



HOTEL & LEISURE ADVISORS

How to Perform a Feasibility Study for Indoor and Outdoor Waterpark Resorts

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Before a developer or organization considers construction of a new indoor or outdoor waterpark resort and/or outdoor waterpark, the mortgage lender and investors generally require a feasibility study. A feasibility study is typically performed by an independent third-party consultant who specializes in analyzing the performance of waterpark and hotel projects. The purpose for performing the feasibility study is to determine if the proposed waterpark development is economically feasible. A proposed project is economically feasible if the value of the proposed project equals or exceeds the development costs when completed and operational. The feasibility study will analyze revenues, expenses, and net income in determining the value of the proposed project and will compare it to projected costs of the development.

The purpose of this article is to analyze the major components of a feasibility study and the general areas that a feasibility study should review as part of determining the potential success of a waterpark project. The article will discuss key areas to analyze for both indoor waterpark resorts and outdoor waterparks as some components are the same while other components are different. Hotel & Leisure Advisors defines an outdoor waterpark as those facilities offering three or more water slides and an indoor waterpark as a facility offering an aquatic area of 10,000 or more square feet. Hotel & Leisure Advisors defines an indoor waterpark resort as a lodging establishment containing an aquatic facility with a minimum of 10,000 square feet of indoor waterpark space and inclusive of amenities such as slides, tubes, and a variety of indoor water play features. We define a resort hotel with an outdoor waterpark as a hotel with three or more water play features, such as slides, lazy rivers, or wave pools that require lifeguards.

Major Components of a Feasibility Study

There are a number of major components included in performing a market feasibility and financial analysis study for an indoor waterpark resort or outdoor waterpark project. The following lists the major components:

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. Valuation Analysis
8. Comparison of Value Created to Projected Costs

Area, Demographic, and Neighborhood Analysis

The area, demographic, and neighborhood analysis evaluates the local economy surrounding the proposed development. The area analysis focuses on the four forces – social, economic, governmental, and environmental - that influence the performance and valuation of a waterpark facility. Demographic information including population, households, income levels, employment levels, etc., should be reviewed in detail to calculate how many people and potential customers live within the local and regional areas. The following are some questions the study should answer.

- Population trends: What is the population in the area and is the number growing or shrinking?
- Household growth: How large is the typical household in the area? How many children are there per household? The number of children in the area is a particularly crucial data point since waterparks are family-oriented facilities.
- Household economics: What is the unemployment rate in the area? What is the median income? How much disposable income do households in the area have?
- Area economics: Which large corporations operate in the area? Are there tourist attractions in the area? When answering these questions, a consultant will look for existing demand generators as well as potential demand generators that are in the development stages. He or she will also look for demand generators that may be leaving the market soon.
- Area transportation: The number of airports, interstate highways, and rail stations greatly affects travel to an area; therefore, these factors must be considered.

A neighborhood analysis reviewing the nearby commercial and tourist establishments is an important component as successful waterpark projects are typically located in areas with complementary real estate uses. For example, the most successful indoor waterpark resorts are located near other major tourist attractions that attract overnight visitors. The most successful outdoor waterparks are typically located in areas where both local residents and tourists want to go and may be located near major retail outlets, beaches, or community facilities.

Site Review

The site review evaluates the subject parcel concerning its size, access and visibility, topography, availability of utilities including water and sewer, and other site related attributes necessary for a successful waterpark project. The proximity to leisure guests for the waterpark is an important consideration as waterpark visitors for both indoor waterpark resorts and outdoor waterparks appreciate convenient access from area highways. Our firm typically analyzes a drive time or mileage radius and estimates the number of available youths and adults within a 30-, 60-, 120-, and/or 180-mile (or minute) ring from the subject property. We obtain the demographic data from sources such as Claritas or ESRI. The study should compare the number of youths and adults within specific drive times from the subject site with other successful waterparks (indoor or outdoor) that are located in different locations in the United States to see whether the subject site has an adequate population base. The following are some questions the study should answer.

- Drive time demographics: What are the population and household income levels within various drive times of the subject property, and how does it compare with existing locations that have successful waterpark resorts such as Wisconsin Dells, Sandusky, Orlando, or other markets?
- Site: Is the site large enough to support the waterpark project being planned? Is there room for future expansions?
- Amenities: Are there nearby amenities that would support the proposed project?
- Governmental impacts: The subject's ad valorem taxes, zoning information, sales history, governmental restrictions, environmental regulations and other factors that may affect the subject property should be analyzed.

Proposed Development Recommendations and Costs

The facilities recommendations and costs include an analysis of the scope of the project and the cost to develop the proposed project. Some clients provide the consultant with their plans for the development, and this section reviews the plans and recommends changes that the consultant may feel are appropriate to the development plan. Other clients request that the consultant analyze and recommend the scope of the development based upon their market research for the feasibility study.

In the case of an indoor waterpark resort, the scope of recommendations includes the number of guest rooms, size of indoor waterpark, rides and attractions for the indoor waterpark, size of outdoor waterpark, number of restaurants and lounges, amount of meeting space, size of gift shop, size of arcade, and other amenities to include.

In the case of an outdoor waterpark, the scope of recommendations includes the size of the outdoor waterpark, rides and attractions for the outdoor waterpark, food and beverage outlets, size of gift shop, size of arcade, and other amenities to include. The consultant may estimate a range of costs for the proposed development based upon other recently constructed waterpark projects, or the client may hire an architect and/or engineer to perform a formal costing estimate for the proposed development. The following are some questions the study should answer.

- Physical plant information: Have any architectural plans been developed by the client?
- Facility size: How large should the project be? How many rides and attractions should the waterpark offer? How many guest rooms should the hotel offer? How many food and beverage facilities within the hotel and waterpark?
- Branding: For an indoor waterpark resort, should the hotel have a franchise affiliation?
- Theming: What type of theming should the waterpark have? How elaborate should the theme be?

Market Analysis

A thorough market analysis of the local hospitality and indoor waterpark resort market is an essential component of an indoor waterpark resort feasibility study. A thorough market analysis of the local and regional outdoor waterpark market is an essential component of an outdoor waterpark feasibility study. The projections of financial performance for the project will depend heavily upon the data gathered in this section. Typically an indoor waterpark resort will attract primarily overnight guests with some local users while an outdoor waterpark will attract primarily local guests with some overnight guests.

Hotel Market

In doing a study for an indoor waterpark resort, the consultant should order a hotel market report from Smith Travel Research (STR). For an outdoor waterpark analysis, the consultant would want to analyze the performance of hotels in the market, but typically the overnight visitors constitute a smaller portion of the usage than for an indoor waterpark resort. An STR report profiles the daily, monthly, and annual occupancy, average daily rate (ADR), and revenue per available room (RevPAR) of a market area. He or she should also conduct research on hotels in the market area that are in the development stages. Additionally, the consultant should interview the management of competitive hotels in order to gain a greater understanding of the state of the hotel market. The following factors are critical to the understanding of the hotel market.

- Existing competitors: How many competitors exist in the market? To what degree are they competitive in terms of amenity offerings, affordability, etc.? How have they performed in past years in terms of occupancy, ADR and RevPAR?
- What existing indoor waterpark resorts exist within the region and what is their occupancy and ADR performance?
- Recent hotel openings: How many hotels have opened in the past few years and what impact have those openings had on the existing market?
- Potential hotel openings: How many hotel projects are in the works? What types of hotels will they be? How many rooms will they have? What is their projected impact on the current supply and demand situation in the market?
- Market segmentation and market penetration: What is the market segmentation and penetration of each competitor in the market? The consultant will want to look at all market segments, but give special attention to the leisure market since an indoor waterpark resort targets this segment. Those hotels in the area that garner the largest share of the leisure market will be the subject property's biggest competitors.
- Projections: Synthesize the data gathered in the previous steps and project the performance potential for the subject property. Based on the current market situation, is the subject likely to perform well in terms of occupancy and ADR? What are its potential penetration rates and market segmentation?

Waterpark Resort Market

For studies on waterparks, an analysis of the existing indoor and outdoor waterparks' attendance and pricing is very important to review. The consultant will need to do thorough research of a variety of published sources as well as interviews with managers of the various waterparks to determine the number of attendees, average prices, and total revenues at the comparable properties. In some cases, waterpark managers are unwilling to share this information, and there is no Smith Travel Research type organization that tracks attendance at waterparks. Our firm maintains proprietary databases concerning performance levels of properties, which we collect on a consistent basis. Below are things to consider.

- Existing and potential competitors: How many other indoor and outdoor waterparks are located in the area? How many are proposed in the area?
- Attendance: How are existing waterparks performing in terms of attendance and usage? How many visitors do they receive in a year?
- Amenities of competitors: To what degree will existing and potential waterparks be competitive in terms of size, amenities, pricing, theming, etc.?
- Waterpark pricing: What are waterparks in the area charging for use of their facilities? What is the average ticket price per attendee at the competitive properties? For the purposes of comparison, it is important to consider the proposed subject property. If the study is for an indoor waterpark resort, the focus should be on other indoor waterparks attached to hotels. If the study is for an outdoor waterpark, the focus should be on existing outdoor waterparks.

Proposed Development Usage and Pricing Analysis

A thorough analysis of the projected usage and pricing is a key component of a feasibility study.

Indoor Waterpark Resorts:

For indoor waterpark resorts, the hotel is the key driver of operating performance for the property. In estimating the performance of a hotel, the study will project the number of occupied rooms, ADR, and usage levels for the hotel property. A detailed supply and demand model that calculates the historical performance of the market and makes projections for the subject property should be presented. The potential number of day pass users for the indoor waterpark should also be calculated through analyzing the number of overnight guests versus capacity for day pass users. The following are some questions to consider.

- Occupancy and ADR: What is the historical and projected performance of the competitive set of hotels in the market? How would the subject property penetrate the existing demand in the major segments including commercial, group, and leisure? What is the projected ADR by segment? Does the projected ADR include usage of the waterpark?
- Demand: Based on the data gathered in this section, what is the projected performance of the subject property? Are there plenty of demand generators in

the area to draw visitors? Are there plenty of families with children in the area who might visit the waterpark?

- Day passes: Will the subject allow for day passes? Indoor waterpark resorts are split between those that do allow for day passes and those that do not. The reason to not allow for day passes is that it drives guests to stay overnight and encourages them to utilize the other amenities of the resort hotel.
- Projections: Based on the data gathered above, how many waterpark visitors can the subject property expect, and will these visitors come from the subject hotel, nearby hotels, or will they be local residents? What is a reasonable rate to charge for admission to the waterpark for non-overnight guests?

Outdoor Waterparks:

For outdoor waterparks, the key figures to estimate include the number of attendees and the average ticket price. Outdoor waterparks have a wide range of attendance depending upon their location, pricing, amenities, number of rides and slides, size, and marketing efforts. The study should thoroughly analyze each of these major issues. The pricing for outdoor waterparks will heavily depend upon the investor's criteria. Many municipally owned outdoor waterparks charge much lower prices as they will not have to pay debt service, while most privately owned outdoor waterparks try to achieve the highest possible prices to provide sufficient funds for payment of debt service and a profit for the investor. The following are some questions to consider.

- Usage: What are the historical and projected usage levels and pricing of existing waterparks and amusement parks within the region?
- Facilities: How does the subject property's proposed facilities, location, and size compare to the existing properties?
- Population: What is the population base within a 30- to 60-minute drive around the subject property, and how many youths are in the area who would potentially utilize the proposed waterpark during the season?
- Season passes versus day passes: What will be the pricing for season passes versus day passes?
- Projections: Based upon the data gathered, what type of attendance levels will the subject achieve for the first five years of the analysis? What type of pricing levels are reasonable considering the proposed attendance levels?

Financial Analysis

This section of the report analyzes a property's capacity to generate income, and makes financial projections for future years for the property. The estimation of the statement of annual operating results for the subject property involves an analysis of the subject's scope and characteristics. The analysis should include a presentation of operating statements of comparable properties and industry standards to inform the reader of what other comparable indoor waterpark resorts or outdoor waterparks are achieving. The general steps include the following.

- Estimate the potential gross revenues for the subject property based upon an examination of the prior operating history of the subject property (if available), operating history of comparable properties in the subject market area and on a national basis, and an analysis of industry trends.
- Analyze departmental, undistributed, and fixed expenses, and project appropriate amounts in each category. For example, staffing and labor costs are critical components of operating an indoor or outdoor waterpark.
- Project the resultant net operating income (cash flow before debt service) over an appropriate holding period.

Valuation Analysis

The economic value of an indoor waterpark resort or outdoor waterpark is calculated through a discounted cash flow analysis from the income capitalization approach. This analysis utilizes the property's projected net income before debt service and applies a discount rate and terminal capitalization rate to determine the valuation. This is a common method utilized in a formal appraisal process. The discount rate is the average annual rate of return necessary to attract capital based upon the overall investment characteristics. The terminal capitalization rate is applied to a future year's net income to calculate a potential sale price for the property in the future. The following is an example of valuation performed for a large 400-room indoor waterpark resort.

Sample Waterpark Resort Discounted Cash Flow Analysis-As Is					
Present Value of Cash Flow				P.V. @:	11.50%
<u>Year</u>	<u>Year Number</u>	<u>Net Income</u>	<u>P.V. Factor</u>	<u>Present Value</u>	
2011	1	8,311,000	0.8969	7,453,812	
2012	2	9,237,000	0.8044	7,429,870	
2013	3	10,111,000	0.7214	7,294,063	
2014	4	10,467,000	0.6470	6,772,091	
2015	5	9,909,000	0.5803	5,749,836	
2016	6	10,205,000	0.5204	5,310,847	
2017	7	10,510,000	0.4667	4,905,448	
2018	8	10,827,000	0.4186	4,532,201	
2019	9	11,152,000	0.3754	4,186,769	
2020	10	11,486,000	0.3367	3,867,409	
Subtotal PV From Cash Flow				\$57,502,346	
Reversion Sale Price					
Net Income for Year:			11	\$11,832,000	
Divided by Reversion Overall Rate			9.0%		
Gross Reversion			\$131,466,667		
Less Costs of Sale @:			2.0%	2,629,333	
Net Reversion			\$128,837,333		
Value per Room			\$322,093		
Reversion PV + PV of Cash Flow					
Add Reversion	10	128,837,333	0.3367	\$43,380,350	
Subtotal PV From Cash Flow				\$57,502,346	
Market Value as of		April 30, 2011		\$100,882,696	
Less Renovation Costs				\$0	
Market Value				\$100,882,696	
Rounded Market Value				\$100,900,000	
Valuation Factors					
Price Per Hotel Room:			\$252,250		
% of Value from Cash Flow			57.0%		
% of Value from Reversion			43.0%		
Source: Hotel & Leisure Advisors					

Comparison of Value Created to Projected Costs

The key component of a feasibility study is to determine if the projected value created as shown from the discounted cash flow analysis equals or exceeds the development cost for the proposed project. A feasibility study should present the projected value created after performing a detailed analysis of the market, projected usage, and financial analysis. In some cases, the consultant performing the feasibility study will not have the detailed costs available, and this conclusion will be determined at a later date after the client has costing estimates performed by building contractors and architects. In other cases, the client has estimates of construction costs, and the feasibility study will present these estimates and compare the value created to the development costs to determine if the project is feasible. The most viable projects, which have the greatest investor appeal, are those where the value created is greater than the development costs for the proposal. However, the value created may be less than the development

costs, but the project may still be feasible if the municipality agrees to abate taxes or provide some capital assistance to the developer in terms of infrastructure. This would allow either for improved financial projections or for lower development costs.

Conclusion: The feasibility study of an indoor waterpark resort or an outdoor waterpark requires analysis and expertise beyond other types of commercial real estate. An indoor waterpark resort feasibility study requires a thorough market analysis involving a study of the economic and demographic factors as well as a review of the hotel and indoor waterpark resort markets. An outdoor waterpark feasibility study requires a thorough market analysis involving a study of economic and demographic factors as well as a review of the outdoor waterpark and amusement park markets. Both studies require a complete financial analysis, which looks at various revenue and expense categories. The purpose of the feasibility study is to provide honest and reliable information to the client to help them in their decision process on whether to develop the waterpark project.

Mr. Sangree will be a speaker at the 2012 World Waterpark Association annual convention in Las Vegas.

Author: David J. Sangree, MAI, CPA, ISHC is President of Hotel & Leisure Advisors, a national hospitality consulting firm. He performs appraisals, feasibility studies, impact studies, and other consulting reports for hotels, resorts, waterparks, golf courses, amusement parks, casinos, conference centers, and other leisure properties. He has performed more than 1,000 hotel studies and more than 200 indoor and outdoor waterpark resort market feasibility and/or appraisal studies across the United States and Canada. Mr. Sangree received his Bachelor of Science degree from Cornell University School of Hotel Administration in 1984. He became a certified public accountant in 1989. He became an MAI member of the Appraisal Institute in 1995 and a member of the International Society of Hospitality Consultants in 1996.

Since 1987, Mr. Sangree has provided consulting services to banks, hotel companies, developers, management companies, and other parties involved in the lodging sector throughout the United States, Canada, and the Caribbean. He has spoken on various hospitality matters at seminars throughout the United States and on *Good Morning America* and *CNBC*. Mr. Sangree was named in 2008 one of *Aquatics International Magazine's "Power 25."* *Aquatics International* publishes an annual list of professionals it deems the most powerful people in the aquatics industry. Mr. Sangree was profiled as one of the first consultants serving the waterpark resort industry and for his expertise and experience in shaping some of the latest industry trends.

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