

WWA UNIVERSITY:
WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



Methodology for Feasibility Studies for Waterparks and Hotels



Presented by:
David J. Sangree, MAI, CPA, ISHC
Hotel & Leisure Advisors
dsangree@hladvisors.com
216-810-5800

Stephen Szczygiel, CHIA
Hotel & Leisure Advisors
sszczygiel@hladvisors.com
216-810-5801



What is a Feasibility Study?

- Purpose
- Necessity
- Scope of assignment
- Who is the client: developer, lender, government, etc.
- Determine financial feasibility
- Analyze plans and designs and make recommendations



Major Components of a Feasibility Study

1. Area, Demographic, and Neighborhood Analysis
2. Site Review
3. Proposed Development Recommendations and Costs
4. Market Analysis
5. Proposed Development Usage and Pricing Analysis
6. Financial Analysis
7. Feasibility Analysis
8. Comparison of Value Created to Projected Costs



1. Area, Demographic, and Neighborhood Analysis

- Population trends
- Number of families with children within driving distance
- Household growth
- Household economics
- Area economics
- Area transportation



2. Site Review

- Drive-time demographics:
 - Indoor waterpark resort: 180 miles
 - Outdoor waterpark: 60 miles
- Site visibility and access
- Amenities/nearby tourist attractions
- Governmental impacts



Demographics Comparison

Ratio of Family Households to Indoor Waterpark Hotel Rooms within 180 Miles of Ferndale, Wisconsin Dells & Sandusky

	Example	Wisconsin Dells	Sandusky
2023 Est. Family Households, 180-mile radius	2,660,840	4,367,765	6,547,072
Number of Existing and Under-Construction Hotels with Indoor Waterparks	2	31	7
Total Rooms	670	8,824	2,599
Family Households per Indoor Waterpark Hotel Room	3,971	495	2,519

Sources: ESRI, Hotel & Leisure Advisors



Demographics Comparison

US and Canada Residents per Outdoor Waterpark by Region			
Region	Number of Waterparks	Population	Residents per Waterpark
Northeast	74	57,040,406	770,816
Midwest	309	68,787,595	222,614
South	309	128,716,192	416,557
West	116	78,743,364	678,822
<u>Canada</u>	<u>35</u>	<u>39,566,248</u>	<u>1,130,464</u>
Total	843	372,853,805	442,294

Source: Hotel & Leisure Advisors, September 2023



3. Proposed Development Recommendations and Costs

- Physical plant information
- Facility size
- Branding
- Hotel affiliation
- Amenities
- Theme
- Development costs



4. Market Analysis: Hotel Market

- Hotel competitors
- Existing indoor waterpark resorts
- Demographic analysis
- Recent hotel openings
- Potential hotel openings
- Market segmentation and market penetration
- Projections



Hotel Statistics

Overall U.S. Lodging Performance						
	Occupancy	% Change	ADR	% Change	RevPAR	% Change
2018	66.2%	0.5%	\$129.83	2.4%	\$85.96	2.9%
2019	66.0%	-0.2%	\$131.23	1.0%	\$86.64	0.9%
2020	44.0%	-33.3%	\$103.30	-21.3%	\$45.48	-47.5%
2021	57.7%	31.1%	\$124.68	20.7%	\$71.88	58.2%
2022	62.7%	8.9%	\$148.83	19.1%	\$93.27	29.8%

Source: STR

A survey of 10 indoor waterpark resorts achieved 72% occupancy with ADR of \$300.19 in 2022 - much stronger than average hotels.



4. Market Analysis: Waterpark Market

- Existing and potential competitors
- Attendance
- Demographics
- Amenities of competitors
- Waterpark pricing



Top 20 US Waterparks by Annual Attendance

Rank	Park	Location	% Chg 2021-2022	2022 Attendance	2021 Attendance	2020 Attendance	2019 Attendance
1	Typhoon Lagoon at Walt Disney World	Orlando, FL	-	1,915,000	-	-	2,248,000
2	Blizzard Beach at Walt Disney World	Orlando, FL	-91.6%	101,000	1,201,000	316,000	1,983,000
3	Universal's Volcano Bay	Orlando, FL	9.4%	1,850,000	1,691,000	574,000	1,811,000
4	Aquatica Orlando	Orlando, FL	35.0%	1,548,000	1,147,000	528,000	1,533,000
5	Schlitterbahn New Braunfels	New Braunfels, TX	6.5%	946,000	888,000	451,000	996,000
6	Water Country USA	Williamsburg, VA	1.0%	707,000	700,000	-	736,000
7	Adventure Island	Tampa, FL	7.3%	636,000	593,000	125,000	656,000
8	Aquatica San Antonio	San Antonio, TX	7.7%	631,000	586,000	263,000	651,000
9	Schlitterbahn Galveston	Galveston, TX	34.1%	539,000	402,000	337,000	567,000
10	Splash Splash	Calverton, NY	-	-	-	-	542,000
11	Six Flags Hurricane Harbor Arlington	Arlington, TX	2.9%	388,000	377,000	235,000	538,000
12	Six Flags White Water Atlanta	Marietta, GA	-4.9%	350,000	368,000	238,000	526,000
13	Six Flags Hurricane Harbor	Jackson, NJ	-4.9%	426,000	448,000	85,000	482,000
14	Typhoon Texas	Katy, TX	7.1%	364,000	340,000	203,000	478,000
15	Six Flags Hurricane Harbor Splashtown	Spring, TX	3.9%	343,000	330,000	-	475,000
16	Zoombezi Bay	Powell, OH	7.0%	399,000	373,000	176,000	466,000
17	Six Flags Hurricane Harbor Phoenix	Glendale, AZ	2.9%	318,000	309,000	-	441,000
18	Camelbeach	Tannersville, PA	65.8%	373,000	225,000	151,000	439,000
19	Dollywood's Splash Country	Pigeon Forge, TN	31.0%	368,000	281,000	188,000	433,000
20	Cedar Point Shores	Sandusky, OH	0.7%	405,000	402,000	-	424,000
Total				12,607,000	10,661,000	3,870,000	16,425,000

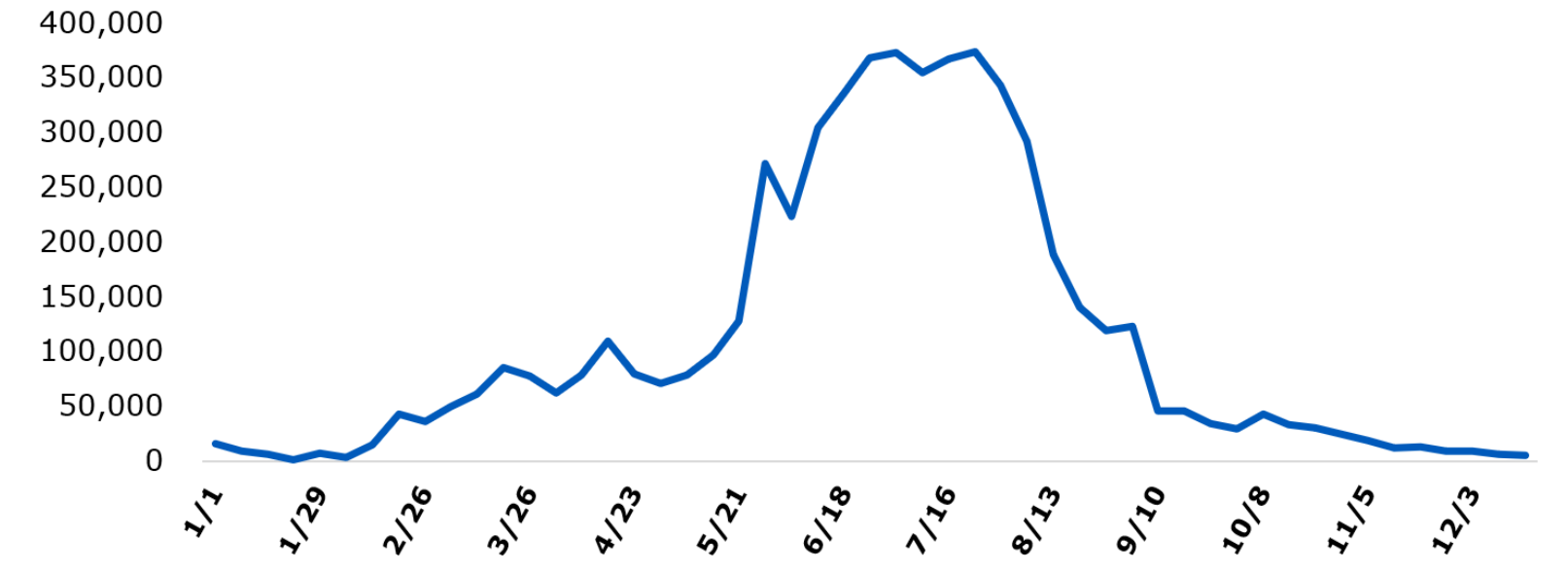
Source: TEA Theme Index, Global Attractions Attendance Report 2022 (released 2023)



WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



Weekly Visitation for 10 Top Outdoor Waterparks



Source: Hotel & Leisure Advisors and Placer.ai

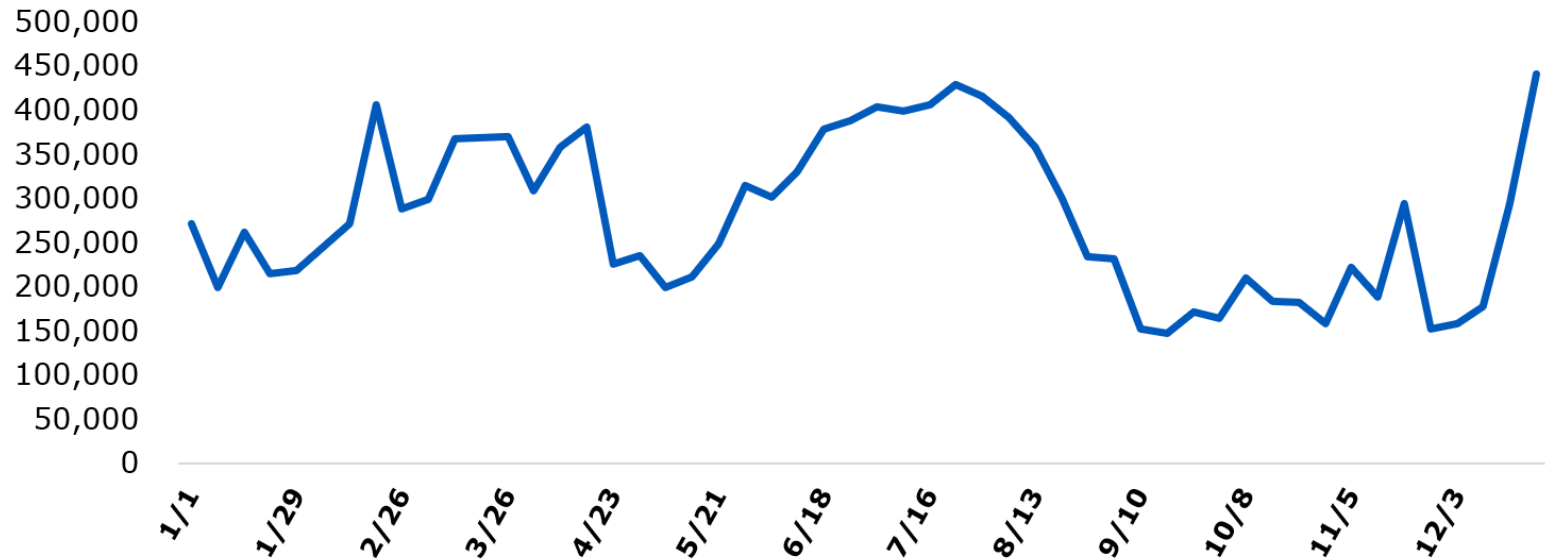
These outdoor waterparks achieved strongest attendance during summer months.



WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



Weekly Visitation for 10 Top Indoor Waterpark Resorts



Source: Hotel & Leisure Advisors and Placer.ai

These indoor waterpark resort venues experienced peak demand in summer and during school breaks.



WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



2022 US & Canada Outdoor Waterpark Supply by Region

2023 US and Canada Open Waterpark Supply by Region

Outdoor Waterparks			
Region	Municipal/ Non-Profit	Private	Total
Northeast	15	59	74
Midwest	267	42	309
South	185	124	309
West	70	46	116
Canada	9	26	35
Total	546	297	843

Note: Outdoor Waterpark is defined as an aquatic facility without attached hotel having 3 or more slides.

Source: Hotel & Leisure Advisors, September 2023



2022 US & Canada Indoor Waterpark Resort Supply by Region

2023 US and Canada Open Waterpark Supply by Region

Indoor Waterpark Resorts

Region	Franchise	Independent	Total
Northeast	7	12	19
Midwest	31	51	82
South	8	12	20
West	11	4	15
Canada	9	5	14
Total	66	84	150

Note: Indoor Waterpark Resort is defined as a hotel with more than 10,000 square feet of indoor waterpark space.

Source: Hotel & Leisure Advisors, September 2023



2022 US & Canada Standalone Indoor Waterpark Supply by Region

2023 US and Canada Open Waterpark Supply by Region

Standalone Indoor Waterparks

Region	Municipal/ Non-Profit	Private	Total
Northeast	2	2	4
Midwest	37	0	37
South	23	3	26
West	45	3	48
Canada	23	2	25
Total	130	10	140

Note: Standalone Indoor Waterpark is defined as being larger than 10,000 square feet with at least three water features.

Source: Hotel & Leisure Advisors, September 2023



2022 US & Canada Resorts with Outdoor Waterpark Supply by Region

2023 US and Canada Open Waterpark Supply by Region

Resorts with Outdoor Waterparks

Region	Franchise	Independent	Total
Northeast	0	4	4
Midwest	0	4	4
South	28	26	54
West	17	7	24
Canada	0	2	2
Total	45	43	88

Note: Resort with Outdoor Waterpark is defined as a resort hotel having an outdoor waterpark with at least 3 features (slide, lazy river, wave pool, etc.) excluding resorts that also have indoor waterparks.

Source: Hotel & Leisure Advisors, September 2023

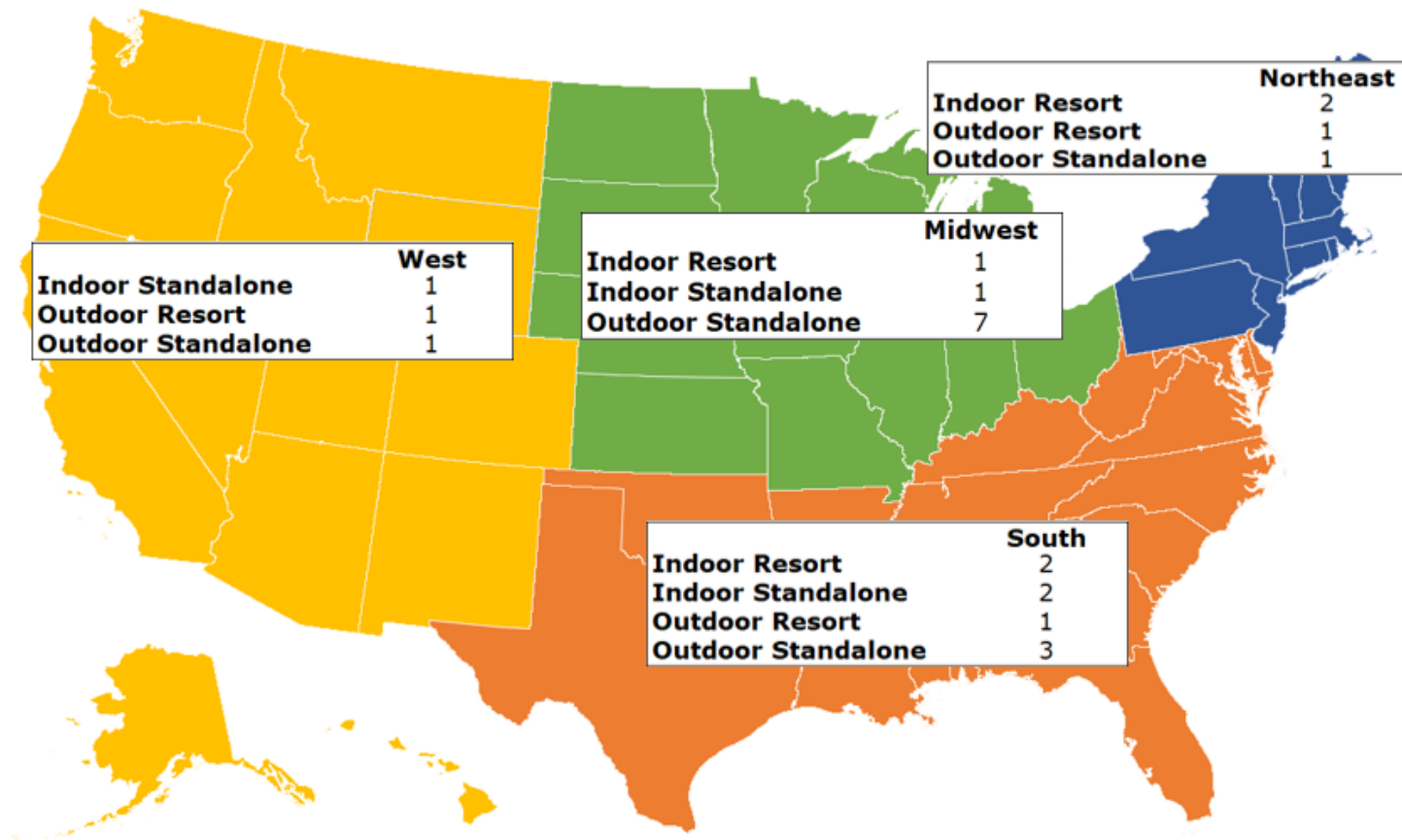


Waterpark Statistics

- The Midwest holds more than half of the supply of indoor waterpark resorts.
- The Midwest and South are tied for the most outdoor waterparks, with the two regions representing nearly three-quarters of the segment.
- Most outdoor waterparks in the United States are municipal due to the predominance of municipally operated properties in the Midwest.
- In the U.S., the Northeast has the fewest outdoor waterparks and the fewest combined indoor waterparks (resorts and stand-alone), indicating potential opportunity.



2023 Waterpark Openings by Region



Source: Hotel & Leisure Advisors, LLC, September 2023



WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



5. Proposed Development Usage and Pricing Analysis: Indoor Waterpark Resorts Occupancy and ADR

- Demand interviews
- Hotel and Waterpark demand
- Day passes
- Projections
- Pricing



5. Proposed Development Usage and Pricing Analysis: Outdoor Waterparks

- Usage
- Facilities
- Population
- Projections
- Pricing
- Climate



6. Financial Analysis

- Estimate the potential gross revenues for the subject property.
- Analyze and project departmental, undistributed, and fixed expenses.
- Project the resultant net operating income over an appropriate holding period.



7. Feasibility Analysis

Economic value is calculated through a discounted cash flow analysis.

Discounted Cash Flow Analysis - As Completed

Proposed Indoor Waterpark Resort

Cash flow at discount rate of 11.0%

	Net Income		P.V. Factor		Present Value
2026	\$13,602,000	x	0.9009	=	\$12,254,054
2027	\$14,716,000	x	0.8116	=	\$11,943,836
2028	\$15,430,000	x	0.7312	=	\$11,282,283
2029	\$15,893,000	x	0.6587	=	\$10,469,211
2030	\$16,371,000	x	0.5935	=	\$9,715,392
2031	\$16,861,000	x	0.5346	=	\$9,014,579
2032	\$17,366,000	x	0.4817	=	\$8,364,480
2033	\$17,886,000	x	0.4339	=	\$7,761,209
2034	\$18,425,000	x	0.3909	=	\$7,202,789
2035	\$18,977,000	x	0.3522	=	\$6,683,405
Present value of cash flow					\$94,691,238



Discounted Cash Flow

Sum of cash flows and the reversionary sale price equals market value.

Discounted Cash Flow Analysis - As Completed

Proposed Indoor Waterpark Resort

Reversionary benefit

Net income for 2036	\$19,548,000
Divided by reversion overall rate	9.0%
Gross reversion	\$217,200,000
Less cost of sale at 2.0%	\$4,344,000
Net reversion	\$212,856,000
Value per room	\$608,160

Present value of reversion **\$74,964,579**

Market Value

PV from cash flow	\$94,691,238
PV from reversion	\$74,964,579
Less renovation costs	\$0
Market value as of 1/1/2026	\$169,655,817

Rounded market value **\$169,700,000**

Valuation factors

Price per room	\$484,857
% of value from cash flow	55.8%
% of value from reversion	44.2%



8. Comparison of Value Created to Projected Costs

- Is the development justified?
- How does valuation compare with proposed development budget including entrepreneurial profit?
- Need to request municipal incentives?



Waterpark Resort Challenges

- Smaller properties generally struggle against larger indoor or outdoor properties.
- Recent indoor waterpark closures in 2021 and 2022:
 - Wasserbahn Waterpark Resort - Williamsburg, IA
 - CoCo Key Water Resort - Omaha, NE
 - Hotel ML with CoCo Key Indoor Waterpark - Mount Laurel, NJ
 - Logger's Landing @ Grand Lodge - Wausau, WI
- Weather affects outdoor waterpark performance.
- Too much competition can affect performance.



Recent Major Openings

- **Great Wolf Resorts** debuted its new \$300 million resort in Perrysville, Maryland, featuring 700 guestrooms and a 126,000-square-foot indoor waterpark.
- The \$100 million **Island Indoor Waterpark** at the Showboat Atlantic City Hotel and Casino in Atlantic City, New Jersey opened with dining, shopping, and waterpark attractions including a lazy river, 11 slides, and pools housed under a retractable glass roof.
- JW Marriott Phoenix Desert Ridge Resort & Spa in Phoenix, Arizona completed its \$18,000,000 pool upgrade to unveil its **AquaRidge WaterPark** with three new water slides and enhanced, cabanas, lounge seating, and lazy river.



Island Waterpark at Showboat Resort – Atlantic City NJ



WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



Recent and Upcoming Expansions

- **Great Wolf Lodge - Poconos, Pennsylvania** has completed a 40,000-foot waterpark expansion and will add 30 villas and a 202-room tower this fall.
- **Grand Country Inn – Branson, Missouri** added 20,000 square feet to its Splash Country Waterpark, including a wave pool and new raft rides.
- **Mt. Olympus Resort – Wisconsin Dells, Wisconsin** expanded its waterpark by 22,500 square feet and added a rotating waterslide.



WWA UNIVERSITY: WATERPARK DESIGN, DEVELOPMENT & EXPANSION WORKSHOP



Questions?



Presented by:
David J. Sangree, MAI, CPA, ISHC
Hotel & Leisure Advisors
dsangree@hladvisors.com
216-810-5800

Stephen Szczygiel, CHIA
Hotel & Leisure Advisors
sszczygiel@hladvisors.com
216-810-5801