Water Park Design

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International Amusements
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For Mrs. Allen’s Hudson Middle School 8th Graders
Primary Goals

1) Safety
2) Customer Satisfaction
3) Innovation and Ingenuity
4) Be Cashflow Positive
   - If you are able to do 1-3 successfully, this will come naturally.
Importance of Layout in Waterparks

• **Control Crowds**
  • Branching networks
  • Multiple routes
  • Large walkways in critical areas

• **Enhance Safety**
  • Think about accessibility

• **Ease of Maintenance**
  • If the ride has to be repaired, can maintenance close it easily?

• **Keep Families Together**
Key Park Elements

How they’re placed and designed
1) Help Center(s)
Help Center

- **Function**
  - Assist guests in anything they need
    - Disabled guests
    - General park information
    - Will-Call Tickets
    - Lost Children

- **Placement**
  - Outside of park and inside of park
  - Two sided building recommended
  - Guests need to be able to access both before entering and while inside the park

2) Wave Pool
• **Function**
  - Focal point of park
  - Large area with lots of seating
  - Meet-up area

• **Placement**
  - Centrally located close to attraction exits
  - Multiple paths to this area

• **Design Considerations**
  - Wave height
  - Wave pool shape
  - Wave pool depth
  - Slope to wave pool depth
    - $Y = -mx (b = 0)$
3) Water Slides

http://cdn.wdwmagic.com/imgstore/ElementGalleryItems/other/Fullsize/Maps_Full_14517.jpg
Water Slides

• **Function**
  - Main park attractions
  - Ensure all ages are accommodated
  - Safe but exciting thrills that are unique

• **Placement**
  - Try and space out to control crowds
  - Make sure people walk out to ride and slide back

• **Design Considerations**
  - Cost
  - Height
  - Target Audience
  - Slope
  - Accessibility

https://vistacayholidays.com/images/conceptual-art.jpg
Types of Waterslides

- **Water Coasters**
  - **Cost:** $1 million for magnetic, $5+ million for tracked
  - **Height:** 60’ max for magnetic, 200’+ for tracked
  - **Target Audience:** 10 year old and up (42”+)
  - **Accessibility:** Enter at outskirt of park; exit nearby
  - **Design Considerations:**
    - How intense do you want it? Steeper slope = more intense
    - Is this ride the focal point of the park? Taller = more centrally located

[Image of water coaster]

[Image of infographic diagram]

http://mms.businesswire.com/media/20160901005170/en/540693/3/ThunderRapids_Infographic_600dpi_11x17.jpg
Body Slides

- **Cost:** $100,000+
- **Height:** Anywhere from 0-120’
- **Target Audience:** 7 years old and up
- **Accessibility:** Enter at outskirt of park; exit closer to center
- **Design Considerations:**
  - How intense do you want it? Steeper slope = more intense
  - Do I have a good mix of rides for all ages?

https://localtvwtr.files.wordpress.com/2015/02/kings-dominion-soak-city.jpg?quality=85&strip=all&w=1200
• **Tube Slides**
  - **Cost:** $100,000+
  - **Height:** Anywhere from 0-80’
  - **Target Audience:** 7 years old and up
  - **Accessibility:** Enter at outskirt of park; exit closer to center

• **Design Considerations:**
  - How intense do you want it? Steeper slope = more intense
  - Are the tubes easily accessed?
  - Are the tubes heavy? Do I need a lift?
Lazy River

• Function
  • Allow multiple guests to enjoy the water
  • Can have high speed/low speed branches
  • Transport guests around the park to major attractions

• Placement
  • Try to keep the river going around the park
  • Have multiple entrances and exits (but not too many)!

• Design Considerations
  • Length
  • Capacity
  • Width
  • Accessibility
  • Theming
5) Kids Areas

http://cdn.wdwmagic.com/imgstore/ElementGalleryItems/other/Fullsize/Maps_Full_14537.jpg
Kids Areas

- **Function**
  - Provide an area for young kids to play in without being disturbed
  - Family-friendly area

- **Placement**
  - Close to central point of park, but isolated from older-age attractions

- **Design Considerations**
  - Age group! How tall and long can the slides be?
    - Also, water depth
  - Ability for all ages to enjoy (young kids area and kids area)
5) Concessions, Gifts, Restrooms, Security
• Functions
  • Provide an assortment of foods and gifts
  • Lost-and-found points
  • Ensure proper changing booths and easy accessibility for guests using the restrooms

• Placement
  • Gifts – close to beginning of the park
    • No one wants to carry souvenirs around the waterpark
    • Sunscreen can be sold throughout
  • Food – close to meeting areas and front gate
    • Adequate seating!
  • Security – at front of park
    • Prevent issues/monitor incoming and outgoing guests
    • Lost-and-found
  • Restrooms – at convenient areas
    • Front gate
    • Kiddie areas
    • Exits of rides
    • Near eating areas
6) Pathways
Pathways

- **Functions**
  - Ease of access around the park
  - No dead ends!
  - Multiple paths to get to places

- **Design Requirements**
  - “Branching” system
  - Wide paths near front of the park where crowds are high
  - Interconnect all areas of the park
Six Flags Over Texas

MAP KEY

- First Aid
- Restrooms
- Handicap Accessible
- ATM
- Lockers
- Guest Relations
- Kennels
- Baby Care/Lost Parents
- Strollers/Wheelchairs
- Security/Lost and Found
- Designated Smoking Areas
- Package Pick Up
- Healthy Meal Options
- THE FLASH Pass Sales
- Single Rider

THEATRES

1. Music Mill Amphitheatre
2. Lone Star Theatre
3. The Backporch Stage
4. The David Blackburn
5. Southern Palace
6. The Courthouse Stage
7. The Crazy Horse Saloon
8. The Silver Star Carousel Stage
9. The Majestic Theatre

SNACKS, TREATS AND DRINK REFFILL STATIONS

Find refill stations as well as junior pretzels, fresh popped popcorn, ice cream treats, and ice cold drinks on carts and in snack locations throughout the park.

HEALTHY MEAL OPTIONS

Six Flags Over Texas offers a variety of healthy meal options including salads, vitamin water, bottled water, and fresh additions throughout the year.

DID YOU FORGET SOMETHING?

Cameras, sunscreen, masks, and other essentials are located in all major stores and on most merchandise carts.
