

Value of Hawaii Hotel and Resort Open Area

Gary R. Vieth, Linda J. Cox, and Frank Eastwood

Department of Natural Resources and Environmental Management

Hawaii residents and visitors enjoy the islands' tropical landscapes. Policies to provide more open area, especially in Waikiki, have been enacted but have had little effect. In 1976, for example, the Waikiki Special Design District (WSDD) called for "landscaped open spaces to ... contribute to a lush tropical setting." But, the WSDD policies had little impact because much of the open space was quickly developed before they took effect.

Open areas can provide value in two ways. An *existence value* results when hotel guests enjoy looking at an open, landscaped area. A *use value* results when the hotel guest actually enters the open area to enjoy it. Guests who value open space in either or both of these ways should be willing to pay more for a room in a hotel with more of it.

Hotel managers are expected to charge as much as possible for a room given the characteristics of the hotel and the room. If hotel guests prefer open space, then hotels with more open space should be charging more per room. The relationship between room rate and open space will indicate the type of value guests get from the open space. A relationship between room rates and the open area per room implies that the hotel guests have a use value that depends on the amount of open area and the number of people using it. Room rates increasing as total open area increases indicates an existence value based on a general feeling of openness.

A decision by a hotel to provide or not provide open areas depends on the costs and benefits to that hotel. The first step in a hotel's decision to provide open areas is to estimate the costs of providing the desired open areas. These were reported in CTAHR publication RM-8, *Providing open areas: the costs to hotels*, October 2000. In the next step, revenues that could result from having the open area are determined, and these estimates

are presented here. A third publication will bring together the costs and benefits to determine the optimal level of a hotel's investment in open area.

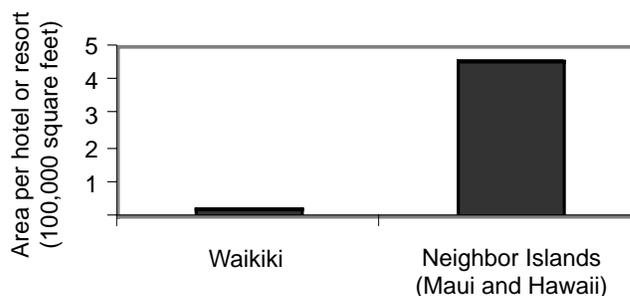
The data used

Data were collected on hotel and room characteristics and on room rates for 39 hotels in Waikiki and, on the Neighbor Islands, for 16 hotels on Maui and 11 on Hawaii. No difference in the characteristics and room rates between the Hawaii and Maui hotels were found, but differences between Waikiki and Neighbor Island hotels were found. Therefore, the data was divided into two groups, Waikiki and Neighbor Island, for the rest of the analyses. Hotels in Waikiki have an average of 17,289 square feet of open area, while those on the Neighbor Islands have an average of 455,853 square feet of open area. The difference in open area between Waikiki and the Neighbor Islands is shown in Figure 1.

Estimated value of open area

Visitors make two decisions when choosing a hotel. First they choose a geographical location, then they select a specific hotel within that location. Both of these choices can be affected by the characteristics of the hotel room.

Figure 1. Hotel and resort open area.



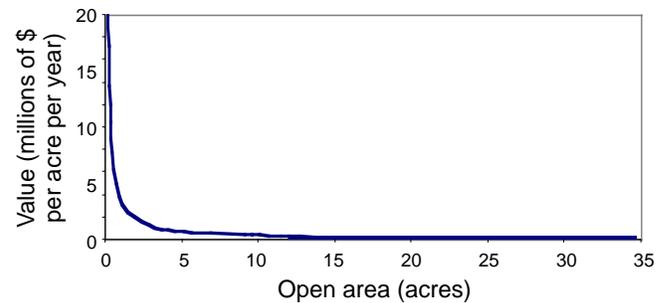
Price models that determine the relation between room rate and hotel and room characteristics were used to estimate the actual value of hotel open area. The price models are equations that measure the differences in hotel room prices that can be explained by room characteristics. Open area is the characteristic of interest here, and thus the model controls for other factors such as service or employees per room, swimming pool size and quality, spa facilities, and proximity to the ocean. The price models explain 54 and 69 percent of the variation in Waikiki and Neighbor Island hotel room rates, respectively.

The study found that hotel guests value the existence of the open areas. No use value was found in the data. Thus, we refer to open area value as the general feeling of openness that the existence of open areas gives the hotel or resort. The only hotel room factor that seems to be important to Waikiki hotel guests is the distance from the ocean. How far a hotel is from a publicly provided open space, such as a park, may effect the results, but it was not included in this study. The factors that visitors consider when they choose to visit Waikiki need further study. The large variety of retail stores, restaurants, shows, and clubs may influence visitors' decisions to stay in Waikiki. But, these factors are the same for all hotels in Waikiki.

Visitors going to the Neighbor Islands value open area and are willing to pay more for rooms in hotels and resorts with more open area. The relationship between open area and room rate for Neighbor Islands is shown in Figure 2. The value, measured as added revenue, is great at low levels of open area and small at high levels of open area.

To understand what this means to a Neighbor Island hotel, let's assume a 70 percent occupancy rate and an average hotel size of 452 rooms. At the open area average, 455,850 square feet (10.46 acres), the added revenue per year is \$7.78 per square foot or \$338,947 per acre. At the low end, 7900 square feet (0.1814 acre), the annual added revenue is \$448.99 per square foot or

Figure 2. The value to hotels of open area.



over \$19 million per acre. At the top end, 1,455,000 square feet (33.17 acres), an increase in open area will increase yearly revenues by \$2.45 per square foot or \$106,927 per acre.

Discussion

Neighbor Island hotels can increase room rates and revenues by adding more open area. However, this study considered only the quantity and not the quality of open area. The affect of open space quality needs to be considered in future studies. The reason visitors to the Neighbor Islands are willing to pay a premium for a room in a hotel with a large amount of open area is not clear. Large open areas provide a geographic barrier to other development, whether it is residential, other hotel, or commercial development. This study suggests that the value to hotels is in the general feeling of openness, rather than physical use of open area. The number of employees per room (representing service) and the size and quality of the swimming pool are other factors that increase a visitor's willingness to pay more for a room.

A more complete presentation of this research is being prepared for publication in a professional journal. Also, analysis of the optimal amount of open space can be done by combining benefit estimates given here with cost figures reported in CTAHR publication RM-8. This analysis will be reported in a subsequent publication on the topic of hotel and resort open area.