified in this Rule.

(b) Float tanks:

- (1) The requirement in Rule .2522 of this Section for a deck or walkway continuous with the top of the pool wall does not apply to isolation float tanks where a clear floor space of at least eight feet by four feet is provided adjacent to the entrance to the tank.
- (2) The requirement in Rule .2532 of this Section for the minimum ceiling height of 7 1/2 feet above the rim of the pool does not preclude use of a canopy of a lower height to enclose an isolation float tank provided the canopy can be opened to allow users a standing entry and exit from the float tank.
- (3) The minimum lighting requirement in Rule .2524 of this Section does not apply to float tanks provided lighting is available for cleaning and is sufficient to provide visibility for entry and exit from the float tank.
- (4) The requirements in Rule .2518 of this Section that recirculation pumps operate 24 hours per day do not preclude turning off the pump during float sessions when a sanitizing cycle is provided that filters and disinfects the entire capacity of the float tank system at least twice before every user

enters the pool. When the float tank is not being used, the pump shall either operate continuously or

intermittently to filter and disinfect the capacity of the pool twice every hour.

- (5) The requirement in Rule .2518 of this Section that pool pumps three horsepower or smaller meet NSF/ANSI Standard 50 is not applicable when the mineral content of the brine in a float tank is

incompatible with standard pool pumps. Pumps that do not meet NSF/ANSI standard 50 shall be approved by the Department when the viscosity of the mineral solution in the float tank requires a pump impeller or magnetic coupling designed to pump viscous liquids. Electrical safety of such pumps shall be verified by an independent third-party testing lab to meet applicable Underwriters Laboratories (UL) Standards.

- (6) The requirement in Rule .2532 of this Section for a caution sign at spas with a water temperature above 90 degrees Fahrenheit is not applicable to float tanks that do not exceed an operating temperature of 95 degrees Fahrenheit. Float tanks that exceed an operating temperature of 95 degrees Fahrenheit shall have a posted sign with the same warnings required for hot spas except references to spas may be reworded to reference float tanks or float spas.

Americans with Disabilities Act 2010