

## **Environmentally Responsible Venues: Efficient Practices of Large Multi-Use Facilities**

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### **ABSTRACT**

*The concept of environmental responsibility in the hospitality industry is an area which has been the central focus of a plethora of researchers. During the past decade, studies have examined eco-sustainability issues, eco-tourism, green certification, organic menu items, and implementing an environmental preservation plan. An under evaluated aspect of the hospitality industry pertains to eco-sustainable practices of large multi-use facilities, specifically arenas which typically play host to professional sports in the United States. Sports arenas are a booming segment of the hospitality industry, and often become destinations within cities. The massive influx of spectators at these venues, during both sporting activities and events, such as large concerts, creates the propensity of the property to consume significant amounts of a destination's natural resources. The purpose of this study is to examine current information available on professional sports stadiums, and compile a comprehensive report on environmentally sustainable practices associated with continuous daily operations of these facilities.*

**Keywords:** *Sports Arenas, Convention Centers, Environmental Protection, Eco-Sustainability*

### **INTRODUCTION**

The concept of environmental responsibility in the hospitality industry is an area which has been the central focus of a plethora of researchers. During the past decade, studies have examined eco-sustainability issues, eco-tourism, green certification, organic menu items, and implementing an environmental preservation plan as part of a corporate responsibility strategy (Carroll, 1999; Eraqi, 2007; Font & Harris, 2004; Jones, 2002; Pojasek, 2003). An under evaluated aspect of the hospitality industry pertains to eco-sustainable practices of large multi-use facilities, specifically arenas which typically play host to professional sports in the United States. An economic impact study conducted through the Los Angeles Controllers office determined the Staples Center, home of the Los Angeles Lakers and Clippers NBA teams, earns over \$3.8 million dollars for the city annually (Baade, 2003). An additional economic impact study determined the HP Pavilion in San Jose, California, provides the city budget with over \$5 million directly contributed to the city, with approximately \$3 million coming directly from events held at the venue. Thus far, the arena has generated \$1.7 billion for the municipality since its inception 15 years ago, while economic benefits to businesses from activities at the venue has

averaged slightly above \$92 million per year (Marketwire, 2009; San Jose Office of Economic Development, 2009). The monetary benefit realized by host communities highlights the importance of these arenas to local economies.

Sports arenas are a booming segment of the hospitality industry. Since “1990, 260 sports, arts, convention, and entertainment facilities” have been constructed in the U.S. alone “at a total cost of over \$21 billion” (Horrow & Swatek, 2010, p. 101). A recessed global economy has not significantly slowed stadium construction, as estimates predict over \$13 billion will be spent on facility construction and renovation between 2007 and 2010 (Horrow & Swatek, 2010). Sizeable sports venues, while primarily constructed to host professional sports teams, serve a dual purpose in that they are often constructed with the secondary intention of attracting tourists to events held within their confines (Gratton, Shibli, & Coleman, 2005). The massive influx of spectators at these venues, during both sporting activities and events, such as large concerts, creates the propensity of the property to consume significant amounts of a destination’s natural resources. While little data exists regarding resources consumed by domestic arenas, foreign studies provide a glimpse into the environmental liability created by these facilities, especially trash production. Analysis of the 2006 World Cup concluded each match would generate between ten and twenty thousand pounds of waste (McCrory, 2006). While this amount of waste may not seem significant on the surface, it is important to note that each World Cup tournament consists of 64 games. Therefore, even utilizing the lesser prediction for waste produced, it can be calculated that as a whole, the event produces at least 640 tons of trash solely from the matches.

Convention center statistics serve as a fair comparison to sports event facilities due to their commonalities in hosting numerous events with several thousand attendees. Available data on convention centers provides insight into resource consumption patterns. For example, the Colorado Convention Center, located in Denver, produced nearly 1,200 tons of waste in 2008 (Denver, 2009). Single events at sizeable convention centers generate up to 16 tons of waste for events which last only a few days (Metro Toronto Convention Center, 2007). On an annual basis the amount of solid waste generated may approach closer to 4 million pounds (San Diego Convention Center, 2008). If garbage is not sorted for recycling it is often sent to a landfill where the propensity for pollution into the local eco-system occurs (Slack, Gronow, Hall, & Voulvoulis, 2007). Solid waste emission is only one variable in the event industry, as estimates predict the recently renovated Phoenix Convention Center “will consume more than three million kilowatt hours of electricity, while attendants will travel more than 41 million air miles and nearly 2.3 million road miles” (GreenerBuildings, 2009).

## **Purpose**

The purpose of this study is to examine current information available on professional sports stadiums, and compile a comprehensive report on environmentally sustainable practices associated with continuous daily operations of these facilities. Consumers have shown preference for environmentally responsible products and services, and practices implemented at sports venues may demonstrate an increase in ticket sales based upon eco-sustainable measures. Each venue is unique, as some have been around for over 50 years, yet renovations have allowed for the utilization of eco-efficient improvements. Other arenas have been constructed recently, giving them the opportunity to seize upon the latest resources available in green construction.

Such green construction practices include using recycled steel and concrete during construction, installing eco-efficient water fixtures, and utilizing energy conserving lighting (Major League Baseball, 2010; Mosier, 2008; New Meadowlands Stadium; 2010) Facilities such as the Toyota Center in Houston, Texas, have instituted recycling facilities onsite, affording members of the community the opportunity to partake in such programs at no cost (Houston Toyota Center, 2010). Through research of the sustainability initiatives enacted by these venues, this study will serve as a basis for event facilities seeking to improve upon, or institute effective environmentally friendly actions for their venue.

Data for this study will be analyzed utilizing qualitative comprehension techniques coupled with meta-analysis. Through the examination of previous studies, supplemented with readily available information, parameters will be established to measure both continuous and discrete variables. Qualitative analysis will be performed through the comparison of common environmental preservation practices, their indicated results, and their expected outcomes if utilized in future construction and/or renovation projects at sports arenas. Meta-analysis will allow for a comparative basis regarding environmental preservation practices, helping to determine which will generate the greatest positive impact.

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