

Accessibility to Girl Scout Camps in Northeast Ohio 18 County Area

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Abstract:

Seven network buffers were created 45 miles from each of the seven camps to determine how many people lived within the desirable 1 hour driving distance. The first camp, Camp Crowell Hilaka in Summit County, was one of two camps that had over 70% or more of the population demographic in question to live within the 1-hour driving distance buffer. Camp Ledgewood, also in Summit County, has almost identical accessibility as Camp Crowell-Hilaka.

The five other camps are much less accessible to the Girl Scout membership and to all girls age 5-17, girls of diversity age 5-17, and households with children under 18 and no husband or wife present. Specifically, the other five camps are accessible to 34% or less of the Girl Scout membership. Camp Timberlane in Erie County is the next most accessible camp to the Girl Scout membership after Crowell Hilaka and Ledgewood. Camp Lejnar in Lake County is the next most accessible camp to the membership after Camp Timberlane.

The last three camps, Great Trail, Pleasant Valley, and Sugarbush, are the least accessible camps, with Great Trail Camp the most accessible of the three. Moreover, Great Trail Camp is the only camp within a 1 hour driving distance of people living in Carroll or Tuscarawas Counties.

Conclusions of Report:

The two camps, Camp Crowell-Hilaka and Camp Ledgewood, both in northern Summit County, are located closest to Cuyahoga County and the city of Cleveland, and therefore closest to the most populated region of the 18 county area. The greatest number of Girl Scout members, both girls and adults, live in Cuyahoga County; over 7,000 girls and over 3,000 adults. Therefore, the final calculations showed that Camp Crowell-Hilaka and Camp Ledgewood are the most centrally and easily accessible camps out of the seven camps. These camps are also the most easily accessible camps for all African-American girls, Hispanic girls, and Asian girls age 5-17 in the 18 county area. These two camps are more accessible, for the most part, for more than double the amount of people than the other five camps.

For instance, Camp Crowell-Hilaka and Camp Ledgewood are within 1 hour driving distance of 70% and 71% of the children Girl Scouts, respectively, while the other camps range in being 1 hour driving time from 6% to 34% of Girl Scouts age 5-17. Thus, it would seem that if either Camp Crowell-Hilaka or Camp Ledgewood were to be closed, and only one camp was accessible to over 70% of the membership, there

would be a lack of facilities available for those that live within an hour driving distance of these two camps. Moreover, if GSNEO wants to expand their members of diverse racial backgrounds and introduce these members to camping and the outdoors, having two camps easily accessible to these girls of diverse racial backgrounds would be vital for capacity needs.

Moreover, if in the future another merger were to occur among Girl Scout councils, the other 5 camps that are located on the outskirts of the council boundaries might also become quite valuable in terms of shortening travel time to camps for the Girl Scout membership. Or, if partnerships among councils in the whole state of Ohio allowed for the use of camps across councils (possibly as a way to share resources, decrease travel time, and increase revenue), then all 7 camps would be highly valuable in serving the Ohio Girl Scout population as many of the current “inaccessible” camps might be located near population centers that are currently outside the designated GSNEO council. Furthermore, Great Trail Camp is very valuable in terms of travel time for the counties of Carroll and Tuscarawas, as it is the only camp that is within an hour driving time of both of these counties.

Other factors besides driving time are being taken into consideration over whether any camps should be closed by the Vision 2012 Property Committee. However, parents and children made it clear in the survey results that the ease of getting to camp in an hour or less is very important to them. It would seem that in the 21st century of busy parents and kids with many activities and hectic schedules, the ease of transporting children to camp should be a main factor in the decision over which camp to keep and invest money into. Catering to the needs of the membership in keeping travel times to a minimum by keeping the most accessible camps open would also seem to be beneficial to the GSNEO organization overall, as happy members are more likely to donate their time, money, and energy to an organization.

I. Background

In 2007 five Girl Scout councils (now called the old Legacy councils) in Northeast Ohio merged to form one council, called Girl Scouts of Northeast Ohio (GSNEO). GSNEO now oversees all Girl Scout activity in an 18 county area; these 18 counties include Ashtabula, Carroll, Columbiana, Cuyahoga, Erie, Geauga, Huron, Lake, Lorain, Mahoning, Medina, Portage, Sandusky, Seneca, Stark, Summit, Trumbull, and Tuscarawas counties. As part of the merger, GSNEO inherited all Girl Scout property previously owned by the five legacy counties. This included 13 camp properties and cabins. Most properties were owned by the Girl Scouts, although a few of the cabins were on leased land. After two years, GSNEO was legally allowed to begin evaluating their new property gained in the merger. This resulted in the announcement in the summer of 2009 that six properties were to be sold or relinquished to the original owner of the land, and two of the remaining seven camps were to be temporarily “mothballed” for one year until a decision was made in the summer of 2010 on whether the property would remain part of GSNEO.

The main reasons GSNEO cited for making these decisions included the high price of maintaining camp property, and the supposed decreased interest in camping by the membership. After this announcement, non-profit “Friends” groups were formed to try to save some of the camps that GSNEO threatened to close. A “Vision 2012 Property Committee” was then formed by GSNEO and tasked to research which camps (if any) should be closed and why. This committee created a matrix that included 11 factors to aid in the decision of which camps should close.¹ These factors included aspects about property costs and maintenance, property assets, programming, usage of camps, travel time to camps, revenue capabilities of camps, nearby resources to the camps, and unique features of the camps, among other things. This report will look in depth at the travel times to the seven camps by the Girl Scout membership in the 18 county Northeast Ohio area.

II. Problem Statement

GSNEO currently owns seven camps in the 18 county area they preside over. Two of these camps are partially closed as GSNEO decides whether to reopen them or close these camps permanently. The 7 remaining camps are; Camp Crowell-Hilaka in Richfield, Great Trail Camp in Malvern, Camp Ledgewood in Peninsula, Camp Lejnar in Leroy Township, Camp Pleasant Valley in Green Springs, Camp Sugarbush in Kinsman, and Camp Timberlane in Wakeman, Ohio. To better access the needs and desires of the Girl Scout membership, the Vision 2012 Property Committee distributed a

¹ <http://www.gsneo.org/media/114712/presentation%20-%20web.pdf>. Slides 17-20.

“Property Survey” to the Girl Scout membership. This survey was posted online for Girl Scout members to fill out and results were separated into children Girl Scout members (age 5-17) and adult Girl Scout members. Questions in the survey were asked pertaining to what people liked about camping and if they thought camping was important. It also asked participants to name their favorite camp and state how far from home they would be willing to drive to go to camp.

The majority response, both of children and adults, was that they would be most willing to drive up to 1 hour to go to camp, or take their daughters to camp (36% of girls and 41% of adults).² Therefore, in order to access the needs of the Girl Scout membership, this study used ArcGIS to calculate the number of Girl Scout members within a 1 hour driving distance of each of the seven camps. It also looked at how accessible each camp is to certain demographics of the Northeast Ohio population. These demographics included girls 5-17 years of age that are African-American, Hispanic, or Asian, and how many girls age 5-17 live in the 18 county area. The number of households with no wife or husband present and children under age 18 was also studied. These demographics were chosen because of the values of the GSNEO organization. In their 2007-2008 annual report, GESNEO cited the importance of having members of “diverse racial backgrounds” and beginning an “outreach campaign to our Hispanic communities”.³

III. Data Source and Description

Data used for this project included county information and GSNEO membership and survey information. Data for the counties included county boundary information of the 18 counties in question, and demographic data for each of these 18 counties (number of girls age 5-17), number of African-American, Hispanic, and Asian girls age 5-17, and the number of households with no wife or husband present with children under age 18. All the county boundary information was downloaded from www.census.gov. Also downloaded from www.census.gov were Tiger files that contained street networks for the 18 county areas. The number of children Girl Scouts and adult Girl Scout members in the 18 county areas were downloaded from the GSNEO website⁴ and obtained from Lynn Richardson. It was assumed that the number of Girl Scout members in each county was spread evenly throughout the county. Survey data was also obtained from Lynn Richardson. The counties with the largest Girl Scout membership are Cuyahoga, Lorain, Stark, and Summit counties.

² <http://www.gsneo.org/media/114712/presentation%20-%20web.pdf>. Slides 29-30.

³ <http://www.gsneo.org/media/1338/annual%20report%202007-2008.pdf>

⁴ <http://www.gsneo.org/media/9125/2010%20delegate%20nomination-election%20packet.pdf>. Slide 9.

IV. Methodology

The addresses of the seven camps were obtained and entered into a table in ArcGIS. County boundaries for Ohio were downloaded and the clip function was used to delete all counties except the 18 counties in question. Tiger files (street routes) were downloaded for each of the 18 counties and merged to form one tiger file. These files were reprojected from GCS to UTM in ArcCatalog. The Geocoding function was used to match the addresses of the seven camps with the tiger file and the 18 county shape file (Maps #1-2). Five addresses were matched using the geocoding tool, the two unmatched addresses were manually matched to the map. The street lengths in the tiger file were converted from decimal degrees to meters. A network dataset was then created from the 18 county tiger file in Arc Catalog (Map #3). In ArcMap, a network analysis was completed that was solved for 45 miles (assumed to be approximately 1 hour driving distance) from each camp (using the option “separate polygons per facility) (Map #4). Different speed limits for the roads in the network were not taken into account.

Demographic data was downloaded, cleaned in Excel, and joined to the 18 county shape file (Maps #7-11). Data from the GNES website (number of Girl Scouts per county, both children and adults) was also joined to the 18 county boundary shape file (Map #5-6). Then, the union function was used to create a union between each of the 7 network buffers (45 miles from each camp) with the 18 county shape file. This way, area weighted calculations could be performed to determine membership and demographic characteristics within 1 hour driving distance of each camp. This was done by dividing the new area of county union within the 45 mile buffer by the old area of the county, multiplied by the membership or demographic number for that county. Area weighted calculations were performed to determine the following within 1 hour driving distance of each camp; number of girls members, number of adult members, number of girls age 5-17, number of African-American girls age 5-17, number of Hispanic girls age 5-17, number of Asian girls age 5-17, and number of households with no husband or wife present and children under age 18. The summarize function was used to determine the total number within the 45 mile buffer from each camp. The data for each camp in the 45 mile buffer in each county are summarized in Table 1.

V. Analysis

Seven network buffers were created 45 miles from each of the seven camps to determine how many people lived within the desirable 1 hour driving distance. The first camp, Camp Crowell Hilaka in Summit County was one of two camps that had over 70% or more of the population demographic in

question to live within the buffer. Specifically the following live within a 1 hour driving distance of Camp Crowell-Hilaka; 70% of the total number of girl scouts in the 18 county area, 70% of adult members, 67% of girls age 5-17, 85% of African-American girls age 5-17, 73% of Hispanic girls age 5-17, 83% of Asian girls age 5-17, and 70% of households with no husband or wife and children under 18. Camp Ledgewood in Summit County has almost identical accessibility as Camp Crowell-Hilaka. For Camp Ledgewood, the following live within 1 hour driving; 71% of the total number of girl scouts in the 18 county area, 72% of adult members, 70% of girls age 5-17, 87% of African-American girls age 5-17, 70% of Hispanic girls age 5-17, 85% of Asian girls age 5-17, and 73% of households with no husband or wife and children under 18. The five other camps are much less accessible to the Girl Scout membership and to all girls age 5-17, girls of diversity age 5-17, and households with children under 18 and no husband or wife present.

Specifically, the other five camps are accessible to 34% or less of the Girl Scout membership. Camp Timberlane in Erie County is the next most accessible camp to the Girl Scout membership. For Camp Timberlane, the following live within 1 hour driving; 34% of the total number of girl scouts in the 18 county area, 34% of adult members, 30% of girls age 5-17, 38% of African-American girls age 5-17, 47% of Hispanic girls age 5-17, 35% of Asian girls age 5-17, and 31% of households with no husband or wife and children under 18 live. Camp Lejnar in Lake County is the next most accessible camp to the membership after Camp Timberlane. For Camp Lejnar, the following live within 1 hour driving; 30% of the total number of girl scouts in the 18 county area, 43% of adult members, 34% of girls age 5-17, 43% of African-American girls age 5-17, 34% of Hispanic girls age 5-17, 42% of Asian girls age 5-17, and 37% of households with no husband or wife and children under. Camp Timberlane seems to be somewhat more accessible to the Hispanic girls, while Camp Lejnar is more accessible to African-American girls and Asian girls.

The last three camps, Great Trail, Pleasant Valley, and Sugarbush are the least accessible camps, with Great Trail Camp the most accessible of the three. Camp Pleasant Valley, in Seneca County has the following statistics: 6% of the total number of girl scouts in the 18 county area, 5% of adult members, 6% of girls age 5-17, 2% of African-American girls age 5-17, 9% of Hispanic girls age 5-17, 4% of Asian girls age 5-17, and 5% of households with no husband or wife and children under 18 live within a 1 hour driving distance of Camp Pleasant Valley. Camp Pleasant Valley seems to be the least accessible of all the 7 camps. Camp Sugarbush in Trumbull County has the following statistics: 14% of the total number of girl scouts in the 18 county area, 16% of adult members, 16% of girls age 5-17, 10% of African-American girls age 5-17, 11% of Hispanic girls age 5-17, 7% of Asian girls age 5-17, and 15% of

households with no husband or wife and children under 18 live within a 1 hour driving distance of Camp Sugarbush. Great Trail Camp has the following statistics; 26% of the total number of girl scouts in the 18 county area, 24% of adult members, 25% of girls age 5-17, 16% of African-American girls age 5-17, 12% of Hispanic girls age 5-17, 15% of Asian girls age 5-17, and 15% of households with no husband or wife and children under 18 live within a 1 hour driving distance of Great Trail Camp. Great Trail Camp is the only camp within a 1 hour driving distance of people living in Carroll or Tuscarawas Counties.

VI. Conclusion

The two camps, Camp Crowell-Hilaka and Camp Ledgewood, both in northern Summit County are located closest to Cuyahoga County and the city of Cleveland, and therefore closest to the most populated region of the 18 county area. The greatest number of Girl Scout members, both girls and adults live in Cuyahoga County; over 7,000 girls and over 3,000 adults. Therefore, the final calculations showed that Camp Crowell-Hilaka and Camp Ledgewood are the most centrally and easily accessible camps out of the seven camps. These camps are also the most easily accessible camps for all African-American girls, Hispanic girls, and Asian girls age 5-17 in the 18 county area. These two camps are more accessible, for the most part, for more than double the amount of people than the other five camps. For instance, Camp Crowell-Hilaka and Camp Ledgewood are within 1 hour driving distance of 70% and 71% of the children Girl Scouts, respectively, while the other camps range in being 1 hour driving time from 6% to 34% of Girl Scouts age 5-17. Thus, it would seem that if either Camp Crowell-Hilaka or Camp Ledgewood were to be closed, and only one camp was accessible to over 70% of the membership, there would be a lack of facilities available for those that live within an hour driving distance of these two camps. Moreover, if GSNEO wants to expand their members of diverse racial backgrounds and introduce these members to camping and the outdoors, having two camps easily accessible to these girls of diverse racial backgrounds would be vital for capacity needs.

Moreover, if in the future another merger were to occur among Girl Scout councils, the other 5 camps that are located on the outskirts of the council boundaries might also become quite valuable in terms of shortening travel time to camps for the Girl Scout membership. Or, if partnerships among councils in the whole state of Ohio allowed for the use of camps across councils (possibly as a way to share resources, decrease travel time, and increase revenue), then all 7 camps would be highly valuable in serving the Ohio Girl Scout population as many of the current "inaccessible" camps might be located near population centers that are currently outside the designated GSNEO council. Furthermore, Great

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Other factors besides driving time are being taken into consideration over whether any camps should be closed by the Vision 2012 Property Committee. However, parents and children made it clear in the survey results that the ease of getting to camp in an hour or less is very important to them. It would seem that in the 21st century of busy parents and kids with many activities and hectic schedules, the ease of transporting children to camp should be a main factor in the decision over which camp to keep and invest money into. Catering to the needs of the membership in keeping travel times to a minimum by keeping the most accessible camps open would also seem to be beneficial to the GSNEO organization overall, as happy members are more likely to donate their time, money, and energy to an organization.

VII. Data Calculation Reflections

The only data readily available on the location of the Girl Scout population in the 18 county area is by county. Therefore, when conducting area weighted calculations, the number of Girl Scouts in each county was assumed to be spread out evenly throughout each county. If data was available at smaller levels, for instance if the number of Girl Scouts in each zip code or in each census tract were known, then calculations would be more accurate in determining how many live within 45 miles of each camp. Further, the driving time of one hour was assumed to be 45 miles, but the type of road was not taken into account. It would have been slightly more accurate to access the speed limits on each type of road in determining the one hour driving distance. However, since the 45 buffer from each of the seven camps was calculated in the same way, all buffers from each of the seven camps can be accurately compared to each other. Lastly, the tiger files for the 18 counties do not have street networks along Lake Erie, causing the 45 mile buffer to be slightly smaller than the county, even if it was within 45 mile of a camp. This caused a slight decrease in the calculations of the number of people within the 45 mile buffer in counties that lay along Lake Erie. For instance, the number of people within the 45 mile driving distance of each camp in Cuyahoga County was slightly underestimated due to the lack of roads along the lake.