

Carrying the Tune of Sustainability  
Addressing Climate Change in Creative Ways

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## Executive Summary

The world is facing a host environmental issues that must be confronted sooner rather later. We are depleting natural resources at an alarming, using dirty fossil fuels to power our cities, producing massive amounts of waste, and destroying our ecosystems and biodiversity in the process. The solution is clear, we must move towards a more sustainable way of living in every part of our society, from the private sector to the public sector. In order to achieve this move towards sustainability, it is going to take partnerships between economic, social, and cultural entities. One promising partnership to arise is the partnership between the music industry and the environmental industry. Music reaches the masses and connects society in ways previously unimagined. The cultural and political significance of the music industry can move us towards a more sustainable future.

Music festivals are the showcase of the music industry and they bring together crowds of up to 100,000 individuals together for a period of several days. These individuals are generally open to an environmental message and as such the opportunity to promote sustainability through the music industry should be utilized to the fullest extent possible. This research analyzes four major music festivals in the United States – Bonnaroo, Coachella, Austin City Limits, and Lollapalooza – for their environmental and educational outreach initiatives. These music festivals are doing impressive things to reduce waste, curb reliance on fossil fuels, minimize audience transport, and educate festival goers in the process. The use of biodegradable plates significantly cuts down waste at festivals. Fueling generators on biodiesel and providing public transit and carpooling incentive curbs emissions. Most importantly, educating people about the environmental impacts of their activities, such as the destruction caused by plastics, and gets them thinking about how they can reduce their own impacts.

This research finds that festival goers are typically college-aged (77% of survey respondents) and have are of low-income (\$30,000 or less), reflecting their college-age status. Interestingly, these individuals are also highly likely to environmentally minded. 87% identify themselves as environmentally conscious. A full 92% of these individuals also believe that the music festivals they attend should become more environmentally friendly and are willing to pay more to see this happen. However, they are misguided as to who can play the greatest role in promoting the sustainability of festivals. The majority of emissions and environmental impacts are produced by audience members but 63% of survey respondents believed it was the role of the festival organizers to reduce impacts.

This research deals with how to realize the goal of creating more sustainable festivals and seeks to correct misperceptions about the source of environmental impacts at music festivals. The research seeks to do more than just promote sustainable festivals, it seeks to promote sustainable living through showcasing it at festivals.

*“After silence, that which comes nearest to expressing the inexpressible is music.”  
Aldous Huxley*

## Background

Music has been an integral part of my life for as long as I can remember. I’ve never been able to place my finger on why this is the case, its just something to which I have always felt connected. My early musical education was rooted alternately in the oldies and in classic rock; the oldies came from my mother and the classic rock came from my father, who played regularly in a band until I was about ten years old. I appreciated the oldies for its upbeat, feel good simplicity but it was the energy of rock guitar that I wound up gravitating towards. The expressiveness that people like Jimi Hendrix, Stevie Ray Vaughn, Eric Clapton, and Duane Allman could pull out of a guitar blew me away. It seemed like these people possessed a special power of communicating that went beyond words, and I remember thinking from an early age that I wanted their gift.

I got my first guitar when I was fifteen years old and I have explored creating music from that time forward. My own attempts at making music have given me a greater appreciation for the dedication needed to develop the skills to speak the language of music. Playing music has been a tremendous creative outlet and has served as a foundation for collaboration with friends. The collective experience of playing music with other people is an unrivaled satisfaction in my life.

The inspiration for my own playing was initiated from listening to music, but it was solidified by going to live shows, which my father took me to as often as possible. When I first started going to see live music I viewed it mostly as a fun outing with my dad. As I matured and began thinking in more complex terms I began to realize the power music had to create a

community in which individuals of all walks of life came together for a common purpose. My education in Urban and Environmental Policy has further enhanced my understanding of community and its central importance in our society and its impacts on political progress.

When it came time to decide on a senior comprehensive project, I saw an opportunity to merge my passion for music with my passion for environmentalism. Thinking back on my awareness of music as a tool to create community, I started to wonder how the community of music could be utilized to affect positive social change in the country. In brainstorming about the potential for using music as a community building tool that could translate to positive change, music festivals seemed like a natural fit for testing whether music can be an engine for change. Music festivals are special cases of music communities because massive crowds of individuals share a common living space, sometimes for several days. Through my own experience at music festivals, I noticed the trend of increasing sustainability and environmental initiatives at these events.

I went to my first music festival in the summer of 2005. The festival was one the largest summer music festivals in the United States, the Tennessee event known as Bonaroo. When I arrived on the festival grounds, I was overwhelmed by the diversity and scale of interests of the people who were in attendance for the event. Corporate sponsors, small time vendors, artists, and political activists from all over the country converged on the festival grounds with the hopes of piggybacking off the publicity and popularity of Bonaroo. On the festival grounds I remember running into the organization Clean Vibes, which held informational sessions on how to improve recycling methods and distributed literature on waste management practices. At the time I thought the organization clever for setting up a booth at the festival since I assumed festival goers to be a more receptive audience to the cause than most other venues.

Unlike corporate sponsors and vendors who were there to sell items for consumption, Clean Vibes was there to sell an idea. That idea was that individuals should be more aware of the impacts of their consumption on the environment. Clean Vibes was also selling the opportunity for attendees to get involved in working to diminish the negative impacts of consumption by asking people to volunteer with their organization. The notion of marketing environmentalism, in order to alter behavior and increase public participation, has begun to appeal to me greatly. In order to combat global climate change and shift towards cleaner and more sustainable energy, the environmental movement must have a broad base and attract individuals through creative means.

Currently, almost every major music festival on the circuit now runs its own green campaign and takes at least some measures to reduce the environmental impacts of holding their event. A question that has always been at the center of this observation is whether the promotion of green initiatives and public education campaigns at music festivals are actually effective social marketing tools. Music festivals attract large crowds of individuals sympathetic to an environmental message but whether those individuals become actively involved is another question.

This research explores the power that music has in our society and the ability of the industry to partner with the scientific and environmental communities to promote sustainable living practices and environmentally friendly initiatives. Studies investigating the link between sustainability and music are part of a relatively new and expanding academic field known as sustainable event management. The bulk of research related to the linkage between music and sustainability has been devoted to the question of how events can achieve sustainability. This research will explore not only the question of how events can become more sustainable, but also

why this trend is important and its potential influence on our society at large. Additional attention will be given to optimizing and expanding public education at music festivals.

## Methodology

The research is primarily concerned with the intersection of music festivals and the environmental movement. This research focuses both on the manner in which music festivals address environmental concerns by enacting their own green initiatives and the success with which they educate festival attendees and encourage alterations in behavior patterns. Of central importance is how music festivals can make themselves more green and sustainable while encouraging individuals to do the same. Music festivals represent venues that an environmental message is likely to find a receptive audience and the research seeks to discover ways to optimize the opportunity to make people more environmentally active. Five major music festivals across the country – Bonnaroo, Coachella, Austin City Limits, Rothbury, and Lollapalooza – were used as case studies exploring the link between environmentalism and music festivals. Primary research consisted of surveying individuals attending Coachella music festival and interviewing event organizers and environmental non-profits linked to the music industry.

Coachella music festival was picked as a primary research site because of its international renown and the timing of the event. Most major music festivals take place in the summer, and Coachella is the one that kicks off summer the festival season on April 16<sup>th</sup>. As such, it is the only event to take place at a time roughly coinciding August-April time frame of senior comprehensives. Ideally, surveys would have been conducted on-site with participants chosen at random from several locations by a survey team. Because of the timing issue, this was not a possibility. Instead, the survey was posted via the Coachella Facebook group and the Coachella

message boards hosted by [www.coachella.com](http://www.coachella.com), both popular online gathering places for fans attending the festival. Survey participants were asked to take an online survey which was hosted by the online platform Survey Monkey. The survey of festival attendees was used to derive demographic data, gauge predispositions to environmentalism, gather data on attendees transportation, and measure attitudes towards environmental education at festivals. Survey tools are attached (See Appendix 1).

### *The Problem*

We are rapidly depleting our Earth's non-renewable resources, polluting the environment, and producing obscene amounts of waste in the process. The environmental tolls of industrial activity have been tremendous. Biodiversity is declining rapidly, due to land use change, climate change, overexploitation, invasive species and pollution. Human activity has resulted in the loss of 35% of the world's mangroves and 20% of the world's coral reefs, with another 20% of coral reefs being severely degraded.<sup>1</sup> Species extinction is nearly 100 times the rate of natural extinction.<sup>2</sup> Agricultural land use has resulted in the devastation of natural habitats and reduced the capacity for the earth produce renewable resources. The waste and pollution that runs into our marine ecosystems is wreaking havoc. Presently, there is a "plastic soup" floating in the Pacific Ocean that is twice the size of the area of the continental United States, and the UN Environmental Programme estimates that for every square mile of ocean there are 46,000 floating pieces of plastic.<sup>3</sup> This plastic debris causes the death of over a million seabirds and 100,000 marine mammals every year.<sup>4</sup>

Our climate is likewise incurring impacts. The last decade has been the hottest decade recorded since measurements were first taken in 1850.<sup>5</sup> The level of CO<sub>2</sub> pumped into the

atmosphere has produced more severe natural disasters, increased droughts, and resulted in the melting of Arctic ice caps. Current levels of CO<sub>2</sub> in the atmosphere exceed the limit that scientists agree is a safe level for the atmosphere, an atmospheric CO<sub>2</sub> concentration 350 parts per million. The present atmospheric concentration of 390 parts per million is the highest concentration in history and the trapped greenhouse gases are melting glaciers, causing sea levels to rise, increasing the presence of mosquitoes that spread malaria and dengue fever, and intensifying drought periods.<sup>6</sup>

The scale of environmental issues that we must deal with is intimidating, but it is clear that efforts must be taken to address the problem. Fortunately, the notion that the Earth can withstand the negative environmental impacts of human activity indefinitely is beginning to fall by the wayside. There is increasing recognition of the fact that our Earth is a finite and closed system that is not able to cancel out rapid resource depletion and pollution. As global climate change and sustainability have come to the fore of our political debates and the need to take action deemed more urgent, the world has been forced to search out innovative means of addressing the problem. Solutions have come in a variety of forms, from carbon trading schemes to programs that promote carbon off-sets, from streamlining energy efficiency to switching to alternative and renewable sources.

The introduction of regulatory measures as a mechanism of combating global climate change has received greater recognition over the past decade. These regulatory mechanisms can be an effective tool for minimizing the environmental impacts of businesses and industries, but they address only one part of the problem. The environmental impacts of industrial activity can be devastating, but looking solely to industry as the source of the problem overlooks the detriment caused by society at large. Patterns of consumption and waste of the general population

are a significant source of greenhouse gas emissions and environmental pollution. An integral component to any strategy that seeks to seriously address climate change is the incorporation of a public participation strategy that can be coupled to regulatory mechanisms. One industry to step up to the plate has been the music industry.

### *In Search of a Solution*

As the world searches for solutions to the problems of climate change and environmental degradation, it is necessary to examine innovative ways of disseminating information and encouraging actions to be taken towards sustainability. The need for consciousness-raising has always been clear but the exact direction to take and the proper medium for bringing the issue of climate change to the consciousness of the world has been less clear. The environmental movement has realized success in getting their message out there by utilizing a variety of mediums from public actions to the much heralded documentary film, *An Inconvenient Truth*. That being said, there is still much work to be done, both in terms of educating people and in terms of reducing the environmental impact of the human race. The recent confluence of the environmental movement and the music industry represents a potentially promising venue for mass education campaigns and the showcasing of technologies that help mitigate the environmental impact of population activities. Music has the power to bring us together, to create a sense of unity between diverse segments of the population. The music industry also functions as ‘a centerpiece of the broader cultural sector’<sup>7</sup> with the capability to influence and inform our lifestyle choices. If the environmental movement plays its cards right, the power of the music industry can be used as a vehicle for the promotion of more sustainable lifestyle choices and thus act as a mechanism for addressing climate change.

The scientific community has been disappointed by the inability of countless reports with dismal predictions to prompt change on the scale required to address the environmental issues we must confront.<sup>8</sup> The reasons are complex and numerous but the inaction is at least partially attributable, according to thirty year climate scientist Diana Liverman, to the fact that scientists are not the best communicators and their predictions seem ‘distant and intangible’ from the everyday lives of the general population.<sup>9</sup> The fact that scientists have hit a brick wall in trying to communicate their findings to lay people is not surprising. The language of science is filled with jargon and technical discussion that is inaccessible to most who lack a scientific education. Policy makers, politicians, and environmental activists have attempted to fill the vacuum, and their efforts have been laudable, but public participation in addressing the problems still lags severely.

The widespread appeal of the music industry and its ability to reach millions of individuals is what makes the potential for partnering with the scientific and environmental community so exciting. The challenge of getting the public to participate in mitigating the environmental impacts of human activity is two-fold. There is the challenge of educating the masses about the problem, and then there is the challenge of letting them know what they can do about it. The music industry and music festivals can act as a catalyst in both areas by giving individuals, who come together for the purpose of music access, to information they may not encounter otherwise, providing suggestions for simple lifestyle changes that can help reduce their impact, and leading by example.

## *Partnership Potential*

The present incarnation of the environmental movement, referred to as “new environmentalism,” puts local people at the center of environmental strategies. The recognition of individuals at the local level may carry some of the greatest power to address environmental concerns.<sup>10</sup> The decision to emphasize local actions and strategies, in order to bring about environmental change, places much of the responsibility for achieving improvements in the hands of the individual. We cannot sit around and wait for governments to act; we must force the change that we want to see. New environmentalism realizes the power of community as a building block for constituencies that can counteract the vested interests of individuals who would like to stymie the environmental programs.<sup>11</sup> While the movement values the importance of community, it also recognizes that the private sector plays a role in promoting environmentally sound decision making and should be worked with instead of against. In short, it tries to take the idealism of the early 1960’s environmental movement and balance it with a practicality that understands that not every compromise is a bad one.

One of the most prominent and successful campaigns that the new environmental movement has engineered is the campaign to raise awareness about the importance of buying local and “going green.” The concept of “living green,” or living in a way in which your impact on the environment is minimal, is a long-touted mantra of the environmental movement, but over the last decade or so the notion of green living has swept through mainstream society. The “go green” and “buy local” movements are essentially consumer movements in which individuals have spoken out against the neoliberal tactic of outsourcing production of US corporations to third-world countries, in the pursuit of cheap labor and loose environmental regulations. The movement has not only spoken out against injustices and environmental degradation abroad, but

has also focused on the domestic issues. Their platform of thinking local and going green has caught on so well, at least in the promulgation of the idea that corporate interests have sought to revamp marketing campaigns and strategies to adapt to changing consumer demands. The rise of the green business image is a testament to the success of the environmental movement in spreading their message. The pervasion of the green image can be seen throughout our society. It is at the grocery store with everything from water bottles to cleaning products claiming to be green. It can be seen in the attempts of ExxonMobil to launch campaigns cleaning up its image by tying itself to renewable energy. It is also signaled by the growth of the business websites such as Greenbiz.com which aggregates green business and provides consumer advice on how to be and shop green.

The music industry has been at the forefront of promoting the green image and incorporating green marketing into advertisements. This is both a promising development and one that merits proceeding with caution. It is promising in that it links environmentalism and a sustainable way of life with a cultural epicenter. It merits proceeding with caution because there is the chance that the industry could just be “green washing.” Green washing is the term used to denote a company or industry that is using the green image as a mechanism for attracting additional consumers to their company in order to increase profits, without fulfilling the true meaning of being ‘green.’ An additional caution that warrants fleshing out is the fact that the music industry and consumer preferences are often fickle and easily changed. Green is the flavor of this month, but what about next month? Incorporating staying power into the movement is one of the most important aspects that needs to be addressed, if the partnership between music and environmentalism is going to bring any reward.

The music industry has generated its most significant connection to environmentalism and sustainability through the promotion of music festivals. Since the connection between the music industry and environmentalism is a relatively new phenomenon, there is a relatively sparse body of literature that investigates the industry's claims of shifting towards more sustainable practices. The most significant body of research to speak to the connection between environmentalism and the music industry comes from abroad in the UK, where the environmental non-profit Julie's Bicycle has put numbers to the industry's green-house gas emissions and developed a guide for mitigating those impacts.<sup>1</sup> Julie's Bicycle's *Green Music Guide* analyzes every sector of the music industry in the UK and estimates the level of CO2 emissions that tours, venues, records, productions, live events, and music festivals are responsible for. The work of Julie's Bicycle will be discussed in detail later in the paper. For now, it suffices to mention that no such study has or guide has been generated in the United States. This research will attempt to partially fill the gap in the research by investigating the festival scene in the United States. Of particular interest are the role the music festivals can play in education campaigns, the best practices employed by festivals, and the degree to which festivals live up to their newfound sustainable image with attention paid to how they can better live up to their newfound sustainable image.

Music festivals are a venue in which tens of thousands of people are brought together for the common cause of experiencing something larger than themselves. Music festivals are often tantamount to a temporary city and the convergence of such large audiences represents an opportunity to capitalize on more than just dollars; it also represents an opportunity to capitalize on social change. If the environmental movement can appropriately harness the power of the

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<sup>1</sup> Full report available at <http://www.juliesbicycle.com/resources/green-music-guide>.

music industry and use it to spread its message, it can be a key influencing factor in the campaign to reduce climate change. Achieving this will require a dedication to enacting the changes that will lead to a more sustainable future, advocating for environmental policies, and educating the masses of potentially being open-minded. Ultimately, these people should be mobilized for more than a good time; they should be mobilized for a good cause. Mobilizing individuals through music is not an entirely new notion, in fact music has been intertwined with social movements throughout our history.

### *Music in Social Movements*

Music is a collective art form that is an inherently social enterprise. Through its very performance, music creates a community involving the composer, interpreter, and listener.<sup>12</sup> As music is produced by the artist(s), it is received and interpreted by the audience and given a meaning which may be the one the artists intended or one entirely the listener's own. Music brings people together in ways previously unplanned, whether it is musicians finding a collective rhythm and musicality or strangers in an audience locking arms and belting out the words to their favorite song together. This collective and community generating nature of music lends itself naturally to being incorporated into social movements to raise awareness about an issue or to enhance the sense of unity and cohesion between individuals participating in the movement. In the context of social movements, music has been utilized to express underdog status, express the social solidarity of a group that stands to benefit from the movement, and to convey a partisan movement viewpoint.<sup>13</sup>

The American blues is a classic example of “underdog music,” in which the African American community found creative ways to channel their despair and frustrations with the

inequality of society into a music that conveyed that pain and brought the culture together.<sup>14</sup> The role of underdog music can raise awareness of an issue and create a sense of unity that precludes an actual social movement. This form of music also seeks to unify a class of people from the dominant norms of society and/or to create an alternative and “off beat” culture that rejects the values of mainstream society. The culture of the blues certainly applies to this categorization but the beatnik generation is perhaps a more apt example, because it carried with it a more explicit political and cultural unorthodoxy than the blues scene. The beatniks defied the modern day conventions of sexuality, gender, and race both in their culture and their music.

In active social movements, music has been a major factor in expressing a sense of social solidarity for those involved in the cause. Perhaps the greatest example of the expression of solidarity arises out of the tumultuous sixties in which social movements seemed to abound. That decade saw movements for civil rights, gay rights, women’s rights, and the environment. An entire cultural revolution emerged as the rock n’ roll revolution swept the generation and the music reflected and encouraged those changes in society. One of the most prominent songs of social solidarity for the civil rights movement was the old Negro spiritual “We Shall Overcome,” which had been used in other social movements but was re-popularized by the Highlander Folk School.<sup>15</sup> The song of perseverance helped instill hope in the movement during trying times. Other notable examples are Bob Dylan’s “Only Pawn in Their Game” and Sam Cooke’s “A Change is Gonna Come.” “Only Pawn in Their Game” tells the story of the assassination of civil rights leader Medgar Evers and was performed by Bob Dylan at the March on Washington in 1963.<sup>16</sup> Sam Cooke wrote “A Change is Gonna Come” after Malcolm X’s death to express the urgency for the country to realize change. These songs spoke to the hearts and minds of those involved in the movement and functioned as anthems behind which they could rally.

Music can also be used to spread a partisan message in social movements. The Granters and the Populists used the style and fervor of religious hymns and adapted them to their platforms.<sup>17</sup> Socialists used widely known religious melodies and added a socialist message for the words. Finally, communists adopted folk music to spread their message. Each group sought to capitalize on the familiarity of music and its ability to spread messages, in order to bolster their political ideologies.

The use of music as a tool in social movements enjoys a long lived tradition. The examples discussed are primarily ways of generating support for movements or raising consciousness to a social movement. The performance and content of music is an integral part of promoting political activism, but to discuss the music alone is to disregard the importance of the venue and the event. The role of the venue and the event in political activism is as equally important as the content of the music itself. One could imagine quite a difference response to Bob Dylan's "Only A Pawn In Their Game" if he had performed it at a rally sponsored by the Conservative Citizens Council instead of the March on Washington, not that the CCC would even consider letting him through the front door.

### *Concerts for a Cause*

The mega-event was born on August 15, 1969 as roughly 400,000 people converged to a dairy farm in the middle of the quiet town of Bethel, New York, roughly fifty miles south of the better known town of Woodstock. For the purposes of this paper, a mega-event refers to a one-time large scale event that draws over 200,000 people. Woodstock was a music festival to be sure, but its massive cultural and historical significance makes it an event that is more than just a music festival. Woodstock Music & Arts Festival is undoubtedly the grandfather of all mega-

events with the fanfare it attracted making the festival grounds the second-largest city in New York, at least temporarily.<sup>18</sup> While the event was not billed as an overtly political music festival, a political interpretation of the event arose a few days after the festival had ended: Woodstock was representative of the eruption of a new class – the Youth.<sup>19</sup> The event has come to be synonymous with the rebelliousness of the sixties and the anti-war movement of the seventies, an iconic moment that seemed to define a generation. Although Woodstock itself was an anti-commercial enterprise (entry became free after festival organizers realized they would not be able to contain the unexpectedly large crowds), it “ushered in the big business/mass media culture of the contemporary era.”<sup>20</sup>

Woodstock managed to be a mega-event with political implications, without attempting to do so. The mega-events that have followed in the wake of Woodstock have sought to refine the model of the music festival and to disseminate an inherent political message. The next truly mega-event to come after Woodstock increased the audience by ten-fold, reaching 400 million people with the power of modern media and the television. Live Aid was held on July 13, 1985 as two simultaneous concert events, one in London and the other in Philadelphia, to raise money and awareness for the victims of famine in Ethiopia. The event brought international attention to the situation in Ethiopia and raised \$67 million in aid to help relieve hunger in the region.<sup>21</sup> Live Aid is the event that is thought to have politicized mass music.<sup>22</sup>

Live Aid is just one of several major music events that has been organized for a purely political purpose. Farm Aid, an event held in September of the same year, was thrown for the purpose of calling attention to the impacts of corporate agribusiness crowding out small family farmers from competition. The themes of Farm Aid were “keep America growing” and help “the men and women who feed us all” and the event focused the eyes of America on the farm crisis

that was deepening in the country. John Cougar Mellencamp, Neil Young, and Willie Nelson, the performers responsible for organizing the first Farm Aid event, have turned Farm Aid into an annual event with the help of local and national activists.<sup>23</sup> Over its 24 years of existence Farm Aid has reached audiences of up to 66 million, raised \$36 million to provide relief to family farmers, helped promote the Good Food Movement, and provided a networking system for linking activists to the cause.<sup>24</sup>

Other notable benefit events of the era include, but are not limited to, the Amnesty International Conspiracy of Hope concerts which occurred in 1988 and covered 20 cities, the *Sun City* album released by artists against apartheid, and the Mandela Tribute which called for the immediate release of Nelson Mandela and a boycott of South Africa and its apartheid regime. Each of these events concentrated focus on issues in a way that people who might otherwise have remained ignorant became informed. The benefit concerts of that era fused politics with music in a way previously unparalleled.

The fusion of politics and activism in mass music has endured into the millennial generation. In fact, events have only become larger and more politically savvy. Live8 and Live Earth are the two most prominent examples of recent times. On July 2, 2005 the organizers of Live8 coordinated an amazing 10 venue concert event that featured 1250 musicians and reached an audience of 3 billion people.<sup>25</sup> The event was thrown for free and billed as a campaign to “make poverty history.” Live8 asked the audience not for money, but to contribute their names to a list that was to be presented to Tony Blair in the time leading up to the G8 conference. Over 30 million people committed their names to the list in order to demonstrate their stance against poverty. The organization is now in the process of tracking the promises of G8, such as the promises increasing aid to Africa by \$50 billion per year by 2010 and providing AIDS drugs to

38 countries as well as keeping individuals informed about what they can do to help organize and make the politicians live up to their promises.

One of the most recent mega-events to be put on was Live Earth which occurred on July 7, 2007. Live Earth was the first mega-event to be thrown for the specific purpose of raising awareness about climate change and mobilizing people to combat it. The event featured “24 hours of music across 7 continents” and reached 465 million viewers.<sup>26</sup> The event organizers, among them Al Gore, generated alliances with The Climate Group, Alliance for Climate Protection, and several other international organizations, in order to keep their campaign going beyond the concert, with the hopes of impacting future public policy. All of the mega-events that have explicit political agendas and start from the premise that music can transcend social and cultural barriers to function as a medium for raising awareness and activism are important to this study. However, Live Earth is of specific importance because the political agenda directly related to the issue of using music as a vehicle for creating more environmentally sustainable lifestyles. The connection made by Live Earth, between music and environmentalism, is not unique and there is now a growing body of scholarship and industry initiatives that tackle the questions of sustainability and climate change from a perspective that transcends the mega-event. Spreading a message through a music festival that takes place annually may prove to be more fruitful than one-time gatherings.

## *The Emergence of a Festival Industry*

The music festival scene can actually be traced all the way back to the 1950's with the Newport Jazz Festival and its sister event the Newport Folk Festival.<sup>27</sup> These events had a devoted following but were relatively small gatherings, due to the limited appeal of narrow musical interests. The modern outdoor music festival got its start with the Monterey International Pop Festival, which was held for the first time in Monterey, California in June of 1967. The music festival in Monterey came a full two years before Woodstock but received much less critical acclaim and less cultural and historical significance has been attached to the event. As such it is not entirely appropriate to refer to the event as a mega-event in the way Woodstock can be defined. Woodstock is thought of as a defining moment in music and culture, Monterey is technically the first large scale music event of its type but it is not thought of a defining moment. Still the Monterey International Pop Festival drew a crowd of roughly 200,000 over a period of three days by offering a diverse line-up of folk, blues, rock, soul, and R&B artists. The event featured artists such as The Who, Jimi Hendrix, Janis Joplin, and Otis Redding and was the first large-scale charity event with all performers playing for free. The racially diverse lineup was a significant success given the state of the country during the sixties. Thirty years later, the recordings, film, and memorabilia from the concert are still producing revenues for the non-profit foundation MIPF.<sup>28</sup>

Since the seminal outdoor music events of the sixties, music festivals have proliferated across the country tremendously. Today there are roughly 100 US music festivals, thrown over the summer of every shape, size, and musical taste. Roughly 20 of those events can be considered major productions, events that draw at least 30,000 people. As the table below shows, the

production of these events is consolidated into a small number of event producers who maintain the rights to the music festivals.

Figure 2.1

**AEG leads surge of new festivals**

Group	Festival	Location	Date	Producers	Status
AEG Live	<b>All Points West</b>	Liberty State Park Jersey City NJ	August 8-10	AEG Live/ Goldenvoice, Liberty Events	Definite
	<b>Rothbury Festival</b>	Double JJ Ranch, Rothbury MI	July 3-6	Madison House Presents, AEG Live	Definite
	<b>Mile High Festival</b>	Commerce City CO	July 19-20	AEG Live	Uncertain
	<b>Other:</b> Coachella, Stagecoach, New Orleans Jazz Fest				
Superfly	<b>Outside Lands</b>	Golden Gate Park, San Francisco CA	August 22-24	Superfly, Another Planet	Definite
	<b>Other:</b> Bonnaroo, Vegoose				
Live Nation	<b>Vineland Festival</b>	Vineland NJ	August 8-10	Live Nation/ Festival Republic, C3 Presents	Postponed
	<b>Unnamed</b>	Pemberton BC	July	Live Nation	Rumor
	<b>Other:</b> Sasquatch, Lollapalooza, Austin City Limits				
Festival Network	<b>Whistler Music &amp; Arts</b>	Whistler BC	July 19-20	Festival Network	Details to come
	<b>Jackson Hole Musc &amp; Arts</b>	Jackson Hole WY	?	Festival Network	Details to come
	<b>Other:</b> JVC Jazz Festivals, Newport Folk, New Orleans Jazz Fest				

The case studies used in this research are not nearly the size of Woodstock but all draw considerable crowds. The four major festivals used as case studies – Bonnaroo (Manchester, TN), Coachella (Indio, CA), Austin City Limits (Austin, TX), and Lollapalooza (Chicago, IL) – draw between 60,000 and 225,000 individuals. Bonnaroo tops out at 80,000 because they sell only multi-day passes. Coachella has a maximum daily capacity of 60,000, if tickets sell out for every day they draw a maximum crowd of 180,000. However, Coachella recently switched to the format of Bonnaroo and sold only multi-day passes this year, capping their capacity at 60,000. Lollapalooza and Austin City Limits have capacities of 75,000 a day and 65,000 a day, drawing maximum crowds of 225,000 and 165,000 respectively. Rothbury, used as a case study for their

environmental initiatives draws a crowd of 35,000. At each of the festivals it is typical for upwards of 100 bands to be showcased over the three or four day period of the festival. As will be demonstrated, these festivals aren't just big gatherings, they're big business.

### *The Economics of Live Events*

The days of musicians and event organizers putting on shows for free are not entirely lost, but a music lover these days would be hard-pressed to attend an experience similar to Woodstock or the Monterey International Pop Festival at no cost. Today's festivals are put on by large corporations that understand how to turn a profit and how to protect and market their good. The degree of commercialization of the music industry can be seen through comparing the economics of Woodstock to today's live music event industry. Woodstock was put on by a couple of venture capitalists who wanted to do something creative with their money. Ultimately, they wound up losing a couple of million dollars because of an inability to properly coordinate all the logistics necessary to make the event run smoothly. They also had the problem of a few hundred thousand more people showing up than they anticipated. Coachella, however, is put on by AEG Live, a corporation that grossed over \$1 billion last year by putting producing live shows.<sup>29</sup> Because AEG Live is not a publicly traded company, extensive financial information is not available so it is impossible to know the true scope of the corporation. On the other hand Live Nation, which merged with Ticketmaster earlier this year to create the world's largest live venue and ticketing agency, is a publicly traded company and their annual financial report to stakeholders can

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<sup>2</sup> Source: <http://festivalpreviewrock.blogspot.com/2008/03/year-of-mega-festival.html>. \*C3 Presents recently took up operations of Austin City Limits and Lollapalooza

indicate for us the scope of the industry. Between AEG Live and Live Nation, the two companies put on fully half of the festivals listed in Figure 2.1.

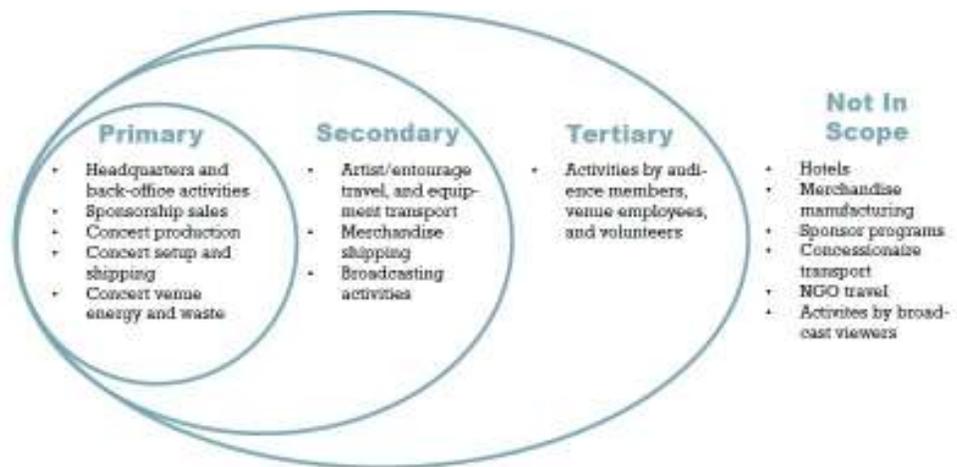
The merger between concert behemoths Ticketmaster and Live Nation was such a large undertaking that it spurred a Department of Justice (DOJ) antitrust investigation. A brief profile of each company makes it fairly obvious as to why. Ticketmaster, located in West Hollywood, CA, is the world's largest ticket retailer selling 140 million event and sporting tickets a year from 7,100 retail centers and 20 call centers with holdings in more than 83% of major venues.<sup>30</sup> For the fiscal year 2008 the company employed 5,800 individuals and reported revenues of \$1.4 billion.<sup>31</sup> In 2008, Live Nation generated revenues of \$2.7 billion in North America alone, a 65% increase over the last three years, by producing over 10,000 live music events.<sup>32</sup> The company generated another \$1.4 billion dollars internationally through the production of 4,000 live music events.<sup>33</sup> For the fiscal year 2008, Live Nation incurred operating expenses of \$3.2 billion, leaving a hefty profit margin.<sup>34</sup> Over the course of 2008 Live Nation employed 4,700 full-time employees, 4,800 seasonal and/or part-time employees.<sup>35</sup> During the same year, Live Nation booked over 1,600 artists for events attended by 57 million fans.<sup>36</sup>

The merger between Ticketmaster and Live Nation passed the DOJ investigation with the stipulation that it share its ticketing technology with leading competitors AEG and Comcast Spectacor.<sup>37</sup> The negotiation also stipulated that Live Nation could not retaliate against venues that left the company for an industry competitor. While these may be tokens of good faith, no other company comes close to touching the power of Live Nation and Ticketmaster in the live music industry. The merger may not have created an outright monopoly in the industry but the newly merged corporation will have its hand in every pocket in the music industry with an ability to book concerts sell tickets and merchandise, and manage artists under one roof.<sup>38</sup> This classic

example of vertical integration demonstrates the tremendously increased level of economic awareness and efficiency in the live music industry.

Since the ‘peace, love, and music’ of the 1960s, much has changed in the events industry. Firstly, the variety of music has been diversified to reach as many different categories of music lovers as possible. It is now commonplace for hip-hop, indie rock, electronica, reggae, country, and folk musicians to appear at the same music festival. Secondly, many of the large outdoor events that are held today are not onetime events but annual gatherings. There now exists an entire festival circuit that begins in early April and ends roughly in October, at least as far as the major festivals are concerned. As the festivals have grown in number, so has the scale of interests involved in working at the festivals. Logistically speaking, it requires a whole sleuth of individuals to make a music festival happen. Live Earth created a set of parameters to include those involved in making an event most sustainable. The diagram of individuals that are involved in making an event more sustainable is shown below. This report follows the same guidelines.

### Actors Involved in Making an Event Sustainable



Source: Live Earth. *Carbon Assessment & Footprint Report*, 2007.

Event organizers and producers have considerable headaches trying to balance all of these logistical requirements, which is part of the reason that major music festivals are once a year events. For those can manage to run the event down to science, the reward is significant pay offs. Apart from logistical requirements there are significant costs associated with an event. The below diagram gives an idea of the proportional distribution of cost inputs.

### Cost Inputs for a Typical Touring Act



IMAGE: © AP Photo 3

Over the last decade, the live music industry has been one of the few bright spots in the music business. Although record sales have slumped in the digital age, North American concert revenue hit a record \$4.4 billion in 2009, a 10% increase over the year before.<sup>39</sup> Music festivals are special instances of live music events in which audience members gather in crowds ranging from 12,000 to 120,000 over either a full day or multi-day event. Music festivals are popular with audience members because they package a wide range of artists to be seen in a short time period, for a *relative* bargain. Relative is stressed because ticket prices for the largest festivals range in the \$200 to \$300. However, considering the fact that big name artists can easily draw ticket prices upwards of \$100 it is still a cost effective way of attending concerts. Promoters and event organizers are partial to festivals because they have lower costs associated with producing the event and maintaining the site.<sup>40</sup> In fact, event organizers who successfully pull off a music festival realize an average profit margin near 30%.<sup>41</sup>

Setting up a music festival the size of a Coachella or Bonnaroo is economically more feasible than taking an act of such scale on tour. It's much cheaper to produce an event with 100 different bands if you have to build the stages and sets only once and have the people come to you. However, funding an event of such magnitude also takes more everything. In the words of Marc Greiger, senior vice president of live music producers William Morrissey Agency, "it takes more upfront capital, more financing, more site planning, and more market planning."<sup>42</sup> The production costs of putting on an event like Coachella can run up to \$12 million, a significant investment for the production of a single event.

It may take more to put on a festival, but it gives more too. Coachella ticket sales brought \$17 million in 2007 and \$11 million the year before.<sup>43</sup> Bonnaroo posted similar ticket sales

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<sup>3</sup> For a music festival, the proportions remain roughly the same but the scale of the costs increases dramatically.

numbers and Austin City Limits brought in roughly \$12 million.<sup>44</sup> Assuming that the 30% profit margin average holds true for these festivals, Coachella and Bonnaroo netted profits of \$5.1 million and Austin City Limits profits of \$3.1 million. The upfront costs may be significant but bringing in more than a million dollars a day is well worth the endeavor. The existence of such generous profits has attracted investors, with a cool \$12 million to spare, onto the festival scene, hoping to grab a piece of the pie. However, having enough money to finance a festival does not ensure a successful event much in the same way that having enough money to buy a professional sports team doesn't ensure a winning record. In the today's tough economy many offshoot music festivals have folded as they have realized that expensive upfront costs could translate to an expensive loss. That being said, the mainstays of the US music festival circuit seem to be rather healthy.

Coachella, Bonnaroo, Austin City Limits, and Lollapalooza all appear poised to remain in business for quite some time. Rothbury, which is used as a case study for its greening policies in this research, made the difficult decision not to hold the festival, citing timing issues and an inability to book the talent expected.<sup>45</sup> It is very likely that Rothbury, an event held for only two years, felt economic pressures as well as timing issues and got squeezed out in a saturated market. Although 2009 ticket sales for Rothbury bested the inaugural event's ticket sales by 25%, bringing attendance to 35,000 for that year, ticket sales leading up the festival were lagging behind and promoters most likely did not want to risk losses.<sup>46</sup> On the other side of the fence, Bonnaroo and Coachella each saw great ticket sales with Coachella selling neck and neck for the year before and Bonnaroo realizing a 15% increase in ticket sales.<sup>47</sup> Even as economic news gets

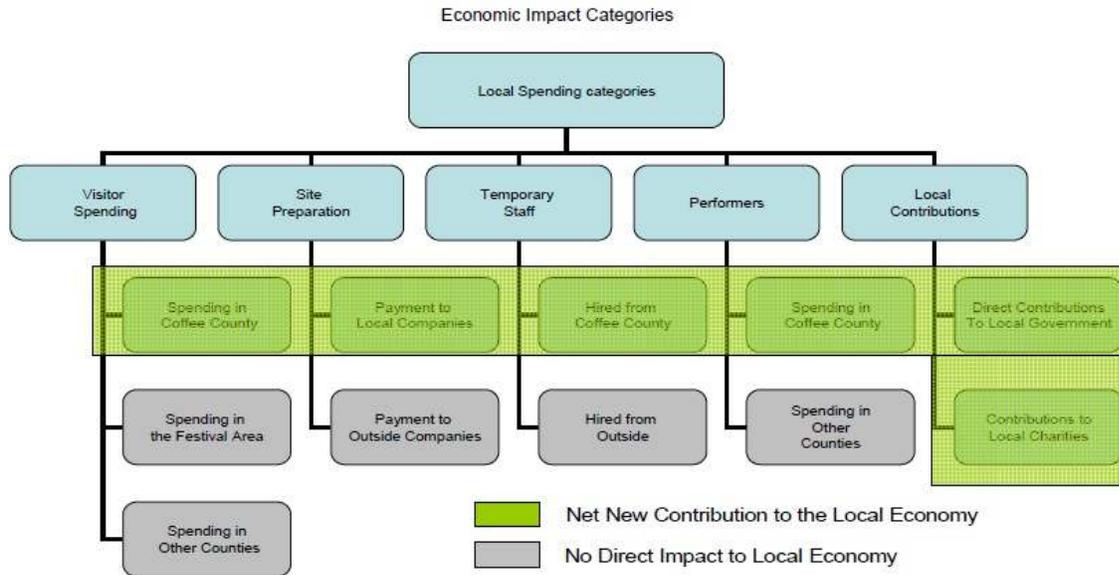
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Source: [http://www.forbes.com/2008/08/08/concerts-festivals-music-forbeslife-cx\\_dr\\_0808travel\\_2.html](http://www.forbes.com/2008/08/08/concerts-festivals-music-forbeslife-cx_dr_0808travel_2.html).

more and more dire, individuals seem to be prepared to shell out a pretty penny for this type of entertainment, indicating the irresistible urge to have fun regardless of the tough times.

### *Community Benefits of Festivals – Cashing In*

While there are very few production companies out there that are capable of putting on a major music festival, the profits of a music festival are not necessarily limited to the pockets of promoters, producers, and sponsors. The host community also enjoys considerable kick-backs as a result of allowing the festival to take place in their hometown. Most towns aren't too keen to lease out their land for over 100,000 people to come enjoy loud music in their backyards into the wee hours of the morning. For this reason, festival organizers have to prove to their host community that the event is worth the temporary inconvenience of increased noise, population, waste and traffic congestion. One way to convince host communities that it *is* worth the trouble is to show them the money. Spending at a music festival can trickle down into local economics and act as an economic engine for the host community. Economists who investigated the impacts of Bonnaroo on host community Coffee County, Tennessee came up with an economic model of how the money makes its way to local host communities. The model uses labeling specific to Bonnaroo's host community but the schematic can easily be generalized to any host community.



Source: Murat Arik and David A. Penn. *Economic Impact of Bonnaroo Music Festival on Coffee County*, 17.

### Coachella:

Coachella Music Festival is a three-day event that draws crowds of about 160,000 and is put on April 16-18 by Goldenvoice promotions at the Empire Polo Club in Indio, California. Coachella's creator, Paul Tollett, is credited with creating the US music festival format which features a multi-genre, multi-day music program at a fixed location to which concert goers must travel. While he may have been the first to institute this format in the United States, the model was already tried and tested in Europe. Paul Tollett is an enterprising concert promoter who has been working in the industry since the age of 17. He bought Goldenvoice, the company he worked for at the time, with a partner in 1991.<sup>48</sup> In 1999 he premiered the first Coachella music festival, which unfortunately came right after the Woodstock '99 debacle that featured riots and bonfires, as frustrations mounted about inadequate accommodations and overpriced food and water. The two-day show went on but Goldenvoice reported an \$800,000 loss that seemed to indicate that Coachella would be a one-time occasion, never to see the light of day again.<sup>49</sup>

Although the festival failed to generate profits, it caught the eye of live event production company AEG Live, which thought that Tollett was on to something with his model. AEG bought Goldenvoice from Tollett in 2000 but Tollett maintained the rights to the festival and put it on again, still without turning a profit.<sup>50</sup> In its fourth year, the festival began to turn a profit and the model started to catch the eyes of other event producers. In that year, Bonnaroo Music Festival and Austin City Limits started up operations and began to put on their own multi-stage, multi-day festivals in Manchester, Tennessee and Austin, Texas respectively. By 2004, the festival sold out with top headliner Radiohead raising the profile of the festival. The 2007 event, which debuted the reunion of Rage Against the Machine sold all 180,000 tickets in only ten days.<sup>51</sup>

Coachella has helped to put Indio, CA on the map, as it is now considered one of the premier festivals in the world.<sup>52</sup> Many European acts, who wish to tap in to the American market are now encouraged to come over to Coachella to play in the hopes that they will gain critical acclaim.<sup>53</sup> The music festival has become vital to this region, which suffers from high levels of unemployment and thrives primarily off of tourism. The importance of the festival to the city is underlined by the fact that the city homepage contains a link to the music festival webpage. Earlier this year, city officials were delighted to discover that Paul Tollett brokered a long-term agreement with the Empire Polo Club for an unspecified dollar amount.<sup>54</sup> Mr. Tollett believes that the future looks bright for the music festival and stated that “as long as the polo field is here, I’ll be doing the show here.”<sup>55</sup>

Exact figures for the amount of money Coachella generates locally were not provided by the Palm Springs Visitors and Tourism Bureau but it is reasonable to estimate that the event brings somewhere in the neighborhood of \$20-\$30 million into the surrounding community. This

estimation is generated on the basis of the economic report done on Bonnaroo and published figures for Austin City Limits and Lollapalooza. Coachella also gives charity proceeds generated from ticket sales to the Indio Youth Task Force, a local community organization similar to the YMCA. The organization provides youth of Indio with sports and recreation activities. The organization also hosts monthly teen and youth dances at Coachella Valley Recreation & Parks district an event that usually draws roughly 200.<sup>56</sup>

### **Bonnaroo:**

Bonnaroo Music Festival is produced by Superfly Productions and AC Entertainment and takes place June 10-13. Since both are private companies only general information about their company size and revenues is available, but neither are live music magnates like AGE or Live Nation. AC Entertainment Inc. brings in revenues between \$1 to \$2.5 million each year and employs 20-49 people.<sup>57</sup> Superfly Productions brings in yearly revenues of roughly \$800,000 and employs 10-19 individuals.<sup>58</sup> Together they have created one of the most revered music festivals on the circuit, which Rolling Stone magazine named the best music festival in the country in 2008.<sup>59</sup> It was the brainchild of former Grateful Dead guitarist Bob Weir and gets significant financial backing from Ben & Jerry's. The festival had a mission from the start to be a community with an activist bent that brought together all artistic and activist walks of life under one roof. Bonnaroo has succeeded by developing the most comprehensive community investment and political education platforms of any music festival in the country.

The festival came to settle in the small rural community of Manchester, Tennessee in 2002. Superfly Productions Bonnaroo Music festival turns the city of Manchester (pop. 10,012), situated in Coffee County, into Tennessee's sixth largest city for four days as 80,000 people

converge to an old hay farm in the middle of nowhere to enjoy the multi-day music event. The festival and this rural community have become unlikely business partners. Coffee County residents have a median household income of \$41,860, 92% white, and fairly evenly split in their political views. In 2004 Bush got 59% of the vote and McCain got 57% of the vote in 2008.<sup>60</sup> The contract between the city of Manchester and Bonnaroo stipulates that the city get \$3 for every ticket sold, or about \$275,000 if the event sells out. According to Mayor David Pennington, 2008 brought in \$225,000 in revenue for the city, which helped pay for six employees.<sup>61</sup> While this is an impressive contribution from the festival, the influx of money extends well beyond a few dollars a ticket.

Bonnaroo essentially operates as its own industry, boosting business by 20% in the three weeks before and after the festival.<sup>62</sup> In 2005 Middle Tennessee State University conducted the most thorough study of the economic impact of bringing a music festival to town. The economic research department of Middle Tennessee State traced the flow of money brought in to the host community Coffee County, Tennessee, as a result of Bonnaroo Music Festival. The report found that direct Bonnaroo-related expenditures in 2005 totaled \$10,532,804, with \$1.9 million coming from festival organizer spending and \$8.6 million coming from visitors of Bonnaroo.<sup>63</sup> There were also indirect business revenue impacts of \$1.2 million and induced business revenues of \$2.2 million, bringing total business revenues to \$14 million.<sup>64</sup> The 2005 Bonnaroo festival also contributed \$4.4 million in personal income and 191 jobs.<sup>65</sup> The report concludes by noting that bringing the music festival to town has brought national renown to Coffee County and that the music festival is clearly economically crucial to the region. The total regional economic impact of Bonnaroo fans in 2008 was estimated at \$20 million.<sup>66</sup>

The festival also goes to great lengths to foster philanthropic investment in Coffee County and recently created the Bonnaroo Works Fund, which will be administered by the East Tennessee Foundation, a non-profit foundation that manages philanthropic endeavors for businesses and organizations in Tennessee.<sup>67</sup> Since arriving in the area, Bonnaroo has generated over \$3 million in direct contributions by using charity ticket-add ons, conducting silent auctions at the festival. The organization has also partnered with non profits such as Doctors Without Borders, HeadCount, Music Cares, Conscious Alliance, Habitat for Humanity, Rock the Earth, American Red Cross, and Sierra Club.<sup>68</sup> Through Conscious Alliance, Bonnaroo set up a food drive which brought in 7,000 pounds of food in 2009. HeadCount, a nonprofit organization that registers voters at over 42 music festivals across the country, says that Bonnaroo was the most successful campaign by a wide margin. According to executive director Andy Bernstein, Bonnaroo “believes that nonprofits add something to the overall festival experience, and they stand behind that belief.”<sup>69</sup>

In 2007 concert producers purchased 530 acres of farmland, that they had previously been leasing on one year terms to the tune of \$8.6 million.<sup>70</sup> The purchase was an indication of an intent to stay longer in the community. Granted, not everyone is happy about the presence of Bonnaroo, but in economic terms it brings vitality to a region that would otherwise lack such a steady source of income.

### **Austin City Limits:**

Austin City Limits Music Festival derives its name from the local Austin television show of the same namesake. The television show Austin City Limits is a public broadcast show featuring music performances and is filmed live on the University of Texas campus. The show,

which began in 1976, is now the longest running concert music series in history and recently opened an exhibit in the Rock and Rock Hall of Fame and Museum and it is the only show to ever receive the National Medal Arts, the nation's highest honor for artistic excellence.<sup>71</sup> At the start of the show, music performances were selected to feature Austin's homegrown music talent but in recent years the show's platform has expanded to include artists of all genres. Artists to appear on Austin City Limits include B.B. King, John Fogherty, Ben Haper, The Flaming Lips, and Willie Nelson. The music festival berthed out of the show reflect the move towards multi-genre concerts.

Austin City Limits Music Festival is attended by roughly 165,000 and takes place October 3-5 and is currently produced by the Austin-based company C3 Presents, which produces live music events regularly in the area. C3 Presents brings in annual revenue of approximately \$820,000 and staffs itself with 24 full-time employees.<sup>72</sup> Much like Coachella, Austin City limits got off to a shaky start with their two-day event in 2002 but since then the festival has done nothing but grow. Each year the event is held in Austin's largest public park, Zilker Park. For use of the park, C3 pays the City of Austin \$12,000 plus \$1 per ticket sold.<sup>73</sup> In 2008, the company wound up paying the city \$66,923 for use of the park. The company has also donated over \$1.4 million to the Parks Foundation over the last three years and has agreed to pay the city \$2.5 million over the next five years to replace sod and improve irrigation systems at Zilker Park.<sup>74</sup> The money donated to the Parks Foundation has been used to make improvements at 50 park sites, a need that might have otherwise gone unserved if not for the presence of the music festival. The company also pays for all road closure fees and police, fire and emergency services.

Unlike Bonnaroo and Coachella, Austin City Limits did not put Austin on the map. The city was already renowned for its rich music history and youth culture. However, the festival still generates a considerable amount of money for the region. According to the Austin Convention and Visitors Bureau, the festival brings in at least \$27 million to the region's economy. Much like Bonnaroo and Coachella, the city has an amicable relationship with the festival and intends to stay put for quite some time.

### **Lollapalooza:**

Lollapalooza is the creation of Jane's Addiction's lead singer Perry Ferrell. The event originally took the form of a traveling festival that toured the United States beginning in 1991. Lollapalooza was actually the first American music festival of its kind and became recognized as a lifestyle festival that brought together people from across cultural barriers to a broad range of alternative music. After achieving critical acclaim as a touring act, the traveling festival called it quits as the rising costs of touring caused financial problems for the act.

In 2005, the festival sprouted back up with a new look as it decided to make itself a destination festival in which concert goers come to you. After a two year testing phase, Lollapalooza signed a five year long deal with the Chicago Park District and the Parkways Foundation and is set to call Chicago home through 2011. The annual event now attracts crowds of 225,000 and takes place in Chicago's Grant Park from August 3<sup>rd</sup> until August 5<sup>th</sup>. The event shares the same producer as Austin City Limits, C3 Presents, and has focus on showcasing alternative music.

Similar to the case of Austin City Limits, C3 has a contract with the city to pay out 10.25 percent of gross revenue and 8.5 percent of sponsorship revenue to the Parkways Foundation,

Chicago's fundraising arm for the city's parks.<sup>75</sup> Total payouts for 2009 came to \$1.9 million. According to Laura Barnett, president of Parkways Foundation, the money generated from the event "accelerates [their] ability to fund new projects, youth programs, and greening initiatives throughout Chicago's parks."<sup>76</sup> Estimates of the festival's impact on Chicago's economy put the event as being responsible for \$40 million. Although Chicago was already a well traveled to city before Lollapalooza came to town, the event has increased tourism and pumped money into the local economy to an even greater extent.

The presence of such large profits and the ability of music festivals to act as economic engines for areas that would be cash strapped under current economic conditions may give struggling cities the notion that bringing a music festival to town is the magic bullet for balancing their budget. While this has certainly been the case with Indio, CA and Manchester, TN – and to a lesser extent Chicago and Austin – there is a limit to how many \$300 music festivals the market can bare. These events are by no means cheap to attend, especially when considering the added costs of food, shelter, and transportation to the festival. The major festivals on the circuit are performing well, but it is doubtful that consumers will be able to support too many more major music festivals in the US. Additionally, there are barriers to entry such as steep start-up costs and booking the kind of talent that gets an event to sell that make it difficult to create a successful festival from scratch. The benefits of music festivals, however are not purely economic. The festivals used as case studies have proven that the benefits can be environmental as well.

## *Environmental Benefits of Festivals – Leading by Example*

The music industry has long been aware of its own financial power and ability to set trends in our society. The recognition of the industry as a trend setter in the cultural sphere is what drives major corporations to seek out sponsorship deals with top labels and musicians to help sell their products. Not surprisingly, a whole sleuth of sponsors can be found on festival grounds trying to get their brand name out to a young consumer-oriented crowd. The tactic must yield considerable profits otherwise businesses wouldn't waste time marketing their product at such a venue.

Over the last few years, music festivals have made considerable efforts to present more than a message of consumption. As music festivals have become more aware of their cultural influence and ability to inform lifestyle choices, there has been a push to educate audiences about environmental issues and promote sustainability. Music festivals have an important role to play in promoting sustainability both operationally and educationally. The things that help to make a music festival more sustainable are the same things can help make our daily lives and our cities more sustainable. If they lead by example they can act as a considerable influence in our society.

A typical festival can produce several tons of trash, cause significant levels of CO<sub>2</sub> emissions, use thousands of bottles of water, and pull enough energy to power a small city. In order to become more sustainable entities, music festivals must address the issues of energy/power, transport, waste management, waste reduction and resource recovery, and materials purchasing and procurement. Making environmentally conscious decisions in these areas is integral to reducing the impact of any human activity. Music festivals have addressed these issues in creative ways.

## **Bonnaroo:**

Once again, the best in the business is Bonnaroo. Their environmental work on the festival them the Greener Festival Award in 2007 and the Outstanding Greener Festival Award in 2008. A Greener Festival is a UK non profit organization that seeks to identify the best practices in the festival industry and created an award system based on a 56 point checklist that music festivals must use to evaluate themselves. The organization will be discussed in more detail under the environmental certification section of this paper. Since its creation Bonnaroo has sought to be a socially responsible entity, seeking out environmentally conscious choices from the get go. Like all festivals, Bonnaroo tries to green itself with an eye on the bottom line. In order to help finance sustainability improvements, the festival created an option for people to opt in to help finance their on-site initiatives. In 2009, 40% of ticket buyers opted in to the sustainability fund, providing an unspecified dollar amount to the festival.<sup>77</sup> The fact that Bonnaroo owns the site it holds the festival on has made it significantly easier for them to make site upgrades that improve upon the sustainability of the festival. For instance, the festival runs its own compost facility which Austin City Limits and Lollapalooza are not able to manage because they hold their events in public parks.

### *Energy Use*

Festivals located outside a city center rely heavily on generators to produce their needed supply of energy as it is generally the only reliable energy supply available. Generators run on diesel fuel and produce a considerable amount of pollution when used. Using a biodiesel product in place of diesel will help cut down emissions considerably but generators are still inefficient producers of energy. To address this problem, Bonnaroo plugged in to the Tennessee Valley Authority electrical grid in 2009 and reduced their on-site generator use by 70%.<sup>78</sup> Of course

there is a catch. The Tennessee Valley Authority derives most of its energy from fossil fuels such as coal. Bonnaroo has also taken the added measure of reducing reliance on security vehicles by utilizing security horses instead with mounted patrolmen. Where possible LED lights and CFL light bulbs are used on-site to help reduce the amount of electricity pulled for lighting requirements. For emissions that cannot be reduced, Bonnaroo purchases carbon offsets the Clean Air Conservatory. In 2009, the festival estimated that it was responsible for total carbon emissions of 900 metric tons and purchased offsets accordingly. In an effort to continue to reduce carbon emissions, Bonnaroo plans to invest in a solar array that will be able to host the power needs for a concert of 20,000 people.

### *Waste Management*

Diverting waste and recycling where possible are the two most important things that can be done to manage waste at a music festival. To assist in waste management at the festival, Bonnaroo employs the help of Clean Vibes. Clean Vibes in assisting outdoor music festivals and events with responsible waste management by ensuring that materials are diverted from landfills through recycling and composting.<sup>79</sup> Clean Vibes functions as an organization that streamlines waste management efforts at Bonnaroo and simultaneously provides on-site education about proper recycling and composting methods to be used at home. The organization runs their waste management efforts at the festival staff almost entirely by volunteers, which are easy to come by since volunteers get a free ticket in exchange for their services. Bonnaroo and Clean Vibes dramatically improved recycling and composting efforts this last year by placing volunteers at each waste station to assist with proper waste disposal.

In 2009 the festival also recycled 3 tons of PET water bottles. In recognition of the harm caused by water bottles, even if they are recycled, Bonnaroo is starting a pilot Bottle-Less Water

Program in which there will be multiple free water stations providing clean drinking water to individuals who bring their own bottle. A significant step in reducing on-site waste comes from giving festival attendees goods that can either be recycled or composted. At Bonnaroo all concession food is served on biodegradable wraps, plates, cups, and cutlery manufactured from corn.<sup>80</sup> Building an onsite compost and utilizing the recycling knowledge of Clean Vibes has allowed Bonnaroo to divert 33% of all waste from the landfill by weight and 65% by volume. Last year's festival produced 30 tons of compost, a 300% increase from the year before.<sup>81</sup> The compost remained onsite to be used in the festival's Victory Garden, which produces a small amount of vegetables for use by festival vendors. Food that is not sold by vendors at the festival (2.5 tons) gets donated to Feed America First, an agency that specializes in hunger relief to poor and homeless communities.<sup>82</sup>

### *Transport*

Like most festivals, Bonnaroo is reached by most festival goers through car transportation. The festival provides shuttle buses to individuals that arrive by air but they have yet to develop a comprehensive strategy for addressing the environmental impacts of a heavy reliance on car and air transport in order to get to the festival. For its part, the festival promotes carpooling through a rideshare program that it features on its website.

### *Purchasing*

As part of its efforts to give back to the community, Bonnaroo makes considerable efforts to buy local and ensure that fair trade standards have been met when purchasing. T-shirts sold at the festival are made from organic cotton and vendors are encouraged to purchase their produce and meat from local farmers.<sup>83</sup> The 15,000 pounds of hay purchased to keep the security horses stocked up on energy is all purchased locally.<sup>84</sup> Other environmentally friendly purchases include

stocking portalets with recycled toilet paper, and using 100% recycled paper for all administrative and program needs.

### *Education*

Education measures start with the staff. Bonnaroo has a year-round Sustainability coordinator on staff to ensure that each year's festival operations are more environmentally friendly than the last. The festival also provides all staff members with a Greening Handbook, distributed via email, that outlines the festival's green policies and informs staff members the role they can play in making the event more environmentally friendly. This is an important aspect of education but the staff is relatively small and the fan base are the ones that can make larger scale changes.

The festival employs a team of Green Ambassadors to roam the site and act as liaisons to communicate the sustainability work of the festival and communicate information about the work of the festival's environmental partners. For interested patrons, these liaisons can direct them to Planet Roo, the centralized education, eco and social activism village that is onsite. Within Planet Roo there is a Waste Free Cafe, non-profit partners of the festival, a social change documentary tent, a Social Change Through Music Panels, and a solar powered stage on which environmentally conscious musicians perform and give talks. At Planet Roo, festival goers can choose to take the Carbon Shredders challenge to reduce their CO<sub>2</sub> emissions by 10% by the end of 2010. Currently the Carbon Shredder challenge has been accepted by only 476 people, but it is a start in the right direction.<sup>85</sup>

The education and outreach is primarily managed by the 501 3(c) organization known as Rock the Earth which seeks to defend the country's natural resources through partnerships with the music industry and environmental communities.<sup>86</sup> Last year the organization ran an education

campaign on the detriment caused by improper disposal of cell phones, which contain lead, nickel, and zinc. To address this issue, Rock the Earth held a cell phone recycling drive in which people were encouraged to recycle their cell phone onsite. In this coming year, Rock the Earth will concentrate on the environmental degradation caused by the use of plastics.

Bonnaroo also recently conducted an impressive outreach campaign achieved entirely through their email database system. On March 3<sup>rd</sup> of this year, the Bonnaroo newsletter sent out a message to all subscribers urging people to send a letter to their Senator and the President expressing the need to pass a climate change bill in this term (See Appendix 2). In exchange for sending the letter, people were offered a free Bonnaroo compilation of various artists who have performed at the event. Over 30,000 people sent a letter either to their Senator or directly to the President in exchange for the free album.<sup>87</sup>

### **Rothbury**

Although Rothbury will not be taking place in the coming year, their work on the environmental aspects of their festival won them an Outstanding Greener Festival Award as well and their environmental initiatives are worth mentioning. To green its event, Rothbury partners with The Spitfire Agency, which is based in a small town outside of San Francisco. The event draws 35,000 and takes place in Rothbury, Michigan which is roughly a three hour drive from Detroit, Ann Arbor, and Chicago. Rothbury, a newcomer to the festival scene, was designed with the intention of raising the consciousness of individuals through music. Rothbury started with the explicit mission of making a difference “to help shape a brighter, greener future.”<sup>88</sup> Their contributions to making a festival environmentally friendly will be touched on only briefly.

One thing that made Rothbury special is that the event took considerable efforts to green their in-house production by using 100% recycled printing paper, copy paper, letterhead, using compostable kitchenware, rechargeable batteries, and energy efficient light bulbs.<sup>89</sup>

### *Energy Use*

Unable to plug in to an electrical grid, Rothbury supplies most of its power through the use of generators. Most of the light towers, trailers, and infrastructure generators used at the show were run on B100 biodiesel which is made from a recycled waste product of Ethanol.<sup>90</sup> The stage generators run on a blend of biodiesel and standard diesel fuel that ranges from 20% biodiesel to 100% biodiesel. The festival also offsets where emission reduction cannot be achieved.

The festival's waste management and purchasing policies are roughly similar to that of Bonnaroo. Of note is the fact that 2009's festival reached landfill diversion rates of 94% and the compost from the event was donated to local farmers.<sup>91</sup>

### *Transport*

Rothbury encourages anyone travelling by car to carpool with friends and provides carpool websites for individuals to access if they don't have anyone to carpool with. The festival also provides links to train, bus, and ferry transportation. The festival also promises prizes for individuals who get to the festival through public transportation.

### *Education*

The event features art that is solar powered and human powered and most of the exhibits are made from junk that is found in the local area, demonstrating creative uses for used materials.<sup>92</sup> The festival also hosts Think Tanks in which festival goers can participate in discussions groups that consist of environmentalists, scientists, entrepreneurs, and attendees in

which participants discuss solutions to a green economy, how to find a green job, and how to grow organic food.<sup>93</sup>

Rothbury also partners with schools in the area to help them implement sustainable initiatives that will reduce energy consumption and eventually lead to cost savings.<sup>94</sup> Rothbury seeks to empower local public schools to lower their carbon footprints by gaining access to renewable energy resources. In 2009 the festival donated two wind turbines to two local schools, one to generate power and one to used for educational purposes, through its Sustainable Schools Program. The festival also donated musical instruments to two high schools in the area.

## **Coachella**

Coachella's sustainability program is run by 501 3(c) organization Global Inheritance. Global Inheritance is a Los Angeles based that characterizes itself as an organization that is reinventing "activism for today's young generations" by focusing "on the power of creativity to communicate and push for progressive social change while rejecting conflict."<sup>95</sup> Coachella has not developed as comprehensive of a sustainability strategy as Rothbury or Bonnaroo but their work helps reduce the impact of the festival on the Empire Polo Field grounds.

In general terms, Coachella does not provide as detailed information about the sustainability projects they are including in the year's festival. With Global Inheritance refusing to get back in contact with myself after repeated contacts, I am forced to assume that their only initiatives are what they post to their website.

The festival's energy use requirements are roughly the same as Bonnaroo.

### *Waste Management*

The festival does not have onsite composting facilities but it does have an extensive recycling program. TRASHed :: The Art of Recycling is a longstanding program run by Global Inheritance in which local artists get a chance to display their talents by creating custom designed recycling bins for festival use.<sup>96</sup> There is no artistic format required so artists are encouraged to get involved in the recycling program in whatever context they wish. The venue has sixty such bins located throughout the festival that provide colorful reminders to recycle. The festival's water program in which festival goers can collect ten empty water bottles and return them to a marked recycling station in exchange for a free bottle of cold water has also significantly helped the festival reduce its waste impacts.<sup>97</sup>

### *Transportation*

In recognition of the fact that most festival goers will arrive on the grounds with an automobile, Coachella created an incentive program to reward individuals who carpool to the event with at least four people in their car. The program known as Carpoolchella randomly rewards carpoolers with prizes such as all access lifetime VIP tickets, sidestage passes, VIP wristbands for the weekend, photo passes, \$50 merchandise vouchers, and a golf cart ride to the front entrance. In order to be eligible carpoolers must display a "Carpoolchella" sign on their dash and show up to the festival parking lot with at least four people in their car.<sup>98</sup>

For those who don't want to carpool, Global Inheritance has worked to encourage other modes of carbon reducing transportation. Because of the close proximity of Los Angeles to Indio, many attendees leave from LA. Global Inheritance provided two options for festival goers to arrive to the site, by bus and by train. The bus service provides roundtrip travel for a fee \$150 and

can take approximately 75 people per bus. Ridership numbers were not available. The festival also provides bus services from several hotel locations in Indio for a \$90 charge. The idea itself is laudable but the fee likely discourages many from taking the more economically feasible and logistically flexible route of carpooling. The train travel provided to individuals from Los Angeles is a much more efficient and lighter on the checkbook, but has limited seating. A partnership between Amtrak and event producers Goldenvoice arrange for a temporary train station to be built to take passengers from LA to the campgrounds of the festival. The only requirement is that the attendee have a camping pass, which costs \$55, and that they be one of the first 500 people to arrive at the train.<sup>99</sup>

### *Education*

The educational section of the festival is run by Global Inheritance and is called the Energy FACTory. At the Energy FACTory festival goers can recharge their cellphones with solar powered chargers or by riding a bike to produce the energy themselves, enjoy solar powered misters, and view a live conversion of vegetable oil to biodiesel.<sup>100</sup> This year's main attraction is the Sweatshop Mixer in which amateur DJ's can play a music set that is powered entirely by friends. The energy for the turntables will be produced by people running in hamster wheels, riding bikes, turning hand cranks, and riding seesaws. The displays and self-powered exhibits are meant to get people thinking about alternative sources of power in creative contexts.

### **Austin City Limits & Lollapalooza**

Much like Bonnaroo, the sustainability team that works on Austin City Limits and Lollapalooza is part of the full-time staff. The greening efforts of Austin City Limits and Lollapalooza have been combined here because C3 Presents runs the environmental initiatives

for both festivals and the initiatives at the festivals nearly mirror each other. Austin City Limits and Lollapalooza have special considerations to keep in mind when producing the festival because the events take place inside public parks. For Jody Goode, who runs C3 Presents, it's simply about being a responsible corporate citizen in the community.

### *Energy Use*

The festival runs most of its power through the use of generators that are used onsite. Like Rothbury, the biodiesel mixes range from B20 to B100 grades, depending on the power requirement for which the generator is needed. The festivals also employ high-efficiency lighting and incorporate some solar energy to power site enhancements such as cell phone chargers and tent misters. C3 Presents claims both events to be carbon neutral events due to the fact that they offset all emissions incurred from producing the event and all emissions from business operations of C3. C3 offsets its emissions by purchasing renewable energy credits and forest sequestration offsets from the Austin-based renewable energy company Green Mountain Energy.<sup>101</sup> The company refused to share a number for the amount of offsets purchased. The viability of supporting such a claim will be discussed under the carbon foot printing section of this paper.

### *Waste Management*

Like Bonnaroo and Rothbury, all vendors at these two festivals are required to use compostable or biodegradable plates and cups and are encouraged to served food that does not require disposable utensils.<sup>102</sup> In the last year, C3 also made the unpopular move to ban all Styrofoam and plastic bags from being brought on to the grounds by any vendor or attendee.<sup>103</sup> For waste that cannot be banned, the festivals have roughly 100 volunteers who work with the event through a program known as Rock & Recycle. Festival patrons who participate in the Rock

& Recycle program become eligible to win merchandise prizes or the grand prize of a Honda Insight. The 2008 program recycled 26 tons of materials from the festival. Because the events take place in a public park, onsite composting facilities are not possible.

### *Transportation*

Chicago and Austin are better locations for holding festivals because they both have public transportation options. Because they are urban centers, many festival goers do not have to drive to the event and thus reduce the level of emissions they output through travel. Both events strongly encourage patrons to walk, bike, take mass transportation, or carpool to the festival site. The metropolitan transit authorities in each city also provide a link on their webpages about how to get to the festivals by using public transportation. The festivals also offer bike valet service for individuals who choose to ride their bike to the event. In 2008 roughly 2500 hundred people showed up to each festival by bike, a 61% increase from the year before.<sup>104</sup>

### *Education*

Each festival has a special section that is devoted to ecologically sound merchandise and provides a location in which attendees can interact with the festival's nonprofit partners. The eco-village at Austin City Limits is called the Green Scene and the at Lollapalooza it is known as Green Street. For artists and vendors to participate in this section of the festival, they must prove to C3 that their products meet fair trade and environmental standards. While visiting the Green Scene or walking down Green Street, festival patrons are provided the option to offset their to the festival. Green Mountain Energy, the same company that offsets the carbon emissions of the festivals, is on site to provide fans the option to purchase "BeGreen Fan Tags" for \$3, which purchases the fan 300kWh of renewable energy credits.<sup>105</sup> The 300kWh of renewable energy credits is said to offset 339 pounds of CO2 emissions which is the equivalent of not driving a car

433 miles.<sup>106</sup> In 2008, roughly 4,000 fans purchased carbon offsets from the festival for 3,250 metric tons of CO<sub>2</sub>, which has a combined impact of not driving a car 7.3 million miles or the annual carbon absorption of 394,500 trees.<sup>107</sup> At Lollapalooza the numbers were slightly higher with roughly 8,500 fan purchasing \$5 (500 kWh) renewable energy credits from Green Mountain Energy. This is claimed to have helped avoid 5.5 million tons of CO<sub>2</sub> emissions, or the same environmental impact as not driving your car for 6.1 million miles.<sup>108</sup>

The eco-village area of the festivals also feature a giant 8-foot rolling ball of plastic bags that is used for educational purpose to raise awareness about the environmental impacts of using plastic bags. The giant ball of plastic bags, named Schlumpy, travels the nation as part of a public display presented by BlueAvocado , a company that makes eco-friendly shopping bags, in an effort to get shoppers to use fewer plastic bags. Schlumpy is there to get people to pledge to use fewer plastic bags by taking the Billion Bag Pledge, a pledge to get American's using 1 billion fewer bags by the end of the year. When taking the pledge, people are given the option to reduce their bag use by 5, 10, 15, or 20 bags a week. At Austin City Limits 840 pledges were made to take 15,000 bags off of the street.<sup>109</sup> Number for Lollapalooza will not be available until the festival takes place this year as this is the first time festival goers have been asked to take the pledge.

### *Carbon Footprinting*

As can be seen from the description of the environmental policies of music festivals, carbon offsetting is a fairly popular practice amongst festivals. In order to offset carbon emissions, it is necessary to perform a carbon audit of festival activities to assess the environmental impacts of the festival. Getting an accurate estimate requires detailed knowledge

of the festival's logistical inputs. Generating robust and accurate data requires measurements from:

- Power from mains
- Generator power (fuel volume)
- Audience transport
- Waste to landfill and waste transport
- Water usage
- On-site and office vehicles (fuel or total distance travelled)
- Crew/stewards/artist transport
- Transport deliveries
- Contractor and supplier transport
- Hotel accommodation<sup>110</sup>

Due my position as an outside researcher with no affiliation to the music industry or the festival circuit, no festival producer would grant access to this kind of data. Only the producers of Bonnaroo were willing to share their estimated carbon footprint, and were only willing to do so after I assured them that I would not release the number to the media. The producers of Bonnaroo estimate their total carbon emissions for the festival to be 900 metric tons of CO<sub>2</sub>, the figure includes pre-production, event activities, and post-production.<sup>111</sup> While the producers were willing to share a raw figure, they declined to give further detail about what they included in their measurements. It is unfortunate that I could not get more detailed information on this front, but the number provides a basis for estimating the average carbon emissions of a music festival of the size of the case studies in this research.

According to research conducted by Julie's Bicycle, transport accounts for between 60% and 80% of a festival's total emissions. It follows that production activities constitute 20-40% of the festival's impacts. Simple algebra can give us estimates for total emissions and emissions due to transport.

If we assume audience travel as 80% of emissions, then:

production emissions = .2(total emissions)

900 tons CO<sub>2</sub> = .2(total emissions)

total emissions = 4500

AND

audience emissions = .8(total emissions)

audience emissions = 3600

If we assume audience travels as 60% of emissions, then:

production emissions = .4(total emissions)

900 tons CO<sub>2</sub> = .4(total emissions)

total emissions = 2250

AND

audience emissions = .8(total emissions)

audience emissions = 1800

At emissions levels of 4500 tons, a festival has the equivalent emissions to the annual emissions of 781 passenger vehicles or the energy use of 347 homes for one year.<sup>112</sup> At levels of 2250 tons, it is equivalent to annual emissions of 390 passenger vehicles or the energy use of 174 homes. The emissions are sizeable but the events have taken efforts to reduce impacts and they are making considerable progress in their efforts. At the very least these emissions levels are lower than what they would have been ten years ago and will be lower ten years from now. All of the activities to promote sustainability and the environmental initiatives of festivals can work together to push for social change and move our country towards more sustainable living. If the industry comes together as a whole, it has the potential to impact one of our most pressing environmental issues – climate change.

## *Looking at the Bigger Picture – Music and Climate Change*

Recognizing the potential for the music industry and music festivals to play an important role in addressing the problem of environmental degradation, the UK has taken the initiative and developed a coalition of music industry executives, event planners, and academic institutions. Two developments in the UK music industry and festival scene have stood out as the most proactive measures with regards to marrying environmentalism and music: the creation of A Greener Festival and the developments of Julie's Bicycle, a London-based non-profit environmental consultancy organization. Julie's Bicycle and A Greener Festival share the belief that 'music is centrally influential in our lifestyle choices and therefore has an opportunity to be an important leader in the transformation to a low carbon economy.'<sup>113</sup> Becoming a leader in the transformation requires rethinking the production of music events and understanding how to utilize the event as an education event that showcases sustainable ways of living. Important to understand is that those initiatives which make music festivals more sustainable events are initiatives that make day to day living more sustainable. Recycling waste, utilizing Waste Vegetable Oil biodiesel, using locally sourced food supplies, composting, and on-site renewable energy have all been part of festival planning for some time and all are initiatives that if brought into mainstream society would lead to more sustainable lifestyles. Interestingly, the central sources of greenhouse gas emissions at music festivals are also the leading causes of emissions in society at large: the consumption of energy and the use of transportation. If one considers the event of a music festival as the construction of a temporary city and community, then we can gain a greater understanding of how initiatives at music festivals can be incorporated into our daily lives.

A Greener Festival is a 'not-for-profit company committed to help music, arts events and festivals around the world adopt environmentally efficient practices through providing information, by providing education resources and by swapping ideas.'<sup>114</sup> The company functions as an aggregate of best practices of festivals from around the world and provides recommendations for festivals to incorporate into their own event productions. In an effort to recognize the festivals that do the best job of reducing their impact, the company has created an international award for festivals that do an outstanding job of making their event more sustainable. The award is simply known as the Greener Festival Award and is broken into three categorizations: outstanding, standard, and improving.<sup>115</sup> These awards are also meant to foster competition between festivals to "out green" each other.

The organization goes beyond simply discerning whether the events themselves are taking initiatives to make their event more sustainable by asking fans what they believe are the impacts of a festival. A Greener Festival surveyed 1400 festival goers about their opinions on the environmental impact of a music festival and whether or not they would green was an important consideration when choosing a music festival. Over 80% thought that the noise, waste, and traffic associated with music festivals have a negative impact on the environment.<sup>116</sup> Of those surveyed, 56% worried about the CO2 emissions of the festivals, an increase of 26% compared to a survey conducted two years earlier.<sup>117</sup> The survey also found that nearly half of festival goers would pay more for a greener event and that 36% took the green initiatives of the event into consideration when purchasing their ticket. The survey results indicate that festival goers are generally concerned about the environmental impacts of a festival and would like to see greater steps taken to ensure that the events are as sustainable as possible. A Greener Festival works in collaboration

with Julie's Bicycle to inform music festivals as to how they can achieve a more sustainable event.

Julie's Bicycle has taken the notion of bringing the music industry into the fold of the climate change debate and generated scientific studies to determine the real environmental impacts of the music industry in the UK. The efforts in the UK to make this direct link have been laudable. Firstly, the research of the environmental impact of the UK music industry was conducted by the Environmental Change Institute at Oxford University. The work of the Environmental Change Institute grounds the claims and assertions of the Julie's Bicycle in real science and lends a sense of legitimacy to the research of the organization. Secondly, Julie's Bicycle put together a manual called *Green Music: Taking Action on Climate Change* that they co-published with the Mayor of London, Boris Johnson. Julie's Bicycle has not only gotten one of the world's most respected institutions to climb on board to their campaign, they have gotten the mayor of one of the world's largest cities to step forward and legitimate their claim in the political arena. The coalition between individuals from the scientific community, the political community, and the music community reinforces the confluence of environmentalism and music and increases the potential of this collaboration to impact real change.

The report released by Julie's Bicycle and Boris Johnson found that the UK music industry is responsible for the emission of around 465,000 tons of carbon dioxide gases each year, roughly equivalent to the energy use of all the homes in Islington, a community of roughly 150,000 people.<sup>118</sup> While this is only a fraction of the UK's total emissions for a given year, Julie's Bicycle and the Boris Johnson both believe that the music industry can play a central role in helping to encourage reductions of greenhouse gases disproportionate to its size because of its ability to reach people. The guide covers the entire breadth of carbon producing activities for

which the UK music industry is responsible. These include: offices, venues, recording studios, festivals, touring, and event production. Music festivals were found to be responsible for a mere 18,000 tons of carbon dioxide emissions and the guide offers a list of recommendations that could reduce the emissions of festivals by 3,600 tons.<sup>119</sup>

In January of this year, there were two important developments in the event industry – the publishing of the book *Sustainable Event Management* by Meegan Jones and the creation of the Green Music Group by Reverb. *Sustainable Event Management* is a great resource for industry personnel that provides detailed instructions on how to go about navigating the logistical aspects of making a large scale event like a music festival a more sustainable entity. The book profiles some of the same practices that I outline later in this paper but it does not provide any primary research on audience perceptions about the sustainability of a festival, a gap that my research fills. If Meegan Jones' book is the how-to of sustainable management, my research can be thought of as the so-what.

In the early stages of this project I had hoped to create a model for a nonprofit in the United States that mirrored the work of Julie's Bicycle, an organization that brought together environmentalists, scientists, musicians, industry executives, and fans for the common purpose of creating a network of social change through music. In a way, Reverb beat me to the punch on creating such a nonprofit organization when they launched the Green Music Group in January of this year. Luckily we have different ideas about what such an organization would look like and in the process of interviewing one the staff members, we discussed the potential for partnership after completing this project with the hopes of translating this research into real world application.

Reverb is an organization in the United States that has been working with touring musicians to help mitigate the impacts of playing on the road. The organization was started by Adam Gardner, lead guitar player for a band called Guster. Gardner started the organization because he saw that there were many musicians who had environmental issues at heart but that their touring practices didn't reflect the ideologies they held.<sup>120</sup> The organization is a small operation, with six full-time employees, that is located in Maine and currently works with musicians and venues to improve their greening efforts. Common practices employed by Reverb are use of biodiesel in touring vehicles, sourcing backstage food locally, and offsetting the CO2 emissions from traveling. As of yet, Reverb and the Green Music Group have not targeted the music festival as a grounds for gathering music industry leaders who are already working on environmental initiatives.

### *When the Music's Over*

In order to determine whether my hypothesis that music festivals are venues in which there are large numbers of individuals that are highly receptive to environmental messaging at American music festival, I conducted surveys on individuals going to Coachella. Coachella is only one music festival out of many, but its international renown and widespread popularity made it reasonable to assume that survey respondents to be a representative sample of the music festival audience. The demographic of festival goers is as one would suspect, mostly young college students who have little disposable income but value getting out in to the experience

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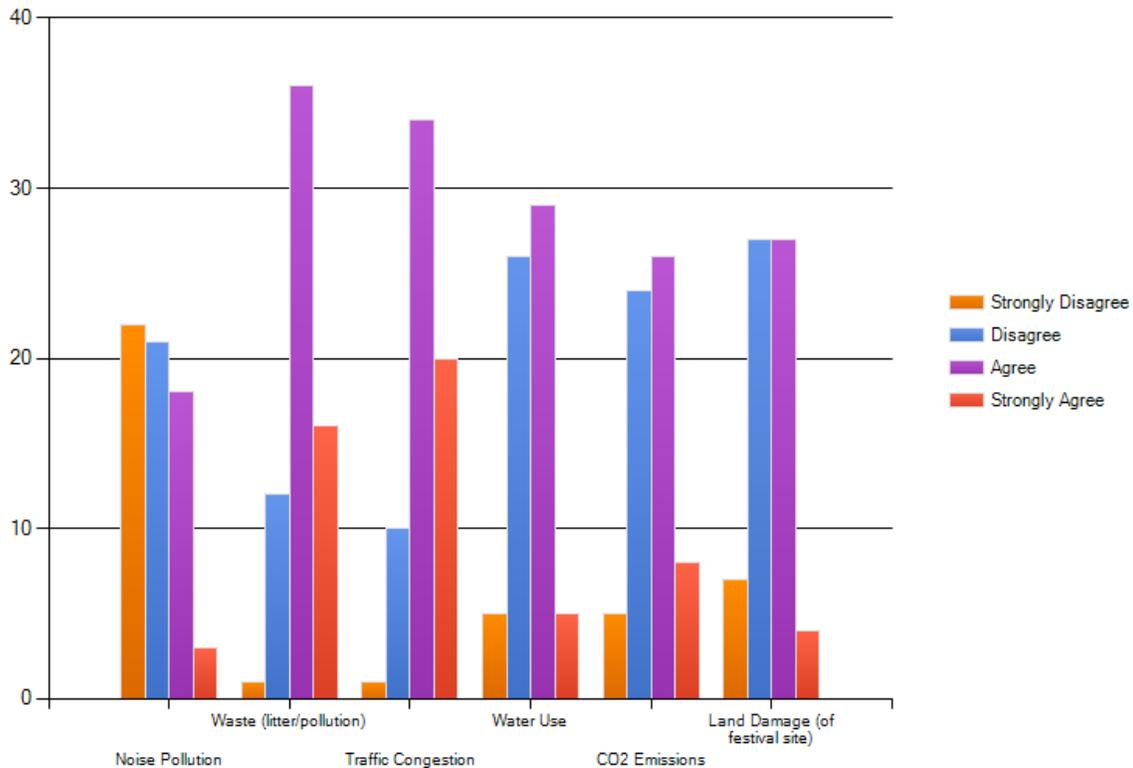
What is your income range?			What is your age range?		
Answer Options	Response Percent	Response Count	Answer Options	Response Percent	Response Count
0-30k	75.0%	48	15-18	7.7%	5
31-60k	15.6%	10	18-24	69.2%	45
61-90k	4.7%	3	25-29	13.8%	9
90k+	4.7%	3	30-34	3.1%	2
			35+	6.2%	4
<b><i>answered question</i></b>		<b>64</b>	<b><i>answered question</i></b>		<b>65</b>
<b><i>skipped question</i></b>		<b>1</b>	<b><i>skipped question</i></b>		<b>0</b>

spend a couple hundred dollars. The average festival goer is between the ages of 18 and 24 with either some college education, 77% had some college education, and an income below \$30,000. It stands to reason that these young, college educated individuals would be likely to support progressive environmental initiatives, and the surveys verified that notion.

<b>What is your highest level of education?</b>		
<b>Answer Options</b>	<b>Response Percent</b>	<b>Response Count</b>
High School	10.8%	7
Some College	30.8%	20
4 year College	46.2%	30
Graduate School	12.3%	8
<b><i>answered question</i></b>		<b>65</b>
<b><i>skipped question</i></b>		<b>0</b>

One the whole, individuals who attend music festivals are already fairly environmentally minded and they would like to see music festivals reflect that mindset. Of individuals surveyed, a full 87% environmentally conscious individuals.<sup>121</sup> Most individuals also believed that music festivals had negative environmental impacts. These individuals not only believed that music festivals had negative environmental impacts, 92.8% of individuals surveyed also believed that music festivals should take steps to become more sustainable and environmentally friendly.

**Do you think that music festivals have a negative impact on the environment in any of the following categories?**



Festival attendees not only want to see the music festivals that they enjoy attending become more environmentally friendly, they also want to be educated while at the festival. 78.3% of people who participated in the survey believed that music festivals should make efforts to educate attendees and raise awareness about environmental issues. From the survey responses, it is clear that the large audiences that music festivals draw are relatively captive audiences and ready and willing to take home the environmental messages presented at music festivals. This represents a tremendous opportunity for promoting sustainability as over roughly 600,000 individuals attend the music festivals profiled in this paper alone. While it is unfair to assume that the level of receptiveness measured by my own research persists across the entire body of 600,000 people, it is at least reasonable to assume that individuals at music festivals are

relatively open to receiving the environmental message. As such, the music industry has quite an opportunity to advance the environmental movement by acting as a leader in sustainability.

## *Recommendations*

To advance the sustainability agenda within music festivals and society at large, the festival industry needs to be at the forefront of the sustainability movement. This means using less non-renewable resources that exact a significant cost on the environment. Environmentally speaking, one of the worst things that people consume is bottled water. Festivals should make every attempt to cut down on reliance on the water bottle. Another major avenue to promote sustainability is to incorporate renewable energy into the production of the festival. Sourcing renewable energy is key to reducing carbon emissions. Sourcing renewable energy will cut down on emissions but the single greatest emissions source is audience travel. This needs to be communicated to a greater extent to the audiences traveling to the festival that the audience knows what issues they must address to help the festival become more sustainable. Another major key to promoting a sustainable lifestyle is to get the festival industry on the same page. It is suggested that this be accomplished through growing the Green Music Group.

## *Bottle-Less*

Bonnaroo made the move to providing free water for individuals who make the effort to bring their own water bottle to the festival. This should become the standard because the amount of bottled water used at a festival, though it is efficiently recycled, is simply wasteful. Water is often the most vital need at a summer music festival when temperatures can easily climb into the 100+ territory. Not providing any bottled water to the event would be a health hazard as it is a much needed amenity in the middle of nowhere. However, festivals should make every effort to go bottle-less to the fullest extent possible. Making water free for festival patrons is one way to do that. If not free, perhaps one dollar could be charged. Selling water doesn't make or break a

music festival. Music festivals make much more on concession items like beer and food so it won't significantly hurt the bottom line of the festival to provide the masses with free water. The environment and audience members will be very grateful.

### *Expand Renewable Energy*

The current uses of renewable energy at music festivals are generally for educational purposes or to satisfy meager power requirements. Music festivals should shift their use of renewable energies such as solar-powered cell phone chargers and misters to more operational contexts. This will necessitate a high initial cost but since all of the music festivals have plans to stay put where they are at and continue producing their events on a permanent basis, an investment in renewable energy has the potential to pay itself off. Festivals should explore using a large solar array to gather and store energy during the day, which has plenty of direct sunlight and energy potential, and then going off the grid when night falls. A generator can used as a backup power source for the solar array should not be able to satisfy the energy demands of a stage. In areas in which there are already large renewable energy projects underway, investigate the possibility of having the energy company sponsor part of the festival and pull energy directly from the renewable energy company.

### *Create a Sustainability Fund*

Investing in technologies and making site improvements that reduce a festivals impact can be somewhat costly. Event organizers hesitate to make a mandatory sustainability fund because of the already high ticket price and people being adverse to being told that they have to pay in to something that they don't necessarily believe in. Personally, I don't necessarily believe

in paying \$25 in Ticketmaster service and convenience charges but I pay them anyways because I know that I am not getting a ticket otherwise. While ticket prices are already high, 68.8% of people surveyed said that they would pay more for a ticket to make a music festival more sustainable. Contributing to the sustainability fund of a music festival is also something that will make ticket buyers feel good about themselves. The \$25 in fees that Ticketmaster slams you with is annoying, but you learn to cope with it. Paying a few extra bucks for a good cause will likely be met agreeably rather than lead to people not purchasing the ticket at all. Making the fee mandatory will dramatically increase the capital available to festival organizers to make environmentally conscious improvements, and organizers won't have to worry if making the improvement is hurting their bottom line.

### *Carbon Emissions*

Instead of shying away from sharing the numbers for a festival's CO2 emissions, festivals should concentrate on using this aspect as an educational opportunity as well. Few music fans understand that their travel to the festival is the greatest environmental impact of the event. In fact, when asked the question of who festival goers believed should be responsible for making an event more environmentally friendly, 63.1% believed that it should be the festival organizers and only 29.2% believed that it should be the festival attendee. There is obviously an information gap that exists between the festival's ability to communicate the true environmental impacts of a festival and the perceptions of attendees. Perhaps if attendees were given statistics on just how much of an environmental impact the ubiquitous use of car travel to festivals has then they would take greater care to seek out alternate options.

In order for festivals to take alternate forms of transportation to the festival, there have to be alternative options. Festival organizers should make every effort to get people to travel by coach or train to their site, biking if possible, as these modes of transport produce far fewer CO<sub>2</sub> emissions than using a car. Partnerships with cities to get them to shell out more transportation options are a viable way of communicating this. Festival's have some leverage to work with here since they bring in such massive amounts of money for the festival over such short periods of time.

### *Carbon Offsetting*

Carbon offsetting is actually a bit of a tricky business. The most important thing that a festival can do is to verify their offsets through programs like Voluntary Carbon Standard, Green e-certification, or Climate Action Reserve.<sup>122</sup> All of these organizations are independent verification systems that rate carbon offset projects and can assure that the projects are legitimate operations. Most festivals have chosen their favorite offsetting projects but audience members likely know little about these projects. The audience should be given information on both the project and how it is can be verified as a legitimate project.

Beyond knowing that the operation is legitimate, there is the issue of communicating exactly what is a carbon offset. Carbon offsets are generally sold by companies that operate in the field of renewable energy. Offsets are sold in the form of renewable energy credits, which account for the production of a quantifiable amount of renewable energy. Renewable energy credits are typically sold at the price of \$1/100kWh. That 100kWh is the equivalent.072 metric tons of CO<sub>2</sub>, but since it is produced from a renewable energy source it is said to have no carbon

impact. Because the power produced by renewable energy credits has zero carbon emissions, the credit is said to “offset” the CO2 that is pumped in to the atmosphere.

Offsetting is tricky for two reasons. For one, the company selling renewable energy credits can sell credits for renewable energy that they plan to produce in the future. So it is possible that when you think you just paid for renewable energy production you actually just invested in a renewable energy project that may or may not get off the ground in the future. Secondly, it is impossible to cancel out CO2 emissions once they have been released into the atmosphere.

The only way to truly “offset” carbon emissions to not produce them in the first place. These intricacies must be communicated to the fans otherwise they may believe that their pollution is eliminated by paying a few bucks for a lot of emissions. Festivals should also avoid describing their events as carbon neutral unless they actually produced no carbon during their event, a feat nearly impossible with current technologies. One person driving to the event immediately squashes that possibility. If you pay for your pollution that is a good thing because it means that you are investing in renewable energy that will be used in the future. Festivals should communicate that they are investing in renewable forms of energy instead of claiming neutrality.

### *Grow the GMG*

Reverb’s Green Music Group is off to a good start but it currently has relatively few partners and only has six full-time staff. In order to be effective, the organization needs to grow and include a more widespread presence from the music industry. In my talks with Alison Tickell, head of Julie’s Bicycle, Alison agreed to help me create my own nonprofit that mirrored the work of her organization in the US. This was before Green Music Group was launched and

underway. Now that the organization is already formed, one of the hardest tasks is already completed and the nonprofit should now be expanded. The connection with Alison Tickell could prove to be an invaluable one because of her head start in the UK and her connections within the music industry, many of which operate in the United States as well. A potential partner to bring into the fold of the Green Music Group is concert giant Live Nation, which is already a member and sponsor of Julie's Bicycle. I hope to be personally involved in the expansion of the Green Music Group and hope to cast a wider net with the organization than is currently being cast. One part of growing the Green Music Group will be securing financial contributions to the organization. Artists, music industry executives, live music producers, and music festivals are all good potential sources of fundraising. There are also grants given out by large corporations for creative endeavors such as these. Every avenue of funding should be explored.

For now, my main focus on bringing more people into the organization is set on music festivals because the music industry and audiences are already organized into a collective unit at music festivals. If all music festivals operate with a coordinated agenda, they will be able to do more to enact change. If the message that Bonnaroo sent out to its members were done on a coordinated basis, the turnout would have been even more astounding. Getting the industry together is of central importance to promoting the agenda.

## *Conclusion*

Research on the sustainability of music festivals and education campaigns at the event is not meant to be viewed as an immediate solution to the problem of climate change. Rather it is to be viewed as an innovative way of encouraging society to take action to help reduce their impact on the environment. Informing people of how to minimize their impact and demonstrating creative ways to achieve that will not result in an immediate mitigation of the problem at hand. It is not about that. This research is about setting standards of behavior that will eventually be normalized into mainstream society. If the music industry and festivals take the lead on this, they will be on the margins and forefront of green solutions to the problem of climate change, but the fringe of today will be the norm of the future. This research is about nudging our culture towards that norm.

# Appendix 1

## Music Festival Attendee Survey

As part of my senior thesis I am surveying individuals who go to music festivals to get demographic data on attendees. I am also looking to get people's perceptions of Coachella's attempts to make the event more sustainable/environmentally friendly. Help me with my research and fill out this survey. Thanks.

**1. Please enter the following. This information will be used solely for the purpose of an academic study and shared with no one. Feel free to omit information.**

Name:

Company:

Address:

Address 2:

City/Town:

State:

ZIP/Postal Code:

Country:

Email Address:

Phone Number:

**2. What is your gender?**

- M
- F
- T

**3. What is your age range?**

- 15-18
- 18-24
- 25-29
- 30-34
- 35+

**4. What is your income range?**

- 0-30k
- 31-60k
- 61-90k
- 90k+

**5. What is your highest level of education?**

- High School
- Some College
- 4 year College
- Graduate School

**6. When you go to a music festival, what is the distance you travel?**

- 5-25 miles
- 26-50 miles
- 51-100 miles
- 100-200 miles
- 250-500 miles
- 500-1000 miles
- 1000+ miles

**7. How do you get there?**

- drive alone
- carpool
- bus
- plane

**8. Do you think that music festivals have a negative impact on the environment in any of the following categories?**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Noise Pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste (litter/pollution)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic Congestion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO2 Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Damage (of festival site)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**9. Who's responsibility do you think it is to minimize the environmental impact of a festival?**

- Festival Organizers
- Local Authorities
- Festival Go-ers
- Noone

**10. Would you pay more for a festival ticket to make the event more sustainable?**

- Yes
- No

# Environmental Messaging Survey

As part of my senior thesis I am surveying individuals about whether environmental education can be an effectively utilized at music festivals. Help me with my research and fill out this survey. Thanks.

## 1. What is your present level of interest in environmentalism?

- (1) Don't really care
- (2) Kind of interested
- (3) I like to recycle
- (4) I take considerable steps to be env. friendly
- (5) I'm a full blown activist

## 2. Do you think that music festivals should take steps to be more environmentally friendly/sustainable?

- Yes
- No

## 3. Do you think music festivals should make efforts to educate and raise awareness about environmental issues?

- Yes
- No

## 4. In what manner would you prefer to receive information on environmental issues? (skip if you answered no to question 3)

- pamphlet
- info booth
- a special section of the festival
- a talk

## 5. Would you like to see more of any of the below at Coachella?

- recycling
- free water if you bring your own bottle
- use of renewable energy
- non-profit environmental organizations
- an option to buy clean energy credits to help offset your carbon footprint

**6. Have you ever seen an environmental practice at a music festival that would make you change your habits?**

Yes

No

**7. Are you familiar with the group Global Inheritance and their work at Coachella?**

Yes

No

## Appendix 2

### Bonnaroo Climate Change Action Letter

Dear Senator:

You have a unique opportunity to confront climate change and spur the growth of a clean energy economy. I urge you to seize this moment and lead America to reduce pollution, invest in energy efficiency, and create green jobs.

With your leadership on this issue, we can reduce our dependence on foreign oil and limit global warming. You have a chance to show voters like me – and nations around the world – that our country is making climate change, energy efficiency and new economic opportunities a top priority.

There are no excuses when it comes to our planet's future. This Congress, and this generation, will be judged by the action we take or fail to take. Please show the courage and resolve to make climate change a primary item on your agenda.

I look forward to receiving your response and learning where you stand on this critical issue.

It's time to define our decade.

## Works Cited

- 
- <sup>1</sup> Millenium Ecosystem Assessment. *Ecosystems and Human Well Being: Biodiversity Synthesis*. (Washington DC: World Resources Institute, 2005), 4.
- <sup>2</sup> *Ibid.*, 5.
- <sup>3</sup> Marks, Kathy and Howden, Daniel. "The World's Rubbish Dump: A Garbage Tip That Stretches from Hawaii to Japan." *The Independent*. February 5, 2008.
- <sup>4</sup> *Ibid.*
- <sup>5</sup> IPCC. *Climate Change 2007: Synthesis Report*. IPCC. 2007. [www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf), accessed February 2010.
- <sup>6</sup> 350 Group. "350 Science." <http://www.350.org/about/science>, accessed March 30, 2010.
- <sup>7</sup> Catherine Botrill et. al. "Jam Packed: Audience Travel Emissions from Festivals." (London: Julies Bicycle, 2009), 3.
- <sup>8</sup> Liverman, Diana. *Long Horizons: An Exploration of Art & Climate Change*. (London: The British Council & Julie's Bicycle, 2010), 22.
- <sup>9</sup> *Ibid.*
- <sup>10</sup> Andrew Steer. "Ten Principles of the New Environmentalism." *Finance and Development*, December 1996, p. 4-7.
- <sup>11</sup> *Ibid.*
- <sup>12</sup> Fabio Dasilva, et al. *Sociology of Music* (Notre Dame University Press: Notre Dame, 1984), 1.
- <sup>13</sup> *Ibid.*, 101.
- <sup>14</sup> *Ibid.*, 102.
- <sup>15</sup> *Ibid.*, 104.
- <sup>16</sup> Reebee Garofalo. "Popular Music and the Civil Rights Movement." *Rockin' the Boat: Mass Movements & Mass Music* (Boston: South End Press, 1992), 234.
- <sup>17</sup> Dasilva, 105.
- <sup>18</sup> Dave Marsh. "Woodstock at 40: What it Means Today." *The Huffington Post*. December 9, 2009. <[http://www.huffingtonpost.com/dave-marsh/woodstock-at-40-what-it-m\\_b\\_257736.html](http://www.huffingtonpost.com/dave-marsh/woodstock-at-40-what-it-m_b_257736.html)>.
- <sup>19</sup> *Ibid.*
- <sup>20</sup> Reebee Garofalo. "Understanding Mega-Events: If We Are the World, Then How Do We Change It?" *Rockin' the Boat: Mass Music and Mass Movements* (Boston: South End Press, 1992), 17.
- <sup>21</sup> *Ibid.*, 21.
- <sup>22</sup> *Ibid.*, 30.
- <sup>23</sup> Neal Ullestad. "Diverse Rock Rebellions Subvert Mass Media Hegemony." *Rockin' the Boat: Mass Music and Mass Movements* (Boston: South End Press, 1992), 47.
- <sup>24</sup> Farm Aid. "Annual Report." Farm Aid Website. <[http://www.farmaid.org/site/c.qll5lhNVJsE/b.2750725/k.946A/Annual\\_Report.htm](http://www.farmaid.org/site/c.qll5lhNVJsE/b.2750725/k.946A/Annual_Report.htm)>.
- <sup>25</sup> Live8. "The Story So Far." Live8 Website. <<http://www.live8live.com/whathappened/#>>.
- <sup>26</sup> Live Earth. "History: 07.07.07." Live Earth Website. <<http://liveearth.org/en/liveearth/070707>>.
- <sup>27</sup> Milesago. "Monterey: Peace, Love and Flowers." from *Music Festivals: The Australian Scene*. <http://www.milesago.com/Festivals/intro.htm>, accessed March 31, 2010.
- <sup>28</sup> *Ibid.*
- <sup>29</sup> Randall, David K. "Head of AEG Live on Live Nation-Ticketmaster Deal." *Forbes.com*. [http://www.forbes.com/2009/02/09/aeg-live-nation-ticketmaster-business-media-0209\\_aeg.html](http://www.forbes.com/2009/02/09/aeg-live-nation-ticketmaster-business-media-0209_aeg.html), accessed March 31, 2010.
- <sup>30</sup> YahooFinance. "Ticketmaster Entertainment, Inc. Company Profile." Yahoo Inc. April 2, 2010. <http://biz.yahoo.com/ic/58/58442.html>, accessed April 2, 2010.
- <sup>31</sup> *Ibid.*
- <sup>32</sup> LiveNation. *2008 Annual Report*. Live Nation, 2008, 4. <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9OTYxMHxDaGlsZEIEPS0xfFR5cGU9Mw==&t=1>, accessed April 1, 2010.
- <sup>33</sup> *Ibid.*
- <sup>34</sup> Live Nation, 49.
- <sup>35</sup> Live Nation, 20.

- 
- <sup>36</sup> Live Nation, 3.
- <sup>37</sup> Chmielewski, Dawn C., Fritz, Ben and Lewis, Randy. "Ticketmaster-Live Nation merger gets Justice Department's approval." *Los Angeles Times*. January 26, 2010. <http://articles.latimes.com/2010/jan/26/business/la-fi-ct-ticketmaster26-2010jan26/3>, accessed April 2, 2010.
- <sup>38</sup> *Ibid.*
- <sup>39</sup> *Ibid.*
- <sup>40</sup> Live Nation, 8.
- <sup>41</sup> David K. Randall. "The Music Man." *Forbes.com*. August 8, 2008. <http://www.forbes.com/2008/08/08/concerts-festival-music-forbes>, accessed April 2, 2010.
- <sup>42</sup> *Ibid.*
- <sup>43</sup> *Ibid.*
- <sup>44</sup> *Ibid.*
- <sup>45</sup> <http://www.rothburyfestival.com/>
- <sup>46</sup> Lee Lupo. "Rothbury Festival Attendance up 25 percent; 2010 concert planned." *The Muskegon Chronicle*. [http://www.mlive.com/rothbury/index.ssf/2009/09/rothbury\\_festival\\_attendee\\_u.html](http://www.mlive.com/rothbury/index.ssf/2009/09/rothbury_festival_attendee_u.html), accessed April 4, 2010.
- <sup>47</sup> Mitchell Peters. "Music Festivals Not Feeling Economic Pinch." *Billboard.com*. <http://www.billboard.com/news/music-festivals-not-feeling-economic-pinch-1003961258.story>, accessed April 2, 2010.
- <sup>48</sup> Randall, <http://www.forbes.com/2008/08/08/concerts-festival-music-forbes>.
- <sup>49</sup> *Ibid.*
- <sup>50</sup> *Ibid.*
- <sup>51</sup> George Varga. "Goldenvoice's Coachella and Stagecoach Festivals Couldn't be More Different Yet Each is a Booming Success." *Creators Syndicate*. April 11, 2009.
- <sup>52</sup> Bruce Fessler. "Coachella Enters 10<sup>th</sup> Year with Global Reputation Among Music Makers, Lovers." *The Desert Sun*. April 16, 2009. <http://www.mydesert.com/fdcp/?1270166947754>, accessed March 25, 2010.
- <sup>53</sup> *Ibid.*
- <sup>54</sup> Bruce Fessler. "Agreement ensures Stagecoach, Coachella will be staying in Indio." *The Desert Sun*. March 19, 2010. <http://www.mydesert.com/article/20100319/EVENTS17/3190308/Agreement-ensures-Stagecoach-Coachella-will-be-staying-in-Indio>, accessed March 19, 2010.
- <sup>55</sup> *Ibid.*
- <sup>56</sup> Coachella Music Festival. "Charity." <http://www.coachella.com/event/charity>, accessed April 5, 2010.
- <sup>57</sup> Manta. "AC Entertainment Inc." <http://www.manta.com/c/mm08cpd/a-c-entertainment-inc>.
- <sup>58</sup> Manta. "Superfly Productions Inc." [http://www.manta.com/coms2/dnbcompany\\_jcf5fy](http://www.manta.com/coms2/dnbcompany_jcf5fy).
- <sup>59</sup> <http://www.rollingstone.com/news/coverstory/20200609/page/23>.
- <sup>60</sup> [http://www.city-data.com/county/Coffee\\_County-TN.html](http://www.city-data.com/county/Coffee_County-TN.html).
- <sup>61</sup> Larry Flowers. "Bonnaroo Fans Stimulate Local Economy." *WSMV-TV*. June 11, 2009. <http://www.wsmv.com/entertainment/19727778/detail.html>, accessed March 31, 2010.
- <sup>62</sup> Andrew Eder. "Bonnaroo Inc. benefits concert owners and locals." *Knoxnews.com*. <http://www.knoxnews.com/news/2007/jun/17/bonnaroo-inc-benefits-concert-owners-locals/>, accessed April 4, 2010.
- <sup>63</sup> Murat Arik and David A. Penn. *Economic Impact of Bonnaroo Music Festival on Coffee County*. (Middle Tennessee State University: Murfreesboro, 2005), 18.
- <sup>64</sup> *Ibid.*, 16.
- <sup>65</sup> *Ibid.*, 19.
- <sup>66</sup> *Ibid.*
- <sup>67</sup> Bonnaroo. "Community Investment." Bonnaroo Inc. <http://www.bonnaroo.com/about/community-investment.aspx>, accessed April 4, 2010.
- <sup>68</sup> *Ibid.*
- <sup>69</sup> *Ibid.*
- <sup>70</sup> Elder, <http://www.knoxnews.com/news/2007/jun/17/bonnaroo-inc-benefits-concert-owners-locals>.
- <sup>71</sup> PBS. "History." *Austin City Limits*. <http://video.pbs.org/program/1273976454/>, accessed March 30, 2010.
- <sup>72</sup> Manta. "C3 Presents, LLC." [http://www.manta.com/coms2/dnbcompany\\_7h2d3m](http://www.manta.com/coms2/dnbcompany_7h2d3m).
- <sup>73</sup> Michael Corcoran. "C3 Pays city \$12,000, plus \$1 per ticket to rent Zilker for ACL." *Austin360*. October 8, 2009.
- <sup>74</sup> *Ibid.*
- <sup>75</sup> Corcoran, "C3 Pays..."

- 
- <sup>76</sup> “Lollapalooza Till 2011.”
- <sup>77</sup> Interview with Laura Sohn of Mockingbird Productions. March 8, 2010.
- <sup>78</sup> Bonnaroo. “Energy Consumption.” *Greening Facts 2009*. <http://www.bonnaroo.com/festival/greening-facts.aspx>
- <sup>79</sup> Clean Vibes. “The Clean Vibes Mission.” <http://cleanvibes.com/mission.cfm>, accessed April 7, 2010.
- <sup>80</sup> Bonnaroo. “Product Consumption.” *Greening Facts 2009*. <http://www.bonnaroo.com/festival/greening-facts.aspx>
- <sup>81</sup> Bonnaroo. “Bonnaroo 2009 by the numbers.” *Greening Facts 2009*. <http://www.bonnaroo.com/festival/greening-facts.aspx>.
- <sup>82</sup> *Ibid.*
- <sup>83</sup> Bonnaroo. “Product Consumption.”
- <sup>84</sup> *Ibid.*
- <sup>85</sup> ICF International. “Do Your Part.” [http://doyourpartclimate.org/bonnaroo\\_carbon\\_shredders.php](http://doyourpartclimate.org/bonnaroo_carbon_shredders.php), accessed April 7, 2010.
- <sup>86</sup> Bonnaroo. “Greening Partners.” *Greening Partners*. <http://www.bonnaroo.com/festival/greening-partners.aspx>
- <sup>87</sup> Derek Singleton. Interview with Nicole Parisi-Smith of HeadCount. April 6, 2010.
- <sup>88</sup> Roberta Cruger. “Rothbury Rock Fest Raises Green Bar.” May 2, 2009. <http://www.treehugger.com/files/2009/05/rothbury-music-fest-raises-green-bar.php>, accessed April 7, 2010.
- <sup>89</sup> Rothbury. “Run a near-zero waste in-house production.” *Our Commitment*. [http://www.rothburyfestival.com/festival/our\\_commitment.php](http://www.rothburyfestival.com/festival/our_commitment.php), accessed April 7, 2010.
- <sup>90</sup> Rothbury. “Choose Clean Energy.” *Our Commitment*. [http://www.rothburyfestival.com/festival/our\\_commitment.php](http://www.rothburyfestival.com/festival/our_commitment.php), accessed April 7, 2010.
- <sup>91</sup> Cruger, “Rothbury.”
- <sup>92</sup> Rothbury. “Educate the Public Through Art & Experiential Activities.” *Our Commitment*. [http://www.rothburyfestival.com/festival/our\\_commitment.php](http://www.rothburyfestival.com/festival/our_commitment.php), accessed April 7, 2010.
- <sup>93</sup> *Supra* note 65.
- <sup>94</sup> Rothbury. “Rothbury Sustainable Schools Program.” *Our Commitment*. [http://www.rothburyfestival.com/festival/our\\_commitment.php](http://www.rothburyfestival.com/festival/our_commitment.php), accessed April 7, 2010.
- <sup>95</sup> <http://www.globalinheritance.org/news>.
- <sup>96</sup> Coachella. “Recycling.” <http://www.globalinheritance.org/news>.
- <sup>97</sup> *Ibid.*
- <sup>98</sup> Coachella. “Carpoolchella.” *Sustainability*. <http://coachella.com/event/sustain>, accessed April 8, 2010.
- <sup>99</sup> Kristin Underwood. “Train to Coachella Music Festival Reduces Cars.” August 7, 2008. [http://www.treehugger.com/files/2008/07/train\\_to\\_coachella.php](http://www.treehugger.com/files/2008/07/train_to_coachella.php), accessed March 15, 2010.
- <sup>100</sup> Global Inheritance. “Energy FACTory.” <http://www.globalinheritance.org/programs/read/14/energy-factory>, accessed April 8, 2010.
- <sup>101</sup> C3 Presents. “Lollapalooza 2009 Greening Overview.”
- <sup>102</sup> C3 Presents. “Lollapalooza 2009 Greening Overview.”
- <sup>103</sup> Austin City Limits. “Greening.” <http://www.aclfestival.com/inthepark/greening.html>, accessed April 4, 2010.
- <sup>104</sup> C3 Presents. “Lollapalooza 2009 Greening Overview.”
- <sup>105</sup> Austin City Limits. “Greening.” <http://www.aclfestival.com/inthepark/greening.html>, accessed April 4, 2010.
- <sup>106</sup> *Ibid.*
- <sup>107</sup> *Ibid.*
- <sup>108</sup> C3 Presents. “Lollapalooza 2009 Greening Overview.”
- <sup>109</sup> Derek Singleton. Interview with Paige Davis, BlueAvocado. April 1, 2010.
- <sup>110</sup> Meegan Jones. *Sustainable Event Management*. (London: Earthscan, 2010), 126.
- <sup>111</sup> Derek Singleton. Interview Laura Sohn Mockingbird Productions. March 8, 2010.
- <sup>112</sup> EPA. “CO2 Emissions Equivalent Calculator.” *Clean Air*. <http://www.epa.gov/RDEE/energy-resources/calculator.html#results>, accessed April 9, 2010.
- <sup>113</sup> A Greener Festival. “Co2 Emissions.” December 7, 2009. <<http://www.agreenerfestival.com/co2.html>>.
- <sup>114</sup> A Greener Festival. “Who Are We?” December 7, 2009. <<http://www.agreenerfestival.com/#whoarewe>>.
- <sup>115</sup> A Greener Festival. “Final Greener Festival Awards Announced for 2009.” <<http://www.agreenerfestival.com/>>.
- <sup>116</sup> A Greener Festival. “Summary of Research.” A Greener Festival. <<http://www.agreenerfestival.com/summary.html>>.
- <sup>117</sup> *Ibid.*

---

<sup>118</sup> Julie's Bicycle and Mayor of London. *Green Music: Taking Action on Climate Change* (London: Greater London Authority, 2009), 2.

<sup>119</sup> *Ibid.*, 31.

<sup>120</sup> Derek Singleton. Interview with Amy Makowiecki of Reverb. March 26, 2010.

<sup>121</sup> Derek Singleton. Environmental Education at Music Festivals Survey. April 8, 2010.

<sup>122</sup> Jones, 123.