

Final Project, 565

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Picnic in the Park: A Demographic Case Study of Brittingham Park

Abstract

This case study examines the demographic composition, use patterns and perception of Brittingham Park patrons. In seeking to answer the research question *who uses Brittingham Park and why*, we used both quantitative and qualitative methods. We composed and administered a survey designed to measure park user characteristics such as age, gender, race and income, perception of the park and what park amenities are most important to users. Furthermore, we made analytical observations about park use and mapped income census data for the neighborhoods surrounding the park. This helped us to determine if the regions around Brittingham Park reflect the demographic of park users. We distributed surveys to people in the park, but the Monona Bay Neighborhood Association and members of the Camp Randall Rowing Club took the majority of the surveys through an online survey, which resulted in an imbalanced data set. After using quantitative statistical analysis to identify patterns within our data, we are forced to conclude that very little can be said about Brittingham Park user demographic, patterns of use or perceptions about the park, based on the data we collected. Although we did not discover anything statistically significant, this is an important topic and given the time and the resources, a more in-depth study of this subject could produce different, and more meaningful results.

Introduction

As land becomes increasingly urbanized, the need for green space in various communities remains an important aspect of our relationship with nature. Parks provide an area for recreation and green space conservation (Yilmaz et al 2006). Availability and proximity to parks encourages active behavior and spatial dimensions and park facilities can influence how nearby residents access and utilize outdoor space (Weiss et al. 2011).

Madison has over 200 parks, so as we examined other park-use research we asked, *who uses Madison's Parks and why?* Our research assessed how socioeconomic status, race, age, gender, and other factors affect who uses Madison parks and why they use it. Understanding *who uses parks and why* can be a useful tool for park planning, design and management (Oguz 2000). By determining how park-goers use the park, we can draw conclusions regarding park resource

allocation and land function (Yilmaz 2006). If we know which resources park users value, we can better focus funds and attention on that amenity.

We used Brittingham Park, located in downtown Madison, as a case study. Brittingham has many different facilities and a large amount of open space that, in theory, promotes diverse use of the space. Do park users live near the park or do they commute to Brittingham for certain reasons? Finally, this research considered how different groups of people use the parks differently. Our research design combined qualitative and quantitative assessments, qualitative observations, a few informal interviews and quantitative data from our survey results.

Before we understand how and why people use Brittingham Park, we must first understand its history. In 1905, in an attempt to clean up the land deemed a “disease breeding hole,” Thomas Evans Brittingham donated money to the Madison Park and Pleasure Drive Association (MPPDA) to acquire the twenty-seven acres (MPPDA, 1906, p53). The MPPDA wanted to clear the area of “nests of crime...unsightly shacks...and people of humble means” (MPPDA, 1908, p40). Over 100 years later, the cosmetics of the park may have changed, but the social dichotomy of park users remains.

The park originally had a bathhouse and a boathouse; however, only the boathouse remains and it continues to draw park users. Today, the boathouse is on the National Historic Landmarks registry and in 2001, the Camp Randall Rowing Club, in partnership with the Madison Parks Division, the Parks Commission and the Parks Foundation, restarted an effort to save the boathouse.

Another structure drawing park users is the Brittingham shelter. People reserve the shelter for everything from baptisms to graduation picnics. In addition to picnics and church services, homeless people often occupy the shelter - the same kind of people the MPPDA sought

to remove during the park's inception. It stands on what was once the carriage loop, which was an extension of a Madison pleasure drive that went through the park. What was once a pleasure drive for high society Madisonians, is now a bike path. The bike path remains a draw for the middle to upper-middle class demographic, and is arguably the same sort of 'pleasure in leisure' drive it was many years ago. Instead of Sunday drives, there are Sunday jogs on the bay and Sunday walks by the lake. Brittingham Park's history is checkered with social class tension. Arguably, even years later, these tensions remain.

This research is important because low and middle-income neighborhoods have been shown to have significantly fewer physical activity opportunities than higher income areas (Estaerooks et al 2003). Another study found that the lowest levels of park resources were in areas with concentrations of low-income residents. This same study found that areas with more ethnic diversity had lower rates of park access as compared with predominantly white areas (Wolch et al 2005). The fact that we were unable to gather statistically significant demographic data beyond upper middle class, white residents is relevant in itself. Other demographics may also be underrepresented in decision-making for park resource allocation, even though they are active park users. Incorporating census data and surveys, our research project considers different ethnicities, ages, and classes use Brittingham Park and how they use it.

Methods

a. Theory

Answering our question required employing a combination of spatial science and humanism. Spatial science, rooted in objectivity and generality, searches for orderly causal processes (Gomez and Jones, 2010). Humanistic geography emphasizes the explanation within the scientific ways of knowing (Gomez and Jones, 2010). When a study uses only qualitative or

only quantitative methods, the data usually falls short and reads incomplete. For instance, in Payne et. al's study of preferences and beliefs regarding a Cleveland park, they call for more research that pairs demographic research with interpretive methods (2002). We will do just that by combining quantitative assessments of park use and user demographics with user perceptions. We categorized 'user perceptions' based on informal interviews conducted during survey distribution and our survey question regarding park safety.

Using only qualitative methods may also leave holes in understanding. Tucker et al. used primarily qualitative methods to conduct their park use research, but found gaps in their conclusions that required quantitative measures (2007). So while they spoke directly to their subjects and were able to understand things like emotional attachment, they recognized that some topics are easier quantified than qualified. Tucker et al. argued that gathering sensitive data pertaining to income, education, and family structure through surveys gives subjects a degree of anonymity (2007). We quantitatively and qualitatively assessed park attitudes and so our findings incorporate two different types of data collection.

This study employed inductive reasoning when examining our research question. Inductive approaches involve a greater degree of uncertainty and rely on inferential statistics and probability to quantify degrees of uncertainty (Gomez and Jones, 2010). For example, although we can observe common patterns of park use, we cannot be certain that the next observation will be consistent with the previous observations. Many other studies, including Gobster et al., use a few major factors to look at a broad scope of who is using a park. Combining this reasoning with both kinds of analyses gives our project a multi-faceted design. Studies often include surveys, interviews, focus groups, GIS data mapping or landscape observation, and sometimes a combination, to achieve in-depth results. All of these approaches have strengths and weaknesses;

however, most researchers agree that a multi-faceted design creates compelling and accurate data acquisition (Omer, 2005; Gobster, 2002; Gomez and Jones, 2010).

b. Approach

For this particular project, we focused on surveys and census data analysis, due to the limited time and resources we had to complete our task. Though ideally we would utilize more in-depth techniques to collect data, these methods allowed us to accomplish our research goal effectively and efficiently. We gathered our data primarily from the Monona Bay neighborhood association and members of the Camp Randall Rowing club, which reflected a primarily upper middle class, white demographic. Observations confirm that more than just white, upper middle class Madisonians use the park, but our survey results can only draw conclusions based on this demographic.

Surveys helped us to gain an understanding of trends within the park-using community. Upper middle-class white people were the primary subjects in our data because of our dissemination process. We administered surveys in the Park but we also sent them via email to the Monona Bay Neighborhood Association and the Camp Randall Rowing Club. This geared our data in an upper middle-class direction, so although we do not have diverse demographic information, we can draw conclusions based on one particular demographic.

The surveys proved useful for characterizing the general attributes of study participants and for identifying patterns that are statistically relevant for a particular population. Our questions assessed demographics by asking about income, ethnicity, race and proximity (Figure 1). We chose to list ethnicity and income options, just as the Census lists them, to avoid bias. Gobster's research studied patterns and preferences of different ethnic groups in Lincoln Park, Chicago and served as an example study for our project. The study used surveys to examine

socioeconomic factors between and among different ethnic groups and issues of park use, access and perception (2002). Although this particular study was more in-depth than our own, it provides a useful example of how surveys can be helpful in collecting and analyzing data concerning utilization and perception among park users. Through the use of a survey, Gobster gained a general understanding of how urban communities use and perceive parks based on socioeconomic, racial, and ethnic differences. One of the major shortcomings of survey use, according to Gobster, is the lack of in-depth information acquired, but for the purpose of our study, we accept that limitation (2002).

Payne et al.'s examination of age, gender, race, and geospatial proximity to parks proved useful for creating our research design. The study, conducted in Cleveland, Ohio, suggests that these categories are important in analyzing the use and perception of urban recreation areas. We therefore included age, gender, race and proximity in our survey. Additionally, Payne et al. poses questions regarding frequency of visits to the park, the role of the park in the community and how people use parks on an individual basis (for activities to be categorized as recreation or conservation). They analyze the data in relation to the demographic information provided by park (Payne et al. 2010). Similarly, we structured survey questions attempting to recognize demographic trends among and between study participants (Figure 1).

According to Omer et al in *Evaluating Accessibility Using House-Level Data: A Spatial Equity Perspective*, Census data can provide important information concerning geospatial distribution in comparison to socioeconomic information, which is one of the main focuses of our study (2005). Therefore, we collected and analyzed Census map information to assess who lives in the area surrounding the park. In this case, we defined the 'who' by household income intervals. Census data gave us an understanding of the socioeconomic and ethnic composition of

the neighborhoods surrounding Brittingham Park. The juxtaposition of our surveys with the Census data revealed that many of the upper middle-class demographic that use the park are not residents of the surrounding area. Part of our future research might include more survey questions regarding reasons behind their park commute. In many of the cases, the surveys suggested that many of those that traveled to the park did so for the Rowing Club facilities. By understanding of the neighborhood composition around the park, we began to see that the park user demographics consist of both locals (fewer than 10 blocks) and those from outside the neighborhood.

Omer's study suggests we must be careful when drawing conclusions from neighborhood demographics. Park use is commonly quantified by analyzing use in each district and Omer argues that park users will use the park nearest to them, even if that means going outside of their district (2005). That is, we cannot assume that households in the Brittingham neighborhood are the primary users of the park.

In order to standardize data collection, we distributed surveys between the hours of 9 a.m. and 4 p.m, similar to Tucker et al. (2007). To gain a wide breadth of data, we collected data in one-hour increments, throughout an even amount of weekdays and weekends. The colder it grew, the more difficult it became to assess to park use. That is when we turned to online survey dissemination. Although the Internet survey gave us heavy results for upper middle-class white park users, we can still draw some conclusions regarding this particular demographic and their park use.

In *Splashpads, Swings, and Shade*, Tucker, Gilliland and Irwin provide general guidelines for ensuring “data trustworthiness” (pg. 200). Through a discussion of four components: *credibility*, *dependability*, *confirmability* and *transferability*; the authors provide

rules for ensuring reliable data. *Credibility* makes sure that survey responses will be clear, and if they are not, we will ask study participants to elaborate on their answers. In order for data to be *dependable*, researchers must accurately record detail - such as weather conditions and potential researcher bias. *Confirmability* requires that two researchers analyze survey results independently from one another, and later compare and contrast the different patterns that emerge. Finally, a *transferable* research is can be used by other interested researchers or research groups to examine similar phenomena (Tucker, Gilliland, Irwin; 2007). By taking into account these four factors, we maintain that our research design and analysis yielded trustworthy.

c. Analysis

Our study focused on inductive reasoning to analyze trends that emerged. Gobster employed this technique by using four components of observation to work toward broader generalizations regarding park use. The four major components used in this case study were analysis of internal factors versus external factors, activity participation, environmental perception, and the role of racial and ethnic discrimination in park use. The use of these four broad themes provides a starting point for our data analysis. This approach offered greater insight into park use and perception, and also recognized that not all people within a particular ethnic group have the same opinions about the park (Gobster 2002). Using inductive reasoning for this case study allowed us to make place-specific observations and develop them into a working hypothesis about park use at Brittingham.

By finding the distribution of variables such as age, gender, race, median household income, and common park uses, we tried to establish the overall demographic of Brittingham Park. We then categorized the different types of park uses as active, passive, mixed, Bike path use, or rowing. Next, we plotted the different variables against these park uses to see if

interesting trends arose. We excluded race from our analysis because only two individuals identified as non-white. The statistical package R a chi-square test identified whether or not the different variables and park use were independent of one another. Because some of the values were too small to run a chi-square test with a good amount of accuracy, Fisher's exact run on each contingency table provided further analysis for whether or not the two variables were independent of one another. In order to better understand the socioeconomic status of the area immediately surrounding Brittingham Park, we averaged the median household income data for the area over each block group and plotted the result using ArcMap.

Results

Using both in-person surveys and surveys distributed online to the Monona Bay neighborhood association and the Camp Randall Rowing Club, we collected 69 surveys. Overall, there was an almost equal distribution of male and female responses (Figure 5). The most common age range denoted by park users was 55-64 (Figure 4) with an almost even range of other age categories. There was a large difference in response for race with 98 percent of survey takers answering white, ruling out any conclusions of statistical significance regarding race and park use in Brittingham. Most park users area also Madison residents (Figure 7). Almost half of all survey takers reported that their yearly household income was about \$84,000 per year (Figure 6). There is a bimodal distribution in survey takers distance to park, with a large amount of survey takers answering one to three blocks and more than ten blocks (Figure 8). Survey takers also responded with a large range of amenities used, with the most common being the bike path and the shoreline (Figure 9).

The map of the average median household income surrounding Brittingham Park (Figure 12) shows that the area adjacent to the park falls into the lowest income bracket. The households

surrounding the park on average make less than \$22,000 a year, with the area immediately beyond that averaging less than \$54,000 a year. Compared with Figure 8, which shows how distance is related to park use, there are a majority of the lower income park users from near the park. Surprisingly, the highest income class (greater than \$84,000 a year) live both very near and very far from the park. The Fisher's exact p-value for income versus distance was insignificant (Table 13), which means distance traveled to the park and income may be independent of one another.

When plotting Park use against age, gender, race, and income, the only category showing interesting trends was income (Figure 11). This graph shows that the majority of the highest income bracket are rowing and using the bike path and doing it much more frequently than any other group. The Fisher's exact test was insignificant (Figure 11), showing that income and park use are independent of one another.

Madison Parks gave us Park reservation history for 2011, which was a great way to examine park use throughout the year. By using this, we gathered information on park use that we could not observe. The top two purposes for reservations were playing Frisbee and having a 'banquet, picnic or party' (Table 10). Madison Ultimate Frisbee Association (MUFA) reserved the fields at Brittingham sixty percent of the year for Ultimate Frisbee leagues to play (Table 10). There are two particular user groups associated with these park use purposes: MUFA and individual citizens (Table 12).

Discussion

As aforementioned, the majority of surveyed park users are middle to upper class white people who use the park for recreation. Arguably, this follows the general make-up of the neighborhood association that completed the majority of the surveys. These groups of people

also had to have access to Internet in order to complete the survey, which excludes anyone without Internet access and excludes many people who may use the park that did not take our survey in person and are not part of the neighborhood association.

Only three people surveyed said they used the park for fishing and kept the fish. Of these people, one was homeless and another was African American. This number is not a significant result but it suggests there may be a trend to be explored further by surveying fisherman in Brittingham Park. This may be difficult because many of the fishermen we attempted to talk to declined to take the survey. Some surveys suggest animosity toward fisherman because of the trash left in the park. One survey taker when asked whether or not they fished wrote, “I don't fish. But if I did, I'd clean up my trash!!” If this hostility exists in the park, fishermen may be unwilling to take surveys. This hostility also suggests that tensions may exist between different groups of park users.

Observations and survey results reveal that people who use Brittingham Park do so for a variety of reasons. There is also a large number of the highest income bracket that live both near and far from the park who seem to use things indirectly related to the Park. For example, the bike path that runs through the park and access to Lake Monona for rowing purposes.

Most park users also rated the park as safe, except for one individual who rated it as unsafe and told us that illicit activities occur in the park at night. This suggests that there are large shifts in who uses the park during the day and at night. Although we do not have seasonal use data, it seems that there are few people surveyed who use the park during the winter. However, we know from past experience that there is a large group of people that use Brittingham Park for ice fishing. Whether or not these fishermen keep these fish for food remains unknown. There suggests a potential shift in the people who use the park in winter and the other

three seasons and may also suggest a shift in what they use the park for— subsistence or recreation.

Our results suggest that there is a range of people using the park for very different activities (although this was not completely captured in our survey). These groups seem to be separated both spatially, by the activities they chose to do and temporally, by the season or time of day they choose to frequent the park. Even with this separation, it seems that a tension still exists between the different groups that use Brittingham Park.

Future Research

Our research efforts are subject to certain limitations, namely both lack of time and lack of resources. One semester is not sufficient to examine this complex topic because there are many factors that need to be considered in order to draw any sort of reasonable conclusion. Not only are there many factors to consider, but there are also challenges of gathering data from a diverse group of park users. Additionally, since we have received no monetary aid for the completion of this project, we are limited in the amount of time we can reasonably allocate to our research.

If given adequate time and resources, there are many other factors concerning park use and perception that we would assess. Things like crime rates in the park and drug use may discourage certain groups of people from using Brittingham and encourage others. These elements play a role in the “social access” to the park as done by Weiss et al 2011 and would serve to answer more thoroughly both the *who* and *why* of our research question.

Time also limits the number of people we can survey and how in-depth our questions can be. Interviews allow researchers to probe more deeply into topics that interviewees identify as particularly important (Tucker et al 2007). However, interviews take significantly longer to

conduct, and, given our time constraints conducting interviews, we limited our sample size. We also lack the monetary resources to distribute surveys via mail to the neighborhoods surrounding Brittingham Park. Therefore, our survey sample size was limited by the number of people we were able to “intercept” at the park and also by the online surveys available only to the neighborhood association and rowing club.

Interviews are a useful tool for gaining in-depth information, and would likely provide us with deeper understanding of park use and perception, if we had the time to conduct them. Interviews would give us more interpretative data and allow us more effectively to combine quantitative and qualitative research.

To better place our research in context, we could analyze how the park and its use may have changed over time. Neighborhood demographics likely changed as Madison grew as a city and the University stretched its boundaries. City park budgets probably fluctuate overtime and we might see trends in how resources are allocated to Brittingham Park. The social tensions that existed during the park’s inception may still exist, but have they been strong all along?

One of the major shortcomings of our project is our inability to observe and survey park users throughout the year. We are limited to researching the park in fall and winter, and it is likely that park use and who uses the park varies greatly between different seasons. Studying the park year-round would give us a more holistic understanding about park use.

Finally, we have only had the opportunity to distribute surveys during daylight hours. Although the park officially closes at dusk, people most likely still visit the park in the evening. The uses at night may be entirely different than those during the day and could provide interesting insight into night park use.

Conclusion

Using a multi-faceted qualitative and quantitative approach, we examined who uses Brittingham Park and why. We used surveys to assess these two questions because time and resource constraints. Spatial analysis data of the surrounding neighborhoods, paired with our survey results, helped us discover that the people using Brittingham Park are made up of both local residents and people who travel a distance to use the park's amenities. As noted by a non-fishing park-user, there is still animosity between park-users at Brittingham.

George Stacy conceived the idea of Brittingham Park because of Monona Bay's dingy state and disreputable impression on people traveling to Madison. Members of the Madison Park and Pleasure Drive Association felt that having a park along Monona Bay would greatly improve the first impressions of Madison and give affluent community members an aesthetically pleasing "natural" environment to enjoy. Today, we found a similar demographic of upper middle class white individuals using the bike path and the boathouse. Though affluent community members once passed recreationally along the pleasure drive in horse-drawn carriages, a similar demographic now uses the bike path for jogging and walking.

Appendix

Figure 1: Brittingham Park Survey

1. How old are you?

18-24 25-34 35-44 45-54 55-64 65-74 75+

2. What is your gender?

Male

Female

3. What is your race/ethnicity? (Circle One or Fill in the Blank):

American Indian or Alaska Native

Asian

Black or African American

Native Hawaiian or Other Pacific Islander

White

Bi-racial

Other (please specify): _____

4. Please circle all that apply or fill in the blank:

Full Time Student

Part Time Student

Madison Resident

Visitor

(Other please specify) _____

5. If you are a Madison resident, approximately how far away do you live from Brittingham Park? (Please Circle One)

1-3 blocks

4-6 blocks

7-9 blocks

10 or more blocks

6. How many people are in your household?

7. What is your yearly household income? (Please Circle One)

less than \$22,000

\$22,001-\$54,000

\$54,001-\$84,000

greater than \$84,000

8. Please rank the seasons based on how often you use Brittingham Park: (e.g. 1 being the most often and 4 being the least often)

Spring

Fall

Summer

Winter

9. During each season, how often do you visit Brittingham Park? (Please circle)

Spring

Almost never
1-2 times per month
1-3 times per week
4-6 times per week
>6 times per week

Fall

Almost never
1-2 times per month
1-3 times per week
4-6 times per week
>6 times per week

Summer

Almost never
1-2 times per month
1-3 times per week
4-6 times per week
>6 times per week

Winter

Almost never
1-2 times per month
1-3 times per week
4-6 times per week
>6 times per week

10. Please list/describe your favorite activities to do at Brittingham Park:

11. Please circle the **three** park amenities that you use most often:

-Reservable Shelter
-Playground
-Boathouse
-Canoe and Kayak Storage
-Beach house
-Bike path
-Fireplace
-Picnic Tables
-Basketball courts
-B-cycle station
-Open Fields (Please specify for which activities)
-Other:

-Beach
-Dog On-Leash Area
-Dog Off-Leash Area
-Parking Lot
-Restroom
-Shoreline
-Tennis Courts
-Volleyball Courts
-Beach

12. If you fish do you keep the fish you catch from Brittingham Park/Monona Bay?

13. Please circle the number corresponding to how safe you feel at Brittingham Park?

Unsafe 1 2 3 4 5 6 7 Very safe

Privacy Statement:

Your privacy is our highest priority. We will not collect, or otherwise obtain, any personal identifying information about you, unless you wish us to do so. Your survey is secure and will only be seen by those members of the research team who have signed a confidentiality statement. The survey will be properly discarded after the completion of our research. No personal identifying information will appear in our report or our class presentation, unless you wish us to do so and provide us with written consent.

Figure 2: Purpose of Park Reservations in 2011 (Total Reservations: 176)

**Source of data: Brittingham Park Reservations, Jan-Oct 2011, Madison Parks*

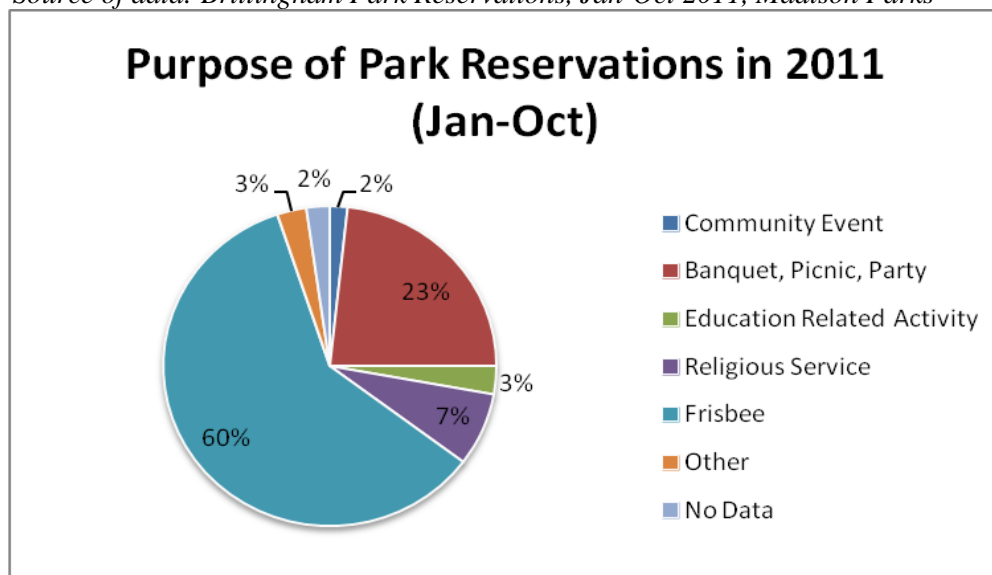


Figure 3: Reservations in User Group (Total Reservations: 176)

**Source of data: Brittingham Park Reservations, Jan-Oct 2011, Madison Parks*

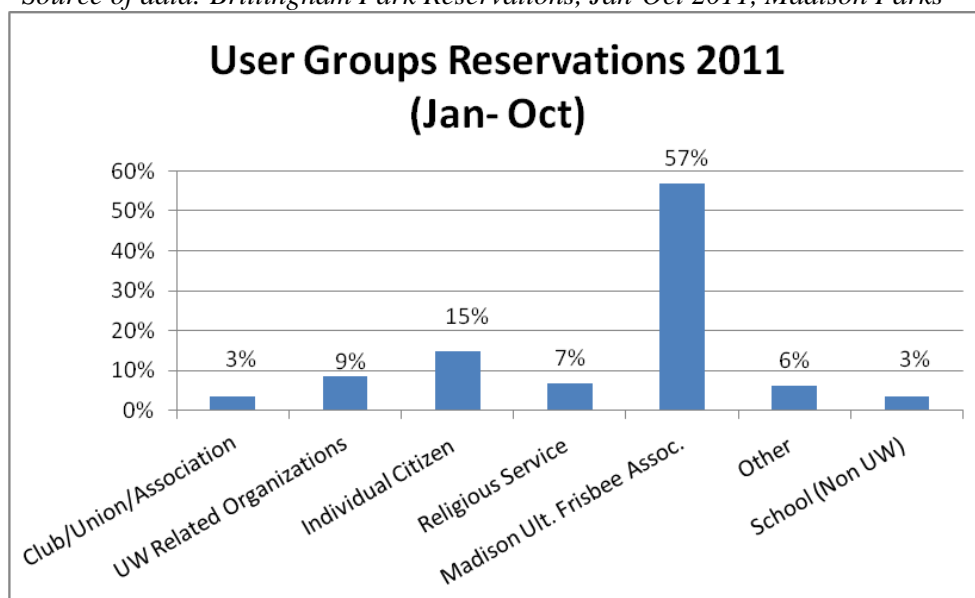


Figure 4: Age Distribution of Surveyed Users in Brittingham Park

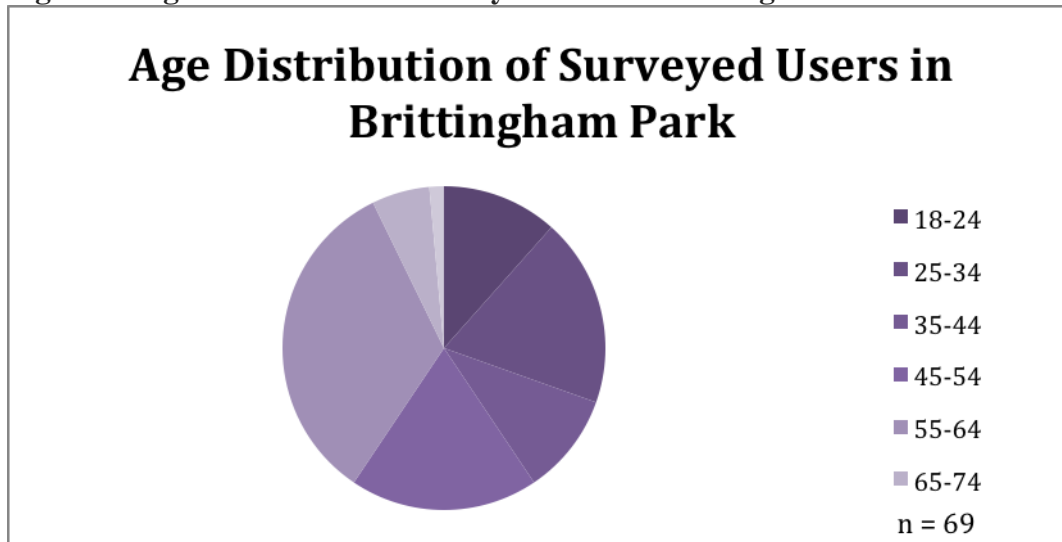


Figure 5: Gender Distribution of Surveyed Users in Brittingham Park

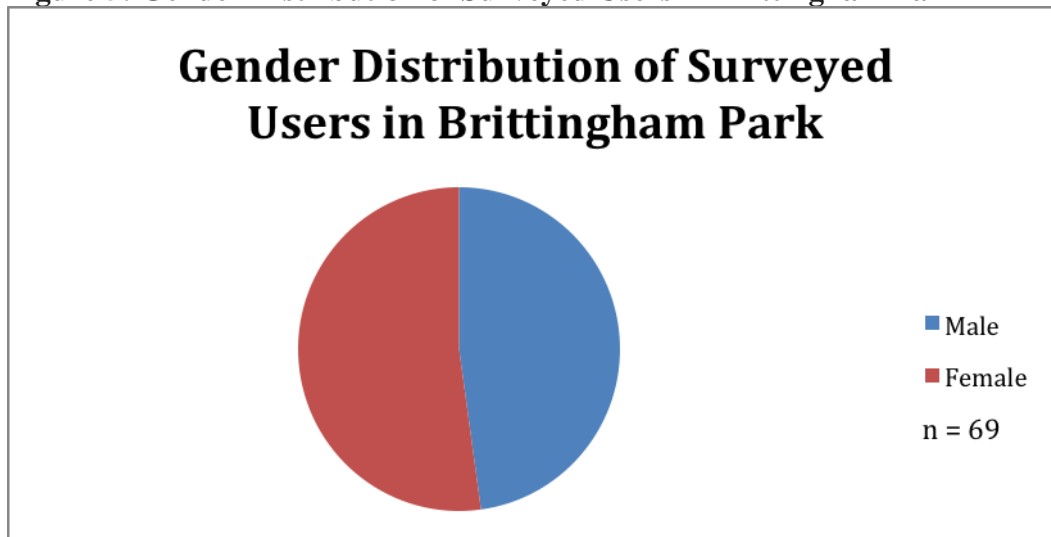


Figure 6. Household Income of Park Users by Income Bracket

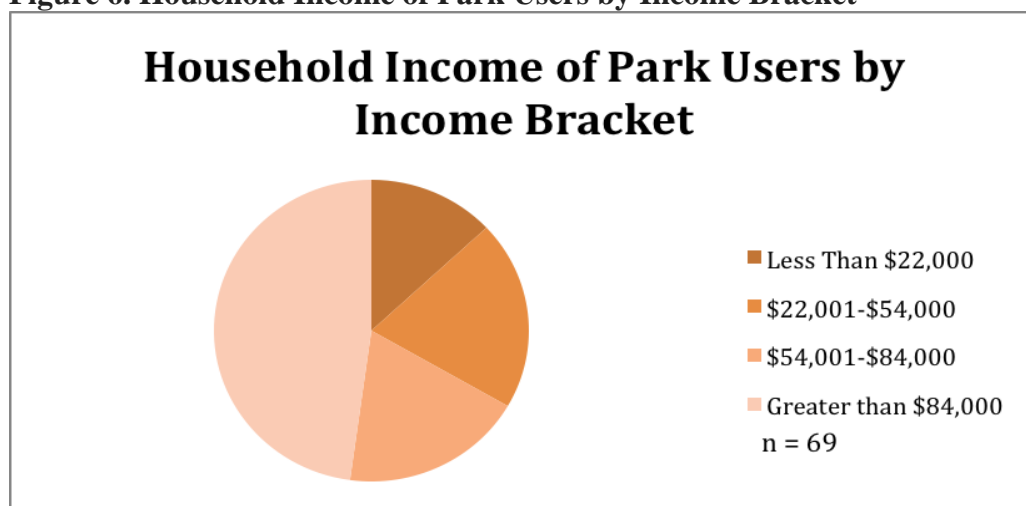


Figure 7: Residential Status of Surveyed Park Users

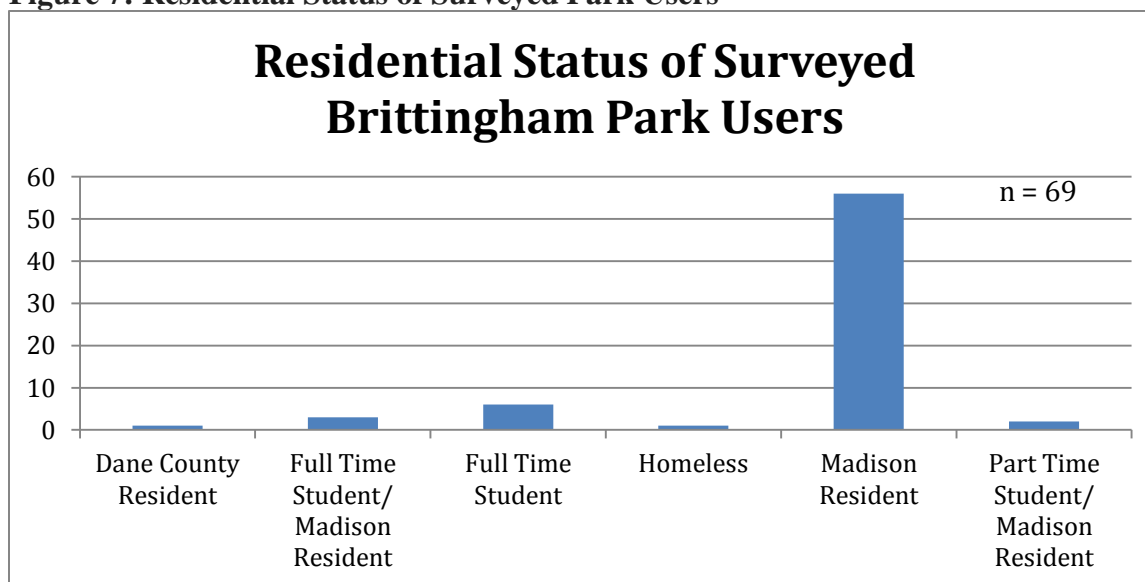


Figure 8: Distance of Surveyed Park User Residence from Brittingham Park

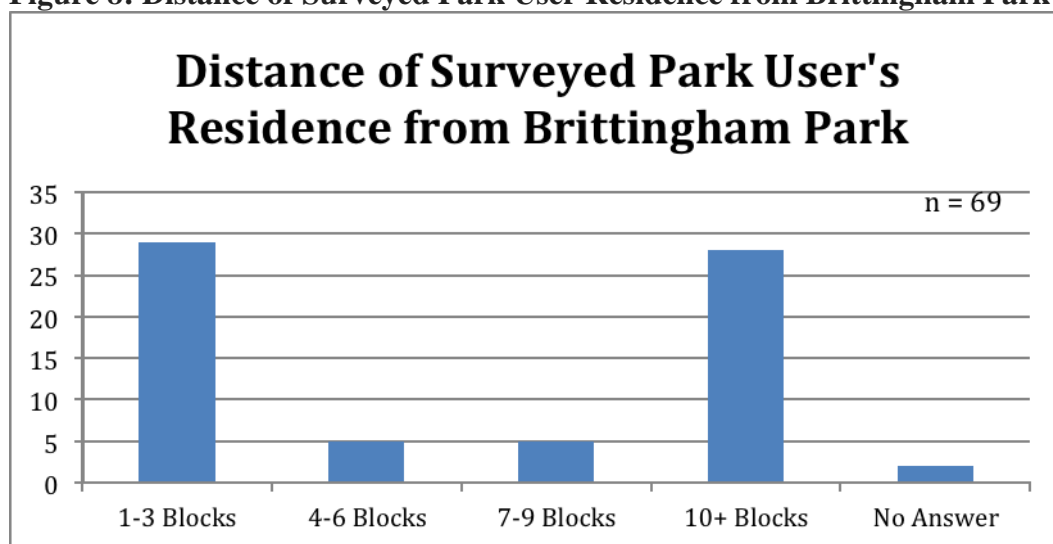


Figure 9. Most Used Park Amenities in Brittingham Park.

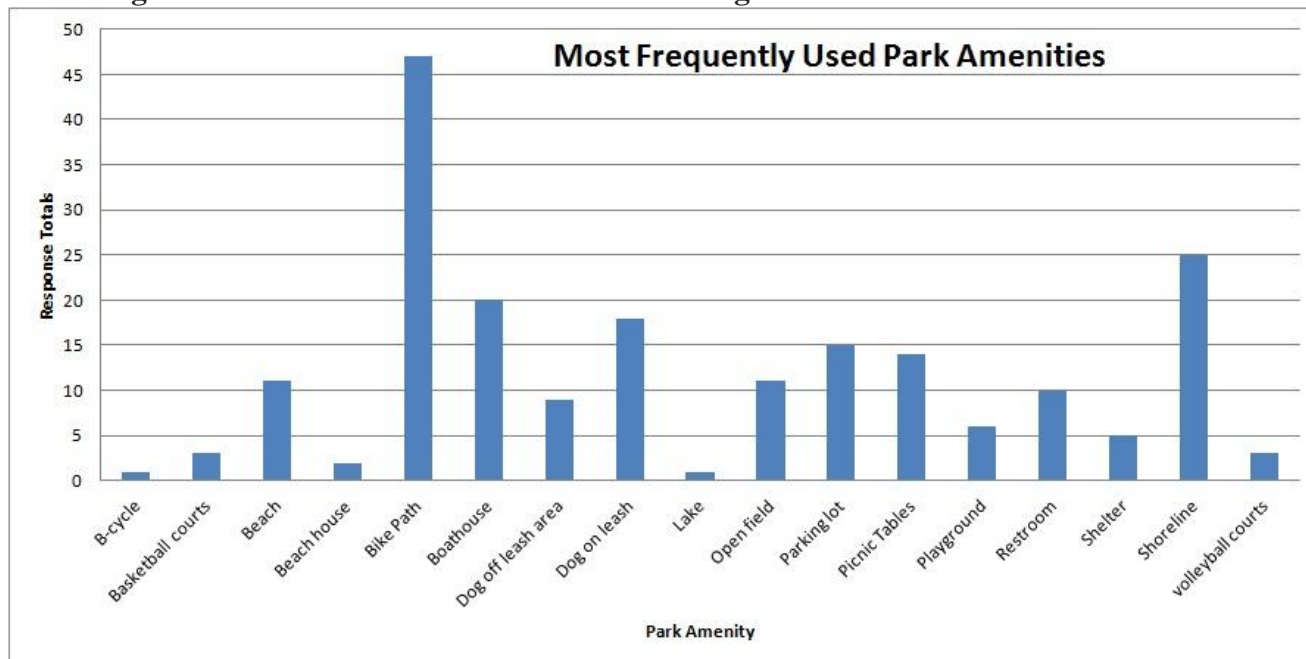


Figure 10. Park Users Distance to the Park by Income Bracket

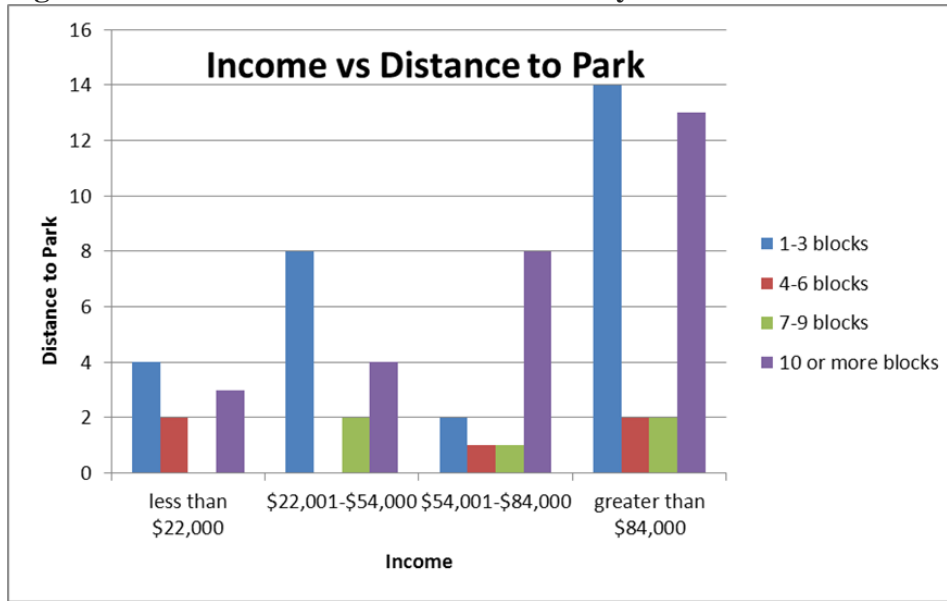


Figure 11. Park Use by Park Users' Income Bracket

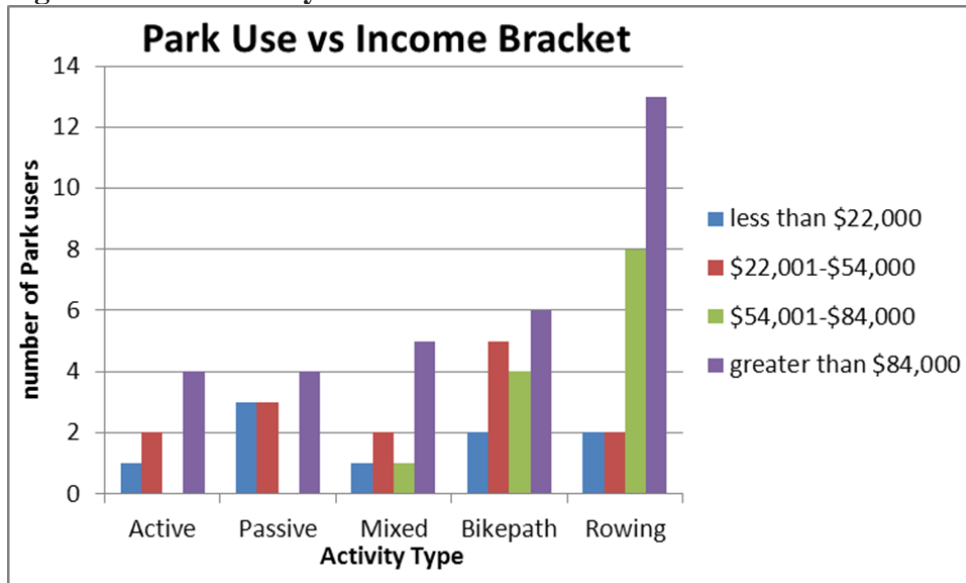


Figure 12: Median Household Income By Block Group, Surrounding Brittingham Park

**Median Household Income by Block Group
Surrounding Brittingham Park, Madison, WI**

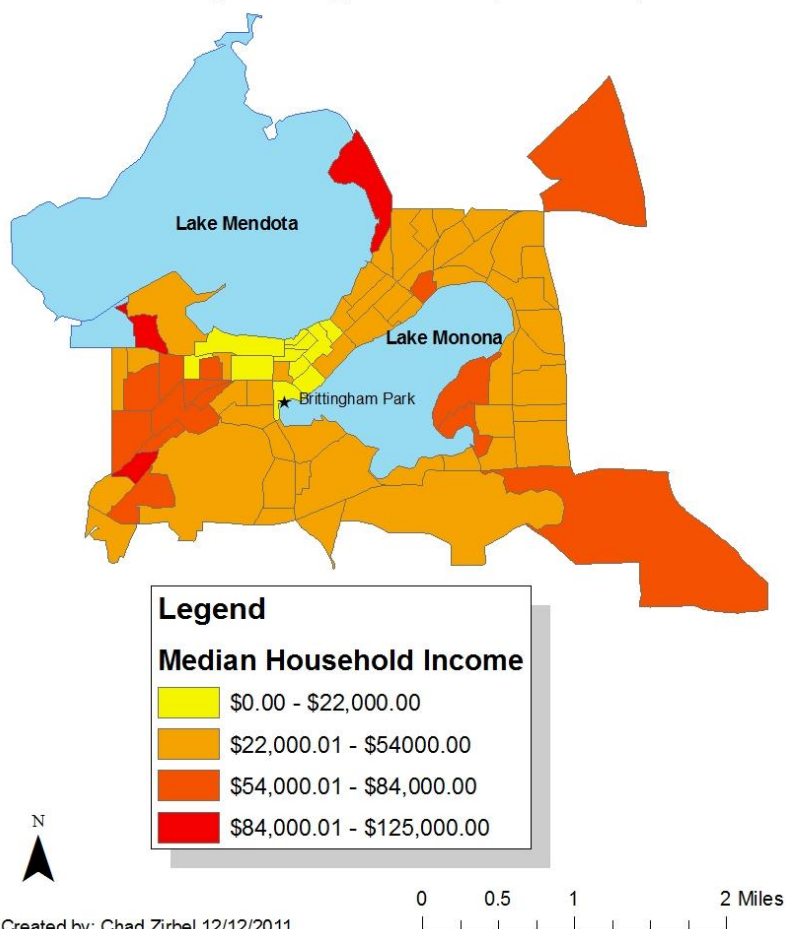


Table 1: Age Distribution for Surveyed Users in Brittingham Park.

| Age | Total |
|----------------|--------------|
| 18-24 | 8 |
| 25-34 | 13 |
| 35-44 | 7 |
| 45-54 | 13 |
| 55-64 | 23 |
| 65-74 | 4 |
| 75+ | 0 |
| Did not answer | 1 |
| Total | 69 |

Table 2: Gender of surveyed users in Brittingham Park

| Gender | Total |
|---------------|--------------|
| Male | 33 |
| Female | 36 |
| Total | 69 |

Table 3: Race distribution of surveyed users in Brittingham Park

| Race | Total |
|---|--------------|
| American Indian/Alaska Native | 0 |
| Asian | 0 |
| Black or African American | 1 |
| Native Hawaiian or other Pacific Islander | 0 |
| White | 67 |
| Bi-Racial | 0 |
| Other: Saudi Arabian | 1 |
| Total | 69 |

Table 4: Residential Status

| Resident Status | Total |
|------------------------|---|
| Full Time Student | 9 |
| Part Time Student | 2 |
| Madison Resident | 62 |
| Visitor | 0 |
| Dane County Resident | 1 |
| Homeless | 1 |
| No Response | 0 |
| Total | 75 (Users were allowed to circle multiple) |

Table 5: Distance lived from Brittingham Park

| House distance from Brittingham Park | Number of People |
|---|-------------------------|
| 1-3 blocks | 29 |
| 4-6 blocks | 5 |
| 7-9 blocks | 5 |
| Over 10 blocks | 28 |
| No answer | 2 |
| Total | 69 |

Table 6: Number of people in survey taker's household

| People in Household | Frequency of Response |
|----------------------------|------------------------------|
| 1 | 15 |
| 2 | 29 |
| 3 | 9 |
| 4 | 10 |
| 5 | 2 |
| 6 | 2 |
| 7 | 0 |
| 8 | 1 |
| Did not answer | 1 |
| Total | 69 |

Table 7: Yearly Household Income of Surveyed Park Users

| Yearly Household Income | Frequency of Response |
|--------------------------------|------------------------------|
| < \$22,000 | 9 |
| \$22,001-\$54,000 | 14 |
| \$54,001-\$84,000 | 13 |
| > \$84,000 | 33 |
| No Answer | 0 |
| Total | 69 |

Table 8: How Safe People Feel in Brittingham on a Scale of 1-7 (Seven is the safest, one is unsafe)

| How Safe You Feel (1=Unsafe, 7=Very Safe) | Frequency of Response |
|---|-----------------------|
| 1 | 1 |
| 2 | 0 |
| 3 | 2 |
| 4 | 5 |
| 5 | 18 |
| 6 | 26 |
| 7 | 17 |
| No Answer | 0 |
| Total | 69 |

Table 9: If the survey taker fishes, do they keep the fish?

| Keep Fish | Frequency of Response |
|----------------|-----------------------|
| Yes | 3 |
| No | 9 |
| Not Applicable | 24 |
| No Answer | 33 |
| Total | 69 |

Table 10: Purpose of Park Reservations in 2011

**Source of data: Brittingham Park Reservations, Jan-Oct 2011, Madison Parks*

| Purpose | Reservations | % of Total Reservations |
|----------------------------|--------------|-------------------------|
| Community Event | 3 | 2% |
| Banquet, Picnic, Party | 41 | 23% |
| Education Related Activity | 5 | 3% |
| Religious Service | 13 | 7% |
| Frisbee | 105 | 60% |
| Other | 5 | 3% |
| No Data | 4 | 2% |
| Total | 176 | 100% |

Table 11: Frisbee User Groups in 2011

*Source of data: Brittingham Park Reservations, Jan-Oct 2011, Madison Parks

| Frisbee User Group | Reservations | % of Total Reservations |
|--------------------------------------|---------------------|--------------------------------|
| Madison Ultimate Frisbee Association | 100 | 95% |
| UW Med School & Law School | 5 | 5% |
| Total | 105 | 100% |

Table 12: Reservations by User Group in 2011

*Source of data: Brittingham Park Reservations, Jan-Oct 2011, Madison Parks

| User Groups | Reservations | % of Total Reservations |
|-----------------------------|---------------------|--------------------------------|
| Club/Union/Association | 6 | 3% |
| UW Related Organizations | 15 | 9% |
| Individual Citizen | 26 | 15% |
| Religious Service | 12 | 7% |
| Madison Ult. Frisbee Assoc. | 100 | 57% |
| Other | 11 | 6% |
| School (Non UW) | 6 | 3% |
| Total | 176 | 100% |

Table 13. Values for statistical tests

| Run | Statistical Test | | |
|---------------------|-------------------------|---------|----------------|
| | Chi-Square | | Fisher's Exact |
| | X2 | p-value | p-value |
| Gender vs. Use | 0.9516 | 0.813 | 0.864 |
| Age vs. Use | 19.6282 | 0.4814 | n/a |
| Income vs. Use | 12.8512 | 0.38 | 0.3259 |
| Distance vs. Income | 10.3722 | 0.3212 | 0.284 |

References

Estearooks PA, Lee RE, Gyurcsik NC. Resources for physical activity participation: does availability and accessibility differ by neighborhood socioeconomic status? *Ann Behav Med.* 2003; 25(2): 100-4.

Gobster, P. H. (2002). Managing urban parks for a racially and ethnically diverse clientele. *Leisure Sciences*, 24, 143-159.

Gomez, B., & Jones III, J. P. (2010). *Research methods in geography: Ch 2* (pp. 17-18), *Ch 5* (pp. 71), *Ch 12* (pp. 196-198). Chichester, United Kingdom: Blackwell Publishing Ltd.

Madison Park and Pleasure Drive Association. (1906). Reports of the Officers of the MPPDA for the Year Ending April 16, 1906. *Madison Park and Pleasure Drive Association Annual Report, 1899-1911*. Madison, WI: Cantwell Publishing Company.

Madison Park and Pleasure Drive Association. (1908). Reports of the Officers of the MPPDA for the Year Ending April 27, 1908. *Madison Park and Pleasure Drive Association Annual Report, 1899-1911*. Madison, WI: Cantwell Publishing Company.

Oguz, D. (2000). User surveys of Ankara's urban parks. *Landscape and urban Planning*, 52(2-3), 165-171.

Omer, I. (2006, May). Evaluating accessibility using house-level data: A spatial equity perspective. *Computers, Environment and Urban Systems*, 30(3), 254-274.

Payne, L. L., Mowen, A. J., & Orsega-Smith, E. (2010, October 10). An examination of park preferences and behaviors among urban residents: The role of residential location, race, and age. *Leisure Sciences*, 24(2), 181-198.

Tucker, P., Gilliland, J., & Irwin, J. D. (2007, May). Splashpads, swings, and shade: Parents' preferences for neighbourhood parks. *Canadian Journal of Public Health*, 98(3), 198-202.

Weiss, C. C., Purciel, M., Bader, M., Quinn, J. W., Lovasi, G., Neckerman, K. M., & Rundle, A. G. (2011). Reconsidering access: Park facilities and neighborhood disamenities in New York City. *Journal of Urban Health*, 88(2), 297-310.

Wolch J, Wilson JP, Fehrenbach J. Parks and park funding in Los Angeles: an equity-mapping analysis. *Urban Geography*. 2005; 26(1):4-35.

Yilmaz, S., Zengin, M., & Demircioglu Yildiz, N. (2007). Determination of user profile at city parks: A sample from Turkey. *Building and Environment*, 42, 2325-2332.