Hot Springs, Arkansas
St. Patrick's Day Parade
Attendance Analysis

Prepared for Garland Good Government Group

Prepared by Worldwide Leisure Management LLC

March, 2012

Purpose

This document is provided at the request of the Garland Good Government Group to assess the true attendance level at the annual St. Patrick's Day parade in Hot Springs, Arkansas. This document was written independently by the consultant to provide the truest assessment of attendance at the parade as is possible.

2011 Photo courtesy of Hot Springs A&P Commission website

Background

Worldwide Leisure Management LLC

Worldwide Leisure Management LLC (WLM) provides consultative services to governments, companies and non-profit organizations around the world.

Worldwide Leisure Management and its affiliated operations have served investment houses around the world with critical advice and insight into the leading companies in the leisure industry since 2007. Additionally, the company has provided feasibility studies, marketing and management consulting and other support to operations and developments in the Southeast United States as well as the Midwest.

Worldwide Leisure Management has developed relationships with three of the world's top design companies in the leisure industry. These critical relationships help create the full service approach that has served the company's clients very well.

Additionally, through an affiliated company, Worldwide Leisure Management offers financing capacity for leisure properties. With relationships totaling more than $1 billion in assets, Worldwide Leisure Management can provide new and existing projects the funding needed to bring the projects to fruition.

WLM also serves the entertainment and recreation industry through affiliate participation for credit card charge analysis, virtual visit video presentations and on-line ticketing solutions.

Through its principal, WLM has provided management services to operations in nine countries, four continents and eight states in the United States.

2011 Photo courtesy of Hot Springs A&P Commission website

The Project Conception

WLM was contacted by Garland Good Government Group in late February, 2012, regarding the possibility of conducting an analysis of attendance at the St. Patrick's Day parade in 2012. This project is in no way intended to reflect negatively on the event but is intended as an effort to define the true make-up of the attendance and the possible impact this attendance is having on the local market. Apparently, during the aftermath of the 2011 parade, questions arose regarding the reported attendance levels which were deemed by many to be severely overstated.

After much discussion, WLM accepted the project from the Garland Good Government Group and a compensation program was agreed upon.

WLM has, therefore, devised the methodology for the analysis and worked with six local assistants to provide the fullest analysis of the attendance and comparisons to insure accuracy of the numbers.

2011 Photo courtesy of Hot Springs A&P Commission website

Methodology

The methodology of the study has taken several layers of confirmation into the analysis. They are:

1. Two individuals were charged with responsibility of counting the actual attendance at the site on the evening of the parade.
   a. Each person was charged with counting one side of the street.
   b. Two people began at the beginning of the parade and counted everyone who was present, attempting to insure all people were counted.
2. Two individuals were charged with responsibility of taking a 1% survey of the audience at the parade to determine their point of residency.
   a. So as to minimize disruption, the people were only asked for the county of residency. No other information was requested.
3. WLM provided photographic documentation of the size of the crowd.
   a. Photographs were taken from area buildings and from street level.
4. WLM measured the dimensions of the crowd and, utilizing standard calculations for the estimation of crowd size, confirmed the physical count of attendees.
   a. This was accomplished based on the on-site photography performed on the day of the parade.

All data gathered on the evening of the parade was reported to WLM which provided the calculations and totaling of all data.

Assumptions

The following assumptions were attributed to the study:

1. The vast majority of the audience will be in place by 6:15 p.m. Therefore, all counts and all surveys will begin to be conducted at that time.

2. Individuals residing in counties within a two hour drive of the event would not qualify as overnight visitors (tourists) for this application.

3. While the number of tourists present at the parade is reported, it is also recognized that there is a certain tourist audience already present in the community due to the Rebel Stakes race at Oaklawn and on-going tourist activity centered around Spring Break in the City of Hot Springs. These audiences would be present with or without the St. Patrick's Day parade.

4. The St. Patrick's Day Parade is a good event for the community that enhances the quality of life in Hot Springs, Arkansas. This event is neither diminished nor blemished by attendance fluctuations between years or the question of the total attendance on any given year. This is a "Chamber of Commerce" type of event that breeds goodwill with the residents and publicity for the community. It should be continued and supported regardless of the results of the study.

5. It is important to realistically and rationally estimate the numbers for given events to more effectively analyze the value of the event, efficiency in promotional activities and quality of the marketing expense relative to the limited number of dollars available.

Estimation of Crowd Size Standards

Bucks New University in the United Kingdom developed a visualizing standard for the estimation of crowd sizes. This is meant to give a frame of reference for the reader of the actual crowd density analysis. NBC TV is also planning to run a show featuring this work in the near future.

(Reprinted from the Bucks New University website)

"Visualising Crowd Density

We developed a 3D crowd visualiser for control room applications. This allows us to both train staff to identifying density from CCTV angles and to provide control room visuals for crowd build up during an event.

1 person per square metre

2 people per square metre

3 people per square metre

4 people per square metre

5 people per square metre

We use this tool to visualise complex sites - most recently for the Royal Wedding in London.

The tool was used extensively to plan the crowd numbers and density at key locations across London."

Source:

Prof. Dr. G. Keith Still FIMA

Senior Consultant - Major Events

G4S Professor of Crowd Sciences

Bucks New University. UK.

In the Hot Springs application, the 5 person per square meter standard is the maximum number to be expected in any particular location. Therefore, for the areas around Central and Bridge Streets, across Bridge Street and the area around Bridge and Malvern Streets, we will use the highest density. Then, as the crowd is

further from Bridge Street, we will use the density measures consistent with the visual evidence.

2011 Photo courtesy of Hot Springs A&P Commission website

Parade Route Capacity

Utilizing the formulas noted above, it is possible to establish a total capacity for the parade route. Please note the parade covers the following route:
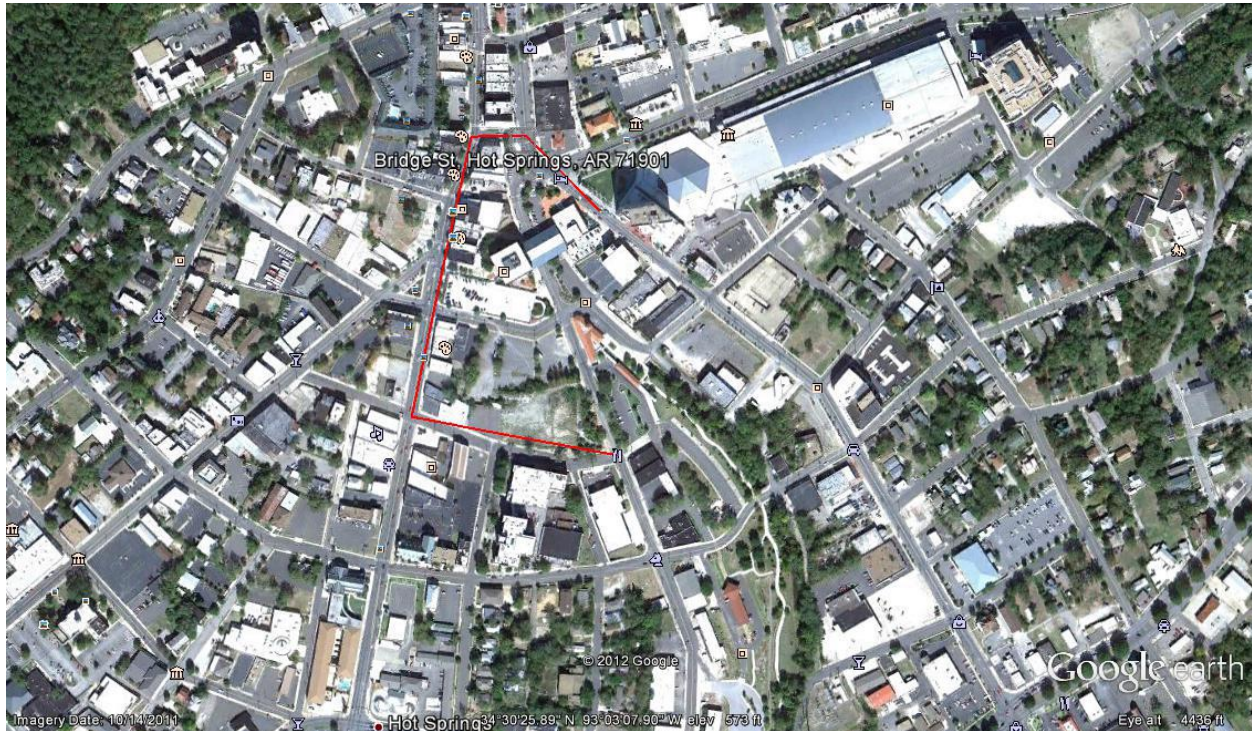

Photo from Google Earth

The parade follows the red line beginning at the Farmer's Market / Transportation Depot, proceeding West to Central Ave., turning right on Central to a right on Bridge Street and then a right on Malvern Ave. to the Austin Hotel. In total, this route is 708 meters long with approximately two meters of standing room on each side of the street for the length of the parade. The two meter depth is generous as there is pedestrian traffic that does move behind the crowds during the parade. This requires at least another 1.5 meters to accommodate the pedestrian traffic. At the standard 5 people per square meter, the total standing capacity, with every square meter full, is 14,160 people, assuming everyone stands within two square meters of the fence line.

However, in 2011, only about 355 meters held the crowds at any level close to capacity. Based on work with Dr. G. Keith Still on this project, if this space were

at capacity and assuming the additional lane of traffic is converted to pedestrian use on both sides of the road for the parade, the core of the parade would hold approximately 17,120 people with several hundred stragglers in the first 353 meters.

For this exercise, we are physically counting the entire crowd so we will have a very accurate accounting of the traffic.

2011 Photo courtesy of Hot Springs A&P Commission website

Results

Daytime Activities

Events were scheduled throughout the day at the Hill Wheatley Plaza and Malvern Street from the Plaza to Bridge Street. To gain an indication of the impact of these events, the crowd size was counted once or twice an hour. Then, to recognize the transient nature of the crowd at that time, we doubled the count to reflect people who may have come after our count or departed before our count. This crowd was primarily transient and spent little time in the area until around 4 p.m. when the major parade crowd began to arrive.

Per the schedule, the following events were conducted:

11:00 A.M. Entertainment District Opens – Hill Wheatley Plaza

2:00 P.M.   Pickled Beats, Irish Band Concert – Bridge Street Stage

4:30 P.M.   Blarney Stone Kissing Contest—Arkansas Blarney Stone

5:30 P.M.   Festivities Kick Off with the Famous Chicken – Bridge Street

6:25 P.M.   Measuring of the Parade Route – Bridge Street

6:30 P.M.   World's Shortest St. Patrick's Day Parade—Bridge Street

8:00 P.M.   38 Special Concert – Hill Wheatley Plaza

Crowd size during the 11 A.M. to 4 P.M. period rose slowly, as shown below. However, we also recognized that a percentage of visitors during this period would not be present during the parade. For presentation purposes, we have added this factor (Unique Visitor) as these individuals will not be duplicated in the attendance.

Time	Count	Adjusted	Estimated Unique
11- 12	20	40	24
12 – 01	97	194	97
01 - 02	212	424	170
02 – 03	273	546	164
03 – 04	351	702	140
Total	953	1906	595

In fairness, these individuals visited the site but were probably not included in the parade attendance. Therefore, they should be added to the final number.

Physical Attendance Count

The following are the results based on the empirical evidence garnered on March 17, 2012, in Hot Springs, Arkansas. Unadjusted Actual Attendance by Count was 7816. This included all counts of all areas of visitor attendance, including Central Ave., Malvern Ave and Hill Wheatley Plaza areas that were cut off from traffic but held visitors. Attendance was accumulated using Tally Counters per the methodology stated previously.

Photo courtesy of WLM, 2012

Residency of Audience

A total of 97 interviews were conducted representing 339 individuals, approximately a 4% sample of the total audience.

County of Residence Results

Residency	Count	Per Cent
Arkansas		
Within Two Hour Drive		
Garland	270	80%
Hot Spring	3	1%
Saline	8	2%
Pulaski	15	4%
Faulkner	4	1%
Pike	4	1%
Montgomery	2	1%
Clark	4	1%
Yell	2	1%
Total Local Market	**312**	**92%**
Beyond Two Hour Drive		
Sebastian	4	1%
Arkansas	3	1%
Benton	3	1%
Other States		
Texas	2	1%
Wisconsin	2	1%
Kentucky	3	1%
Mississippi	1	0%
California	4	1%
Michigan	1	0%
Kansas	4	1%
Total Overnight Market	**27**	**8%**
Grand Total	**339**	**100%**

Calculated Attendance

Estimated attendance by calculation used the formula as expressed previously. This total is intended to generously allow for all aspects of attendance and grants extra attendance for building occupants who may not be visible. To generate this calculated attendance, we photographically documented the parade site and identified volume of attendance at various points.

Photo courtesy of WLM, 2012

Until the parade reached Central and Market Streets, there was very little attendance present. For presentation purposes, we have generously applied a total of 350 people from the start of the parade route to the Central and Market intersection.

Photo Courtesy of WLM, 2012

Photo courtesy of WLM, 2012

From Market Street to the area near the Theater on Central, the average crowd size was approximately 3 people per meter and only one meter deep. This means that little space was occupied during the parade by the audience.
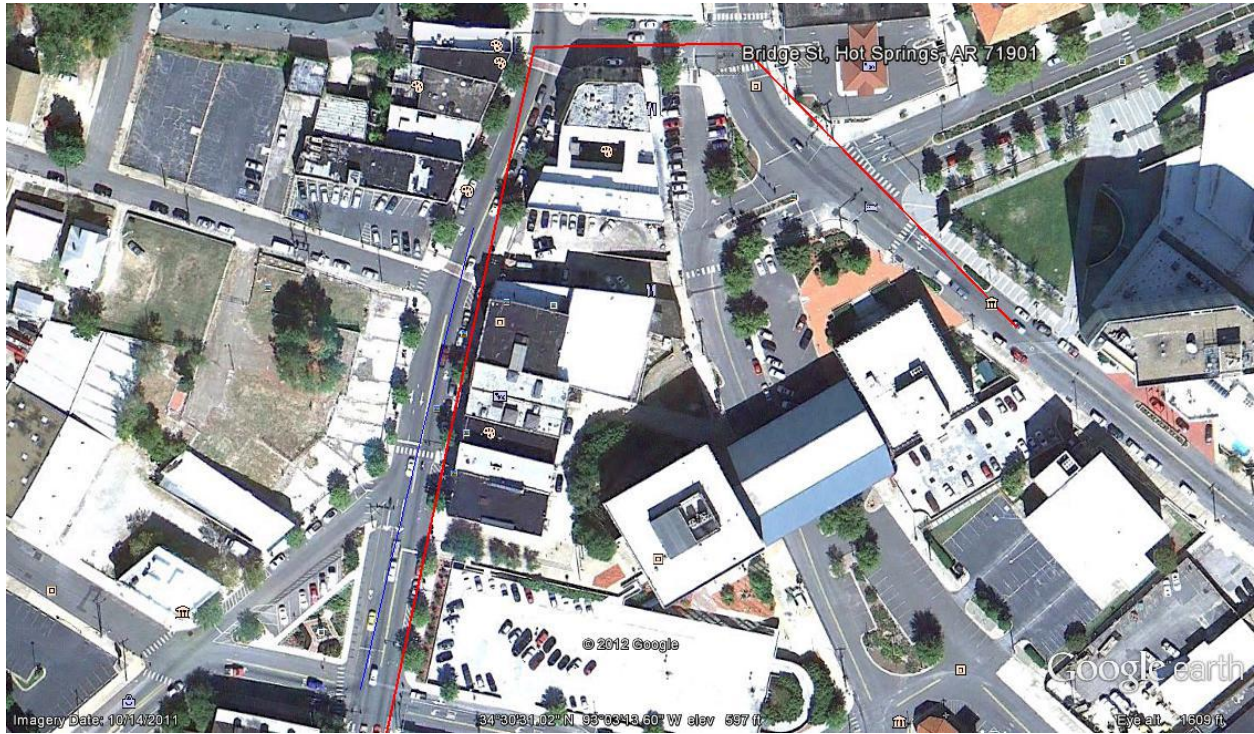
Courtesy of Google Earth, 2012

Parade route is red.

Total attendance for this section of the parade route is 798 persons.

As the parade approaches Bridge St., the crowds become much heavier and the density level increases dramatically. This is the area in the immediate vicinity of the start of the parade and parties and activities are visible in the buildings at this stage.

To fairly represent the crowd, while counting the visible people in the buildings and on patios in the actual count, we are allocating 500 additional people to insure we reflect all the people in attendance who may be watching from inside buildings whether visible from the street or not.

Along the sidewalks, on both sides, the audience lined up shoulder to shoulder but remained relatively shallow.

Photo courtesy of WLM, 2012

Photo courtesy of WLM, 2012

Therefore, the actual standing area was only about two meters dense with a moderate density level of 4 persons per square meter through to the corner of Bridge and Central. Total calculated attendance for this area is 1011 persons.

Photo courtesy of WLM, 2012

Bridge Street was busy on both sides with the crowd allowing a walking area for pedestrian traffic walking behind the bulk of the crowd. This area provided a relatively high density of attendance.

Photo courtesy of Google Earth, 2012

Photo courtesy of WLM, 2012

However, the sides of the street are not the same, due to the turn. Therefore, the north side of the street included up to 3400 people while the south side could hold no more than 990 people.

The plaza area by the Brickhouse ran with very low density throughout the event. At no time did the density level approach even 3 persons per square meter.

Photo courtesy of WLM, 2012

Therefore, this area held no more than 731 at any given time.

The run out of the parade along Malvern Ave. was lightly attended.

As can be seen in the photo, the crowd is sparse on the far side and shallow as well as fluid on the near side. This area averages about 1.5 meters depth per side with a density of about three persons per square meter, or a total of 173 people for the 57.5 meter length.

The length of the remaining run out had less than two people per square meter density. By the time the parade passed the Austin Hotel, there were no people remaining on the street.

Photo courtesy of WLM, 2012

Photo courtesy of WLM, 2012

The estimated attendance in this section totals 308 people.

Additionally, there were people on Central and Malvern outside of the immediate area of the parade route.

Photo courtesy of WLM, 2012

While part of this area of Central Avenue was counted in the previous total, this level of density behind the main crowd is consistent with one person per square meter. Given that this is an area of approximately 542 square meters, this volume totals about 542 people in this area.

On Malvern, the street crowd was about the same density throughout the area behind the primary viewing area. This area of Malvern totaled 939 square meters with approximately 940 people on the street, using the formulas.

Photo courtesy of WLM, 2012

Photo courtesy of WLM, 2012

Therefore, the parade route, itself, totaled approximately 9261 people in attendance by calculation.

An allowance is also given for additional people in the area who may have escaped count for one reason or another. These include people who may be by the large stage and people coming into or out of the site as the analysis is being done.

Concert Attendance

Following the parade, 38 Special performed in a special concert tied to the event. This event was heavily attended by teens, young adults and some middle aged individuals.

The crowd was on the hillside by the Federal Building and in the fenced concert viewing area on Hill Wheatley Plaza.

Photo courtesy of WLM, 2012

Additionally, there was a small crowd on Malvern Street between Bridge and the Hill Wheatley Plaza.

Malvern Street was at a very low density level, well below even one person per four square meters. While the hillside was at no more than one person per five square meters, the concert site itself held people at less than two people per square meter.

Photo courtesy of WLM, 2012

This calculates to approximately 194 people on Malvern Street, 105 people on the 421 square meters of grass at the Federal Building and 2762 people in the contained concert area in front of the stage in the Hill Wheatley Plaza, or a total of approximately 3061 people for the concert event in the evening. Of this total, it is estimated that no more than one-third were unique visitors for the concert.

Attendance Calculation

Based on the above, the estimated actual attendance for this event is as follows:

Attendance Count Analysis

Type of Attendance	Count	Formula
Daytime Unique Visitors	595	595
Parade	7816	9261
Related Party	500	500
Related Activity	0	200
Concert Unique Visitors	<u>1020</u>	<u>1020</u>
Total	**9,931**	**11,576**

Indeed, the difference between the two methods of calculating attendance indicates the validity of the count.

Calculations related to attendance were reviewed by Dr. G. Keith Stills who concurred with the methodology and the validity of the procedures and the results.

Summary

This document is not intended to demean the efforts of the volunteers for the First Ever Ninth Annual Shortest St. Patrick's Day Parade. Indeed, they have done a fine job of establishing and operating a good quality event for the community.

However, this document is designed to accurately reflect the impact of those efforts so that realistic goals and accomplishments can be recognized and appreciated by all concerned.

We look forward to further discussion of the facts presented herein.

Attachment A

Project Methodology Statements Per Position

Four Volunteer Positions

1. Start at beginning of parade route left side.
   a. Begin walking up the street from the beginning of the parade and follow the parade route.
   b. Using the clicker provided, count the number of people along the parade route to the best of your ability.
   c. Only count the individuals on your side of the street.
2. Start at beginning of parade route right side.
   a. Begin walking up the street from the beginning of the parade and follow the parade route.
   b. Using the clicker provided, count the number of people along the parade route to the best of your ability.
   c. Only count the individuals on your side of the street.
3. Survey left side.
   a. Start at the beginning of the parade and walk the parade route.
   b. Count the audience up to 100.
   c. Ask that individual to identify their county and state of residence.
   d. Using the forms provided, record the country and state of residence.
      i. Use a slash mark to record the counties listed.
      ii. Write in the names of counties not listed.
4. Survey right side.
   a. Start at the beginning of the parade and walk the parade route.
   b. Count the audience up to 100.
   c. Ask that individual to identify their county and state of residence.
   d. Using the forms provided, record the country and state of residence.
      i. Use a slash mark to record the counties listed.
      ii. Write in the names of counties not listed.
5. Photograph site from beginning to end.
   a. From the Brickhouse building, photograph the crowd to document the dimensions of the area covered by the crowd.
   b. From the ground, photograph the dimensions of the crowd perimeter.

Attachment B

Form For Recording Residency

County of Residence

County Name   State   Count

County Name		State	Count
Garland		Arkansas	
Hot Spring		Arkansas	
Saline		Arkansas	
Pulaski		Arkansas	
Other Arkansas		Arkansas	
		Arkansas	
		Arkansas	
		Arkansas	
		Arkansas	
		Arkansas	
		Arkansas	
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Tennessee			
		Tennessee	
		Tennessee	
		Tennessee	
		Tennessee	
		Tennessee	
		Tennessee	
		Tennessee	
		Tennessee	
Other States			

Other States Continued		State	Count

Other States Continued		State	Count