

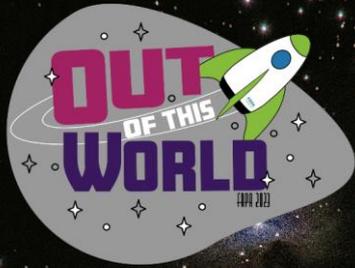
Welcome to the 2023 FRPA Conference!



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**HOP, SKIP, PLAY:
CREATE ACCESSIBLE
PLAY VALUE AT
SPLASH PADS**





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LEARNING OBJECTIVES

- 1. List the key features a splash pad can have to increase accessible play value.**
- 2. Recognize how childhood development is benefitted by engagement with aquatics.**
- 3. Define what zoning means and identify how to tailor play to different developmental ages and abilities.**





PLAY VALUE



WHY IS PLAY IMPORTANT?

FOR GUESTS

- Develop social + motor skills
- Foster healthy lifestyle
- Encourage imagination and creative problem solving
- Enrich communities

FOR FACILITIES

- Repeat guest usage
- Facility reviews improve
- Length of stay lengthens
- Potential revenue increase for food and beverage purchases

An aerial view of a water park featuring several slides, pools, and lounge areas with umbrellas. The scene is set in a tropical environment with palm trees. The image is overlaid with a semi-transparent blue filter.

“Play is essential to development because it contributes to the cognitive, physical, social, and emotional well-being of children and youth.”

- Kenneth R. Ginsburg, Committee on Communications,
Committee on Psychosocial Aspects of Child and Family Health



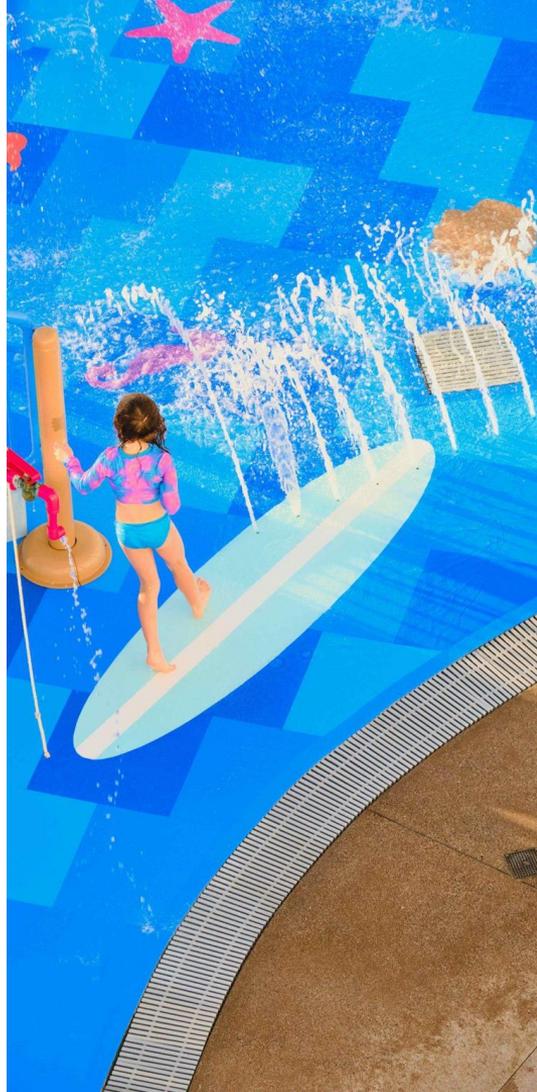
WHAT IS PLAY VALUE?

According to The Alliance for Early Childhood, something with high play value should:

- Appeal to children of multiple ages and stages of development
- Allow for multiple kinds of play
- Allow for kids to learn a respectful way to interact
- Stand the test of time

Everyone experiences play in different ways. It's why there isn't just one type of spray feature design.

Provide options for guests to engage with a facility in different ways.



COURTYARD BY
MARRIOTT ANAHEIM
Anaheim, CA
Winter 2020



PERFECT DAY AT
COCOCAY, RCCL
Bahamas
April 2019





TYPES OF ABILITIES

Vast variety of abilities to consider. In this presentation, we'll be talking specifically about:

- Age
- Developmental Stage
- Physical Disabilities (riding wheelchairs, using crutches)
- Audio/Visual Disabilities
- Cognitive Disabilities



AGE GROUPS + DEVELOPMENT

BENEFITS OF AQUATIC PLAY

Introduction to water elements at a young age can lessen fears.

Diverse play elements enable children to:

- Be active
- Gain confidence around water
- Socialize

Splash pads encourage:

- Risky Play
- Collaborative Play
- Imaginative Play





TYPES OF RISK

GOOD RISK

Also known as Risky Play. Some types include:

- Play with High Speed
- Rough and Tumble Play
- Play Near Dangerous Elements (Water)

BAD RISK

Associated with hazards and can cause harm such as:

- Sharp edges
- Hot surfaces
- Hard impacts



RISKY PLAY + AGE GROUPS

Increase play value by providing experiences for different age groups

- Water play for young children can be risky from their perspective.
- For older children who understand hazards vs. risks, water play can be more intense.

Different features help shape development at different stages and provide diverse risky play.



COLLABORATIVE PLAY

Kids collaborate with others in aquatic environments to develop life skills.

Interactive activities contribute to social play and elevate learning in creativity and problem solving.

Diversity of play is encouraged by maximizing different creative options available.

IMAGINATIVE PLAY

Themed elements provide opportunities for children to engage in more imaginative play at splash pads.

These elements can include:

- Play structures
- Spray features
- Surfaces



An aerial view of an aquatic park featuring various water slides, pools, and play structures. The park is surrounded by palm trees and a clear sky. The text is centered over the image, flanked by two horizontal lines.

WHAT TYPES OF PLAY CAN BE SEEN AT THE CITY OF WINTER HAVEN'S AQUATIC FACILITIES?





ZONING SPLASH PADS



WHAT IS ZONING?

Awareness of how age/developmental groups prefer to interact with water features helps determine how to zone properly.

Diversity of features enables patrons to gradually engage with riskier play elements.



INTRODUCTORY ZONES

Allow younger guests and guests new to water to get acclimated with water play.

May include:

- Simple ground sprays
- Spray features of varying types and sizes
- Interactive and creative play opportunities



ADVANCED ZONES

Contain riskier or larger play elements for guests looking for more adventurous opportunities.

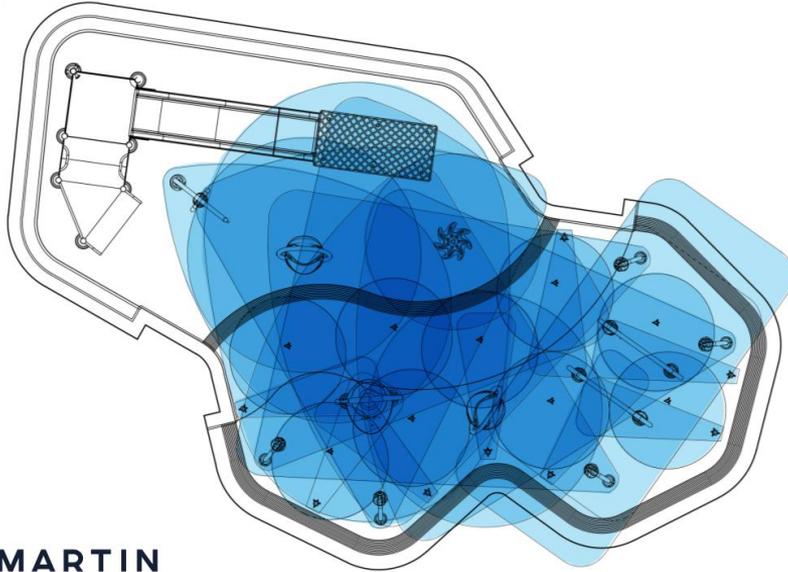
May include:

- Large play structures
- Water slides
- Dump buckets
- Dueling sprayers

SPRAY FEATURE LAYOUT: TOO MANY

Overcrowding a splash pad can detract from the individual effects of the spray features and decrease play value.

No break from spraying water could deter younger or more sensitive guests.



Darker areas = Higher water density



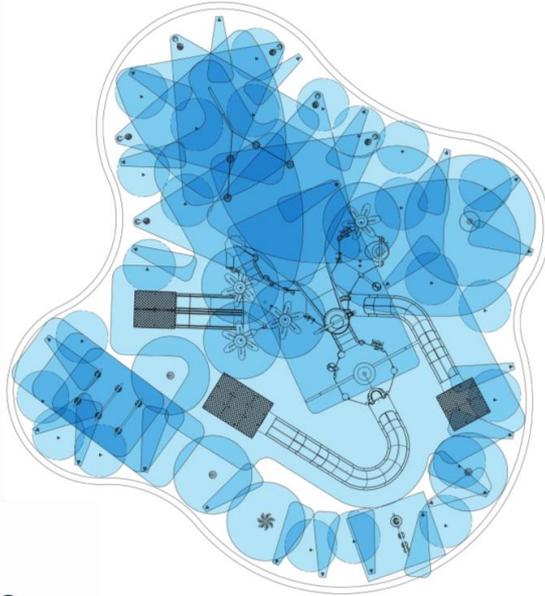
SPRAY FEATURE LAYOUT: TOO FEW

Too few features mean there is too much surface area with limited water play space.

If guests need to move too far to interact, play value is hampered and social interaction becomes limited and stagnant.

A purposeful selection of features by thoughtfully considering play value and on flow rates is key.

SPRAY FEATURE LAYOUT



Space out water features, but don't underspace them either

Younger or more sensitive guests can choose small sprays or calm areas between features.

Zones of varying spray intensity and type can accommodate diverse ages, comfort levels, and abilities.

Operate within the manufacturer's recommended flow rates.

An aerial view of a water park featuring various slides, pools, and a central play area with a large water wheel. The park is surrounded by palm trees and a building in the background. The image is overlaid with a semi-transparent white filter.

**HOW HAS THE CITY OF
WINTER HAVEN DECIDED ON
SPRAY FIXTURES?**

FLOW RATE

2 main installation types:

- Flow Through (water goes to waste)
- Recirculated (water goes to a tank + reused)

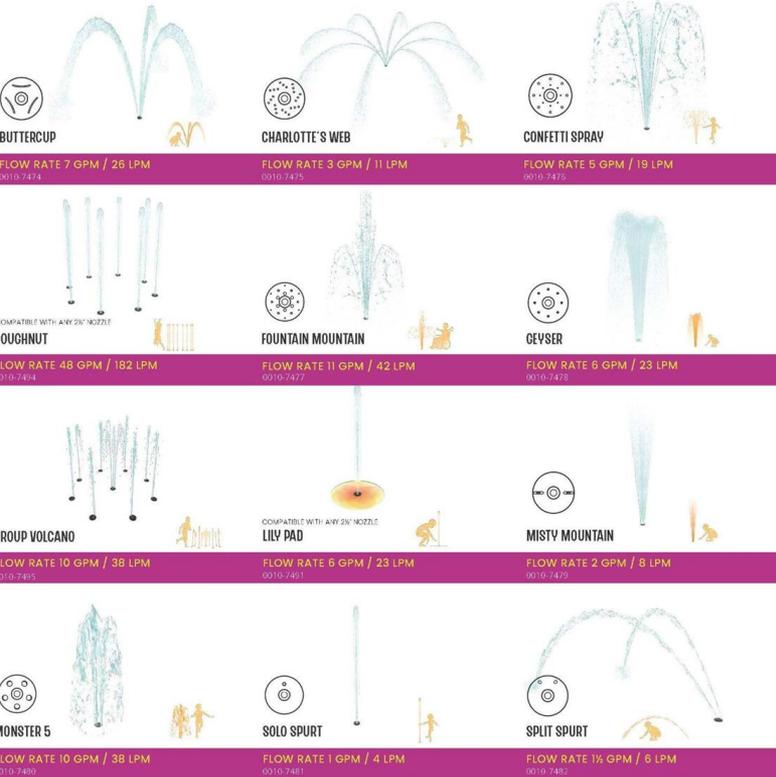
Calibrate fixtures so the water flow isn't too aggressive or too weak:

- Aggressive flows can be intimidating and hurt
- Weak flows can be disinteresting

Refer to your manufacturer's guide for proper water flow rates and educate staff regularly.



2 1/2 INCH GROUND SPRAYS



EXAMPLE OF FLOW RATE

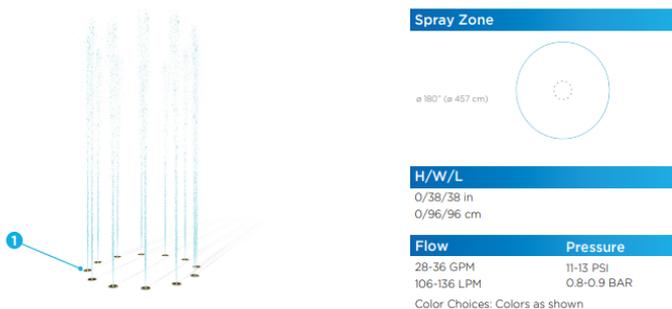
Waterplay is a fixture manufacturer and designer.

- Their fixtures are designed to be very low flow.
- Typical flow rates for ground sprays are between 1-48 GPM depending on the size of the spray.

Sequencing helps reduce overall flow rate requirements while keeping guests engaged.

- Example: You can design a great park at 125 GPM and sequence that down to 55-65 GPM.

Always refer to your manufacturer's specifications for your equipment.



VORTEX EXCLUSIVE TECHNOLOGIES

This product features the following technologies that are unique to Vortex.



LINEFLOW™ NOZZLE

- Precisely orient the stream of water with the internal Brass marble
- Compact design provides better product integration
- Easy to adjust for the most efficient use of water based on your installation
- Made of lead-free brass for maximum durability

WATER EFFECTS

- Ground jet (12)

Revised: 07/10/2017

EXAMPLE OF FLOW RATE

Vortex is a fixture manufacturer and designer.

- As an example, flow rate for this ground spray is between 28-36 GPM.

Operating outside of flow rate ranges will cause a splash pad to operate improperly and directly influence play value. This can lead to:

- Aggressive or weak flows
- Variable water usage and cost
- Poor play experiences
- Alienation of some guests

Always refer to your manufacturer's specifications for your equipment.



CHOREOGRAPH FEATURES

Create “moving water” from one feature to another

- Encourages movement around the splash pad and engagement with different features
- Reduces flow rate with staggered times that features are turned on
- Reduces water consumption

Water feature controllers and activators help reduce water usage and prevent the splash pad from being on when no one is there.



SURFACING IS A FEATURE

Avoid drab concrete or blank surfaces. The surface is a large feature you can use to dramatically increase play value:

- Incorporate games like hopscotch, scavenger hunts, and other activities
- Use colors to create pathways through fixtures which can help with choreographing fixtures
- Expand your theming to create an immersive experience

An aerial view of a water park featuring various slides, pools, and lounge areas. The scene is set in a tropical environment with many palm trees. The water park's design includes blue and white slides, circular pools, and a central area with a blue and white checkered pattern. The overall atmosphere is bright and sunny.

**HOW HAS SURFACING
PLAYED A ROLE AT THE CITY
OF WINTER HAVEN'S
AQUATIC AMENITIES?**



ACCESSIBLE DESIGN



SPLASH PADS AND ACCESSIBLE PLAY

Splash pads offer water play opportunities to people of all ages and abilities.

For guests who don't know how to swim, these amenities provide introductory and accessible aquatic play.

Like playgrounds, these amenities can enhance communities for little to no charge to guests.



CONSIDER IMPROVED ACCESS

WAYS TO IMPROVE ACCESSIBILITY & INCLUSIVITY

- ADA Certified Ramps and Access Points
- Lifts
- Aquatic wheelchairs
- Sensory-friendly spray features

Highly accessible facilities improve experiences and increase play value for everyone.



SHIFT YOUR PERSPECTIVE

Engage with your facility from the literal perspective of your visitors.

Crawl on hands and knees, ride a wheelchair, or use crutches from the entrance to attraction.

- Are doorknobs too high?
- Are bathroom sinks inaccessible? Are access points inconvenient?
- Is the surfacing painful?



**HAVE YOU TRIED A SHIFTED
PERSPECTIVE APPROACH?**

AUDIO/VISUAL ABILITIES

We recommend working with a consultant or designer to tailor your facility to your specific guest needs.

Example, for dump buckets consider:

- A visual signal the bucket is about to activate
- A pleasant auditory signal the bucket is about to activate
 - Note: a pleasant sound helps ensure individuals who have some forms of autism have positive experiences. A blaring alarm can be a disruptive and unpleasant experience.

Use contrasting surfacing materials and colors to indicate the landscape is changing without reducing overall experience.

Varying textures and colors can create inviting spaces that reduce anxiety and encourage play!





DESIGN FOR MULTI-GENERATIONAL ENGAGEMENT

About 50% of patrons are adults.

Shade structures, seating, and play elements that accommodate older guests often result with longer stays.

Cushioned, non-abrasive surfaces provide comfort to sit on the floor and join water play activities.

A STANDARD FOR SPLASH PADS: NSF/ANSI/CAN 50



PLAYGROUNDS NEED SAFETY SURFACING

1903: First unsafe playgrounds. No codes or standards, children often hurt.

Today: Concrete is recognized as being unsafe and hazardous. Surfacing is required, which has reduced injuries.

Safety surfacing approved with ASTM F1292.

78 years from the time dry playgrounds were introduced in 1903 for the CPSC to publish the Handbook for Public Playground Safety in 1981.



Photo Credits: Landscape Structures



PLAYGROUNDS

+ WATER

= SPLASH PADS

Splash pads are playgrounds and need safety surfacing too.

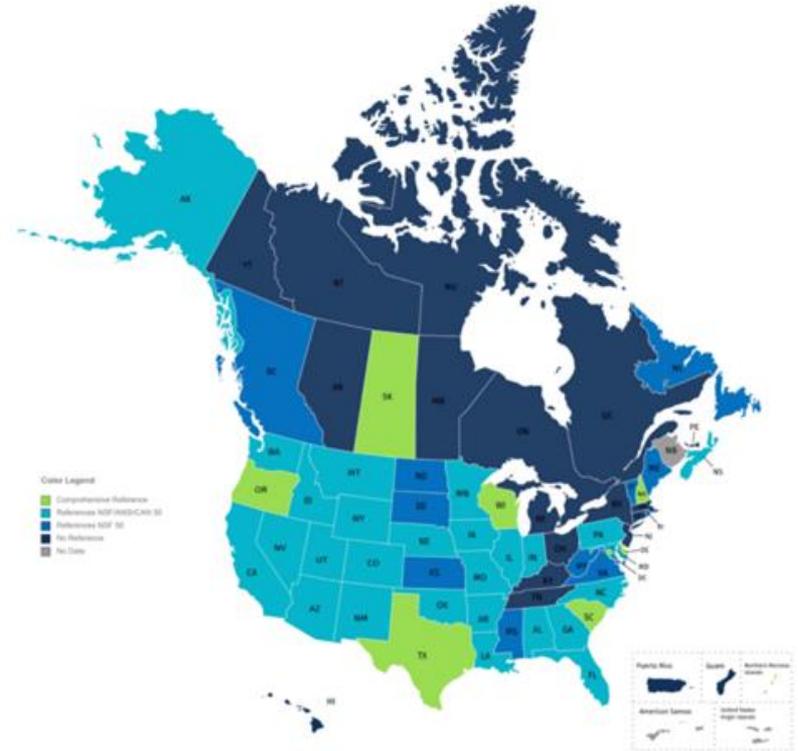
FLORIDA CODE: CHAPTER 64E-9

“(28) Slip Resistant – Having a textured surface which is not conducive to slipping under contact of bare feet... Manufactured surface products shall be designated by the manufacturer as suitable for walking surfaces in wet areas.”

Applies to most aquatic applications including:

- Treads and underwater bench seats
- Pool finishes
- Sanitary facility floors
- Water activity pools

+ More



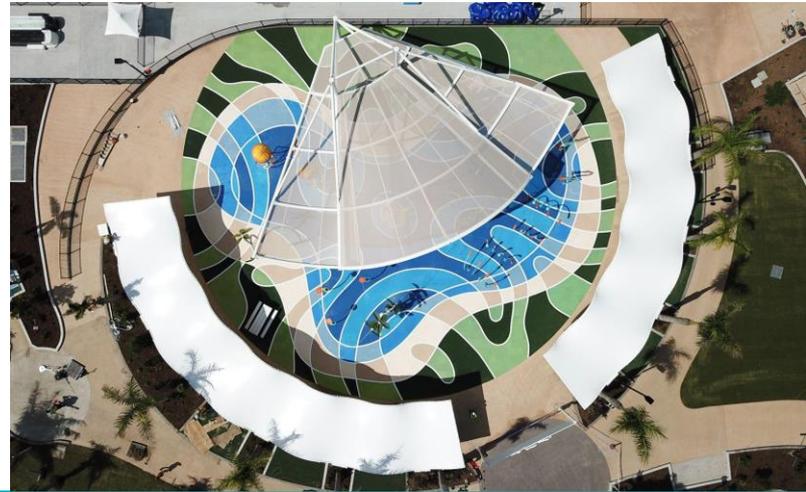
North America: NSF/ANSI/CAN 50 Reference Map

STANDARD CRITERIA

Certified products must meet 6 criteria:

- Slip-Resistance
- Cushioning
- Impermeability
- Cleanability
- UV Resistance
- Chemical Resistance

For a facility to comply with NSF/ANSI/CAN 50, a certified product must be installed.





SLIP-RESISTANCE

Certified surfaces are slip-resistant to minimize slip-and-fall injuries.

The standard requires a 40 British Pendulum Number (BPN) and a P4 on the Australian Standard.



CUSHIONING

Certified surfaces must be cushioned to absorb inevitable falls.

The standard requires a HIC (Head Injury Criterion) value of 750, with a 0.20 meter minimum fall height.



IMPERMEABILITY

Impermeability is important to prevent foreign substances such as sunscreen, fertilizer run-off, and other hazardous substances from absorbing into the surfaces and causing health concerns.

The standard requires a minimum of 98.3% impermeability which uses concrete as a baseline.



CLEANABILITY

A certified surface must respond well to cleaning and sanitization as detailed in the Model Aquatic Health Code.

The standard requires 99.9% removal of bacteria after cleaning.



UV RESISTANCE

Resistance to UV radiation is essential, as many splash pads experience intense, year-long sun exposure. To determine UV resistance, a surface is independently tested for 750 hours under a fluorescent UV light in accordance with ASTM G154.

During testing, erosion is not acceptable if it compromises the surface's traction and impact attenuation.



CHEMICAL RESISTANCE

A surface is tested by exposing samples to treated water for 100 days, including 3 elevated chlorine “shock” periods lasting 24 hours each.

Surfaces must remain slip-resistant and impact attenuating after exposure to high chemical shock periods without showing signs of erosion. Surfaces must also retain color contrast and visual clarity after chemical exposure which is important for safety messaging and depth markers.



WHAT DOES THIS MEAN FOR CITIES?

**LIFE
FLOOR**



BEST PRACTICES

NSF/ANSI/CAN 50 isn't code yet, but it has the potential to influence codes.

Have peace of mind knowing these products are reputable and validated through multiple accredited sources.

It is recognized as a standard for operational excellence and best practices.

REMEMBER

Your facility could be the first introduction someone ever has to aquatic play.

Intentional design helps to ensure your guests have positive experiences and create positive memories.

It's never too late! Remodels and retrofits are common and even small changes can make a big difference.



TAKEAWAYS

Thoughtful design considerations make aquatic experiences more accessible and engaging to all guests.

- More people can enjoy the facility in diverse ways
- Guest stay will lengthen
- People may visit from greater distances
- Positive memories will guarantee repeat customers
- An intentionally designed facility can become a showcase project for your city or region



An aerial view of a water park featuring various slides, pools, and a central play structure. The scene is overlaid with a semi-transparent white filter. Two thick black horizontal lines are positioned above and below the central text.

QUESTIONS?



Thank You!

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FRPA

FLORIDA RECREATION
& PARK ASSOCIATION

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