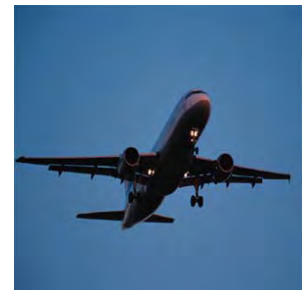
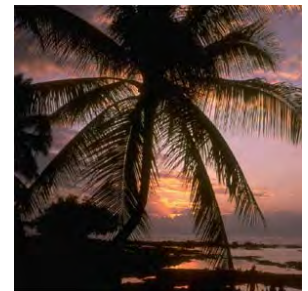


# Economic Impact Analysis of the Potential Erosion of Waikiki Beach

**Waikiki Improvement Association**

**September 3, 2008**

*Final Report*



**HOSPITALITY ADVISORS LLC**



HOSPITALITY ADVISORS<sub>LLC</sub>  
HOTEL TOURISM & REAL ESTATE CONSULTING

September 3, 2008

Mr. Rick Egged  
President  
Waikiki Improvement Association  
2255 Kuhio Avenue Suite 760  
Honolulu, HI 96815

Dear Mr. Egged:

Hospitality Advisors LLC (“Hospitality Advisors”) is pleased to submit this report to the Waikiki Improvement Association (“WIA”) in regards to the economic impact of a potential complete erosion of Waikīkī Beach.

**TERMS AND CONDITIONS**

Our work and written product is based on information provided by secondary research sources, industry interviews, our extensive database and knowledge of the Hawaii market as well as other sources as appropriate. Information provided to us was not audited nor verified by us and is assumed to be correct for the purposes of this engagement. Where appropriate, the source of information provided to us was stated. We have no responsibility to update any report, presentation or analyses prepared by us for changes in any economic or market factors or receipt of new information after the date of this report.

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Recognizing that the war and ensuing aftermath in Iraq will likely not be resolved prior to the completion of this study, and that these events continue to evolve as of the date of this report, Hospitality Advisors will not be responsible nor liable for any direct and indirect impacts that the war may have on the results of this analysis or assumptions used, whether considered or not in the preparation of this report.

Information, estimates and opinions furnished to us are assumed obtained from sources considered reliable and is considered to be true and correct. However, no representation, liability or warranty for the accuracy for such items, as well as any information, estimates or opinions prepared by Hospitality Advisors, are assumed by or imposed on us, and may be subject to corrections, errors, omissions and withdrawals without notice.

All information and analysis provided to WIA in this report is solely for your internal information and use. The information and analyses should not be relied upon for any other purpose or by any other entity. Neither our report nor any reference to our firm may be included or quoted in any offering circular or registration statement, prospectus, sales brochure, appraisal, loan or other agreement or document.

WIA agrees to hold harmless Hospitality Advisors from any and all third party claims, liabilities, costs and expenses relating to services Hospitality Advisors renders under the Engagement Letter, except to the extent finally determined to have resulted from the willful misconduct or fraudulent behavior of Hospitality Advisors relating to such services.

Thank-you again for the opportunity to provide consulting services to WIA. Should you have any questions concerning this report, please do not hesitate to contact me at (808) 550-8955.

Very truly yours,

Joseph M. Toy  
President & CEO  
Hospitality Advisors LLC

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# Executive Summary



# Introduction

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- Waikīkī Improvement Association (“WIA”) engaged Hospitality Advisors LLC (“Hospitality Advisors”) to provide an overview economic impact analysis of the potential complete erosion of Waikiki Beach on the Island of O‘ahu. WIA has requested Hospitality Advisors to provide the following:
  - An overview analysis of Hawai‘i’s visitor industry, with specific focus on Waikīkī, O‘ahu
  - Analyses of on-beach and off-beach hotel market performance and economic contribution through renovations and improvements
  - Estimates of market and economic impact assuming complete erosion of Waikiki Beach, including visitor spending, beach activities, and taxes

# Executive Summary

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- To assess the economic impact of a complete beach erosion, Hospitality Advisors has relied on primary and secondary research statistics for analysis, including State of Hawai‘i DBEDT visitor statistics, a visitor intercept survey conducted by Hospitality Advisors’ subcontractor, Market Trends Pacific (“MTP”), and Smith Travel Research (“STR”) hotel lodging and financial survey. Specifically, analysis are provided for the following areas of impact based on U.S. and Japan visitor expenditures:
  - Total hotel revenue, including room revenue, food and beverage revenue, and other hotel operations
  - Visitor Activity Spending
  - General Excise Tax
  - Transient Accommodations Tax
- In addition to examining the aforementioned revenue streams, potential impacts on O‘ahu visitor arrivals and total visitor expenditures are also analyzed.

# Executive Summary

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- Based on the MTP visitor intercept survey, 58.0 percent of all westbound visitors stated that they would not consider staying in Waikīkī if the beach is completely eroded. In contrast, only 14.0 percent of Japanese respondents indicated that they would not consider staying in Waikīkī.
- It is estimated that annual Waikīkī room demand would decline by 2.9 million occupied nights due to Waikīkī Beach erosion. Accordingly, the potential decline in room demand would result in a loss of approximately \$503.8 million in room revenue.
- In addition to a potential \$503.8 million loss in room revenue, other hotel revenues such as food and beverage, spa, and parking, may also be affected due to declines in room demand.



# Executive Summary

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- Based on market and financial analyses prepared by Hospitality Advisors, the potential economic impact on total hotel revenues is estimated to be \$661.2 million.
- Our analyses estimate that nearly \$2.0 billion in overall visitor expenditures could be lost annually due to a complete erosion of Waikīkī Beach.
- Although this study focuses on the erosion impact on Waikīkī, we note that some level of displaced demand would likely select other Hawai‘i locations. However, any potential relocation of demand would likely be limited by accommodation inventory constraints in the neighbor islands.

# Executive Summary

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- Given the scope of our assignment and study objectives, this report is not meant to be definitive; rather, it is intended to provide an overview of the potential economic impact on Waikīkī's visitor industry from an assumed complete erosion of Waikīkī Beach.
- While the estimated loss is significant, there may be opportunities for the industry to instigate the impact through potential marketing and repositioning strategies in response to a gradual erosion. However, the analysis of such strategies is beyond the scope of this report.

# Survey Finding: Consideration for Staying in Waikīkī if Beach is Eroded

*When presented with the issue of beach erosion, 58.0 percent of westbound visitors would not consider staying in Waikīkī if the beach is no longer available. Only 18.0 percent of westbound visitors would definitely consider staying in Waikīkī. In comparison, Japan visitors are more likely to stay in Waikīkī even if the beach is completely eroded.*

	Visitor Hotel Location:			Visitor Hotel Location:		
	Westbound Total	On-Beach	Off-Beach	Japan Total	On-Beach	Off-Beach
Definitely Consider Staying in Waikīkī	18.0%	16.0%	20.0%	56.0%	58.0%	58.0%
Possibly Consider Staying in Waikīkī	24.0%	23.0%	26.0%	27.0%	29.0%	18.0%
Not Consider Staying in Waikīkī	58.0%	60.0%	53.0%	14.0%	9.0%	21.0%
Don't Know	1.0%	1.0%	1.0%	3.0%	4.0%	3.0%

# Summary of Estimated Visitor Expenditure by Category

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*The potential economic impact due to a complete erosion of Waikīkī Beach is estimated at \$2.0 billion.*

<b>Total Estimated Impact on Total Waikīkī Visitor Expenditures:</b>	(\$1,977,379,886)
Including:	
Estimated Hotel Room Expenditure:	(\$503,823,828)
Estimated Retail Expenditure:	(\$560,973,160)
Estimated Entertainment & Recreation:	(\$224,790,053)
Estimated F&B Expenditure:	(\$456,514,303)
Estimated Transportation Expenditure:	(\$231,278,542)
<b>Estimated Job Loss:</b>	(6,352)

# Summary of Estimated Tax Impact

*Total potential tax impact is estimated at \$125.5 million.*

	\$ Revenue Impact	Tax Rate	\$ Tax Impact
Estimated TAT Impact:	(\$503,823,828)	7.25%	(\$36,527,228)
Estimated GET Impact:	(\$1,977,379,886)	4.50%	(\$88,982,095)
Total Tax Impact:			(\$125,509,322)

# Estimated Impact from Hotel Expenditures

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*Total potential impact from hotel expenditures is estimated at \$727.5 million.*

Potential Hotel Revenue Loss:	(\$661,223,225)
Estimated TAT Impact:	(\$36,527,228)
Estimated GET Impact:	(\$29,755,045)
Estimated Total Hotel Impact:	<u>(\$727,505,497)</u>

# Other Potential Impacts Due to Beach Erosion

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- In addition to potential direct impact on visitor expenditures, the estimated decline in room demand due to beach erosion could also result in a hotel industry job loss of 6,352 jobs based on our analyses and data provided by the State of Hawai‘i.

# Average Number of Jobs Per Occupied Room

*According to the statistics provided by the Hawai‘i Department of Labor and Industrial Relations, there are approximately 16,350 accommodation industry jobs in 2007. Based on daily hotel demand levels, the average number of jobs needed per occupied room is 0.79 jobs.*

	# Accommodation Industry Jobs	Annual Waikiki Room Demand	Avg. Daily Room Demand	# Jobs Per Occupied Room
2002	15,050	6,573,387	18,009	0.84
2003	15,200	6,654,911	18,233	0.83
2004	15,450	7,200,139	19,673	0.79
2005	15,900	7,647,239	20,951	0.76
2006	16,100	7,296,776	19,991	0.65
2007	16,350	6,894,440	18,889	0.87
Six-Year Average # of Jobs Per Occupied Room:				0.79

Source: Hawai‘i Department of Labor and Industrial Relations, Smith Travel Research



# Potential Impact on Accommodation Industry Workforce

*If Waikīkī room demand declined due to beach erosion, an estimated 6,352 jobs could be lost based on those U.S. and Japan visitors not returning to stay in Waikīkī.*

	U.S.	Japan	Other	Total
O‘ahu Visitor Arrivals	2,302,339	1,102,542	629,362	4,034,242
% Visitor Market Share	57.1%	27.3%	15.6%	100.0%
Average Daily Waikīkī Room Demand	10,780	5,162	2,947	18,889
% Visitors Not Returning to Waikīkī Due to Beach Erosion	58.0%	14.0%	36.5%	
Potential Impact on Daily Room Demand Due To Beach Erosion	6,252	723	1,076	8,051
Average # Jobs/Occupied Room	0.79	0.79	0.79	0.79
Potential Annual Job Loss Due to Beach Erosion	4,933	570	849	6,352

Source: State of Hawai‘i DBEDT, Hawai‘i Department of Labor and Industrial Relations, Smith Travel Research

# Hawaii Visitor Industry Overview



# Statewide Visitor Industry Overview

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- Despite a slight decrease in arrivals, Hawaii achieved record room revenues for three consecutive years since 2004, topping over \$3.1 billion in room revenues in 2006, and again in 2007.
- Strong growth in the U.S. leisure market drove Hawaii's growth during 2002-2006, with most market demand segments experiencing gains. In particular, the luxury and upscale segments experienced substantial growth due in part to improved infrastructure and hotel repositioning. Given the rapid absorption of repositioned hotels, this implied that there was a strong pent-up demand for higher category hotel product in Hawaii's market.
- While the U.S. domestic market has strengthened in the past several years, Japanese visitor arrivals have declined significantly, falling by approximately 27.7% between 2000 and 2007.

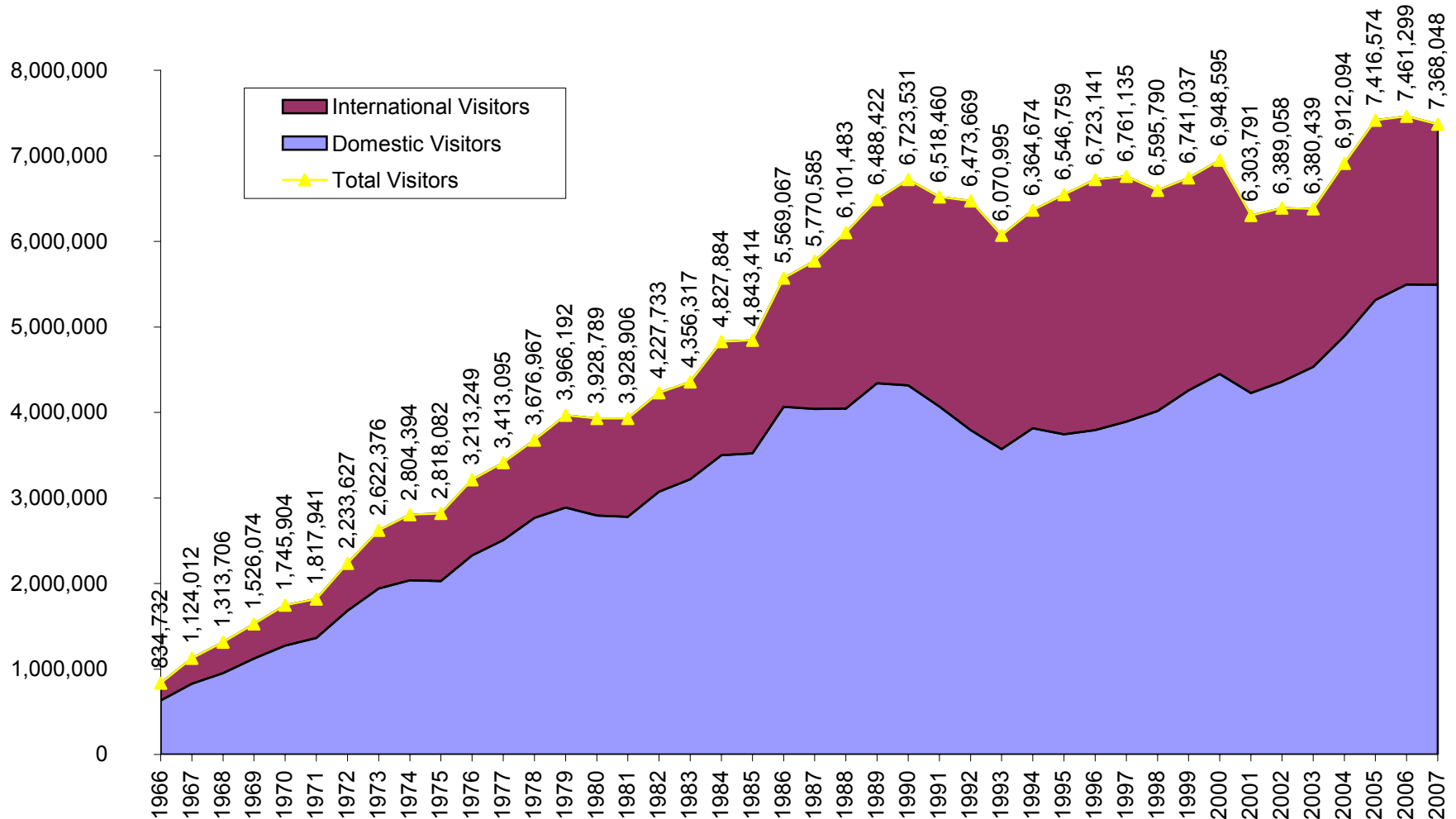
# Statewide Visitor Industry Overview

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- Significant investment into Hawaii's visitor industry and hotel infrastructure has helped Hawaii's strategic tourism plan to attract a higher yielding market. Accordingly, the improved tourism product has helped increase Statewide visitor expenditures. Total visitor expenditures grew by 0.9 percent to over \$12.2 billion in 2007 while Statewide per person per day spending increased by 2.5 percent to \$181.60.
- However, Hawai'i's tourism industry has seen a sharp downturn in 2008 due to greater economic instability, as well as the loss of air seat capacity and the departure of two NCL cruise ships. Through June 2008, visitor arrivals to Hawai'i have declined by 5.2 percent to 3.6 million visitors. Total visitor expenditure also declined by 3.4 percent to \$5.9 billion for the first half of 2008.

# State of Hawaii Visitor Arrivals

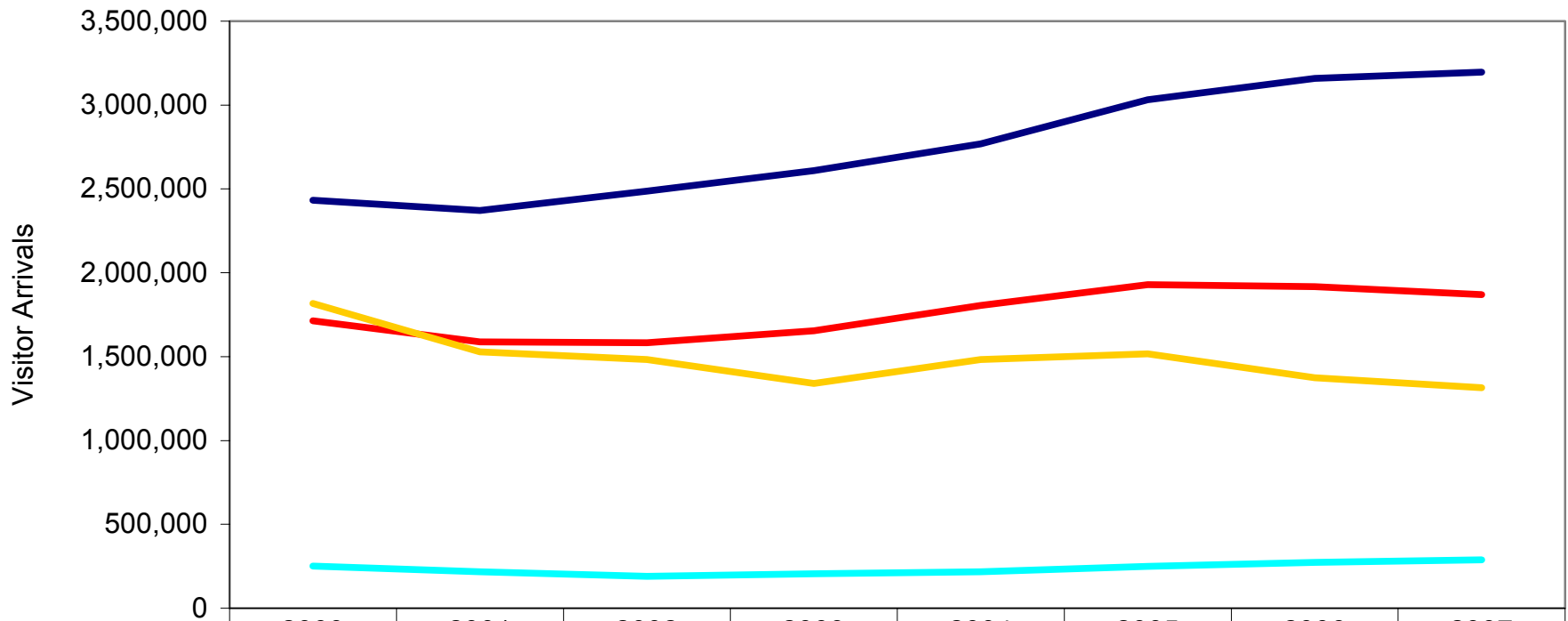
*Driven primarily by the U.S. domestic market, Hawai'i visitor arrivals showed a strong recovery post-9/11, setting a new record in 2005. However, growth in arrivals has since dipped slightly to 7.4 million visitors in 2007.*



Source: State of Hawaii DBEDT

# Statewide Visitor Arrivals by MMA

*U.S. West visitor arrivals have substantially grown since 2000, while annual Japan visitor arrivals have declined from 1.8 million visitors in 2000 to 1.3 million visitors in 2007.*



	2000	2001	2002	2003	2004	2005	2006	2007
US West	2,432,444	2,372,070	2,486,914	2,609,862	2,768,002	3,032,492	3,158,526	3,196,233
US East	1,712,712	1,588,164	1,582,563	1,653,357	1,805,377	1,929,294	1,917,919	1,869,770
Japan	1,817,643	1,528,564	1,483,121	1,340,034	1,482,085	1,517,439	1,374,454	1,314,619
Canada	251,843	216,948	189,890	204,999	217,163	248,617	273,167	288,150

US West

US East

Japan

Canada

# 2007 Statewide Hotel Performance by Island

*O‘ahu traded lower occupancy for higher ADR in 2007, showing only a slight 0.1 percent RevPAR gain to \$129.64. Kaua‘i led RevPAR growth with a 9.1 percent increase to \$155.75.*

	Occ.	% Pt. Δ	ADR	% Δ	RevPAR	% Δ
Oahu	76.9%	-6.8%	\$168.67	7.4%	\$129.64	0.1%
Maui	76.5%	-4.3%	\$262.23	6.6%	\$200.53	1.9%
Hawaii	67.6%	-4.8%	\$202.34	5.7%	\$136.75	0.6%
Kauai	75.8%	0.8%	\$205.35	8.1%	\$155.75	9.1%
State	75.3%	-5.3%	\$199.87	6.8%	\$150.49	1.2%

# YTD 6/08 Statewide Hotel Performance by Island

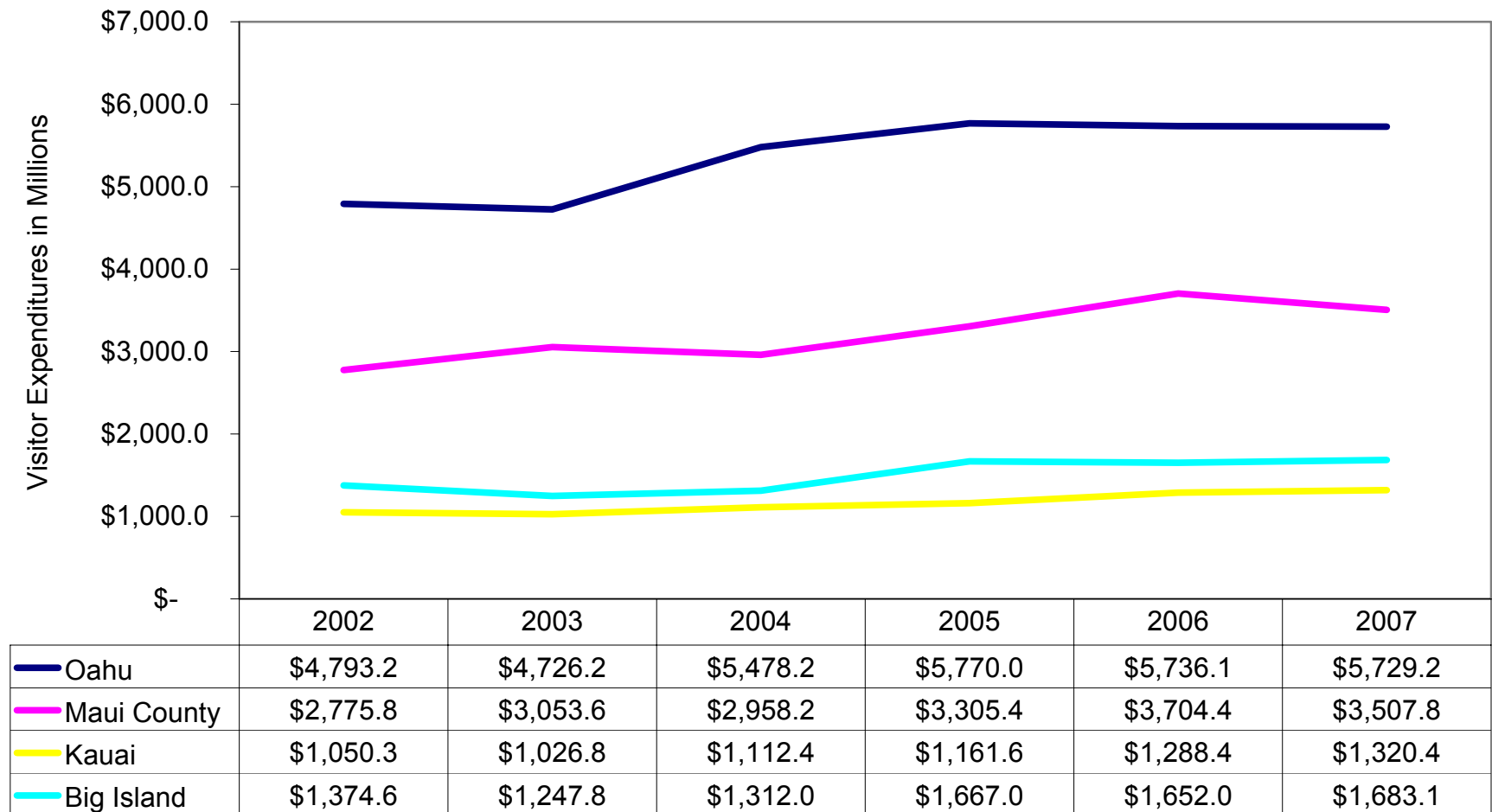
*O'ahu traded lower occupancy for higher ADR in 2007, showing only a slight 0.1 percent RevPAR gain to \$129.64. Kaua'i led RevPAR growth with a 9.1 percent increase to \$155.75.*

	Occ.	% Pt. Δ	ADR	% Δ	RevPAR	% Δ
Oahu	76.1%	0.1%	\$172.10	4.5%	\$131.04	4.7%
Maui	73.8%	-1.8%	\$276.80	5.3%	\$204.24	2.8%
Hawaii	65.7%	-3.4%	\$210.39	3.3%	\$138.22	-1.9%
Kauai	73.7%	0.2%	\$211.03	2.2%	\$155.60	2.5%
State	73.8%	-0.9%	\$207.04	4.0%	\$152.76	2.7%



# Annual Visitor Expenditures by Island

*Despite a slight decline in visitor arrivals, higher daily spending contributed to an overall increase in visitor expenditures Statewide. O‘ahu visitor expenditures topped over \$5.7 billion in 2007, while Maui followed second at \$3.5 billion.*



# Oahu Visitor Industry Overview

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- There has been a considerable amount of public and private infrastructure improvement on O‘ahu, specifically Waikīkī, since 2000. Renovation budgets for Waikiki’s public and private infrastructure improvement total more than \$2.7 billion between 2004 and 2010. When taking 2000-2004 into account, total investment into Waikiki’s infrastructure approximates \$3.6 billion. Some of the major improvements include the redevelopment of Outrigger Waikīkī Beach Walk and the Starwood property upgrade and redevelopment.
- In addition to product renovations and redevelopment, O‘ahu has seen an active hotel transaction cycle with a number of major properties changing ownership since 2000. Waikīkī’s hotel transaction value totaled over \$1.7 billion between 2000 and 2007. Some of the major transactions include the Hyatt Regency Waikīkī, Waikīkī Beach Marriott, Waikīkī Beachcomber, and the Kāhala Resort.

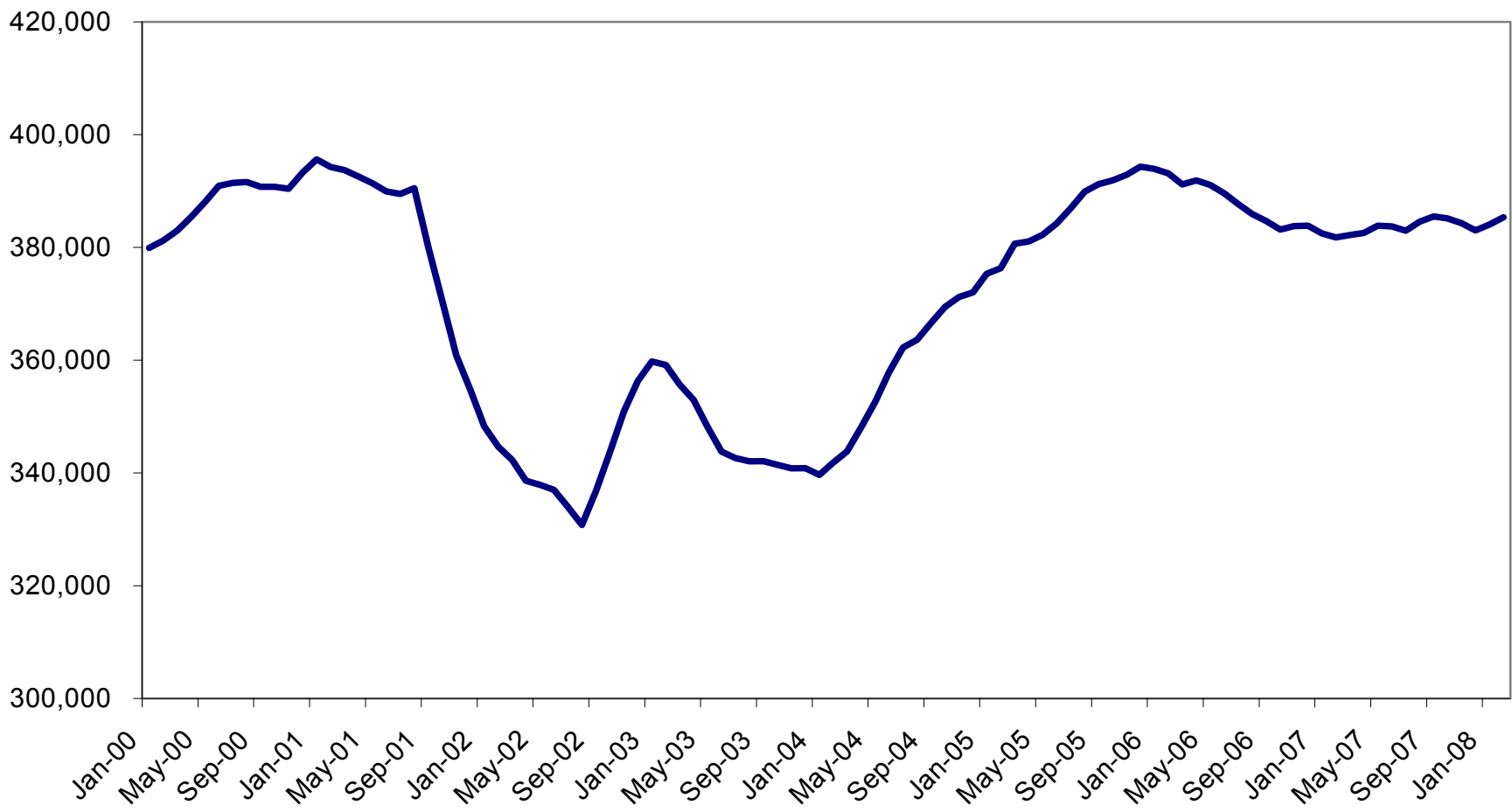
# Oahu Visitor Industry Overview

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- The substantial amount of capital investments into O‘ahu’s hotel inventory has helped rejuvenate and reposition many hotel properties into a higher property class. Along with the upward repositioning, O‘ahu has seen a strong growth in room rates. For 2007, ADR on O‘ahu increased by 7.4 percent to \$168.67; however, hotel occupancy on O‘ahu fell by 5.6 percentage points to 76.9 percent, resulting in a slight 0.1 percent gain in RevPAR.
- For 2007, O‘ahu hotels generated an estimated \$1.4 billion in room revenue, with Waikīkī accounting for approximately \$1.2 billion.
- Despite the substantial downturn in the market in 2008, significant investment remains in the re-development and renovation pipeline.

# Oahu Average Daily Census: 12-month Moving Average

*O'ahu average daily census peaked in 2006 and began to retreat in 2007. O'ahu average daily census has maintained relatively flat through 2007 and into 2008.*



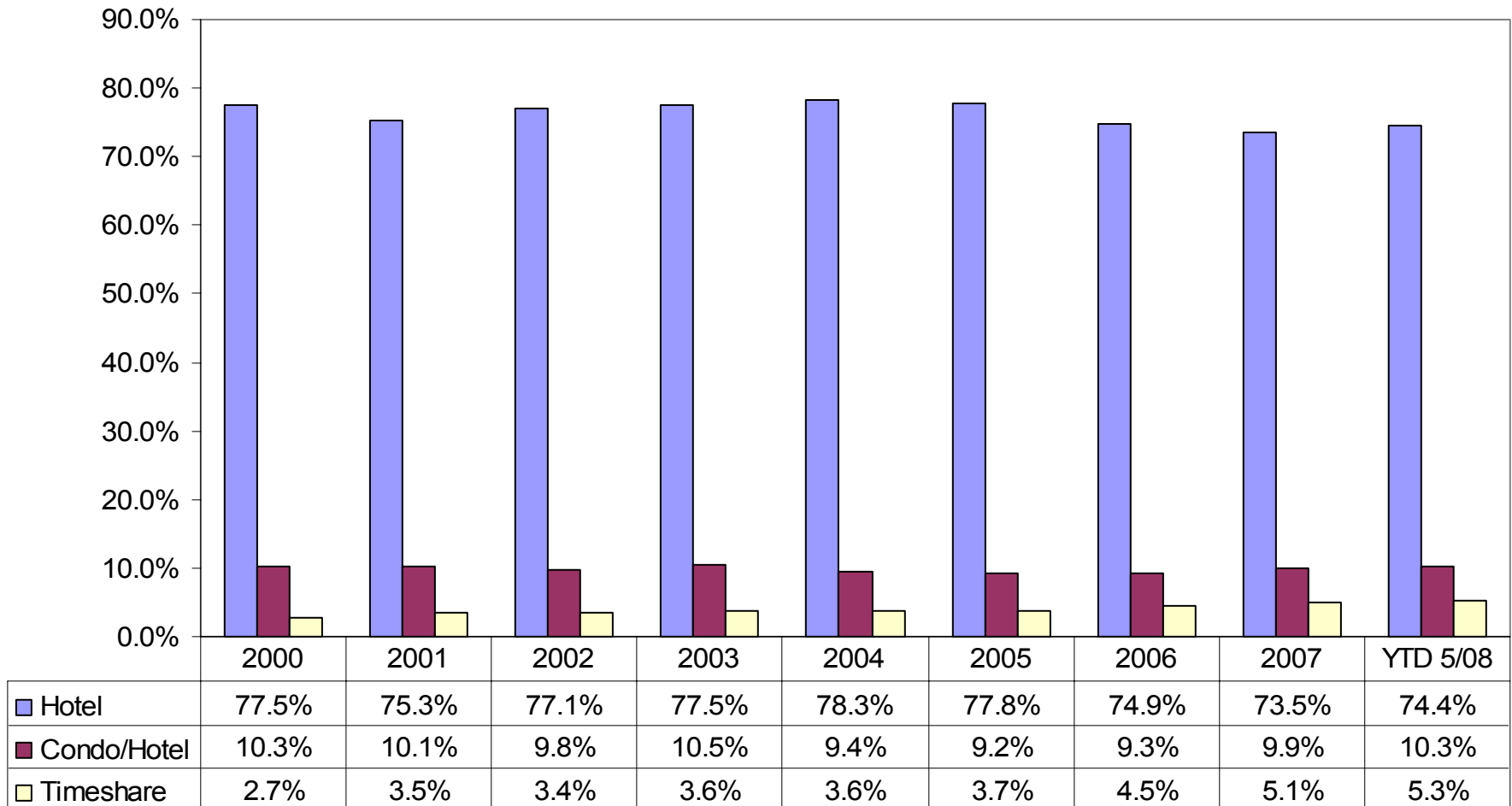
# O'ahu Visitor Accommodation Choice

*While the majority of Oahu visitors continue to use hotel accommodations, a growing number of visitors are starting to explore alternative accommodations such as condominium and timeshare. Due to NCL's fleet reductions, visitors staying on cruise ships has declined significantly through the first quarter of 2008.*

<b>Accommodations</b>	<b>YTD 5/08</b>	<b>% Share</b>	<b>2007</b>	<b>% Share</b>
Stay in Hotel	1,331,428	74.4%	3,377,316	73.5%
Hotel Only	1,149,259	64.3%	2,887,377	62.8%
Stay in Condo	184,961	10.3%	454,006	9.9%
Condo only	111,283	6.2%	276,918	6.0%
Stay in Timeshare	95,169	5.3%	232,408	5.0%
Timeshare only	58,427	3.3%	142,626	3.1%
Cruise Ship	84,122	4.7%	341,932	7.4%
Friends/Relatives	188,054	10.5%	473,271	10.3%
Bed & Breakfast	16,192	0.9%	38,140	0.8%
Other	31,782	1.8%	80,876	1.8%

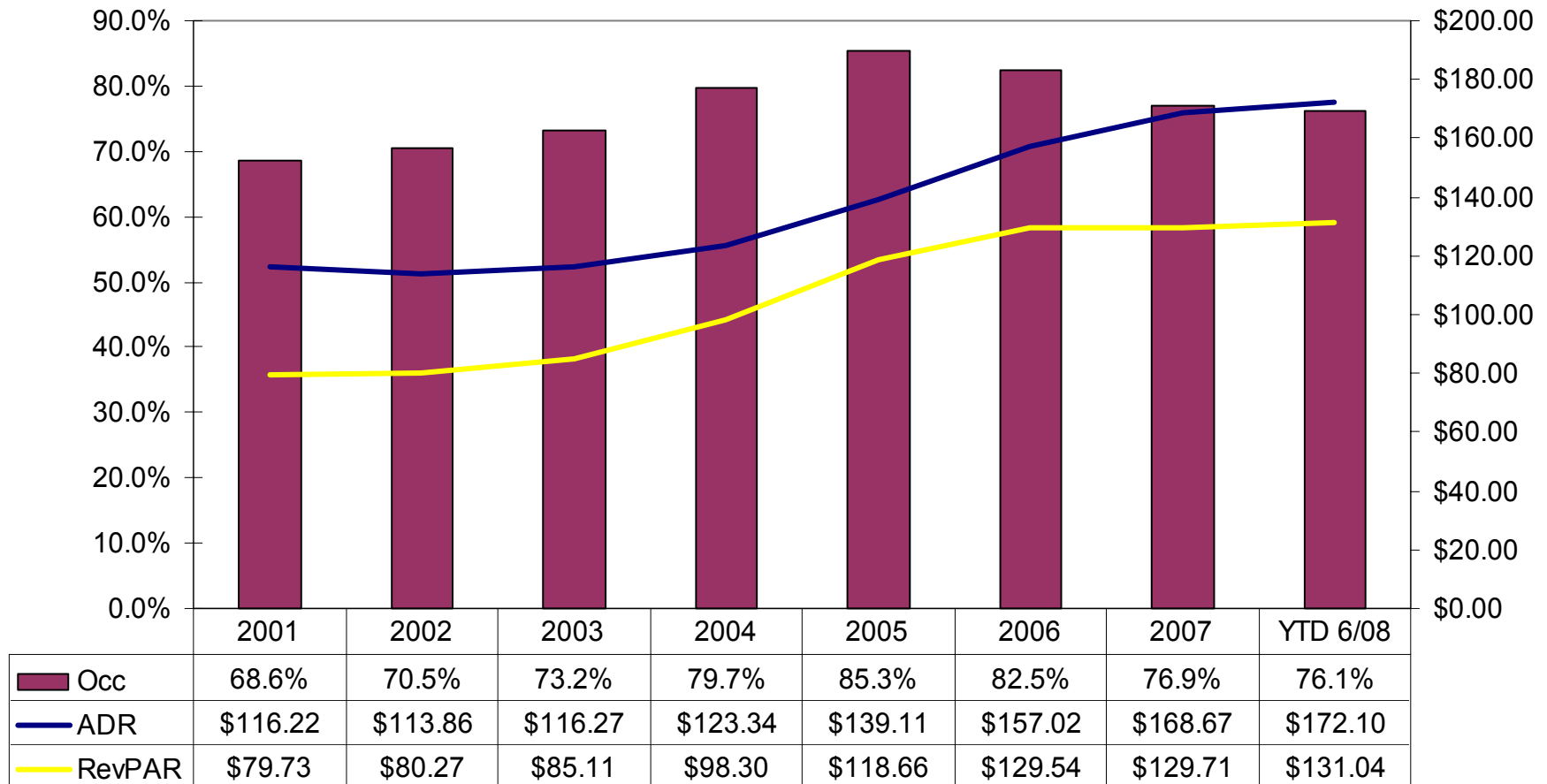
# O'ahu Visitor Arrivals by Accommodation

*The majority of Oahu visitors continued to select hotel as the accommodation of choice, though timeshare use has been steadily increasing in the last five years.*



# 2001 – YTD 6/08 O‘ahu Hotel Performance

*Driven by record visitor arrivals and reductions in room supply, O‘ahu occupancy reached 85.3 percent in 2005. However, softened demand combined with the reintroduction of renovated hotel rooms have led to declines in occupancy in the last two years.*



# 2007 O'ahu Hotel Performance by Class of Property

*O'ahu hotels reported occupancy declines across all class segments. Strong room rates helped lift midprice through budget RevPAR, while upscale RevPAR fell slightly by 2.1 percent.*

	Occupancy	% Pt. Δ	ADR	% Δ	RevPAR	% Δ
Luxury	78.3%	-3.5%	\$243.21	3.6%	\$190.43	0.0%
Upscale	76.7%	-8.1%	\$152.38	6.6%	\$116.88	-2.1%
Midprice	74.0%	-9.2%	\$118.61	12.9%	\$87.77	2.5%
Economy	84.5%	-4.6%	\$89.21	9.2%	\$75.38	4.2%
Budget	74.8%	-12.0%	\$82.89	15.6%	\$62.00	1.7%



# YTD 6/08 O'ahu Hotel Performance by Class of Property <sup>33</sup>

*O'ahu upscale and economy hotels reported occupancy declines through June 2008. Strong room rates helped lift luxury, midprice, economy, and budget RevPAR, while upscale RevPAR fell slightly by 1.9 percent.*

	Occupancy	% Pt. Δ	ADR	% Δ	RevPAR	% Δ
Luxury	78.4%	0.7%	\$232.32	4.1%	\$182.04	4.9%
Upscale	68.7%	-3.3%	\$160.16	2.8%	\$110.01	-1.9%
Midprice	76.0%	1.1%	\$120.75	6.6%	\$91.72	8.1%
Economy	83.8%	-1.6%	\$92.50	4.2%	\$77.51	2.3%
Budget	76.2%	2.7%	\$86.33	6.4%	\$65.75	10.3%

# Waikīkī Beach Erosion Overview



# Waikīkī Beach Erosion Overview

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- Located on the South Shore of O‘ahu, Waikīkī Beach is recognized as a major tourism destination in Hawaii, as well as a popular recreational spot for visitors and residents. Waikīkī Beach extends approximately two miles between the end of Kapahulu Avenue and Ala Wai Yacht Harbor, fronting a number of major hotels such as Hilton Hawaiian Village, Halekulani Hotel, Sheraton Waikiki, Hyatt Regency Waikiki Resort, and Waikiki Beach Marriott Resort. On average, there are approximately 25,600 hotel rooms available in Waikīkī on a daily basis. In 2007, Waikīkī hotels sold 3.9 million room nights and generated approximately \$1.2 billion in hotel room revenues. Given the popularity and economic importance of Waikīkī, the issue of Waikīkī beach erosion has been an on-going concern dating as far back as the late-1800’s. There have been various studies and construction efforts to prevent further beach erosion. Some of the more recent studies include:

# Waikīkī Beach Erosion Overview

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- *Erosion Management Alternatives for Hawai‘i*. Department of Land and Natural Resources, July, 2004
- *Regional Economic Benefits of Waikīkī*. Department of Land and Natural Resources, May, 2002
- *The Economic Contribution of Waikīkī*. State of Hawai‘i Department of Business, Economic Development & Tourism, May 2003.
- *Multi-Hazard Pre-Disaster Mitigation Plan for the City and County of Honolulu*. City and County of Honolulu Oahu Civil Defense Agency, 2003.
- *Coastal Erosion Management Plan (COEMAP)*. State of Hawaii Department of Land and Natural Resources (DLNR). 2000.
- *Waikīkī Beach Erosion Control, Island of O‘ahu, Hawaii*. US Army Corp of Engineers, January 1992.

# Waikīkī Beach Erosion Overview

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- According to the *Regional Economic Benefits of Waikīkī* report conducted by the Department of Land and Natural Resources (“DLNR”) in 2002, losses due to Waikīkī beach congestion as a result of beach erosion are estimated at \$181.0 million.
- The loss estimates provided by DLNR are primarily based on the percentage of visitors that would not return to Hawai‘i due to crowding and congestion. The same ratio is applied to visitor expenditures, labor income, and state and local taxes to arrive at an estimated economic impact of \$181.0 million. While this DLNR analysis was conducted in 2002, we note that this internal report is still in draft form and has not been finalized. It should also be noted that the economic impacts estimates by DLNR reflects 1998 dollars. Statistics used for this analysis were also based on 1998 DBEDT visitor survey responses and expenditures.

# Waikīkī Beach Erosion Overview

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- Prior to the DLNR report, the Army Corp of Engineers also conducted a study in 1992 that provided an estimated economic benefit by beach users of \$6.6 million per year without any beach erosion control, and \$9.4 million per year under beach erosion control. In terms of Waikīkī's overall economic contribution, the State of Hawai'i DBEDT reported that Waikīkī contributed approximately \$3.6 billion to the State economy in 2002, or 8.0 percent of Hawai'i's Gross State Product ("GSP").
- As an on-going effort to protect Waikīkī Beach, the State of Hawai'i conducted a \$500,000 sand-pumping project in 2006 to replenishing 10,000 cubic yards of sand onto Kūhiō Beach, a stretch of beach in front of major hotel properties such as the Hyatt Regency Waikīkī Resort and Waikīkī Beach Marriott Resort. The Kūhiō Beach project is one of many construction and replenishment efforts to restore Waikīkī Beach and prevent further erosion.

# Waikīkī Beach Erosion Overview

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- Given the significance of Waikīkī Beach and the on-going concern over Waikīkī Beach erosion, the Waikīkī Improvement Association has engaged Hospitality Advisors to further analyze the economic impact of a complete erosion of Waikīkī Beach. To begin our analysis, we will examine the importance of beach availability and the potential economic impact of beach erosion on hotel performance based on location, including analysis of on-beach and off-beach hotel occupancy, room rate, and revenue. We will also analyze visitor activity participation, visitor satisfaction levels, and beach-related visitor spending.
- As part of this study, Market Trends Pacific (“MTP”) has been engaged to conduct a visitor preference survey in order to further analyze the importance of beach availability and the potential impact of beach erosion on visitors’ future travel decision and behavior.

# Waikīkī Hotel Performance

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On-Beach Hotels vs. Off-Beach Hotels



# On-Beach vs. Off-Beach Hotel Performance

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- Waikīkī's on-beach properties, including beachfront hotels, generate a significantly higher level of revenues through a more comprehensive and diverse product offering than off-beach properties. Waikīkī's on-beach properties achieve a much higher ADR than off-beach properties as the on-beach hotels tend to rank among the top-tier luxury and upscale segments. Many beachfront properties are also full-service properties, generating additional revenue through food and beverage, retail, spa, and other minor operations.
- On-beach hotels achieved an ADR of \$224.49 in 2007, whereas off-beach properties reported an average room rate of \$122.01. However, off-beach hotels managed to achieve a slightly higher occupancy rate at 79.3 percent versus the on-beach hotel occupancy of 76.7 percent.

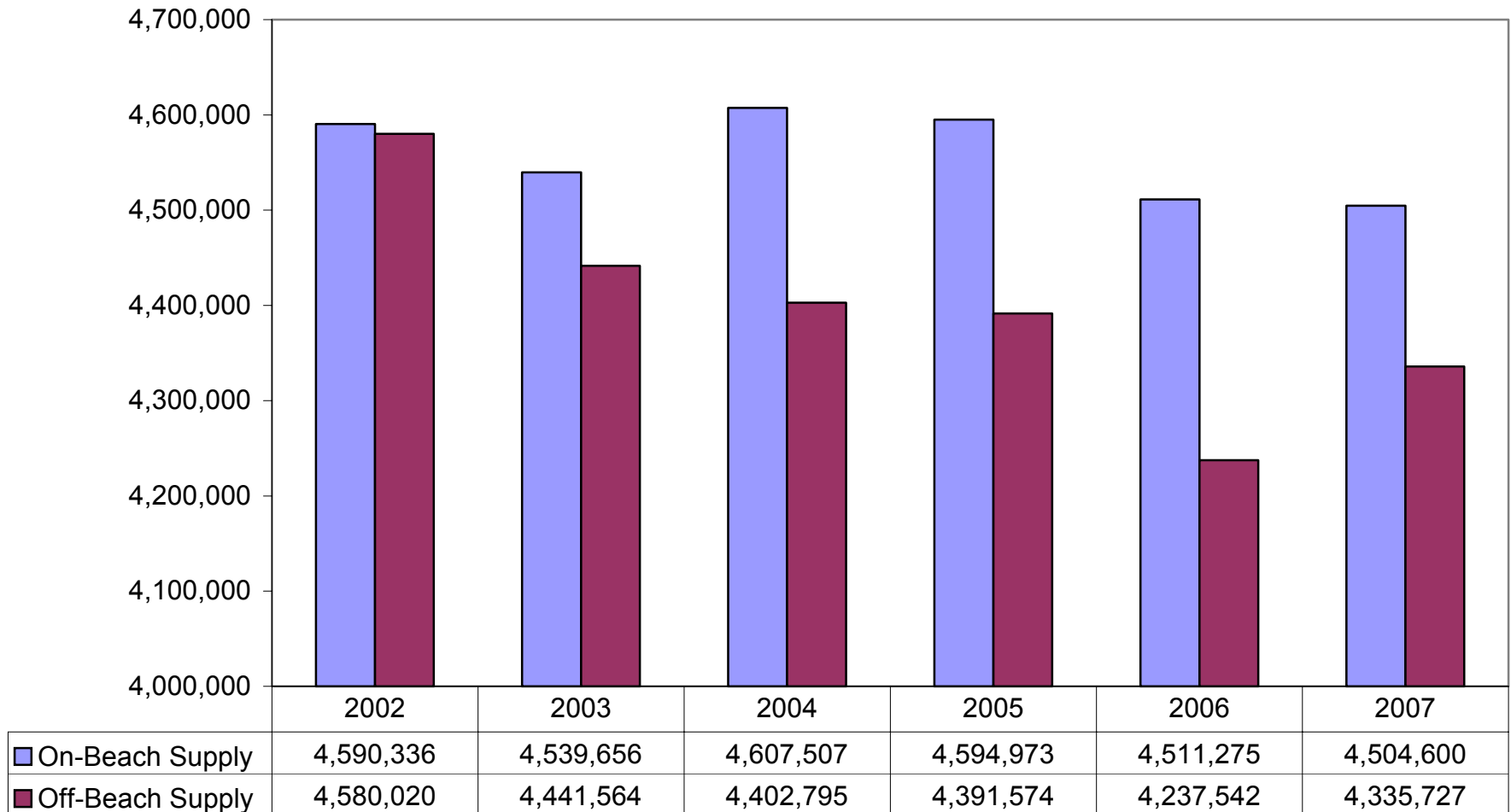
# On-Beach vs. Off-Beach Hotel Performance

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- With respect to hotel supply, on-beach properties show a slightly higher number of available room supply than off-beach properties. Driven primarily by higher room rates, on-beach properties generate more in total room revenue than off-beach properties. In 2007 on-beach hotels reported \$775.9 million in annual room revenue in comparison to \$419.5 million from off-beach hotels, or about 85.0 percent higher.
- On-beach properties reported over \$1.1 billion in total capital improvement budgets compared to an estimated \$960.0 million for off-beach property renovations budgeted between 2004 and 2010. Some of the major on-beach hotel renovations include improvements at the Royal Hawaiian Hotel, Outrigger Reef, and Hilton Hawaiian Village. Major off-beach improvements include the redevelopment of the Trump Tower and renovations at the Hilton Waikīkī Prince Kūhiō Hotel.

# Waikīkī Hotel Supply: On-Beach vs. Off-Beach Properties

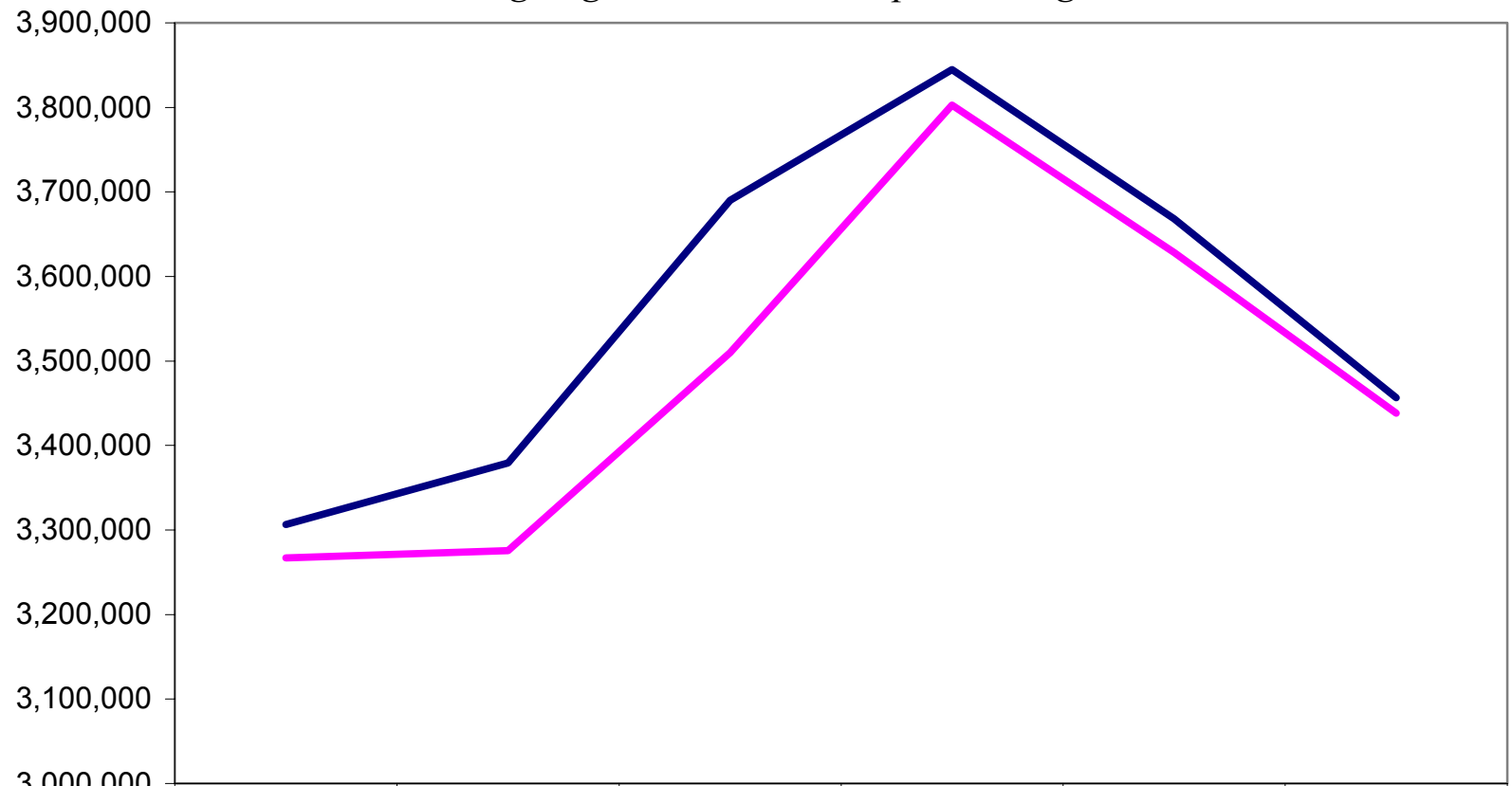
*Off-beach hotel supply declined in recent years due in part to conversions or renovations. As renovations veer closer to completion, available rooms began to return to the Waikīkī inventory.*



Source: Smith Travel Research, Hospitality Advisors LLC

# Waikīkī Hotel Demand: On-Beach vs. Off-Beach Properties

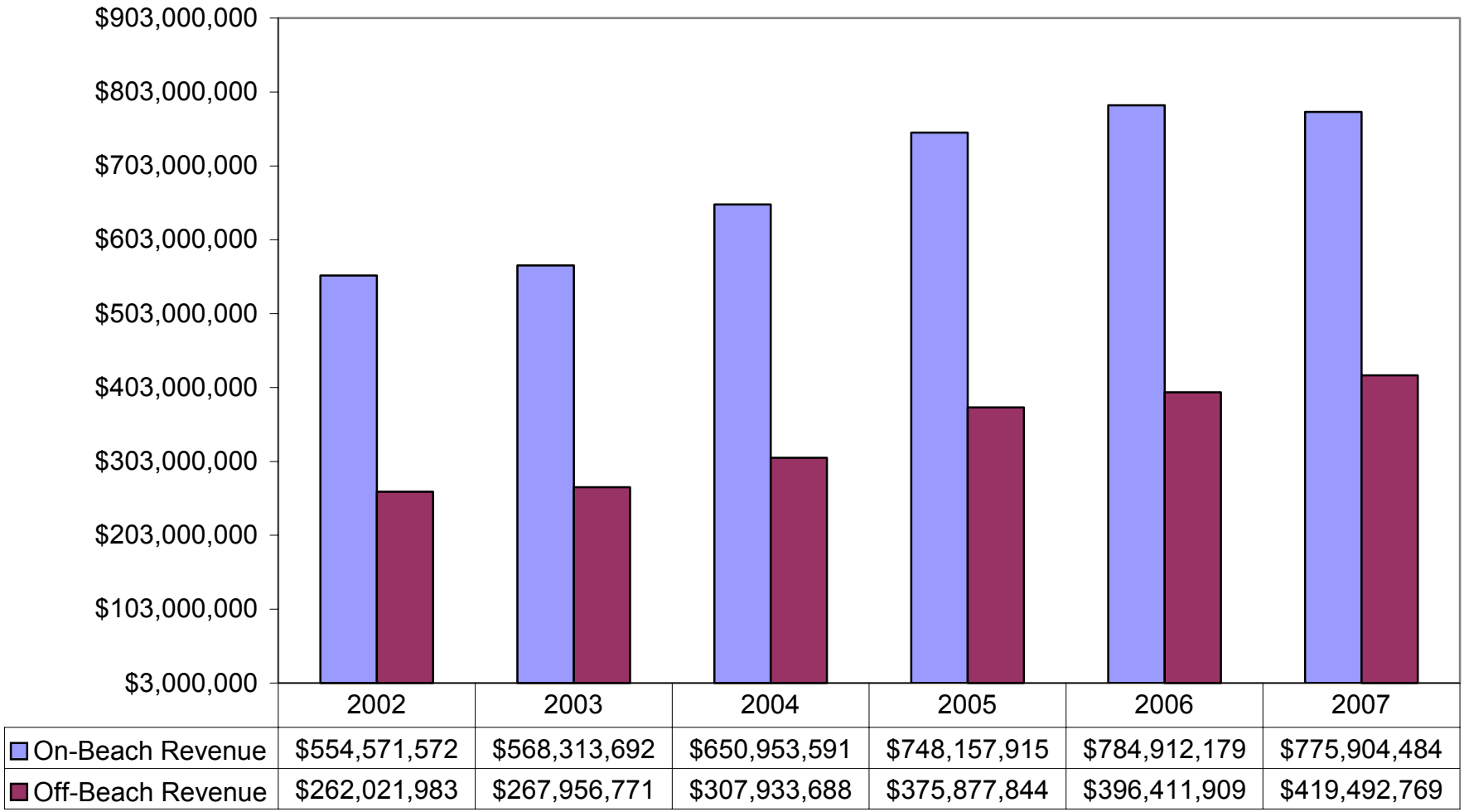
*Waikīkī room demand peaked in 2005 and began to retreat in 2006 due in part to out of service rooms undergoing renovations or repositioning.*



	2002	2003	2004	2005	2006	2007
On-Beach Demand	3,306,365	3,379,146	3,690,188	3,844,576	3,668,349	3,456,368
Off-Beach Demand	3,267,022	3,275,765	3,509,951	3,802,663	3,628,427	3,438,072

# Waikiki Hotel Revenue: On-Beach vs. Off-Beach Properties

*Due to higher room rates and greater supply, Waikiki on-beach hotels generate a much higher revenue level than the off-beach properties.*



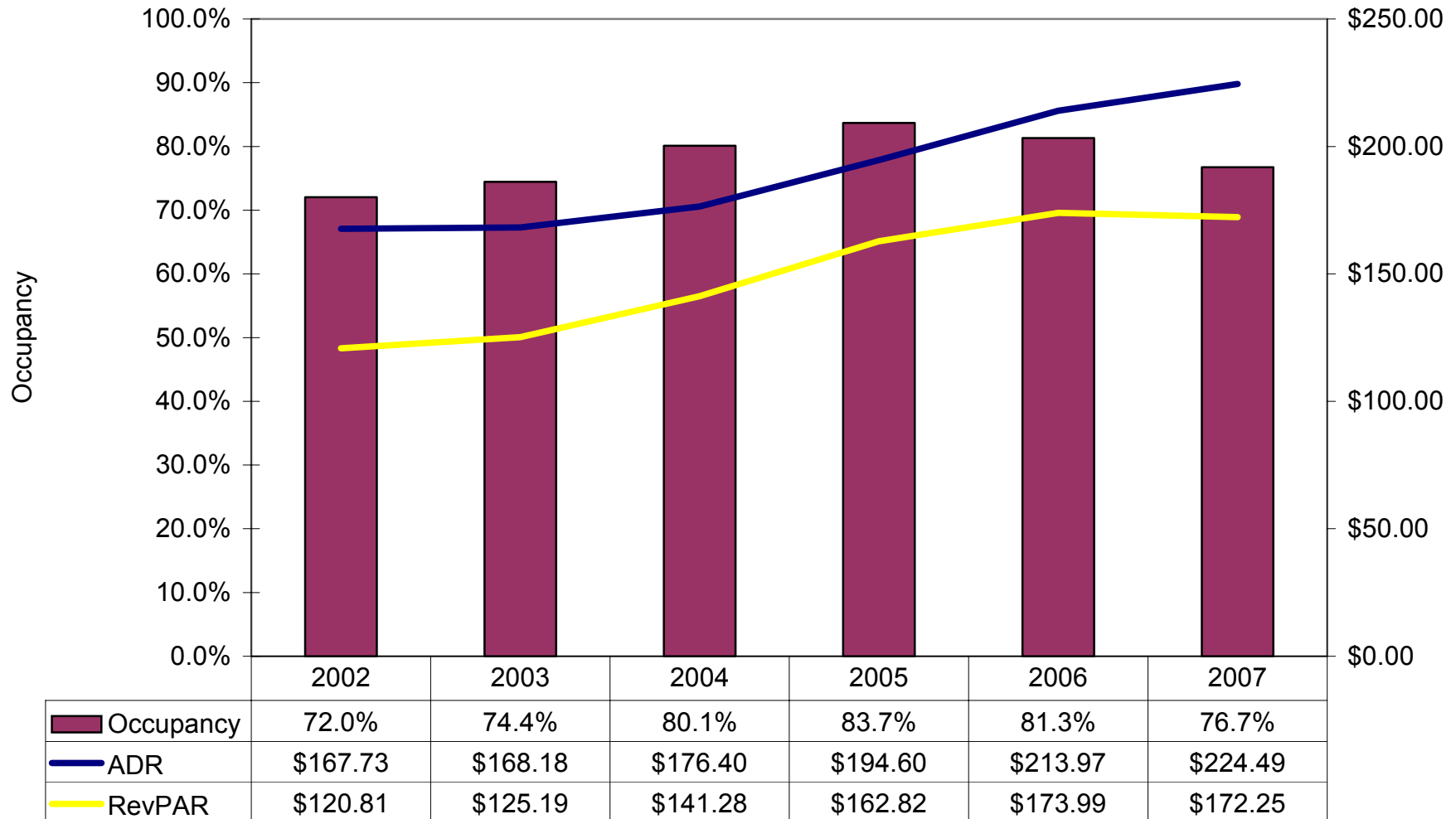
# 2001- 2007 Waikīkī Hotel Performance

*After four consecutive years of occupancy gains, Waikīkī occupancy began to decline in 2006. Room rates continued to improve through 2007; however, Waikīkī's RevPAR growth remained relatively flat as the increases in room rates were offset by declines in occupancy.*



# Waikīkī On-Beach Hotel Performance

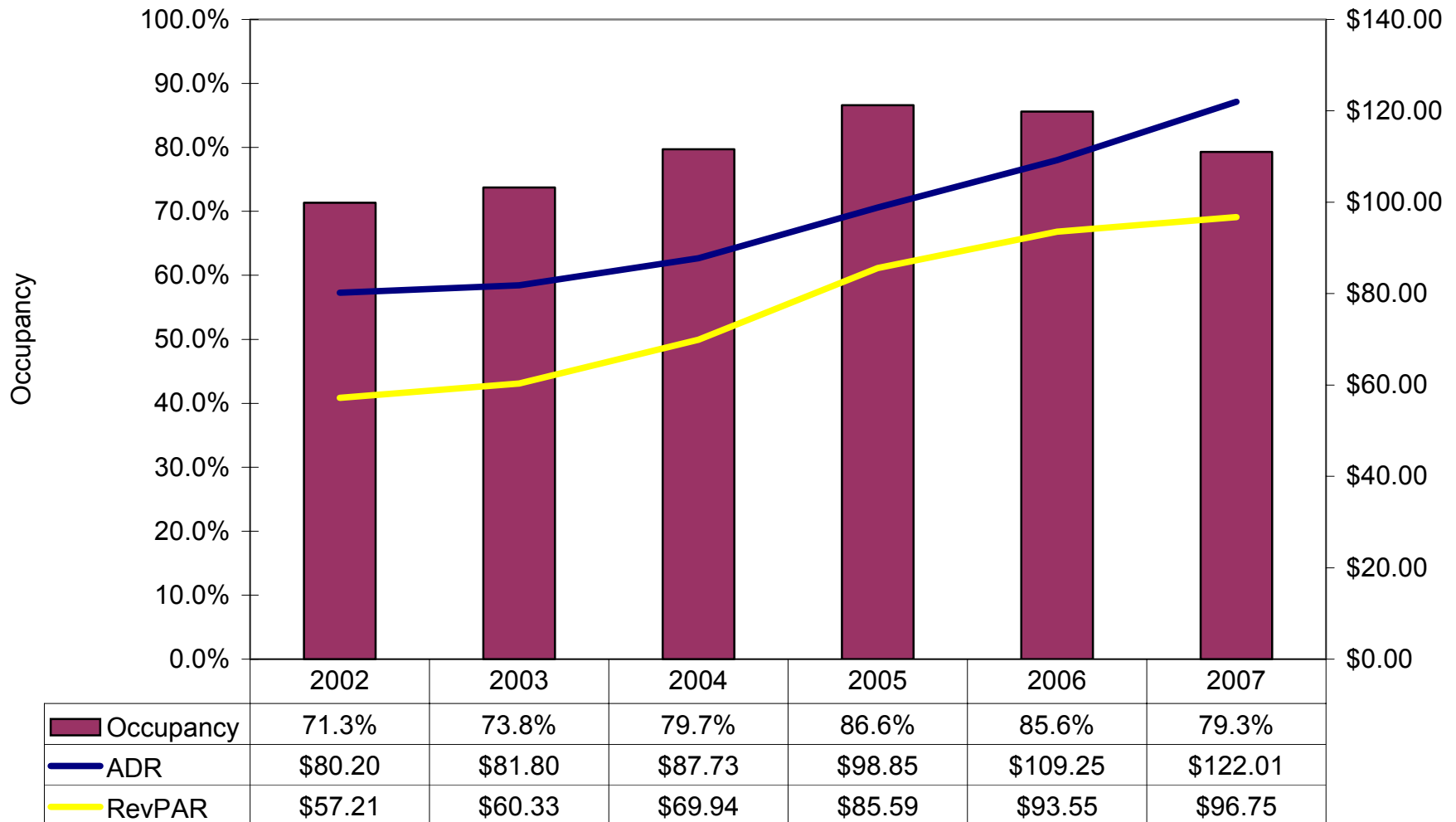
*Waikīkī's beachfront properties demand a much higher room rate than the off-beach properties, averaging at \$224.49 per night for 2007.*



Source: Smith Travel Research, Hospitality Advisors LLC

# Waikīkī Off-Beach Hotel Performance

*The Waikīkī off-beach properties show a higher occupancy than on-beach properties, but report a much lower room rate.*

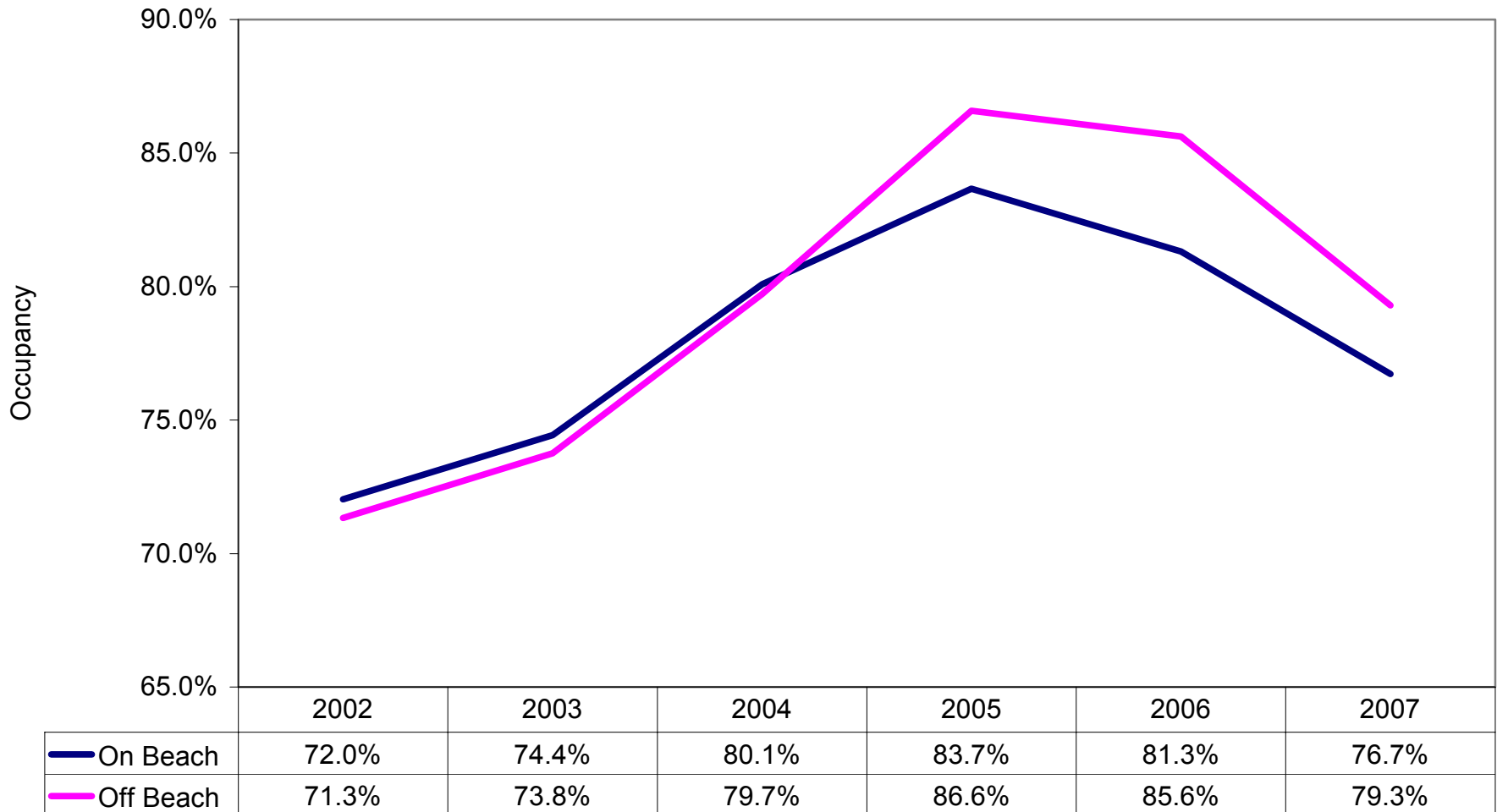


Source: Smith Travel Research, Hospitality Advisors LLC



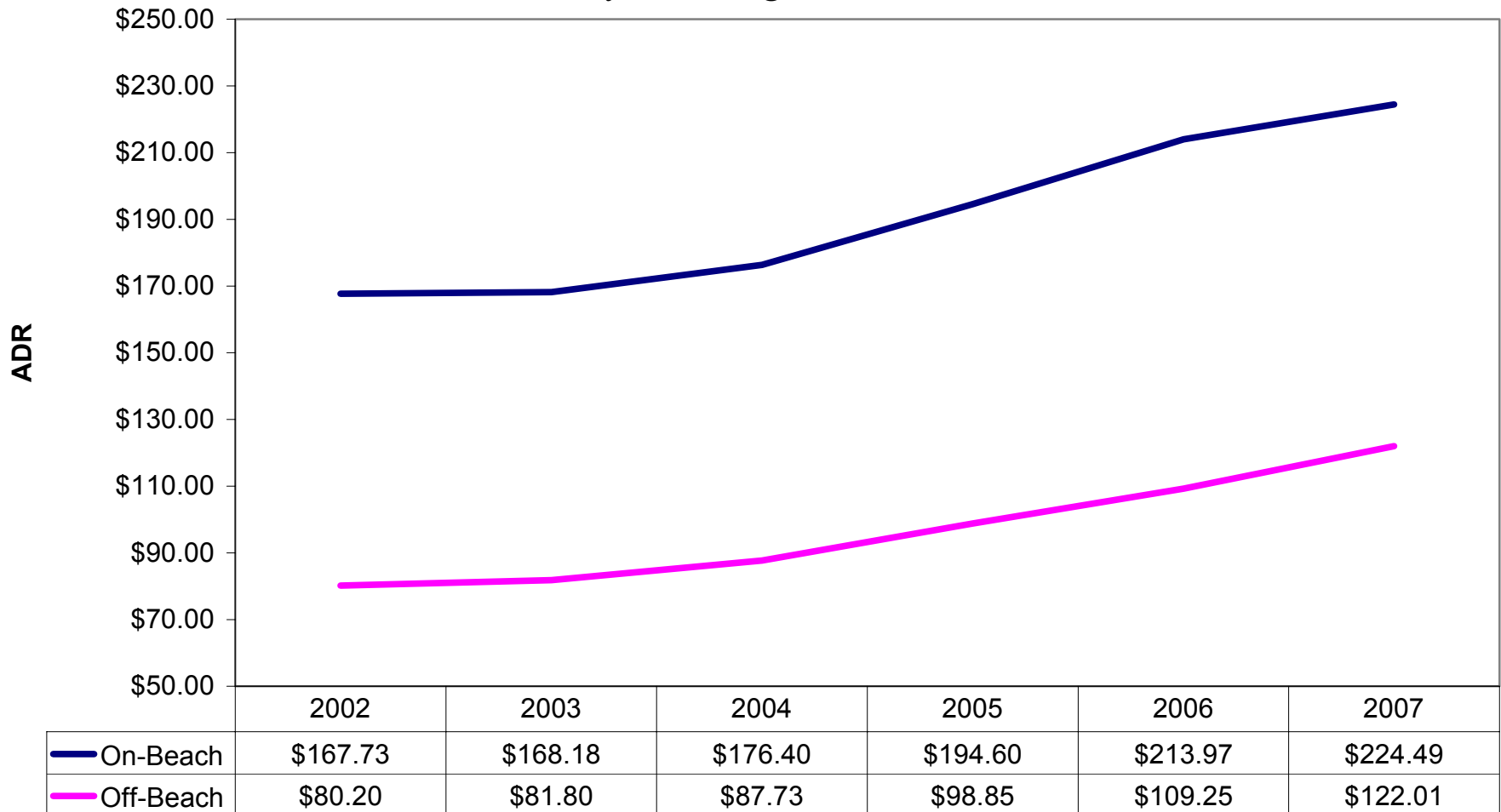
# Waikīkī Occupancy: On-Beach vs. Off-Beach

*Waikīkī's off-beach properties achieved higher occupancy in recent years due in part to supply constraints. Many budget and economy properties has undergone conversions and/or renovations, reducing the number of rooms available for visitor use.*



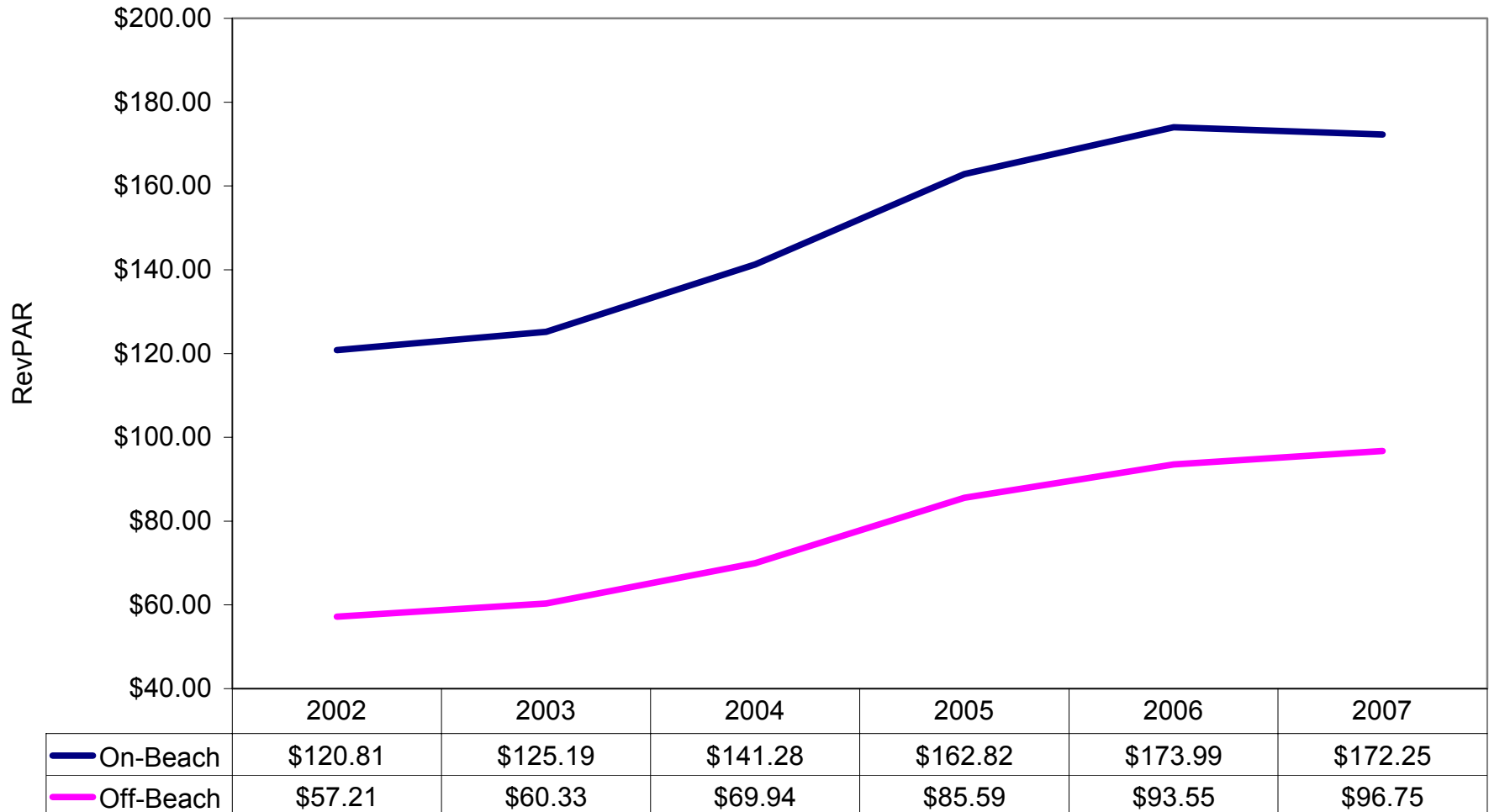
# Waikīkī Average Daily Rate: On-Beach vs. Off-Beach

*The gap between on-beach and off-beach room rates is in excess of \$100 for 2007. While off-beach ADR continued to show steady growth, on-beach room rates have started to show signs of a slower growth rate.*



# Waikīkī Revenue Per Available Room: On-Beach vs. Off-Beach

*Due to occupancy declines, RevPAR for on-beach properties dipped slightly in 2007. Waikīkī off-beach hotel RevPAR also showed slower growth in 2007 in comparison to the previous years.*



# Waikīkī Hotel Demand Penetration

## On-Beach vs. Off-Beach

*Waikīkī's on-beach demand penetration has slipped in the past three years, while off-beach demand penetration surpassed the overall Waikīkī market between 2005 and 2007 due to reintroduction of renovated product.*

	Occupancy Penetration	
	On-Beach	Off-Beach
2002	100.5%	99.5%
2003	100.5%	99.5%
2004	100.2%	99.8%
2005	98.3%	101.8%
2006	97.5%	102.7%
2007	98.4%	101.7%

# Waikīkī Hotel ADR Penetration

## On-Beach vs. Off-Beach

*Waikīkī on-beach properties generally over-penetrate the market in room rates as these properties tend to rank in the luxury and upscale segments. Off-beach properties tend to capture the midprice, economy, and budget markets.*

	ADR Penetration	
	On-Beach	Off-Beach
2002	135.0%	64.6%
2003	133.8%	65.1%
2004	132.5%	65.9%
2005	132.4%	67.2%
2006	132.2%	67.5%
2007	129.5%	70.4%

# Waikīkī Hotel RevPAR Penetration

## On-Beach vs. Off-Beach

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*Driven by higher room rates, historical RevPAR penetration for on-beach properties well exceed those for the off-beach properties.*

	RevPAR Penetration	
	On-Beach	Off-Beach
2002	135.7%	64.2%
2003	134.4%	64.8%
2004	132.8%	65.7%
2005	130.2%	68.4%
2006	128.9%	69.3%
2007	127.4%	71.6%

# Hotel Renovations and Improvements<sup>(1)</sup>: On-Beach vs. Off-Beach

*Between 2004 and 2010, on-beach properties show a much higher capital improvement budget on a per available room basis than off-beach properties. On-beach properties invest approximately \$172,184 per available room in capital improvement, while off-beach properties spend an estimated \$108,689 per room.*

	Total Estimated Renovation Budget	Total # Properties	Total # Rooms	\$ Budget/Room
On-Beach Properties	\$1,149,500,000	9	6,676	\$172,183.94
Off-Beach Properties	\$960,380,000	30	8,836	\$108,689.45
Waikīkī Total	\$2,109,880,000	39	15,512	\$136,015.99

(1) Includes hotel and condo/hotel properties. Excludes properties located outside of Waikīkī, such as The Kāhala Resort and Ala Moana Hotel.

# Visitor Satisfaction and Activity

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Beach and Water Activities



# Waikīkī Beach Activity and Satisfaction

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- Beach activity and satisfaction levels for O‘ahu visitors have generated mixed reviews in recent years. According to the DBEDT Visitor Satisfaction Survey, approximately 68.9 percent of all O‘ahu visitors participate in swimming/sunbathing/beach activities. With the exception of U.S. East visitors, the percentage of visitors with positive parks and beach satisfaction levels has generally declined in 2006 when compared to 2005.
- Beach and water activity participation has been relatively even in recent years. Visitor participation in water sports, including surfing and bodyboarding, saw a slight decline from 17.6 percent participation rate to 16.7 percent between 2005 and 2006. However, other water-related activities, such as snorkeling and scuba diving, saw a modest increase in participation rates during the same period.

# O'ahu Visitor Activity Participation - Swimming/Sunbathing/Beach

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*U.S. East and Japan visitors participating in beach and swimming activities have declined slightly, whereas U.S. West and Canadian visitor participation saw slight increases.*

	2006	2005
U.S. West	71.0%	70.9%
U.S. East	66.0%	69.2%
Japan	63.9%	68.0%
Canada	77.7%	77.2%
Total <sup>(1)</sup>	68.9%	70.3%

(1)Estimated based on DBEDT Visitor Satisfaction Survey and reported visitor arrivals by major market area.

# O‘ahu Visitor Activity Participation – Water Sports and Other Ocean Activities

*Visitor participation in surfing/boarding activities has declined slightly, while snorkeling and scuba diving saw a small increase, primarily by U.S. West visitors.*

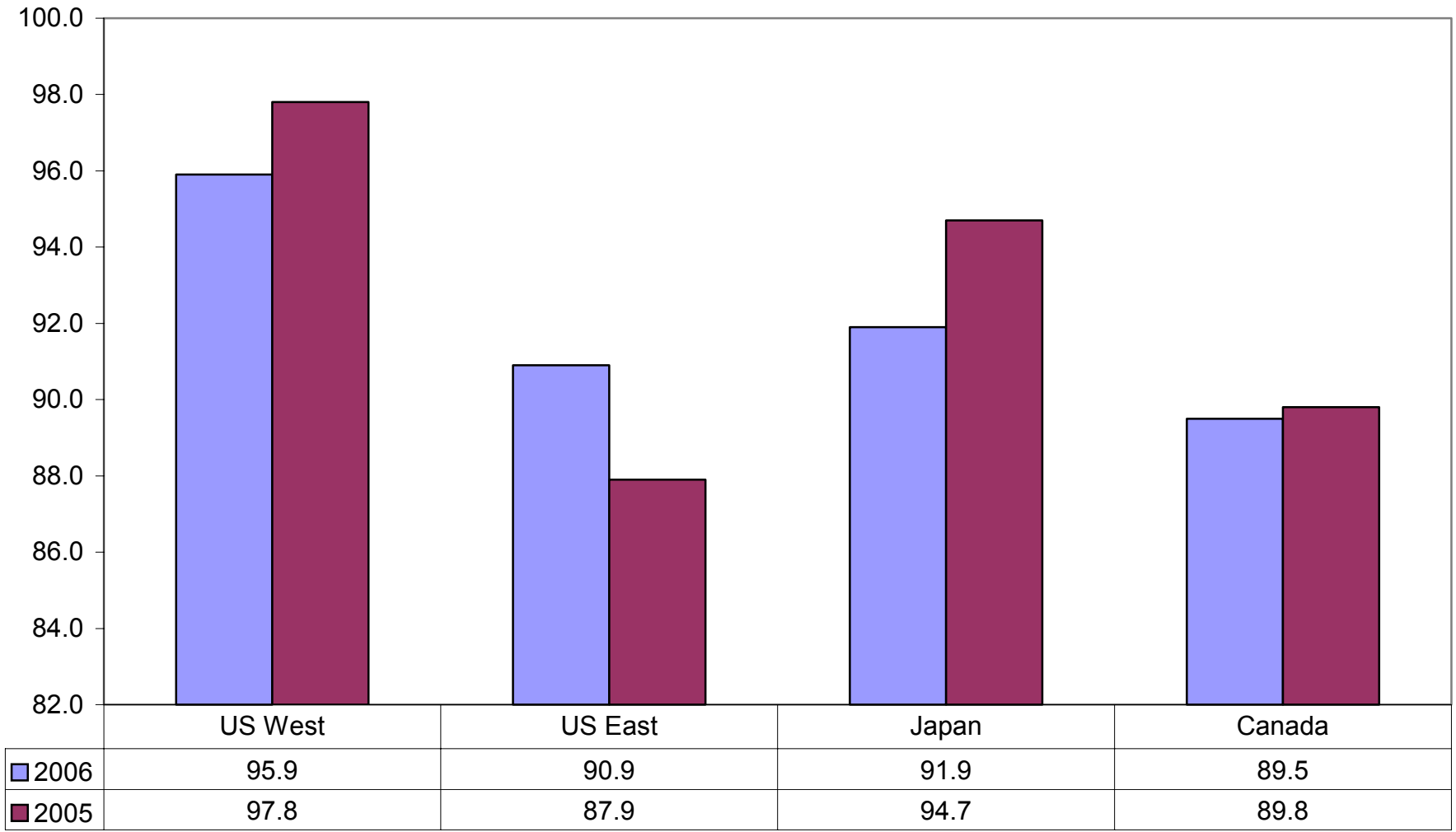
Surfing/Bodyboarding		
	2006	2005
U.S. West	20.5%	22.3%
U.S. East	14.2%	14.5%
Japan	7.0%	8.6%
Canada	20.0%	19.3%
Total <sup>(1)</sup>	16.7%	17.6%

Snorkeling/Scuba Diving		
	2006	2005
U.S. West	32.2%	28.0%
U.S. East	24.8%	24.9%
Japan	17.0%	18.0%
Canada	32.6%	30.9%
Total <sup>(1)</sup>	27.9%	25.7%

(1) Estimated based on DBEDT Visitor Satisfaction Survey and reported visitor arrivals by major market area.

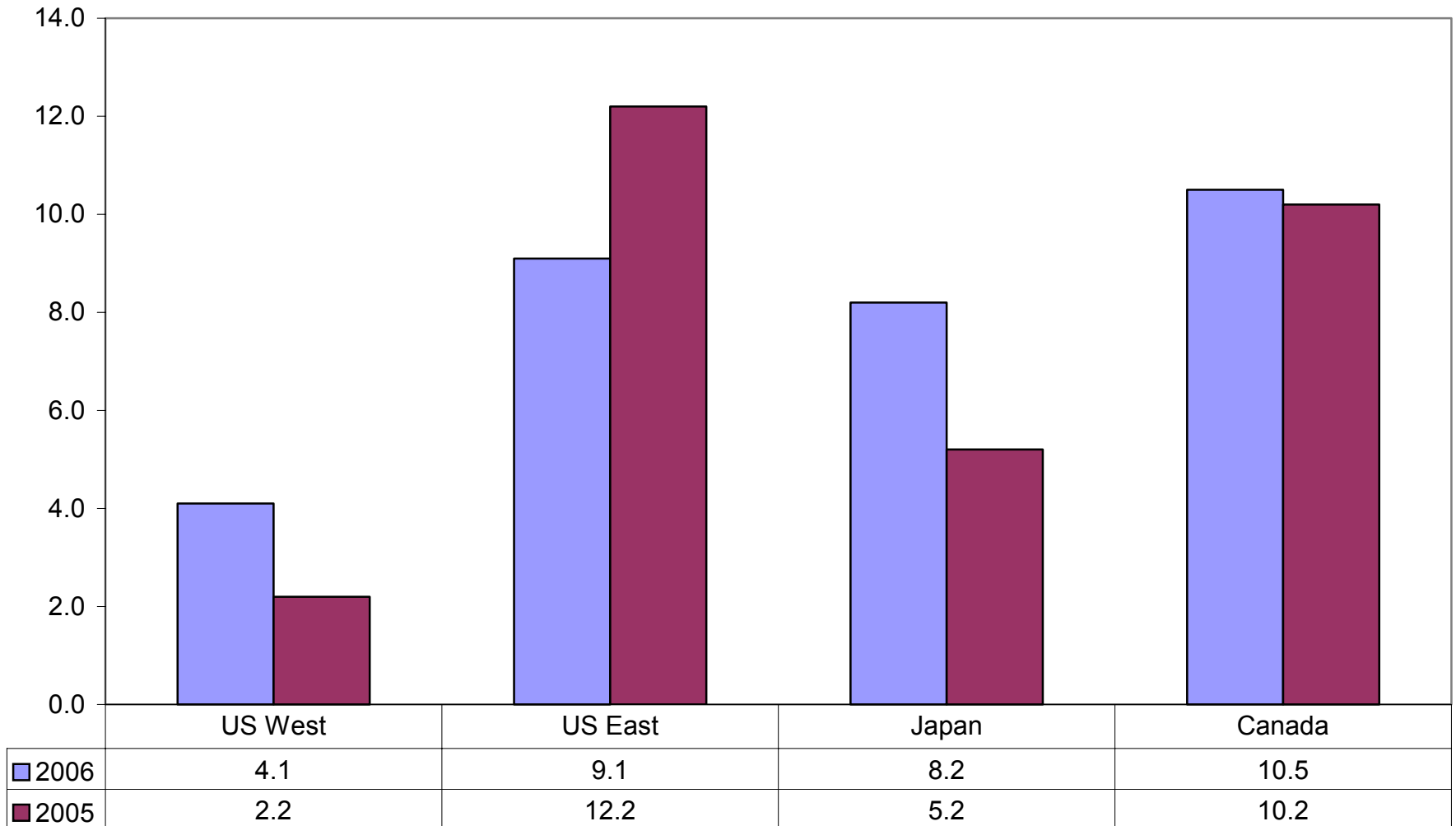
# Positive O‘ahu Parks & Beaches Satisfaction: Very Satisfied to Somewhat Satisfied

*With the exception of U.S. East visitors, positive visitor satisfaction has generally declined between 2005 and 2006 across all visitor segments.*



# Negative O'ahu Parks & Beaches Satisfaction: Somewhat Dissatisfied to Not Satisfied at All

*With the exception of U.S. East visitors, overall dissatisfaction with parks and beach activities has generally increased between 2005 and 2006.*



# Visitor Preference Analysis

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# Visitor Preference Survey Methodology

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- As part of our analysis, MTP was engaged to conduct a visitor preference survey to better understand the importance of beach availability and the impact of beach erosion on future travel behavior and decisions to stay in Waikīkī. The survey examined various aspects of the visitor experience with respect to the availability of Waikīkī Beach, including key drivers for visitors choosing to stay in or visit Waikīkī, perceived quality of beach, planned beach and water activities, and beach-related ancillary spending.
- The survey took place during the period of May 17, 2008 through July 12, 2008. The visitor preference survey sampled 428 visitors at various beach locations in Waikīkī. Visitors from Japan account for 24.4 percent of all survey respondents, while westbound visitors make up approximately 75.6 percent of the sample. U.S. visitors account for 84.8 percent of all westbound visitors, with the rest from Canada and other countries.

# Visitor Preference Survey Methodology

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- The margin of error for a random sample of 428 at the 95.0 percent level of confidence is +/-4.82 percent.
- The interview locations were spread between the Honolulu Zoo and Hilton Hawaiian Village. Approximately 80.0 percent of the interviews were conducted on the beach, while 20.0 percent of the interviews were conducted at off-beach locations.
- The survey collected the following information:
  - Decision-making factors influencing decisions to visit O‘ahu and Waikīkī (i.e. Waikīkī Beach)
  - Activities and behavior related to beach-going during their visit
  - Comparison of Waikīkī Beach with Other Beaches
  - Reaction to the potential complete erosion of Waikīkī Beach
  - Likelihood of returning to Waikīkī and likelihood of recommending Waikīkī
  - The demographic profile and travel characteristics of respondents



# Visitor Preference Survey Findings

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- According to the visitor preference survey, approximately half of the westbound visitors surveyed stayed at on-beach properties in comparison to 59.0 percent of Japan visitors that stayed at on-beach properties. Nearly all visitors stayed in Waikīkī.
- More than one-third of westbound and Japanese respondents cited beach or swimming as their primary reason for staying in Waikīkī. More than 90.0 percent of total visitors surveyed considered beach availability as very important or somewhat important.
- The top four planned activities for both westbound and Japan visitors were swimming, sunbathing, surfing, and snorkeling. Approximately 45.0 percent of westbound visitors indicated that they would spend over \$100 in beach activities and attractions. In contrast, only 8.0 percent of Japan visitors would spend more than \$100, while 72.0 percent indicated that they would not spend anything on beach activities and attractions.

# Visitor Preference Survey Findings

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- The Japan visitors have a more favorable perception of the quality of Waikīkī Beach in comparison to other beaches. Over 64.0 percent of the Japanese respondents considered the quality of Waikīkī Beach much better than other beaches, while 51.0 percent of westbound visitors provided the same favorable response.
- 88.0 percent of both westbound and Japan visitors are very likely to recommend Waikīkī Beach, with another 7.0 to 9.0 percent of all surveyed visitors responding “somewhat likely” to recommend Waikīkī Beach.

# Visitor Preference Survey Findings

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- When presented with the possibility of a complete beach erosion, an overwhelming 58.0 percent of all westbound visitors stated that they would not consider staying in Waikīkī. Westbound visitors staying at on-beach properties are less likely to return if Waikīkī Beach is no longer available due to beach erosion. In contrast, only 14.0 percent of Japanese respondents indicated that they would not consider staying in Waikīkī, with a higher percentage of visitors that would possibly consider staying in Waikīkī.
- Motivations for the westbound visitors to stay in Waikīkī even if Waikīkī Beach is completely eroded are primarily shopping, availability of restaurants, and availability of accommodations, whereas Japan visitors indicated shopping and convenient location as the primary reason for staying in Waikīkī if the beach is no longer available.

# Survey Finding:

## Percentage of Visitors Staying in Waikīkī

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*Nearly all visitors surveyed are staying in Waikīkī. Japan visitors are more likely to choose beachfront hotels. 49.0 percent of westbound visitors stayed at on-beach properties, while 59.0 percent of Japan visitors chose on-beach accommodations.*

	Westbound	Japan
Staying in Waikīkī	93.0%	99.0%
Staying outside of Waikīkī	7.0%	1.0%
Sample Size	323	105
Hotel Location:		
On the beach	49%	59%
Off the beach	51%	41%

# Survey Finding: Primary Reason for Staying in Waikiki

*While most of the respondents have chosen vacation/tourism as their primary reason for staying in Waikīkī, one-third of the respondents specifically stated beach and/or swimming as the primary motivation for choosing to stay in Waikīkī.*

	Westbound	Japan
Beach/Swimming	30.0%	33.0%
Particular Brand of Hotel	2.0%	2.0%
Shopping	1.0%	8.0%
Restaurants	1.0%	0.0%
Entertainment	2.0%	0.0%
Competitive Rates	3.0%	0.0%
Vacation/Tourism	37.0%	46.0%
Other (wedding, business, conference)	25.0%	11.0%

# Survey Finding: Importance of Beach Availability

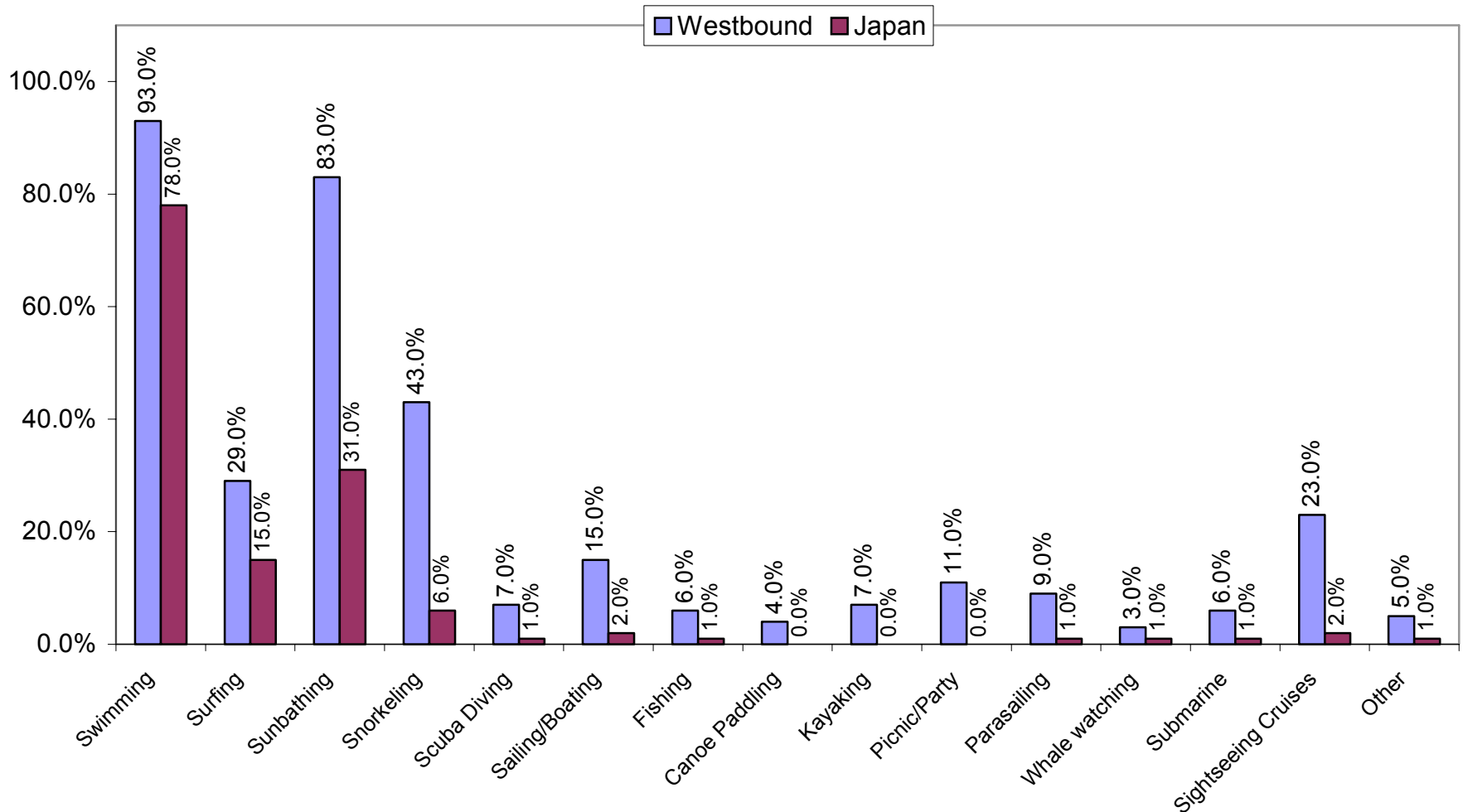
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*An overwhelming majority of westbound and Japan visitors consider beach availability to be very important or somewhat important. Less than 5.0 percent of all survey respondents provided a negative response to the importance of beach.*

	Westbound	Japan
Very Important	79.0%	76.0%
Somewhat Important	16.0%	19.0%
Not Very Important	3.0%	3.0%
Not At All Important	2.0%	1.0%
Don't Know/Refused	0.0%	1.0%

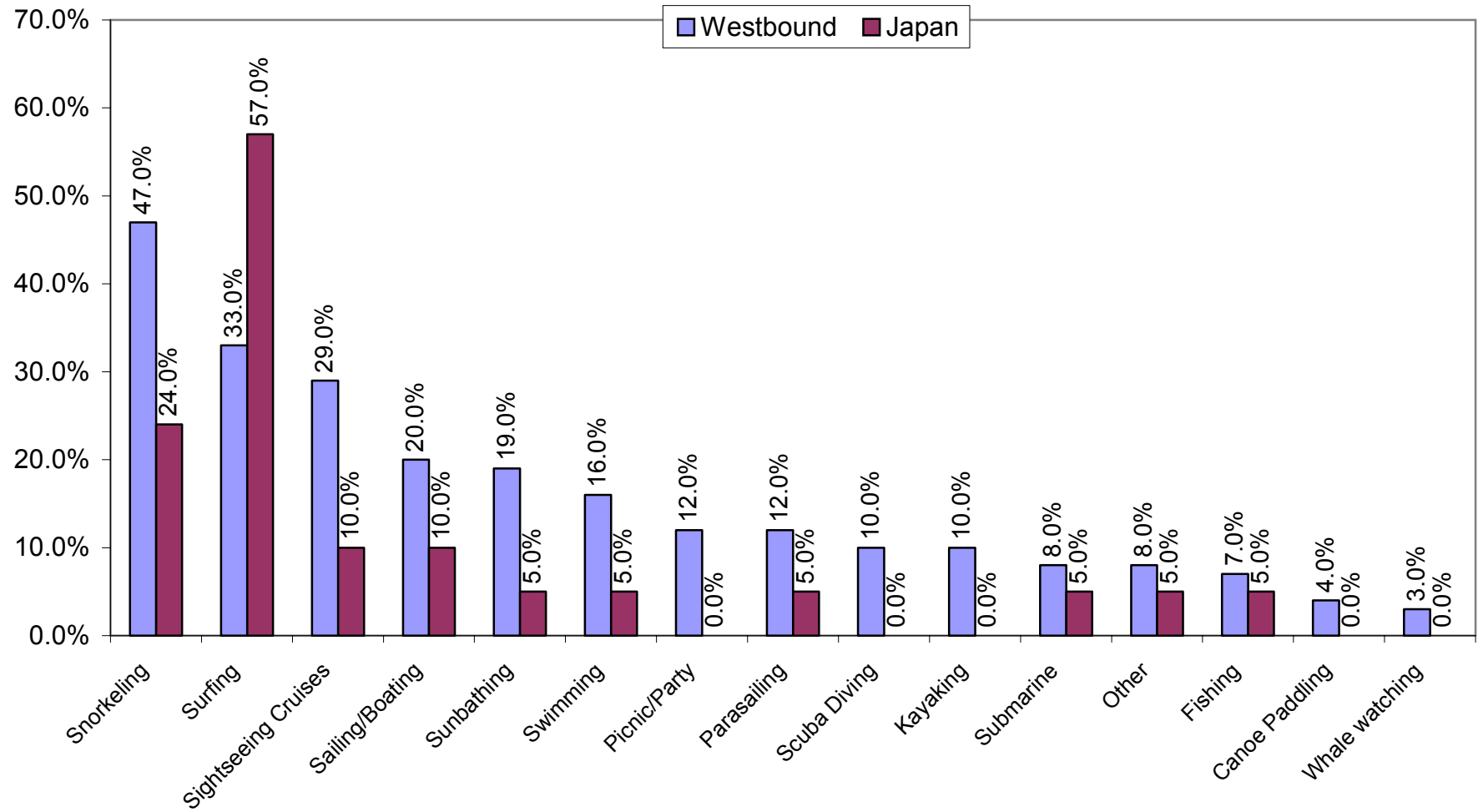
# Survey Finding: Planned Beach/Water Activities

*Swimming and sunbathing are the top two activities for both westbound and Japan visitors. Surfing and snorkeling are popular activities for both westbound and Japan visitors as well.*



# Survey Finding: Paid Beach/Water Activities

*A majority of U.S. and Japan visitors plan to pay for snorkeling, surfing, and sightseeing cruises. Other popular paid activities include sailing/boating, sunbathing, and swimming.*





# Survey Finding: Planned Beach/Water Activity Spending

*Westbound visitors are more likely to spend on beach and water activities than Japan visitors. Only 20.0 percent of the surveyed Japan visitors plan to pay for beach and water activities in comparison to 74.0 percent of westbound visitors that plan to pay for beach and water activities.*

	Westbound	Japan
Less than \$100	29.0%	12.0%
\$100 to \$200	15.0%	2.0%
\$200 to \$300	10.0%	4.0%
\$300 to \$400	4.0%	1.0%
\$400 to \$500	5.0%	0%
\$500 or more	11.0%	1.0%
Nothing/Zero	15.0%	72.0%
Don't know/refused	11.0%	8.0%

# Survey Finding: Visitor's Perception on Quality of Beach

*While the overall perception of the quality of Waikīkī Beach appears positive, Japan visitors provided a more favorable response than the ratings given by westbound visitors.*

	Westbound	Japan
Beaches in Waikīkī are much better than other beaches	51.0%	64.0%
Slightly better	24.0%	18.0%
About the same	16.0%	8.0%
Slightly worse	5.0%	1.0%
Much worse	0.0%	2.0%
Cannot compare	3.0%	3.0%
Don't know/Not sure/Refused	2.0%	5.0%

# Survey Finding: Likelihood of Recommending Waikīkī Beach

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*In accordance with the positive beach quality ratings, 88.0 percent of both westbound and Japan visitors are very likely to recommend Waikīkī Beach.*

	Westbound	Japan
Very Likely	88.0%	88.0%
Somewhat Likely	9.0%	7.0%
Not Very Likely	2.0%	2.0%
Not At All Likely	1.0%	0.0%
Don't Know	1.0%	4.0%

# Survey Finding: Consideration for Staying in Waikīkī if Beach is Eroded

*When presented with the issue of beach erosion, 58.0 percent of westbound visitors would not consider staying in Waikīkī if the beach is no longer available. Only 18.0 percent of westbound visitors would definitely consider staying in Waikīkī. In comparison, Japan visitors are more likely to stay in Waikīkī even if the beach is completely eroded.*

	Visitor Hotel Location:			Visitor Hotel Location:		
	Westbound Total	On-Beach	Off-Beach	Japan Total	On-Beach	Off-Beach
Definitely Consider Staying in Waikīkī	18.0%	16.0%	20.0%	56.0%	58.0%	58.0%
Possibly Consider Staying in Waikīkī	24.0%	23.0%	26.0%	27.0%	29.0%	18.0%
Not Consider Staying in Waikīkī	58.0%	60.0%	53.0%	14.0%	9.0%	21.0%
Don't Know	1.0%	1.0%	1.0%	3.0%	4.0%	3.0%

# Survey Finding: Reasons for Staying in Waikīkī if Waikīkī Beach is Eroded<sup>77</sup>

*Both westbound and Japan visitors consider the availability of shopping as the primary reason to stay in Waikīkī if the beach is no longer available. Other motivations for staying in Waikīkī include the availability of restaurants, convenient location, and the availability of accommodations.*

	Westbound	Japan
The Availability of Accommodations	36.0%	29.0%
The Availability of a Particular Brand of Hotel	13.0%	25.0%
Offers Competitive Rates for Accommodations	12.0%	1.0%
Availability of Shopping	46.0%	41.0%
Availability of Restaurants	36.0%	11.0%
Availability of Entertainment	25.0%	6.0%
Previous Experience	18.0%	6.0%
Convenient Location	25.0%	38.0%
Other	16.0%	13.0%

# Economic Impact of Beach Erosion



# Economic Impact of Beach Erosion

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- To assess the economic impact of a complete beach erosion, Hospitality Advisors has relied on primary and secondary research statistics for analysis, including State of Hawai‘i DBEDT visitor statistics, MTP visitor intercept survey, and Smith Travel Research (“STR”) hotel lodging and financial survey. Specifically, analysis are provided for the following areas of impact based on U.S. and Japan visitor expenditures:
  - Total hotel revenue, including room revenue, food and beverage revenue, and other hotel operations
  - Visitor Activity Spending
  - General Excise Tax
  - Transient Accommodations Tax
- In addition to examining the aforementioned revenue streams, potential impacts on O‘ahu visitor arrivals and total visitor expenditures are also analyzed.

# Analysis Approach and Assumptions

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- The potential economic impact estimates are based on the anticipated demand changes presented earlier in the MTP visitor preference survey analysis. In particular, the analysis focuses on the potential changes in visitor arrivals and expenditures due to the loss of visitors that definitely would not return to stay in Waikīkī if Waikīkī Beach is eroded or unavailable. As such, the analysis further explore the impact on hotel revenue, activity spending, and the resulting impact on transient accommodations tax (“TAT”) and general excise tax (“GET”).
- Given the different revenue characteristics between on-beach and off-beach properties, appropriate revenue ratios were applied to assess the economic impact on hotel revenues due to beach erosion. Additionally, primary research was conducted by Hospitality Advisors to further analyze on-beach activity concession rentals and pricing.



# Analysis Approach and Assumptions

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- Waikīkī's hotel inventory represents approximately 87.1 percent of total hotel supply on O'ahu. Similarly, Waikīkī's hotel demand captures an estimated 87.8 percent of total room nights sold on O'ahu according to STR market research. For the purposes of our analysis, Waikīkī's visitor demand is assumed to be 87.7 percent.
- U.S. West, U.S. East, and Japan are the top three market areas for Hawaii's visitor industry. U.S. visitors represented 91.5 percent of O'ahu westbound visitor arrivals in 2006. Japan visitors comprised 84.9 percent of O'ahu eastbound visitor arrivals. Due to budgetary constraints and limited data available, the economic impact analysis is focused primarily on the U.S. and Japan markets to provide a magnitude of impact. However, economic impacts from other visitor markets are included using MTP's westbound and Japan survey responses as proxies for other westbound and eastbound visitors, respectively.

# Analysis Approach and Assumptions

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- In effort to evaluate the potential economic impact of beach erosion on hotel revenues, it is important to establish a reasonable measure of hotel room demand. The number of room nights sold in Waikīkī is regularly monitored by STR as part of the STR Hotel Lodging Survey. The STR survey samples over 91.9 percent of total hotel rooms in Waikīkī, O‘ahu. STR’s hotel statistics are regarded as the authoritative benchmark reporting in Hawai‘i and nationwide. An alternative method to measure Waikīkī’s hotel demand level can be accomplished by using the annual visitor arrivals statistics as reported by DBEDT and applying the percentage of visitors using hotels, average length of stay in nights, and double-occupancy factor to calculate the range of hotel room demand by Waikīkī visitors. For this analysis, both the STR statistics and DBEDT calculations are used to validate the level of annual room demand in Waikīkī.

# Analysis Approach and Assumptions

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- According to STR's lodging survey, Waikīkī hotels sold approximately 6.9 million room nights in 2007 and generated nearly \$1.2 billion in room revenues.
- Using statistics reported by DBEDT, the calculated room demand for Waikīkī range between 6.4 million room nights and 7.4 million room nights, with a midpoint of 6.9 million room nights in 2007. The estimated demand calculation using DBEDT statistics matches the market demand statistics reported by STR and is considered reasonable to use in evaluating the potential economic impact on hotel revenues.

# 2007 Estimated Waikīkī Hotel Room Demand

## (Based on DBEDT Statistics)

*Based on calculations using DBEDT visitor statistics, Waikīkī hotel room demand is estimated between 6.4 million room nights and 7.4 million room nights, with a midpoint of 6.9 million room nights.*

2007 Total Waikīkī Visitors	4,034,242
X 2007 O‘ahu ALOS in Nights <sup>(1)</sup>	5.77
= 2007 Waikīkī Visitor Nights	<u>23,277,578</u>
2007 % O‘ahu Hotel Use	73.5%
2007 % O‘ahu Hotel Only Use	62.8%
Occupancy Factor (Avg # persons per room)	2.3
2007 Est. Waikīkī Hotel Room Demand (DBEDT) – High <sup>(2)</sup>	7,436,533
2007 Est. Waikīkī Hotel Room Demand (DBEDT) – Low <sup>(3)</sup>	<u>6,357,734</u>
<b>2007 Est. Waikīkī Hotel Room Demand (DBEDT) – Midpoint</b>	<b><u><u>6,897,133</u></u></b>

(1) The estimated average length of stay in nights is calculated based on average length of stay in days minus one.

(2) Based on percentage of visitors using hotels during part of their stay.

(3) Based on percentage of visitors using hotels only during their stay.

Source: State of Hawaii DBEDT, Smith Travel Research

# 2007 Estimated Waikīkī Hotel Room Revenue

## (Based on DBEDT Statistics)

*Based on the high and low range of estimated room demand, Waikīkī annual hotel room revenue is estimated between \$1.1 billion and \$1.3 billion, with a midpoint of approximately \$1.2 billion.*

	Room Demand	ADR	Room Revenue
2007 Est. Waikīkī Room Demand - High	7,436,533	x \$173.39	= \$1,289,388,367
<b>2007 Est. Waikīkī Room Demand - Mid</b>	<b>6,897,133</b>	<b>x \$173.39</b>	<b>= \$1,195,864,199</b>
2007 Est. Waikīkī Room Demand - Low	6,357,734	x \$173.39	= \$1,102,340,032

Note: Estimated room demand based on visitor arrivals, hotel use, and average length of stay as reported by DBEDT.

# 2007 Estimated Tax Revenue from Waikīkī Hotels <sup>86</sup>

## (Based on DBEDT Statistics)

*TAT impact from total room revenue generated in Waikīkī is estimated between \$79.9 million and \$93.5 million. Estimated GET generated from room revenue is estimated between \$49.6 million and \$58.0 million.*

	Room Revenue	TAT	GET
2007 Est. Waikīkī Room Demand - High	\$1,289,388,367	\$93,480,657	\$58,022,477
<b>2007 Est. Waikīkī Room Demand - Mid</b>	<b>\$1,195,864,199</b>	<b>\$86,700,154</b>	<b>\$53,813,889</b>
2007 Est. Waikīkī Room Demand - Low	\$1,102,340,032	\$79,919,652	\$49,605,301

Note: Estimated room revenue based on visitor arrivals, hotel use, and average length of stay as reported by DBEDT and Waikīkī average daily rate as reported by STR.

# 2007 Waikiki Hotel Room Demand and Revenue

## (Based on STR Statistics)

*According to STR, Waikīkī hotels sold nearly 6.9 million rooms in 2007, matching the calculated room demand estimates using DBEDT statistics. Total room revenue is reported at nearly \$1.2 billion.*

	Full Service/ On-Beach	Ltd. Service/ Off-Beach	Total Waikīkī
2007 STR Waikīkī Room Demand	3,456,368	4,335,727	6,894,440
2007 STR Waikīkī Room Revenue	\$775,904,484	\$419,492,769	\$1,195,397,253
O‘ahu Avg. % Room Revenue to Total Revenue	69.8%	95.3%	77.0%
Total Hotel Revenue	\$1,111,611,009	\$440,181,290	\$1,551,792,298

# 2007 Estimated Tax Revenue from Waikīkī Hotels<sup>88</sup>

## (Based on STR Statistics)

*Based on room revenue statistics reported by STR, total TAT and GET generated from hotel room revenue reached nearly \$156.5 million in 2007.*

	Full Service/ On-Beach	Ltd. Service/ Off-Beach	Total Waikīkī
2007 TAT Generated from Room Revenue	\$56,253,075	\$30,413,226	\$86,666,301
2007 GET Generated from Room Revenue	\$34,915,702	\$18,877,175	\$53,792,876
2007 GET Generated from Other Hotel Revenue <sup>(1)</sup>	\$15,106,794	\$930,983	\$16,037,777
2007 TAT & GET Generated From Waikīkī Hotels	\$106,275,570	\$50,221,384	\$156,496,954

(1) All operating revenue excluding hotel room revenue.



# Estimated Room Revenue Cross-Validation: DBEDT vs. STR

*A side-by-side comparison of STR's market statistics and calculated estimates using DBEDT's visitor data show nearly identical room demand and room revenue levels. The comparison further validates the overall market demand for Waikīkī.*

	DBEDT <sup>(1)</sup>	STR	% Variance
2007 Waikīkī Room Demand	6,897,133	6,894,440	0.0%
2007 Waikīkī Room Revenue	\$1,195,864,199	\$1,195,397,253	0.0%
2007 TAT from Waikīkī Room Revenue	\$86,700,155	\$86,666,301	0.0%
2007 GET from Waikīkī Room Revenue	\$53,813,889	\$53,792,876	0.0%

(1) Using midpoint estimates based on DBEDT visitor arrivals and accommodation use statistics.

# Visitor Market Share

*Based on O‘ahu’s hotel supply and demand levels, Waikīkī represents approximately 87.8 percent of the O‘ahu visitor market. U.S. visitors comprise of 57.1 percent of total arrivals, while visitors from Japan account for approximately 27.3 percent of total O‘ahu arrivals.*

	U.S.	Japan	Other Markets	Total Oahu	% Share
2007 Total O‘ahu visitors	2,623,122	1,256,158	717,050	4,596,330	100.0%
2007 Est. Waikīkī Visitors	2,302,339	1,102,542	629,361	4,034,242	87.8%
% Market Share	57.1%	27.3%	15.6%	100.0%	--

# O'ahu Visitor Arrivals: Westbound and Eastbound

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*U.S. visitors comprise of 91.5 percent of total westbound visitors, while visitors from Japan account for 84.9 percent of total eastbound visitors.*

	Westbound	%
U.S.	2,606,626	91.5%
Other	242,550	8.5%
Total	2,849,176	100.0%

	Eastbound	%
Japan	1,303,374	84.9%
Other	231,471	15.1%
Total	1,534,845	100.0%

Note: Latest data available based on 2006 DBEDT Annual Statistical Report.

# 2007 Waikīkī Visitor Expenditures

*Total visitor expenditures from Waikīkī visitors is estimated at \$5.2 billion in 2007. U.S. visitors generated approximately \$2.8 billion, while Japan visitors spent approximately \$1.5 billion.*

	US	Japan	Canada	Other	Total Waikīkī
2007 O‘ahu visitors	2,623,122	1,256,158	288,150	428,900	4,596,330
% Waikīkī Visitors	87.8%	87.8%	87.8%	87.8%	87.8%
Total Waikīkī Visitors	2,302,339	1,102,542	252,912	376,450	4,034,242
O‘ahu Average Length of Stay	7.24	5.18	8.68	7.23	6.77
2007 Waikīkī Visitor Days	16,677,799	5,715,691	2,195,189	2,723,141	27,311,821
O‘ahu PPPD Expenditure <sup>(1)</sup>	\$169.28	\$269.20	\$150.80	\$184.00	\$190.17
Waikīkī Visitor Expenditure	\$2,823,217,804	\$1,538,664,125	\$331,034,573	501,057,891	\$5,193,974,392

(1) Due to limited data available, Statewide 2007 preliminary visitor expenditure statistics for U.S., Japan, and Canada are applied to calculate Waikīkī visitor expenditure. O‘ahu 2007 per person per day expenditure is used to calculate total expenditure for other MMAs.

# Estimated Total Room Revenue Generated from U.S. and Japan Visitors

*U.S. visitors generated an estimated \$682.2 million in Waikīkī room revenue in 2007, while Japan visitors generated approximately \$326.7 million in room revenue. When combined, U.S. and Japan visitors contributed nearly \$1.2 billion in Waikīkī hotel room revenue. Hotel room expenditures accounts for nearly one-fourth of total visitor expenditures by U.S. and Japan visitors.*

	On-Beach	Off-Beach	Waikīkī Total
Room Demand	3,456,368	3,438,072	6,894,440
U.S. Market Share @ 57.1%	1,972,547	1,962,105	3,934,652
Japan Market Share @ 27.3%	944,611	939,611	1,884,222
Other Market Share @ 15.6%	539,210	536,356	1,075,566
x ADR	\$224.49	\$122.01	\$173.39
U.S. Room Revenue	\$442,808,093	\$239,404,201	\$682,212,294
Japan Room Revenue	\$212,051,490	\$114,645,641	\$326,697,131
Other Room Revenue	\$121,044,901	\$65,442,927	\$186,487,828
Total Room Revenue	\$775,904,484	\$419,492,769	\$1,195,397,253

# Historic O‘ahu Room Revenue vs. Visitor Expenditures

*O‘ahu hotel room revenue has historically been approximately 21.0 percent to 25.0 percent of total O‘ahu visitor expenditures.*

(\$ in millions)	Total O‘ahu Visitor Expenditure	Total O‘ahu Hotel Room Revenue	% Share
2002	\$4,793	\$1,022	21.3%
2003	\$4,726	\$1,050	22.2%
2004	\$5,478	\$1,176	21.5%
2005	\$5,770	\$1,323	22.9%
2006	\$5,736	\$1,405	24.5%
2007P	\$5,729	\$1,387	24.2%

# Estimated Economic Impact on Hotel Revenues

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- As previously stated, the economic impact analysis presented in this report will focus primarily on the U.S. and Japan markets. U.S. and Japan visitors occupied approximately 5.8 million Waikīkī room nights and generated approximately \$1.0 billion in Waikīkī room revenue in 2007.
- According to the MTP Visitor Preference Survey presented in the previous section, 58.0 percent of westbound respondents indicated that they definitely would not stay in Waikīkī if the beach is completely eroded. In the same manner, 14.0 percent of the Japan visitors responded that they definitely would not stay in Waikīkī if the beach is no longer available. Based on the survey response and 2007 visitor arrivals, it is estimated that annual Waikīkī room demand would decline by 2.9 million occupied nights due to Waikīkī Beach erosion. Accordingly, the potential decline in room demand would result in a loss of approximately \$503.8 million in room revenue.

# Potential Impact on Hotel Room Demand and Room Revenue Due to Beach Erosion

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*The potential impact on room demand due to beach erosion approximates 2.9 million room nights, resulting in an estimated loss of \$503.8 million in room revenues.*

	Impact on Room Demand	Impact on Room Revenue
U.S.	(2,282,098)	(\$392,569,082)
Japan	(263,791)	(\$43,160,219)
Other	(392,734)	(\$68,094,527)
Total	(2,938,623)	(\$503,823,828)



# Potential Impact on Hotel Revenue from U.S. Visitors Not Returning Due to Beach Erosion

*The potential impact on total hotel revenue from U.S. visitors is estimated at \$513.8 million.*

	Visitor Hotel Location		Waikīkī Total U.S.
	On-Beach	Off-Beach	
U.S. Room Demand	1,972,547	1,962,105	3,934,652
% U.S. Visitors Definitely Not Staying in Waikīkī Due To Beach Erosion	-60.0%	-53.0%	-58.0%
Impact on U.S. Room Demand	(1,183,528)	(1,039,916)	(2,282,098)
x ADR	\$224.49	\$122.01	
Impact on U.S. Visitor Room Revenue Due To Beach Erosion	(\$265,684,856)	(\$126,884,227)	(\$392,569,082)
O‘ahu Avg. % Room Revenue to Total Revenue <sup>(1)</sup>	69.8%	95.3%	
Impact on U.S. Visitor Hotel Revenue Due to Beach Erosion	(\$380,637,329)	(\$133,141,896)	(\$513,779,225)

(1) Room revenue as a percentage of total hotel revenue based on STR hotel financial survey.

Source: Smith Travel Research, Hospitality Advisors LLC

# Potential Impact on Hotel Revenue from Japan Visitors Not Returning Due to Beach Erosion

*The potential impact on total hotel revenue from Japan visitors is estimated at \$52.6 million.*

	Visitor Hotel Location		Waikīkī Total Japan
	On-Beach	Off-Beach	
Japan Room Demand	944,611	939,611	1,884,222
% Japan Visitors Definitely Not Staying in Waikīkī Due To Beach Erosion	-9%	-21%	-14.0%
Impact on Japan Room Demand	(85,015)	(197,318)	(263,791)
x ADR	\$224.49	\$122.01	
Impact on Japan Visitor Room Revenue Due To Beach Erosion	(\$19,084,634)	(\$24,075,585)	(\$43,160,219)
O‘ahu Avg. % Room Revenue to Total Revenue <sup>(1)</sup>	69.8%	95.3%	82.0%
Impact on Japan Visitor Hotel Revenue Due to Beach Erosion	(\$27,341,883)	(\$25,262,943)	(\$52,604,826)

(1) Room revenue as a percentage of total hotel revenue based on STR hotel financial survey.

Source: Smith Travel Research, Hospitality Advisors LLC

# Potential Impact on Hotel Revenue from Other Visitors Not Returning Due to Beach Erosion

*Inbound markets excluding Japan and U.S. are considered as Other markets for the purposes of this report. The potential impact on total hotel revenue from Other visitors is estimated at \$94.8 million.*

	Westbound	Eastbound	Waikīkī Total Other
% Visitor Arrivals <sup>(1)</sup>	51.2%	48.8%	100.0%
Other MMA Room Demand	550,353	525,214	1,075,566
% Visitors Definitely Not Staying in Waikīkī Due To Beach Erosion <sup>(2)</sup>	-58.0%	-14.0%	-36.5%
Impact on Other MMA Room Demand	(319,204)	(73,530)	(392,734)
x Overall Waikīkī ADR	\$173.39	\$173.39	\$173.39
Impact on Other MMA Visitor Room Revenue Due To Beach Erosion	(\$55,345,487)	(\$12,749,041)	(\$68,094,527)
O‘ahu Avg. % Room Revenue to Total Revenue	71.8%	71.8%	71.8%
Impact on Other MMA Visitor Hotel Revenue Due to Beach Erosion	(\$77,082,850)	(\$17,756,324)	(\$94,839,174)

(1) Other visitors represent visitors excluding U.S. and Japan visitors. Percentage Share based on 2006 DBEDT visitor arrivals by MMA.  
 (2) The MTP Westbound and Japan survey responses are applied to Westbound and Eastbound estimates, respectively.

# Estimated Economic Impact on Hotel Revenues

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- In addition to a potential \$503.8 million loss in room revenue, other hotel revenues such as food and beverage, spa, and parking, may also be affected due to declines in room demand.
- According to the 2007 STR/Hospitality Advisors Hawai'i Hotel Operating Statistics ("HOST") report, room revenue accounts for 69.8 percent of total hotel revenue for O'ahu full service hotels, which are primarily on-beach or beach front properties.
- Room revenue at O'ahu's limited service hotels, which are primarily off-beach properties, account for 95.3 percent of total hotel revenue.
- By applying the appropriate revenue ratios to Waikīkī's on-beach properties and off-beach properties, the potential economic impact on total hotel revenues is estimated at \$661.2 million.

# Estimated Potential Impact on Hotel Revenue

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*Total room revenue loss not staying in Waikīkī due to beach erosion is estimated at \$503.8 million. When considering peripheral hotel spending, such as food and beverage, total hotel revenue impact is estimated at \$661.2 million.*

	Total Room Revenue Impact	Total Hotel Revenue Impact
U.S.	(\$392,569,082)	(\$513,779,225)
Japan	(\$43,160,219)	(\$52,604,826)
Other	(\$68,094,527)	(\$94,839,174)
Total	(\$503,823,828)	(\$661,223,225)

# Estimated Economic Impact on Hotel Revenues

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- Based on the estimated impact on hotel revenues, the potential impact on TAT is approximately \$36.5 million.
- Furthermore, the impact on GET due to declines in hotel room revenues is estimated at \$29.8 million.
- We note that although visitors may not choose Waikīkī as a destination due to beach erosion, they may choose to return to other resort regions in Hawai‘i to the extent room inventory is available.
- Alternatively, the potential declines in room demand may be mitigated by expanding the visitor markets that would definitely return to Waikīkī regardless of beach condition and availability or recapture room demand through other marketing initiatives.
- Due to the various unknown factors and possibilities, the economic impact analysis presented in this report is not meant to be definitive; rather, it is intended to provide an overview of the potential economic impact on Waikīkī’s visitor industry.

# Potential Hotel Tax Impact: TAT and GET

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*Based on the estimated hotel room and total revenue loss, impact on TAT is estimated to be \$36.5 million, while impact on GET approximates \$29.8 million.*

## **Transient Accommodations Tax:**

Potential Room Revenue Loss:	(\$503,823,828)
x Transient Accommodations Tax ("TAT") @	7.25%
<hr/>	
= Potential TAT Impact from Hotel Revenue:	(\$36,527,228)
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## **General Excise Tax:**

Potential Hotel Revenue Loss:	(\$661,223,225)
x General Excise Tax ("GET") @	4.50%
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= Potential GET Impact from Hotel Revenue:	(\$29,755,045)
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# Potential Impact on Beach Concession Activity Spending

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- Beach and water activities are important revenue generators in Waikīkī. Activity lessons and equipment rental kiosks are located throughout Waikīkī.
- According to our primary research, there are approximately five beach concession activity companies located directly on Waikīkī Beach between the Honolulu Zoo and Outrigger Reef Hotel.
- For the purpose of this analysis, we are limiting our estimates to activity gear and equipment rentals that are available at on-beach concession stands.
- Such expenditures include surfboard rentals, umbrella and chair rentals, canoe rentals, and snorkel gear rentals. Surf lessons, on-beach photo sales, and other on-beach activity sales are excluded in our analysis due to insufficient data.



# Potential Impact on Beach Concession Activity Spending

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- Despite the assumption of a complete erosion of Waikīkī, which may eliminate all beach and water activity revenues in Waikīkī, we are limiting our analysis to only those visitors that are not returning to stay in Waikīkī to be conservative.
- Nearly 70.0 percent of all O‘ahu visitors participate in swimming, sunbathing, and/or beach activities, according to the DBEDT visitor satisfaction survey,. Furthermore, the MTP visitor preference study shows that 74.0 percent of westbound visitors have plans to spend on beach activities with another 20.0 percent Japanese visitors also planning to spend money on beach activities. In order to determine the estimated impact on activity spending, we have conducted an on-beach activity concession survey to determine average activity pricing and are relying on the findings from the MTP survey to determine the percentage of visitors paying for participation in surfing, sunbathing, canoe paddling, and snorkeling.

# Potential Impact on Beach Concession Activity Spending

- For the primary research on activity pricing, Hospitality Advisors surveyed individual activity pricing for all on-beach concession stands, including five activity concession companies with a total of eight kiosks located on Waikīkī Beach.
- The rate of paid activity participation for surfing, sunbathing, canoe paddling, and snorkeling is determined by applying the percentage of visitor participation for a specific activity to the percentage of visitors that plan to pay for such activity. The total economic impact of beach erosion on the activity is then calculated by applying the paid participation rate to the number of visitors not returning to Waikīkī due to beach erosion and the average activity price to determine revenue loss.

$\% \text{ Visitors Participating in Activity} \times \% \text{ Visitors Paying for Activity} = \text{Paid Participation Rate}$

$\text{Paid Participation Rate} \times \text{Visitors Definitely Not Returning to Waikīkī} \times \text{Price} = \text{Estimated \$ Impact Due to Beach Erosion}$

# U.S. and Japan Visitor Paid Beach Concession Activity Participation

*The percentage of paid visitor activities are based on the findings from the MTP visitor preference survey. A higher share of U.S. visitors are planning to pay for beach and water activities, such as surfing, sunbathing, than Japan visitors.*

% Paid Activity Participation <sup>(1)</sup>	U.S.	Japan
Surfing	9.6%	8.6%
Sunbathing	15.8%	1.6%
Canoe Paddling	0.2%	0%
Snorkeling	20.2%	1.4%

(1) Paid activity participation level is based on MTP's visitor preference survey by applying the activity participation level to the planned paid activities.

# Potential Visitor Arrivals Impact Due to Beach Erosion

*Based on findings previously presented, approximately 1.7 million U.S. and Japan visitors will not return to Waikīkī if the beach is eroded or unavailable.*

	U.S.	Japan	Other	Total
# Waikiki Visitor Arrivals	2,302,339	1,102,542	629,362	4,034,242
<b>x</b> % Not Returning Due to Beach Erosion	58.0%	14.0%	36.5%	
<b>=</b> # of Potential Visitors Not Returning	1,335,357	154,356	229,806	1,719,519

# Potential Impact on Beach Concession Activity Spending from Visitors Not Returning Due to Beach Erosion

*By applying the number of potential visitors not returning to Waikīkī against the paid activity participation for surfing, sunbathing, canoe padding, and snorkeling, total economic impact on beach and water activity spending is estimated at \$8.5 million.*

	U.S. Spending Impact	Japan Spending Impact	Other Spending Impact	Total Spending Impact
Surfing @ \$10/Board Rental	(\$1,277,936)	(\$131,974)	(\$229,241)	(\$1,639,152)
Sunbathing @ \$10/Umbrella & Chair Rental	(\$2,105,857)	(\$23,925)	(\$219,956)	(\$2,349,739)
Canoe Paddling @ \$15/Rental	(\$32,049)	\$0	(\$2,522)	(\$34,570)
Snorkeling @ \$15/Gear Rental	(\$4,048,134)	(\$33,341)	(\$422,914)	(\$4,504,389)
<b>Total Impact on Beach/Water Activity Spending:</b>	<b>(\$7,463,976)</b>	<b>(\$189,240)</b>	<b>(\$874,633)</b>	<b>(\$8,527,850)</b>

Note: Activity pricing based on on-beach concession pricing survey conducted by Hospitality Advisors.

# Potential Impact on Beach Concession Activity Spending Due to Beach Erosion

*Assuming Waikīkī Beach is completely eroded with no beach activities available, the estimated impact on beach concession activity spending is \$16.6 million.*

	U.S. Spending Impact	Japan Spending Impact	Other Spending Impact	Total Spending Impact
Surfing @ \$10/Board Rental	(\$2,203,338)	(\$942,673)	(\$627,814)	(\$3,773,826)
Sunbathing @ \$10/Umbrella & Chair Rental	(\$3,630,789)	(\$170,894)	(\$602,386)	(\$4,404,068)
Canoe Paddling @ \$15/Rental	(\$55,256)	\$0	(\$6,906)	(\$62,162)
Snorkeling @ \$15/Gear Rental	(\$6,979,541)	(\$238,149)	(\$1,158,219)	(\$8,375,908)
<b>Total Impact on Beach/Water Activity Spending:</b>	<b>(\$12,868,924)</b>	<b>(\$1,351,716)</b>	<b>(\$2,395,325)</b>	<b>(\$16,615,965)</b>

Note: Activity pricing based on on-beach concession pricing survey conducted by Hospitality Advisors.

# Total O‘ahu Entertainment & Recreation Spending

*The estimated economic impact on beach activity spending represents only 1.7 percent of total O‘ahu entertainment and recreation visitor expenditures.*

	U.S.	Japan	Other	Total
O‘ahu Average Daily Census	52,059	17,841	15,411	85,312
x 365 Days	365	365	365	365
2007 Visitor Days	19,001,503	6,512,054	5,625,185	31,138,742
PPPD Entertainment & Recreation Expenditure <sup>(1)</sup>	\$16.07	\$16.07	\$16.07	\$16.07
Total Entertainment & Recreation PPPD Expenditure	\$305,354,153	\$104,648,708	\$90,396,720	\$500,399,581

Estimated \$ Impact of Beach Activity Revenue Due to Beach Erosion: (\$8,527,850)

% Share of Total Entertainment & Recreation Revenue: 1.7%

(1)Based on DBEDT 2007 O‘ahu per person per day visitor expenditure statistics.

# Potential Impact on Beach Activity Spending

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- Based on our analysis, the estimated potential revenue impact on activity spending is \$8.5 million. Potential impact on GET due to activity spending approximate \$383,753.

Potential Activity Revenue Loss:	(\$8,527,850)
X General Excise Tax (“GET”) @	4.50%
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= Potential GET Impact from Activity Revenue:	(\$383,753)
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# Potential Impact on General Excise Tax

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*Combined impact on GET from potential hotel and activity revenue loss total approximately \$30.1 million.*

Potential GET Impact from Hotel Revenue:	(\$29,755,045)
Potential GET Impact from Activity Revenue:	<u>(\$383,753)</u>
Potential General Excise Tax Impact:	<u><u>(\$30,138,798)</u></u>

# Summary of Potential Hotel, Activity, and Tax Revenue Impact Due to Beach Erosion

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- As previously stated, the analyses presented in this report are primarily focused on hotel and activity revenues. However, a decline in visitor arrivals to Waikīkī or changes in visitor behavior may also impact other expenditure items, such as retail, tours, transportation, and entertainment. When applying the average daily expenditure per person per day (“PPPD”) for retail, food and beverage, transportation, and entertainment and recreation to the average number of visitors in Waikīkī per day, it is estimated that nearly \$2.0 billion in overall visitor expenditures could be lost per year due to a complete erosion of Waikīkī Beach.
- It is noted that the STR average daily room rate reflects purely room rates whereas DBEDT’s PPPD lodging expenditures include GET and TAT. For the purposes of this analysis, STR’s Waikīkī room rates are used in lieu of the DBEDT lodging data. TAT and GET tax impacts are shown separately in this report.

# O‘ahu Visitor Expenditures PPPD

*Average per person per day spending for O‘ahu visitors total approximately \$185.91 in 2007.  
Food and beverage and shopping account for nearly 40.0 percent of total daily spending.*

Category	2006		2007	
	PPPD \$	% Share	PPPD \$	% Share
Food and beverage	\$36.77	20.3%	\$32.64	17.6%
Entertainment & Recreation	\$17.05	9.4%	\$16.07	8.6%
Transportation	\$18.86	10.4%	\$16.54	8.9%
Shopping/Retail	\$29.63	16.4%	\$40.11	21.6%
Grand Total PPPD <sup>(1)</sup>	\$181.03		\$185.91	

(1) O‘ahu per person per day (“PPPD”) expenditure.

# Estimated Impact on Daily Visitor Census

*Based on the MTP survey, it is estimated that 38,319 daily visitors will not return to Waikīkī if the beach is completely eroded.*

	U.S.	Japan	Other	Total
2007 Average Daily Census <sup>(1)</sup>	52,059	17,841	15,411	85,312
% Visitors Definitely Not Stay in Waikīkī Due to Beach Erosion	-58.0%	-14.0%	-36.5%	-44.9%
Estimated Loss in Visitors Per Day:	(30,194)	(2,498)	(5,627)	(38,319)

(1) Preliminary 2007 data as reported by State of Hawai‘i DBEDT.

# Estimated Economic Impact Allocation by Expenditure Category

*The total potential economic impact including lodging could reach \$2.0 billion.*

Category	2007 PPPD \$		Estimated Loss of Visitors Per Day		# Days	=	\$ Impact Allocation
Food and beverage	\$32.64	x	(\$38,319)	x	365	=	(\$456,514,303)
Entertainment & Recreation	\$16.07	x	(\$38,319)	x	365	=	(\$224,790,053)
Transportation	\$16.54	x	(\$38,319)	x	365	=	(\$231,278,542)
Shopping	\$40.11	x	(\$38,319)	x	365	=	(\$560,973,160)
Total Expenditure Excluding Lodging:							(\$1,473,556,058)
Room Revenue:							(\$503,823,828)
Total Potential Economic Impact:							<u>(\$1,977,379,886)</u>

# Other Potential Impacts Due to Beach Erosion

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- In addition to potential direct impact on visitor expenditures, the estimated decline in room demand due to beach erosion could also result in a hotel industry job loss of 6,352 jobs per year based on the number of accommodation industry jobs available per occupied room.
- It is noted that the estimates provided in this study primarily reflect the potential demand and behavioral changes from westbound and Japan markets based on the MTP survey responses. We understand that the estimated impact may be mitigated through a variety of other factors such as adjusting sales and marketing strategies, improving Waikīkī's tourism products, or repositioning of beach accommodations. We again emphasize that this analysis is not meant to be definitive, but rather to provide an overview of the potential economic impact based on current demand levels.

# Average Number of Jobs Per Occupied Room

*According to the statistics provided by the Hawai'i Department of Labor and Industrial Relations, there are approximately 16,350 accommodation industry jobs in 2007. Based on daily hotel demand levels, the average number of jobs needed per occupied room is 0.79 jobs.*

	# Accommodation Industry Jobs	Annual Waikiki Room Demand	Avg. Daily Room Demand	# Jobs Per Occupied Room
2002	15,050	6,573,387	18,009	0.84
2003	15,200	6,654,911	18,233	0.83
2004	15,450	7,200,139	19,673	0.79
2005	15,900	7,647,239	20,951	0.76
2006	16,100	7,296,776	19,991	0.65
2007	16,350	6,894,440	18,889	0.87
Six-Year Average # of Jobs Per Occupied Room:				0.79

# Potential Impact on Accommodation Industry Workforce

*If Waikīkī room demand declined due to beach erosion, an estimated 6,352 jobs could be lost based on those U.S. and Japan visitors not returning to stay in Waikīkī.*

	U.S.	Japan	Other	Total
O‘ahu Visitor Arrivals	2,302,339	1,102,542	629,362	4,034,242
% Visitor Market Share	57.1%	27.3%	15.6%	100.0%
Average Daily Waikīkī Room Demand	10,780	5,162	2,947	18,889
% Visitors Not Returning to Waikīkī Due to Beach Erosion	58.0%	14.0%	36.5%	
Potential Impact on Daily Room Demand Due To Beach Erosion	6,252	723	1,076	8,051
Average # Jobs/Occupied Room	0.79	0.79	0.79	0.79
Potential Annual Job Loss Due to Beach Erosion	4,933	570	849	6,352

Source: State of Hawai‘i DBEDT, Hawai‘i Department of Labor and Industrial Relations, Smith Travel Research



# Summary of Estimated Visitor Expenditure by Category

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*The potential economic impact due to a complete erosion of Waikīkī Beach is estimated at \$2.0 billion.*

<b>Total Estimated Impact on Total Waikīkī Visitor Expenditures:</b>	(\$1,977,379,886)
Including:	
Estimated Hotel Room Expenditure:	(\$503,823,828)
Estimated Retail Expenditure:	(\$560,973,160)
Estimated Entertainment & Recreation:	(\$224,790,053)
Estimated F&B Expenditure:	(\$456,514,303)
Estimated Transportation Expenditure:	(\$231,278,542)
<b>Estimated Job Loss:</b>	(6,352)

# Summary of Estimated Tax Impact

*Total potential tax impact is estimated at \$125.5 million.*

	\$ Revenue Impact	Tax Rate	\$ Tax Impact
Estimated TAT Impact:	(\$503,823,828)	7.25%	(\$36,527,228)
Estimated GET Impact:	(\$1,977,379,886)	4.50%	(\$88,982,095)
Total Tax Impact:			(\$125,509,322)

# Estimated Impact from Hotel Expenditures

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*Total potential impact from hotel expenditures is estimated at \$727.5 million.*

Potential Hotel Revenue Loss:	(\$661,223,225)
Estimated TAT Impact:	(\$36,527,228)
Estimated GET Impact:	(\$29,755,045)
Estimated Total Hotel Impact:	<u>(\$727,505,497)</u>