



**US Department of the Interior
Bureau of Land Management
Winnemucca District, Nevada**

Burning Man Event Special Recreation Permit
Environmental Impact Statement



**PUBLIC HEALTH AND SAFETY AT THE
BURNING MAN EVENT
MARCH 2019**

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ACRONYMS AND ABBREVIATIONS

Full Phrase

BLM	Bureau of Land Management
BRC	Black Rock City
EA	environmental assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESD	Emergency Services Division
FAA	Federal Aviation Authority
HHS	United States Department of Health and Human Services
MCI	mass casualty incident
NAC	Nevada Administrative Code
NAAQS	National Ambient Air Quality Standards
NDPH	Nevada Division of Public Health
NEPA	National Environmental Policy Act
NRS	Nevada Revised Statutes
OSHA	Occupational Safety and Health Administration
PCSO	Pershing County Sheriff's Office
PELS	permissible exposure limits
PLPT	Pyramid Lake Paiute Tribe
RC	remote control
SR	State Route
SRP	special recreation permit

Public Health and Safety at the Burning Man Event

1.1 BACKGROUND

The Burning Man Event has occurred completely on public lands administered by the Bureau of Land Management (BLM) since 1990, with the exception of 1997 when the event was held primarily on private lands. The Burning Man Event underwent an environmental assessment (EA) in 2012 as part of the National Environmental Policy Act (NEPA) to determine the environmental and societal impacts of the event. The Black Rock City, LLC (BRC) Proposed Action is to renew the special recreation permit (SRP) allowing the event and to analyze a proposed increase to a total event population of 100,000. The population, also called bodies on the playa, is all Burning Man Event attendees, including participants and BRC staff and volunteers. The population does not include government personnel or vendors. This public health and safety report addresses the existing environment of the Burning Man Event from the 2012 EA to the present day.

1.2 PUBLIC HEALTH AND SAFETY

Public health and safety are analyzed in the proposed Closure Area, including the surrounding communities of Gerlach, Fernley, Reno/Sparks, Nixon, Wadsworth, Lovelock, and Winnemucca. The area also includes traffic routes (with a 0.5-mile buffer) and the air basin (Black Rock Desert Hydrographic Region). The scope of public health and safety concerns includes the existing environment with factors affecting public health and safety, and it includes consideration for mitigations in place per planning and operational actions. The Burning Man Event includes a population of approximately 80,000 with participants, staff, and volunteers inside the city perimeter, approximately 9,715 acres or 15 square miles, with a density of approximately 5,270 persons per square mile.

The BLM's public health and safety management ensures compliance with federal, state, and local laws to protect public land users and public land resources from undue harm. Federal law mandates the BLM to provide for environmental safety in all activities on public lands, to promptly respond to any hazard, and to mitigate or remove hazards. This is in accordance with federal and state laws and regulations, including the Comprehensive Environmental Response, Compensation, and Liability Act. BLM policy for SRPs and discretionary actions dictates the BLM must determine if the agency can manage the event while protecting against health or safety risks to the public and unnecessary or undue degradation of public lands (BLM Handbook 2930-1).

Parties responsible for hazards and contamination of public lands may be held liable for damages and restoration. Public health and safety, including law enforcement, also pertains to all items in the permit regulations, stipulations, and annual Burning Man Event Closure Order published in the *Federal Register*. Public health and safety within the defined geographical scope applies to participant and nonparticipant impacts before, during, and after the proposed Burning Man Event. While BRC implements programs and event regulations to increase mitigations to public safety, the BLM must determine all reasonable efforts made from the agency and event organizer to provide for public health and safety, prevent unnecessary or undue degradation of public lands, and ensure all mitigations to do so are implemented (BLM Handbook 2930-1).

Public health and safety concerns outside of the event site relate to increased transient populations in surrounding communities for several months after the event. Increased instances of hitchhiking and residing in vehicles in public areas are observed in communities in the I-80 corridor following the event (BLM Social Values and Economic Assessment 2018). Abandonment of recreational vehicles, trailers, and vehicles in suburban communities around the event increases in the month following the event. The event increases the workload of neighboring communities' medical resources, tow truck operations, sanitation, and law enforcement (BLM Social Values and Economic Assessment 2018). Law enforcement officers brought from other agencies across northern Nevada leave an absence in their home agency, drawing down available public safety resources in northern Nevada (BLM Social Values and Economic Assessment 2018).

1.2.1 Aircraft Activity

BRC operates a Federal Aviation Administration (FAA)-approved un-towered private airport, 88NV, during the event. The 2012 EA analyzed the existence of one runway at this airport and through determinations of NEPA adequacy, the 88NV expanded to three runways with one runway dedicated to emergency medical evacuations in 2018. Aircraft authorized by BRC to operate at 88NV include contracted charter planes, private operators, and medical evacuations under contracted services.

A potential for hard landings exists on remote, unpaved landing strips; a minimal number of incidents have occurred with minor injuries and property damage to aircraft. The airport did not experience an aircraft crash, per FAA definition, in its history of operation until 2018 when the FAA defined an incident as a crash. Investigation is pending at the time of this writing by the FAA and National Transportation Safety Board. An aircraft crash at the event site has a low probability of occurrence, albeit a potential for a high degree of severity should it occur. This means it is unlikely that a significant crash would occur, but if an aircraft were to crash into the event site or loaded with passengers, resulting in a mass casualty scenario, the impacts would be severe. BRC mitigates this risk by providing communications at the airport, restricting operator access at the airport, and delineating runways.

BRC has developed drone-use protocols for participants due to the rising popularity of remote control (RC) aircraft or unmanned aerial vehicles, and the need to ensure public safety. BRC regulates all RC aircraft and requires that they be operated responsibly and subject to restricted fly zones and other rules of operation based on the FAA regulations and the Academy of Model Aeronautics safety code. The FAA requires all operators of RC aircraft flying within 5 miles of an airport to notify that airport of their operations. All operators must register and follow all policies, rules, restrictions, and conditions; failure to comply can lead to confiscation of the aircraft, removal from the event, and/or criminal penalties.

1.2.2 Civil Disorder

Civil disorder may occur if services within the city are disrupted beyond the expectations of event participants. In 2007, a male participant, disgruntled with the cultural shift at the Burning Man Event, lit the man effigy ablaze several days prior to the scheduled burn. A civil unrest built within the community, and the suspect was removed from the event location immediately because riotous crowds were forming with an intent to cause harm to the suspect. Quick messaging through BRC messaging outlets informed the crowd the suspect was no longer at the event location, and Black Rock Rangers were able to dismantle the crowds. Civil disorder could overwhelm law enforcement resources on-site in the event another disruption occurs, causing the population within the event to become riotous.

In 2016, a juvenile was reported missing and was not located for several hours. As per BRC protocol, BRC closed the gate for approximately 4 hours, preventing the juvenile from leaving the event with an adult. Unrest ensued from those trying to exit the event site during the gate closure. Supplemental law enforcement responded to the line of vehicles queued up to leave the event to prevent full-scale civil disorder. BRC also deployed more staff to the area to calm the crowd trying to exit. The juvenile was located within the city by BRC staff, and the gate resumed operations, calming the unrest.

A dispute broke out between participants and a theme camp known as White Ocean. The participants did not appreciate White Ocean's elitism and exclusivity and took action through vandalism. White Ocean was the victim of vandalism and theft resulting in thousands of dollars of property damage from civil disorder. The theme camp was a problem for BRC in that the theme camp did not adhere to BRC's ten principals, and it was a problem for the BLM for repeated environmental compliance issues. White Ocean disbanded the theme camp following the 2017 event without ever naming the vandals who caused the property damage.

In 2018, BRC contacted the BLM Authorized Officer at the event to lift population control measures of one vehicle entering the event for every vehicle leaving the event. BRC requested this change due to a growing unruliness of participants waiting to enter the event despite volunteers working diligently to settle waiting participants. The BLM agreed to pulse 200 vehicles into the event every two hours to alleviate the unrest in participants waiting to enter the event. This resulted in a sustained population over 80,000 for several hours to alleviate unrest and avert full-blown civil disorder.

1.2.3 Disease Vectors

Fly Ranch non-potable water used for dust abatement contains contaminants that could be harmful if ingested. Dust abatement trucks are labeled non-potable, and participants are discouraged by BRC from running behind dust abatement trucks, in accordance with the applicant's annual operations plan (Burning Man 2017). Participants do not always heed the warnings and occasionally run into dust abatement water that flows behind the trucks. A detailed water quality analysis is located in the Burning Man Special Recreation Permit Environmental Impact Statement (EIS) outlining water contaminants and potential health threats.

Blood-borne pathogen exposure from injured participants or from needles found during a search are a risk to law enforcement, the applicant's Emergency Services Division (ESD), and other BRC employees and volunteers. Law enforcement mitigates this risk by encouraging officers to use puncture-resistant gloves when searching and barrier gloves when administering first aid or when responding to calls for service at medical facilities.

Widespread illness is a risk if the flu or norovirus infects attendees and is addressed in the human health concerns section of this document. Valley Fever is a known risk in conditions presented on the Black Rock Desert. Valley Fever has not presented itself during the Burning Man Event, but the possibility of this disease vector is ever present in the austere environment of the Black Rock High Rock National Conservation Area in Pershing County, Nevada. (More information is available at: <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/causes.html>.)

West Nile virus is also prevalent in the area with recorded incidents in Lyon and Washoe Counties in 2018. In 2014, nine mosquito traps in Gerlach, Nevada, tested positive for West Nile virus from mosquitos

in the trap (<https://www.kolotv.com/home/headlines/Burners-May-Be-E-273670861.html>). Mosquitos are the vectors for this virus and can spread the virus to humans. Mosquitos are commonly found around areas with water. (More information can be found at: <https://www.cdc.gov/cholera/index.html>.)

1.2.4 Medical

Burning Man is located approximately 150 miles from the nearest Trauma II Level hospital in Reno, Nevada. As such, medical services during the event are provided by BRC. In 2012, BRC began looking for ways to treat participants on the playa rather than transporting them to area hospitals, decreasing time to treatment by managing complaints on-site. Medical care is divided into two components: ESD Medical and Rampart. ESD Medical is a group of approximately 400 Nevada-licensed medical care professionals who volunteer at six medical stations around Black Rock City. All ESD Medical providers must be licensed in the state of Nevada in accordance with Nevada Revised Statutes (NRS) 450B.695. They have historically provided only first aid level care. Medical stations are used to provide faster care and ensure appropriate triage of patients.

Rampart is a Nevada-licensed independent center for emergency care for the 14 days during the event. It is staffed by licensed care providers and provides basic emergency care, including cardiac monitoring, intravenous hydration, medications, radiology services, limited laboratory studies, and transport off the playa as needed. Rampart subcontracts the air and ground ambulance services on and off the playa.

The BLM also provides a medical unit on-site. This unit is dedicated to government employees' health and safety concerns. Definitive patient care is delivered rapidly, which is one of the most critical tenets of mitigating medical threats to government employees assigned to work the Burning Man Event. The BLM medical unit has treated officers for exposure to illegal controlled substances, illness related to playa conditions, and dehydration in addition to other medical needs on the playa.

BRC stages one fixed-wing air ambulance on-site while one is on standby in Reno, Nevada. The fixed-wing air ambulance is limited in patient volume and has a maximum carrying capacity of two patients. Careflight can also deploy a rotor wing air ambulance in the event planned medivac resources are exhausted. The nearest Trauma I Level hospital is the University of California, Davis, hospital in Sacramento, California, which is accessible by air ambulance in approximately two hours.

Statistical analyses of BRC's medical data found a linear relationship between the number of ESD cases and the participant population. There is a positive trend in the number of ESD cases and an increase in population.

1.2.5 Law Enforcement

Emergency response by law enforcement agencies at the event includes responding to numerous crimes, such as disorderly conduct, theft, destruction of property, and person-on-person crimes such as assaults, batteries, and sexual assaults. The law enforcement agencies also respond to vehicle crashes, fire and medical emergencies, injuries, structural collapse, structure fires, and drug intoxication. The applicant prepares operational and contingency plans annually to address emergency response by medical, hazmat, and fire personnel.

Investigating person-on-person crimes at the event is the primary responsibility of the Pershing County Sheriff's Office (PCSO); BLM officers augment the PCSO as needed, depending on call volume and available

staffing, to ensure responsiveness to participants' public health and safety. Additionally, BLM law enforcement is responsible for protecting public land resources and public safety concerns through application of the 43 Code of Federal Regulations and other federal laws, to include a Temporary Closure and Restriction Order.

Adequate law enforcement staffing levels are based on current and future event populations. Responsible agencies determine law enforcement staffing, with the exception of Pershing County, which is limited by a legal agreement between the applicant and Pershing County. Staffing levels may also be supported by current and future management studies, to address emergency response and ensure adequate public health and safety.

The number of law enforcement personnel required to support the BLM law enforcement function at the event is drawn from national resources and represents a significant drawdown of the agency's available sworn law enforcement staff. The number of officers required to support the administration of the Burning Man Event special recreation permit represents approximately a 40 percent drawdown on BLM national law enforcement resources for 258 million acres of public lands administered by the BLM. This hinders the agency's ability to provide for the protection of resources and the safety of the public throughout the country, in addition to responding to other emergency situations such as wildfires, hurricanes, marijuana interdiction, and normal protections to public lands. This event creates an obstacle to fulfilling the agency's mission bureau-wide.

The BLM determined 75 officers were required for the 2016–2018 Burning Man Events. In 2017, the BLM was only able to fill 73 officer positions due to staffing shortages nationwide and competing agency priorities. As such, the BLM must rely on partner agencies to reach the target of 75 officers at the event at its current population.

In 2017, Hurricanes Harvey, Irma, and Maria activated the Federal Emergency Management Agency's Emergency Support Function 13 Public Safety and Security (ESF-13), the largest-scale response in ESF-13 history. This activation provides federal government support to affected regions and relies on federal law enforcement officers to respond to designated areas to assist. In response to Hurricane Harvey, 1,891 federal law enforcement officers responded; 149 were from the Department of the Interior, including 27 from the BLM (DOI 2018). The BLM's Hurricane Harvey response initiated during the 2017 Burning Man Event, and response resources from the BLM nationwide, were limited because officers were assigned to the Burning Man Event.

In response to Hurricane Irma, 660 federal law enforcement officers responded; 144 were from the Department of the Interior, including 30 from the BLM (DOI 2018). Hurricane Irma made landfall 4 days after the majority of officers were released from the Burning Man Event and 2 days after most of those officers returned home; many officers returning from the Burning Man Event responded to Hurricane Irma. In response to Hurricane Maria, 445 federal law enforcement officers responded with a contingent staged in Puerto Rico prior to the hurricane making landfall; 90 officers were from the Department of the Interior, including 42 from the BLM (DOI 2018).

The BLM deployed resources for ESF-13 hurricane response approximately 7 days after the 2018 Burning Man Event. The full deployment numbers are not available, as the hurricane season is ongoing at the time of this writing. BLM officers assigned to the Burning Man Event remain responsible to respond to all hazard

events due to agency responsibilities, resulting in organizational burnout from extended assignments occurring in a tight time frame. Hurricane season often overlaps with the Burning Man Event.

Marijuana interdiction on public lands occurs in late summer and early fall on BLM-administered lands. Eradication of marijuana cultivation sites on BLM-administered lands is a priority for the agency due to the millions of dollars in environmental damages and threats to public safety from hazardous materials found on-site and dangerously aggressive inhabitants. Marijuana interdiction operations cannot be delayed when known suspects are occupying a marijuana cultivation site. A delay may result in the plants being harvested, occupants leaving the scene, and only the trash, environmental damage, and hazardous materials left for investigators. BLM special agents in Nevada have succeeded in apprehensions of multiple suspects and restoration of public lands in recent years. In 2018, BLM law enforcement sought assistance from special agents for a Burning Man Event-related investigation, but additional agents were unavailable, working an active marijuana interdiction case.

PCSO personnel for the event must be contracted from northern Nevada and local agencies to supplement the county resources and mitigate the drawdown on resources necessary to respond to normal county emergency response needs. The PCSO attempted to fill 21 positions for 8 days during the main Burning Man Event in 2016 and 2017 despite only having an allowed full-time, year-round staff of 15 (when fully staffed). In 2017, the PCSO only had 13 positions filled at the time of the event. The draw for deputies to move on to larger agencies creates perpetual turnover for the PCSO. The Pershing County Sheriff must balance staffing the Burning Man Event while providing adequate coverage for the rest of the county and special events over the holiday weekend.

Pershing County hired 22 temporary deputies for the 2011 festival, which was prior to BRC attempting to increase the population to 70,000 paid participants. The number of 22 deputies included 8 deputies per day to run the jail. These positions were (and still are) necessary for the increase of criminal activity that occurred (and continues to occur) in a portion of Pershing County that is absent human population for the vast majority of the year, only requiring approximately two calls for service a year outside of the Burning Man Event. This usage of 8 deputies for the jail has meant only 14 patrol positions to provide law enforcement response to the remainder of the population at the Event.

In the 2012 EA, the PCSO advised it would need to hire 32–34 additional deputies just for the population to increase to its current permitted level (BLM 2012) and to keep up with the increase in crime and calls for service at a 70,000-paid participant cap. The PCSO has been unable to obtain the adequate number of deputies pursuant to the 2012 EA and will continue to have an extremely difficult time attempting to contract any additional deputies for this festival, continuing to staff the event with just 22 deputies with the increased population following the 2012 EA (BLM 2012). Obtaining the proper level of law enforcement to increase the population to 100,000 persons at this point is virtually impossible for the Pershing County Sheriff under the current confines of the legal agreement between Pershing County and the proponent.

The BLM and PCSO also experience issues borrowing resources from other agencies due to the event encompassing the Labor Day holiday. The PCSO has been told by peer agencies that the event lacks the law enforcement resources to provide for adequate officer safety and as such would not allow their staff to work the event under contract with the PCSO. The Burning Man Event has, for several years, far exceeded the resources of not only Pershing County but law enforcement resources of northern Nevada as a whole. The PCSO has had to contract with several different law enforcement officers within the state

to provide some semblance of law enforcement expected by the participants. This endeavor is becoming increasingly difficult to perform from year to year, as the population of the Burning Man Event continues to increase, and the payment to Pershing County for this festival remains relatively stagnant (PCSO PMS 2017).

Due to limited BLM law enforcement resources to staff the event, the BLM has been forced to enter into interagency agreements with the US Forest Service to fill patrol positions. This process has become more and more difficult due to competing demands on US Forest Service officers in their respective regions. Staffing the event regularly taxes both the BLM and PCSO to gather the minimal resources necessary to provide for public safety, and recruitment is a year-round endeavor.

Within the Zone I Nevada law enforcement program, which is responsible for providing law enforcement coverage across 13.2 million acres of public lands in the Carson City and Winnemucca District Offices, to include the Black Rock Desert, all law enforcement personnel were assigned to work the Burning Man Event in 2018. As a result, no patrols were provided outside of the Burning Man Event for a 10-day period. Heavily visited recreation areas within the zone, such as Sand Mountain Recreation Area and the Hungry Valley Recreation Area, were not patrolled during Labor Day weekend.

Currently, if fully staffed, the PCSO and BLM combine for 96 officers, including command staff, for an approximate 80,000-person population with a straight line staffing of 1.2 officers per 1,000 population. This falls below the industry standard of 1.8 per 1,000 population. Burning Man differs from a normal population analysis because the participants at the event regularly stay active 24-hours a day and do not report to work and school as in normal policing environments. The 96 officers on-site are split across three shifts to provide 24-hour coverage with peak staffing targeted at peak participant activity (7:00 p.m. to 2:00 a.m.).

The Pyramid Lake Paiute Tribe (PLPT) provided comments during government-to-government consultation relative to Burning Man's impact on tribal law enforcement resources. PLPT is experiencing a shortage in law enforcement resources for year-round coverage, which is exasperated during the Burning Man Event ingress and egress through tribal lands. PLPT has to reassign law enforcement normally dedicated to protecting cultural and spiritual resources that are prone to vandalism to address law enforcement incidents within the communities. As a result, cultural and spiritual resources on tribal lands, already susceptible to vandalism, go unprotected during the highest traffic flow of the year through the reservation. PLPT enlisted assistance from the Bureau of Indian Affairs in 2018, but that effort was met with a publicly hostile response from BRC.

PLPT observes increases in trespassing at Pyramid Lake, human waste, drug incidents, and traffic congestion creating an unsafe environment for pedestrians. PLPT further notes delays due to event traffic affecting tribal employees reporting to work in medical clinics and schools, reducing critical services to the tribal community. PLPT experiences reductions in emergency medical services in the community as participants need care and transport due to illness or injury in route to the event, leaving the tribal community without resources. PLPT has observed impacts in the form of increased drug activity on and through the reservation associated with the Burning Man Event participants.

The Washoe County Sheriff's Office and Nevada Highway Patrol staff supplemental officers to the area during the event due to an increase in call volume during the event. This draws law enforcement resources

away from the Reno, Nevada, area during an active end of summer season with large community events and a holiday weekend.

Law enforcement statistics listed represent the violations of regulations encountered by law enforcement; this should not be conflated with convictions, as the prosecutors establish priorities for prosecutions in their respective jurisdictions (**Table I**, Law Enforcement Statistics). Violations of BLM regulations are tied to public health and safety and/or protection of natural resources; as such, the statistics provide a metric for measuring impacts on public health and safety and protection of natural resources. An increase in BLM law enforcement actions represents an increase in threats to public health and safety and natural resources. Factors relevant to these threats include traffic violations, illicit drug activity, and damages to resources (e.g., improper fuel storage, improper discharge of grey water, and depositing of human waste on the playa) affecting the National Conservation Area (NCA) and environmental justice populations (BLM Social Values and Economic Assessment 2018).

Table I
Law Enforcement Statistics

Burning Man Event BLM Law Enforcement Activity Summary (2001–2017)				
Year	Burning Man Event	BLM Operation	BLM Law Enforcement Actions	BLM Officer to Participant Ratio
	Population	Number of Officers	Citations / Arrests	
2001	26,700	34	98 (55 drug) / 6	1 per 785
2002	30,100	31	237 (149 drug) / 2	1 per 970
2003	30,381	33	177 (102 drug) / 5	1 per 920
2004	35,511	45	208 (108 drug) / 4	1 per 789
2005	35,289	45	229 (156 drug) / 8	1 per 784
2006	39,100	45	155 (81 drug) / 1	1 per 868
2007	48,011	45	331 (176 drug) / 2	1 per 1,066
2008	49,599	45	193 (123 drug) / 11	1 per 1,102
2009	43,558	45	287 (187 drug) / 9	1 per 967
2010	51,515	51	293 (158 drug) / 9	1 per 1,010
2011	53,735	51	376 (218 drug) / 8	1 per 1,053
2012	52,385	70	365 (253 drug) / 14	1 per 748
2013	69,613	70	433 (285 drug) / 6	1 per 994
2014	65,922	72	392 (205 drug) / 0	1 per 916
2015	76,412	97	534 (154 drug) / 0	1 per 788
2016	75,711	75	326 (85 drug) / 0	1 per 1,009
2017	79,432	75	413 (196 drug) / 0	1 per 1,059

* Note: The average BLM law enforcement officer ratio to participant over 16 years has been 1 BLM officer per 931 participants. This participant/officer ratio is for general information only and does not reflect actual operations within the event. This distribution shows a Poisson Distribution with one change point in 2004 and no statistically significant staffing changes after the 2004 change point.

Bayesian and frequentist Poisson regression analysis indicates that there is a strong relationship between the total number of citations and the population (Poisson indicates 6 citations for every 1,000 population, Bayesian indicates 4-9 citations for every 1,000).

Bayesian and frequentist Poisson Statistical Analysis performed by Dr. Mark Hall, BLM Black Rock Field Manager. All other statistics performed by Staff Law Enforcement Ranger Becky Andres.

Note: The PCSO assumed more drug cases beginning in 2015; the reduction of BLM drug charges does not reflect a reduction in drug possession at the event.

Burning Man Event Pershing County Law Enforcement Activity Summary (2015–2017)				
Year	Burning Man Event	PCSO Operation	PCSO Law Enforcement Actions	PCSO Officer to Participant Ratio
	Population	Number of Officer Positions	Citations/Arrests	
2015	76,412	24	147/43	1 per 3,183
2016	75,711	22	152/46	1 per 3,441
2017	79,432	22	125/64	1 per 3,611

* Note: The average PCSO law enforcement officer ratio to participant over 3 years has been 1 PCSO deputy per 3,412 participants. This participant/officer ratio is for general information only and does not reflect actual operations within the event. Additionally, in 2015 a rotation of 74 deputies was utilized to fill the 24 positions; in 2016 a rotation of 39 deputies was utilized to cover the 22 positions, and in 2017 a rotation of 38 deputies was necessary to cover the 22 positions.

Law enforcement arrests include but are not limited to instances of assault, assault on officers, battery, battery on officers, interstate drug trafficking, distribution of narcotics, and possession of controlled substances.

Table I summarizes BLM law enforcement actions, excluding warnings, during the 2001 through 2017 Burning Man Events.

1.2.6 Evacuation

Burning Man Event evacuation may be necessary in the case of natural or human-made disasters during event operations. Wildfire, rain, sustained high winds, mass casualties, and large-scale structure fires may create conditions necessary to evacuate the event site location.

The applicant uses radio, social media, and traditional media outlets to broadcast emergency information to participants, in accordance with the applicant's annual event operations plan. The primary evacuation route is Pershing County Road 34, to State Route (SR) 447, south toward Nixon. If the primary route is unavailable, the secondary routes are Jungo Road to Interstate 80 or SR 447, north toward Cedarville, California. SR 447 is a paved road but is limited by degradation or possible road failure if vehicle traffic exiting the event were to exceed 700 vehicles per hour (Burning Man 2017). Jungo Road is unpaved and is known to cause mechanical failure, such as multiple flat tires, due to rough road conditions; it is not recommended for passenger cars. In addition, tow service along Jungo Road is very limited.

Natural disasters include wildfires, rain, and high winds. Rain exceeding approximately one-quarter inch in a single event can render the playa inaccessible by motor vehicles; this would result in sanitation and emergency response concerns. Portable toilet vaults need daily maintenance for proper sanitation, and a significant rain event would impede these services. This can have a negative impact on the health and safety of the public. Wildfires can close major ingress/egress routes to the event, preventing the free flow of traffic and cutting off vital services to the city such as fuel, ice, and sanitation.

Human-made disasters include conditions causing mass casualties, such as structure fire, airplane crashes, and structure collapse. The applicant proposes annual fire response and rescue plans in its emergency services operational plan. Fire response may require a law enforcement response for scene security, firefighter safety, and evacuations. Law enforcement also augments the applicant's resources in response to structure collapse by providing site security and emergency response.

1.2.7 Explosives

Unexploded ordnance is a public health and safety risk on public lands. The BLM coordinates mitigation, neutralization, and removal of all known explosives. The playa was once utilized as a military ammunition range, but no known unexploded ordnances remain in the affected environment. There are no known hazards in the affected environment from existing activities. Burning Man produces a large fireworks display at the burning of the effigy on the Saturday night before Labor Day. BRC provides security for these explosives prior to the deployment on-site.

Explosives not included in Burning Man Event operational plans are prohibited during the event. Although possession and use of unauthorized fireworks are prohibited by the event closure order, they are encountered annually by law enforcement within the event. BRC staff and volunteers were located in 2016 and 2018 discharging fireworks in violation of the closure order in the days following the main event. Law enforcement destroys confiscated fireworks.

1.2.8 Fire Safety

The applicant provides fire safety response resources and operational plans for all fire events within the proposed Closure Area, including fire art (Burning Man 2017). BRC identifies three fire response categories: single occupancy, multiple occupancy, and airport/aircraft. Through a separate plan, BRC provides for major burn and small-scale burn (art) logistics, to include fire response. Despite the applicant's planning, a determined participant ran into the Man Burn in 2017 and died from his injuries. The BLM requires BRC to provide firefighters certified in wildland firefighting per the 2012 EA.

The growing number of camp trailers at the event, in addition to fuel storage within camps, create a concern for a rapidly spreading structural fire, not necessarily contained in one structure. In 2015, the BLM expressed concerns with shortcomings in equipment and management of fire, rescue, and hazmat programs. BRC responded by adding two new tactical tenders to increase fire response and suppression capability. In addition, an airport crash tender with foam fire suppression capabilities was added for quick response to incidents at the airport. BRC also acquired new rescue and extrication resources to augment and expand existing BRC rescue capabilities.

A requirement that BRC provides structural, qualified firefighters within the fire response group needs to be considered in future permitting requirements. One trailer did catch fire, and quick-thinking responders towed the trailer away from other dwellings and prevented fire spread; this mitigation is not possible to accomplish with all trailer locations at the event site. The BLM and interagency partners provide wildland fire suppression response and fire prevention messaging on travel routes to the event.

In 2018, a rental box truck ignited at its camp while the camp was breaking down and loading equipment. Fire and law enforcement responded, secured the scene, and extinguished the fire. The box truck and its contents were a total loss and created environmental compliance issues as petroleum products leaked onto the playa. BRC and the camp occupants remediated the compliance issues by removing contaminated playa soils.

In 2018, an RV leaving the event caught fire approximately 30 miles south of the event on SR 447. The vehicle fire spread when it was parked on the shoulder of SR 447, becoming a wildland fire. The wildland fire closed SR 447 for approximately an hour while fire crews controlled the fire and insured safe passage. The road closure created traffic congestion for miles as participants trying to exit the area were stopped.

1.2.9 Flooding

The playa surface becomes impassible in the event of even a small amount of rain. In 2014, the playa received enough rain to paralyze vehicular travel on the playa for approximately 12 hours. The inability to traverse the event site by vehicle eliminated public services, including portable toilet servicing, rapid emergency response for medical and law enforcement incidents, and servicing of camp equipment. Flooding on the playa is a rare occurrence but threatens a significant risk to event operations and public health and safety.

BRC mitigates this risk by messaging to participants to bring a 5-gallon bucket in the event sanitation services are disrupted and the bucket is needed to deposit human waste. Absent sanitation services, public health and safety diminishes due to the increased risk of exposure to disease vectors during a flood event if resources are unable to provide sanitation services to the existing 1,700 portable toilets used by participants. In addition, flooding can cut off vital services to the city such as fuel and ice delivery. Without adequate ice, food spoilage could occur. Without fuel deliveries, emergency services would be unable to provide required services within the city.

1.2.10 Human Health Concerns

The playa is a rugged, austere environment with risks from heat, dehydration, sun exposure, and chemical burns to skin from exposure to playa surface soils. Heat-related injuries for participants and BRC staff are reportedly treated at BRC's on-site medical facility and by the BLM medical unit for government employees assigned to the event. The austere environment creates respiratory distress and discomfort in the eyes for some individuals. It is recognized some employees working the event develop "Playa Cough" sometimes for weeks following their assignment after the event.

On-site medical care provided by the BLM and the United States Department of Health and Human Services (HHS) mitigates the lasting effects of the austere environment by providing primary and preventative medical care at the event site. HHS is also equipped with capabilities to assist employees with Office of Workman's Compensation Program paperwork as applicable. HHS providers are also trained in critical incident stress management, and this service was offered to all staff following the traumatic event of witnessing a man burn alive in 2017. BRC offered critical incident care to participants and staff through their volunteer response team.

The Burning Man Event is located approximately 150 miles from the nearest Trauma Level II hospital in Reno, Nevada. BRC stages one fixed-wing air ambulance on-site while one is on standby in Reno, Nevada. The nearest Trauma I Level hospital is the University of California, Davis, hospital in Sacramento, California.

Traffic-related injuries occur in the Closure Area on the playa; two participants were run over by vehicles during the 2017 event. Additionally, motor vehicle crashes occur within the Closure Area and on travel routes to the event. In 2014, a participant was killed in a crash involving an art car when the individual fell from the art car and was run over by a trailer being towed behind the art car. The PCSO took a total of six reports in 2014 involving art car accidents (one fatal and three injuries [PCSO AAR 2014]). Participants largely do not drive while present at the event except to reach their campsite and upon exodus. BRC implements and manages a Department of Mutant Vehicles to register any vehicle the organization permits to operate on the playa through vehicle inspections and education to restrict vehicle use during the event.

BRC approves large art cars to operate on crowded streets within the city and on the open playa. Some of these art cars store a fuel supply and operate pyrotechnics.

Within the event Closure Area, Leave No Trace® principles are communicated to participants; however, unauthorized dumping of unsanitary debris, such as trailers and trash, next to the Closure Area and along travel routes have an impact on surrounding communities. Large amounts of waste are deposited along the roadside, spreading into neighboring lands by the wind. Businesses in Fernley rent extra trash receptacles at their own expense to accommodate trash left behind from Burning Man Event participants (see **Section 3.7.1** of the Burning Man Special Recreation Permit EIS). Trash and abandoned vehicles and trailers can be found along the travel routes and in Reno suburbs. Within the event Closure Area, participants often cannot reach a portable toilet in time, and depositing human waste on the playa is an issue creating sanitation concerns. BRC has appointed part of the restoration team to clean up solid human waste found on the playa during the event.

Participants fall from structures and art pieces at the event, which is a human health concern before, during, and after the Burning Man Event. Injuries from falls at the event range from minor injury and discomfort to serious injury, such as paralyzing spinal injuries and potentially death.

Local area first responder resources, including fire, emergency medical services, and law enforcement, are drawn down during the event, as personnel from across northern Nevada support the event. Communities across northern Nevada are left with reduced emergency services staff, particularly in Pershing County. Additionally, BLM personnel at the event are brought from across the nation over Labor Day weekend, one of the busiest weekends on public lands across the nation. This results in millions of acres of public lands without BLM law enforcement coverage during the Burning Man Event, reducing public safety on public lands falling outside the event.

Table 2 summarizes medical incidents during the 2012 through 2017 events.

Table 2
Summary of Medical Incidents

Incident Type	2012	2013	2014	2015	2016	2017
Patients	4,821	6,196	5,443	5,313	4,899	5,039
Off-site transports	29	34	22	26	31	53
Altered state, influence of drugs/alcohol	76	240	127	79	126	325
Combative patients	Not Reported	Not Reported	Not Reported	1	6	Not Reported

Source: BRC provided statistical information

Note: Single fatalities occurred at the event in 2014, 2017, and 2018

Bayesian and frequentist Poisson regression analysis indicates that there is a strong relationship between the total number of medical incidents and the population (Poisson indicates 8 medical incidents for every 1,000 population increase over 2,400, Bayesian indicates 7-17 medical incidents for every 1,000 population increase over 2,400). Both studies found a negligible number of medical incidents for a population of 2,400 or less.

Bayesian and frequentist Poisson Statistical Analysis performed by Dr. Mark Hall, BLM Black Rock Field Manager.

1.2.11 Controlled Substances

Illegal possession, use, and distribution of a controlled substance at the Burning Man Event are a public health and safety concern, and are potential impacts from the rise of the national opioid epidemic. The “gifting culture” of the Burning Man Event results in people accepting items from strangers and ingesting

substances unknown to them. Participants who believe they are ingesting one substance only to find out they have ingested something completely different may overdose. After the 2014 event, the event medical provider, Humboldt General Hospital, reported an increase in the use of synthetic illicit drugs and Gamma-Hydroxybutyrate (GHB, commonly known as liquid ecstasy). The report stated illicit drugs can cause life-threatening complaints and require immediate clinical intervention (HGH AAR 2014).

In addition to being a public health concern, illegal drug use at the event increases safety concerns of staff and law enforcement. Ingestion of certain illegal substances leads to violent participant behavior. These encounters often lead to use of force situations in which law enforcement must go “hands on” to bring participants under control to prevent risk of harm or injury to the public and employees working the event. On an annual basis, the public, BRC staff, and law enforcement officers have been assaulted or battered as a result of illegal drug use and/or alcohol consumption. Response to these calls consumes patrol resources, which can be tied up for over an hour dealing with a combative subject. This leaves large parts of the city without patrols or units to respond to other calls for service.

Law enforcement responds to assaultive or combative subject calls during the event, from illegal controlled substance abuse and/or alcohol consumption. This use jeopardizes the safety of the public, first responders, and BRC staff and volunteers. Law enforcement agencies at the event enforce state and federal law to combat illicit drug use. BRC has an illegal substance policy that clearly states the use and possession of illicit drugs and drug paraphernalia are violations of law. Despite this, BRC does not search vehicles for illegal substances upon entry. Previous BRC entrance policies have informed participants their cars would be searched for prohibited items, some of which include explosives, fireworks, firearms, loose feathers, and tubs of confetti. Illegal controlled substances have not been listed, nor has BRC ever contacted law enforcement to report discovery of illegal controlled substances. The BLM does not have a record of BRC gate operations ever referring an incident to law enforcement for illegal substances found upon entry at the event.

Absent discovery of illegal controlled substances during BRC searches upon entry, detection of illegal substances falls on law enforcement. Within the confines of Pershing County, the Burning Man Event contains the largest concentration of narcotics violations in the county for the entire year (PCSO PMS 2017). During the 2017 Burning Man Event, the PCSO seized the following types and amounts of controlled substances:

- Over 639 grams of marijuana
- Over 818 grams of psilocybin mushrooms
- Over 120 grams of ketamine
- 13.5 grams of methamphetamine
- Over 231 grams of cocaine
- Over 334 grams of 3-4 methylenedioxymethamphetamine (MDMA)
- Over 217 doses of LSD

From 2012 through 2017, BLM law enforcement issued an average of 196 citations per event for possession of controlled substances, far exceeding the average of six citations per year issued throughout the Winnemucca District Office, outside of the Burning Man Event.

The proponent attempted in 2017 and 2018 to hire and deploy a private security force, in what the proponent referred to as intermediate protection for their staff. The applicant advised the primary role of the security force would be to attempt to calm those who use violence against their staff due to psychosis brought on by the consumption of illicit narcotics and/or alcohol. The security force has advised they will be able to go “hands on” and attempt to diffuse the situation prior to law enforcement response. It is imperative to note the root of violent behavior against others at the event, to include law enforcement, is illegal drug use. Attempting to stem violent participant behavior without addressing illegal drug use will not have a significant impact on participant or law enforcement safety.

Table 3
BLM-Issued Drug Citations

Year	Drug Citations Issued During Burning Man Event	Drug Citations Issued in Winnemucca District (outside of Burning Man)
2012	253	7
2013	285	2
2014	205	0
2015	154	22
2016	85	0
2017	196	7

Source: (BLM data)

1.2.12 Sexual Assaults

The occurrence of sexual assaults at the event is a major concern for the BLM since it poses a serious threat to public health and safety. The PCSO has the jurisdiction and authority to investigate sexual assaults that occur during the event. In 2014, the PCSO noticed a marked increase in sexual assaults. Many of the victims reported blacking out, which is characteristic of GHB or date rape drugs. Since 2014, an average of 12 sexual assaults are investigated by law enforcement over the course of the 8-day event.

Not all sexual assault victims report incidents to law enforcement at the event. According to the Department of Justice, three out of ten sexual assaults are not reported to law enforcement (Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, and National Crime Victimization Survey 2018). Sexual assault response teams are multidisciplinary teams who partner together to provide interagency, coordinated responses that make victims' needs a priority, hold offenders accountable, and promote public safety. Despite the number of sexual assaults occurring at the event, sexual assault response teams are not available for victims within 100 miles of the event site. If a sexual assault occurs at the event, the victim must be transported off-site for forensic medical exams without a support network in place.

Table 4
Burning Man Event Sexual Assault Statistics

Year	# of Sexual Assaults Reported to Law Enforcement at Burning Man Event	Rate of Sexual Assault (Occurrences/Day) Bayesian 95% Highest Posterior Density¹	Median
2014	6	0.35–1.64	0.81
2015	15	1.1–2.95	1.83
2016	11	0.73–2.36	1.4
2017	21	1.61–3.83	2.49

¹ The number of sexual assaults is assumed to be represented by a Poisson distribution whose mean is represented by the rate of sexual assault multiplied by the time period.

1.2.13 Mass Casualty Response

A mass casualty incident (MCI) is any incident in which emergency medical resources, such as personnel and equipment, are overwhelmed by the number and severity of casualties. Due to the uniqueness and austere environment of Black Rock City, there are any number of events that could precipitate an MCI, including but not limited to foodborne illness, natural disasters, illicit substance use, building collapses, plane crashes, or vehicle accidents. BRC has a Multiple Casualty Incident Plan in place that addresses the roles of each responding entity in Black Rock City to effectively triage, treat, transport, and track patients, and manage the overall incident. During an MCI response, the BRC ESD is the lead agency for providing a medical response and developing a strategy with the event medical provider, law enforcement, and other resources, in the case of a medical emergency.

Law enforcement is primary in responding to a mass casualty event, such as an active shooter, a plane crash, or terrorism. Depending on the scale of the event, law enforcement may draw from other resources in the region. Due to the event's remote location, there are only minimal resources in the area next to the event; as such, response from other agencies and resources would be delayed. Immediate relief may come from the few officers Washoe County deploys to Gerlach, Nevada, during the event and the Nevada Highway Patrol officers assigned to SR 447 during the event. The Washoe County special response team is capable of an approximate two-hour response time to the event site, as is a quick deployment contingency from the National Guard in Reno, both with members who can fit on rotor wing aircraft for transport to the event.

Members who must arrive by ground transport would have an extended response time of up to five hours. Pershing County is in partnership with a three-county emergency response team (Pershing, Humboldt, and Lander) with a response time of approximately two hours for those members who fit in a medical helicopter. Response would be greater for members arriving by ground transport and may exceed five hours. The Federal Bureau of Investigations would be the lead investigating agency should a mass casualty incident occur on BLM-administered lands.

1.2.14 Hygiene and Food Safety

The Nevada Division of Public and Behavioral Health (NDPH) provides resources for large-scale food and water services at the Burning Man Event on the agency website (http://dphh.nv.gov/Reg/Temp-E/Temporary_Events_Home/). The state statutes and regulations used to permit and regulate this mass gathering event are outlined in NRS and Nevada Administrative Code (NAC) Chapter 446 regarding food establishments and NRS and NAC Chapter 444 regarding sanitation, which includes sections on temporary mass gathering events as well as sewage disposal, septic tank pumping contractors, and non-sewered toilets (NDPH AAR 2014).

According to the NDPH website, a temporary permit is required to serve food or beverages to participants or to provide food and beverages to theme camps serving 125 or more people. Vendors offering potable water also require a temporary permit, as designated on the NDPH website. The NDPH conducts on-site inspections during the event to ensure permit compliance. BRC obtains permits for relevant services provided at the event and cooperates with inspections.

Under their operation plans, the applicant provides hand sanitizer at all restroom locations and encourages participants to use the hand sanitizer (Burning Man 2017). It is unknown how many participants heed this advice and maintain hygienic eating conditions. No running water is available on the playa though some

participants utilize camp trailers and rented shower and restroom facilities to manage hygiene and refrigeration of perishable items. BRC sells ice on the playa for participants as a preventative food spoilage measure.

1.2.15 Missing Juveniles

The safety and security of juvenile participants is important to all parties. BRC estimates 500 juveniles under 12 years old attend the event each year. The applicant produces an annual operational plan addressing response to missing juveniles at the event. Also, law enforcement response is required for children in need of supervision, in accordance with the Nevada Revised Statute (Sections 62A.370, 62B.320, 62C.050, 200.508, 202.870, and 202.879). The Nevada Revised Statute defines a juvenile as any unemancipated person under the age of 18.

The PCSO is the primary response agency for missing persons in Pershing County; when children in need of supervision are located, they cannot be released into adult custody until the PCSO has approved the release. Pershing County Code 9.12.100 defines the responsibilities of parents, guardians, or other adult persons having the care and custody of a minor. The applicant provides a missing minor operation plan annually, but the PCSO retains sole authority for releasing juveniles. Annually, multiple registered sex offenders register with the PCSO and attend the event, compounding concerns when a minor is reported missing. It is uncommon for the PCSO to receive a report of missing juveniles in the county outside of the Burning Man Event.

During the 2018 event, a juvenile was lured from an art piece the juvenile was working on by an adult male operating an ice cream truck registered by BRC as an art car. BLM law enforcement located the truck and discovered the juvenile was provided an intoxicating substance by the adult, who was unknown to the juvenile prior to this event. The juvenile was removed from the scene and placed in the custody of the Division of Child and Family Services until the juvenile could be reunited with a parent or legal guardian. The suspect was found to be in possession of illegal drugs, pornography, and restraint devices and was arrested by PCSO and evicted from the event site by the BLM.

1.2.16 Respiratory Concerns

The Closure Area is on the Black Rock Desert playa, which contains alkaline gypsum and silica dust that become airborne in high concentrations with Burning Man Event activities and wind (Adams and Sada 2010). Exposure to alkaline gypsum dust with a silica component is regulated by the Occupational Safety and Health Administration (OSHA) as a known carcinogen for workers, to include all government and contracted employees working in the environment at the event site. Detailed air quality analyses, including threshold limits, are found in **Section 3.6.1** of the Burning Man Special Recreation Permit EIS. The Burning Man Event is a temporary event reoccurring annually with a population that includes environmentally sensitive groups such as children and the elderly. Children take in more air per unit body weight than adults, resulting in greater impacts from poor air quality (CARB 2000).

The National Ambient Air Quality Standards (NAAQS) are established by the Environmental Protection Agency (EPA) and establish acceptable levels for exposure to ambient air particles. The playa surface is known to contain a naturally occurring carcinogen, silica, which when combined with iron, also present in the playa surface, can contribute to silicosis of the lung with repeated exposure (Burning Man EA 2012; EPA 1996). Baseline air quality reporting from the 2017 Burning Man Event indicates the PM₁₀ and PM_{2.5} particulate density measured exceeded EPA NAAQS thresholds by 8.6–14.6 times allowable exposure

during the event operation period. In addition, silica and iron were represented as the top two elements in the chemical analysis of oxides and metals in the sampling filter analysis.

1.2.17 Government Employee Health and Safety

OSHA thresholds vary from the EPA and are based on exposure during an 8-hour shift over the course of a 40-year career. Data collected in 2017 for comparison with the NAAQS are not directly comparable with OSHA exposure limits for ambient and respiratory air quality. An air quality study was performed by government industrial hygienists during the 2018 Burning Man Event. The study found six samples exceeding the OSHA permissible exposure limits (PELS) for respirable crystalline silica and three exceeded OSHA PELs for total respirable dust. Crystalline silica is a contributing factor to silicosis of the lung and a known carcinogen naturally occurring on the playa surface. Additional sampling in future years will improve data and monitoring. All samples exceeding PELs occurred with winds in excess of 18–20 miles per hour. It is recommended that all exposed employees use an N95 Respirator when winds are in excess of 18–20 miles per hour and reduce the use of open-air vehicles (BLM 2018). Further precautions include specialized filters in vehicles and offices, entry vestibules at the Joint Operations Center (JOC) facilities, and relocating the JOC to a location upwind of Gate Road (BLM 2018).

An alternative to implementing respirator use is to shelter in place in an enclosed space (i.e., a vehicle or building). Sheltering in place means limiting exposure to windblown fugitive dust by all means necessary and may mean temporarily discontinuing exterior ventilation. Vehicles with a recycle air function drawing only air from the interior of the vehicle should be placed in this mode. Visibility is also affected at high winds, and employees operating motor vehicles should reduce speeds or shelter in place in a stopped vehicle until visibility is restored.

Industrial hygienists also identified concerns regarding employee noise exposure at the Event. Individual noise monitors that emit a colored light when decibel levels reach the point of OSHA-required hearing protection were recommended to ensure employee health protections are in place (BLM 2018).

Due to the extended nature of the Event assignments, and an average of 10 days working 13–16 hour shifts, government personnel and contractors need access to housing, food, and hygiene resources. Current government personnel and contractor staffing levels strain available resources in Gerlach. Planning for future Event growth will require ensuring adequate services to government employees assigned to the Event.

1.2.18 Structure Collapse

The Burning Man Event includes several temporary structures, such as stages, impromptu hotels, and other dwellings, that lack extensive safety features or licensed Nevada building inspection. Structure collapses pose a threat to public safety with a moderate potential for occurrence and a substantial injury risk to the participants involved. Historically, there is a low occurrence of structure collapse within the city. In 2016, a structure collapse resulted in three minor injuries and one trauma injury, resulting in off-playa transport after the weight of participants on the structure caused a second-story floor collapse. The event growth and further development of theme camps increase this risk due to a greater number of structures erected on the playa. This remains a low-risk impact on public health and safety with minor to traumatic injuries depending on the severity of the incident.

BRC inspects structures and stages as part of the event's safety program; it is unknown what qualifications the BRC inspectors possess. Pershing County does not deploy building inspectors to the event site due to staffing limitations; the county only has one building inspector. BRC has a Structural Collapse Plan for an emergency response to a structure collapse during the event.

1.2.19 Terrorism

Terrorism has never occurred at the Burning Man Event; however, several vulnerabilities exist. The presence of large numbers of people, the iconic status of Burning Man, and widespread media coverage of the event could make the festival an attractive target for an individual or team of attackers. Since the event is a soft target with the potential to draw the ire of international and domestic terrorists, tactics from active shooter, vehicular assault, and improvised explosive devices are real threats with a low to moderate risk of occurrence. The impacts of a terrorist act at the event could prove fatal and result in a mass casualty scenario that exceeds the capacity of law enforcement and medical resources on-site. A novel depicting the Burning Man Event as a terrorist target was published in 2017 and depicts weaknesses in the event security and actions to overcome existing security mitigations. The changing global culture around acts of terrorism makes this risk difficult to adequately assess, as events such as the October 1, 2017, shooting at a country music festival in Las Vegas, Nevada, are undetected prior to occurrence.

Event Vulnerabilities

The Burning Man Event is classified as a large, outdoor, public gathering. Unlike limited-duration events at fixed facilities, large, outdoor, public gatherings are not confined to a physical structure and do not rely on a permanent allocation of dedicated security resources. Rather, they usually rely on local law enforcement to provide security during the event. Nearly all aspects of security must be uniquely planned and formulated for each individual gathering. Large, outdoor, public gatherings are typically open-access events and have been successfully targeted by terrorists on numerous occasions in the past (DHS 2011).

The Burning Man Event lacks a defined "See Something, Say Something" program to educate participants as to what qualifies as suspicious behavior and how to report concerns. Event organizers and public agencies lack transparent communication regarding threats and intelligence of criminal activities within the event site. Because of the layout of the city, there are multiple locations to place explosives or hazardous agents. Public involvement in identifying and reporting suspicious items is necessary to prevent this type of activity.

Burning Man organizers resist physical barriers to prevent vehicular attacks against its population, citing vehicle operation restrictions during the event without regard for malicious intent. The event does not use barriers to mitigate high-speed avenues of approach, deny vehicle entry, and provide perimeter protection. The perimeter fence at the event is an orange plastic trash fence; the event lacks effective physical barricades for protection of unauthorized entry. In 2018, a vehicle drove through the plastic trash fence and through the walk-in camping section of the city, entering the event without authorization and at great public safety risk. The vehicle was never located by BRC or law enforcement after it gained entry to the event. Barriers would reduce vehicle speeds and prevent vehicle penetration to help mitigate concerns. Options for barriers include, but are not limited to, fixed and retractable bollards, heavy objects walls and ha-ha barriers, water obstacles, and Jersey barriers.

Limited access controls and lack of professional security resources at entrance points into the city, coupled with limited law enforcement staffing, are two critical event vulnerabilities. BRC operates the gate and

searches for stowaways at peak traffic flow areas to prevent ingress and prevent traffic backlog onto paved routes in the area. There is not enough law enforcement assigned to the event to provide a high-visibility presence at gate operations at the three portals into the city: the Main Gate, Airport, and Point I.

Possession of weapons, including firearms, is prohibited during the event. Due to the lack of available resources to search all vehicles entering the event for weapons or explosives, especially during the peak of ingress, prohibited items such as firearms do enter into the city. There are numerous examples of firearms being discovered by law enforcement inside of the Burning Man Event that were not screened upon entry to the event. In 2015, a death investigation led to the discovery of a Burning Man employee who possessed a firearm in the employee's personal vehicle, as well as a firearm in the vehicle leased to BRC and assigned to the employee (PCSO Post Festival Report 2017). In 2017, a traffic stop within the Burning Man Event led to the discovery of a large quantity of cocaine in a recreational vehicle. A loaded AR-15 rifle was also found within the vehicle with a round in the chamber. This vehicle was allowed into the event as an "early entry" participant and was not discovered during screening by BRC at the entrance gate. These incidents create concern regarding the quality/validity of searches by BRC at entry points. Since BRC controls access through the gates, processes must be in place to ensure proper searches for contraband are being conducted.

The presence of firearms exposes another vulnerability for the event: the lack of exercises for emergency plans involving an active shooting response. The October 1, 2017, shooting at a country music festival in Las Vegas, Nevada, resulted in hundreds of casualties and fatalities and overwhelmed local law enforcement and emergency medical services, despite being in the middle of the thirtieth-largest city in the United States. In an austere environment such as Burning Man, with limited law enforcement and medical resources to draw from in the surrounding areas, an active shooting response plan is critical to ensure additional resources are available. The BLM received recommendations for enhanced physical site security from the Department of Homeland Security in 2016 to include establishing a reporting system for participants, increased transparency in risk analysis and intelligence sharing between all event management entities, proactive gate searches to mitigate active shooter incidents, physical barriers in crowded areas within the city, and a hardened perimeter security measure.

I.3 COMPARABLE ENVIRONMENTS

I.3.1 Sparks, Nevada

Sparks, Nevada, is similar in population size to the total Burning Man Event population of approximately 80,000 people. The Sparks Police Department employs 159 employees, 126 of whom are sworn law enforcement officers, to keep the community safe (<http://sparkspolice.com/>). Sparks contains a large working population, including commuters to Reno and USA Parkway. Residents in Sparks are not active 24 hours a day in their routine lives. Sparks reported an unemployment rate of 3.8 percent in August 2017, indicating the majority of the population is working and sleeping according to social norms.

The Sparks Police Department published a Personnel Utilization Study identifying an optimal rate of 34 percent of an officer's shift responding to calls for service, with the rest of the time being consumed by community policing, outreach, and proactive measures (Sparks 2013). The 2010 Census revealed Sparks had a population of 2,524 persons per square mile, which is much lower than the average for comparable communities of 4,706 persons per square mile (Sparks 2013). The Sparks Personnel Utilization Study shows violent crime increases in cities with a greater population density in comparison with Sparks. The study indicates that in December 2012, the sworn law enforcement staff was adequately staffed with 107

personnel but understaffed in civilian operations at 41 personnel (Sparks 2013). The Burning Man Event's population is approximately 16,000 persons per square mile.

Sparks is located adjacent to Reno, Nevada, with a Trauma II Level hospital and ample ambulance response. The nearest Trauma I Level hospital is the University of California, Davis, hospital in Sacramento, California, which is accessible by air ambulance. The Washoe County Sheriff's Office, Nevada Highway Patrol, Reno Police Department, and several federal law enforcement agencies can support the Sparks Police Department in the event of a major or mass casualty incident, with response times for a critical incident of less than 15 minutes.

Table 5
Sparks Crime Statistics

Category	2014	2015
Cases Taken	12,170	12,297
Calls for Service	77,223	81,189
Non-Injury Accidents	764	817
Injury Accidents	348	411
Fatal Accidents	5	2
Total Accidents	1,117	1,230

Unified Crime Reporting – Violent

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Homicide	3	4	0	4	8	8	2	3	2	2
Rape	40	36	51	40	40	46	32	44	68	54
Robbery	124	134	128	112	103	75	68	70	56	99
Aggravated Assault	214	179	237	242	211	157	133	156	181	204
Human Trafficking	-	-	-	-	-	-	-	-	-	-
Total	381	353	416	398	362	286	235	273	307	359

Unified Crime Reporting – Property

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Burglary	893	832	904	850	699	655	609	559	545	672
Larceny	2,104	2,422	2,282	2,007	1,829	1,600	1,710	1,706	1,701	1,759
Grand Theft Auto	455	349	304	248	233	191	240	253	248	272
Total	3,452	3,603	3,490	3,105	2,761	2,446	2,559	2,518	2,494	2,703

Unified Crime Reporting – Total

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cases	3,833	3,956	3,906	3,503	3,123	2,732	2,794	2,791	2,801	3,062

Source: Sparks Crime Statistics from <http://sparkspolice.com/wp-content/uploads/2016/10/SparksPolice-Historical-Stats-2016.pdf>

Table 6
Sparks Sexual Assault (Rape) Statistical Analysis

Year	# of Sexual Assaults Reported to Law Enforcement	95% Highest Posterior Density (Occurrences/Day) ¹	Median
2014	68	0.15–0.23	0.19
2015	54	0.11–0.19	0.14

¹ The number of sexual assaults is assumed to be represented by a Poisson distribution whose mean is represented by the rate of sexual assault multiplied by the time period.

I.3.2 Electric Daisy Carnival

The Electric Daisy Carnival is a multiday music festival held annually in Las Vegas, Nevada, on private leased property at the Las Vegas Speedway under the law enforcement jurisdiction of the Las Vegas Metropolitan Police Department. The Las Vegas Metropolitan Police Department staffs approximately 350 officers per day at the event while event producers hire approximately 1,500 to 2,000 private security staff per day for a peak population of 140,000 participants per day. The event location, Las Vegas Speedway, is less than 15 miles from Las Vegas, Nevada, with three trauma centers operating at Level I and Level II response. Air and ground ambulances are available to transport victims, and private vehicles are available to transport noncritical patients the short distance to care. Supplemental law enforcement resources are also available from Henderson, Nevada.

Clark County Ordinance 6.65.120 mandates one law enforcement officer per 500 attendees at every special event permitted or two law enforcement officers per 1,000 participants. The Clark County Sheriff is authorized to staff events at a higher ratio and determine the type of officers if the agency deems it necessary, with all enforcement costs paid by the event organizers. Electric Daisy Carnival also employs on-site medical care with approximately 60 intake beds and six trauma beds for immediate care of participants.

Table 7
2018 3-day Event Experience According to Open Source Statistics

2018	Population	Total Arrests	Felony Narcotics Arrests	Ejections
Day 1	137,582	33	29	32
Day 2	138,593	35	33	65
Day 3	135,225	30	28	166
	TOTAL	98	90	263

***Average population 137,133. Six traffic tickets were issued on Day 3.

I.4 REFERENCES

- Adams, Kenneth D., and Donald W. Sada. 2010. Black Rock Playa, Northwestern Nevada: Physical Processes and Aquatic Life. Desert Research Institute. May 24.
- Bureau of Land Management (BLM). 2018. Burning Man Data Discussion. BLM Washington Office, Washington, DC.
- Burning Man. 2017. Burning Man Event Special Recreation Permit Operations Plan. BLM Winnemucca District Office, Winnemucca, Nevada.
- CARB (California Air Resources Board). 2000. The Health Effects of Air Pollution on Children. Fall. Internet website: <http://www.aqmd.gov/docs/default-source/students/health-effects.pdf>.
- DHS (Department of Homeland Security). 2011. Protective Measures Guide for the U.S. Outdoor Venues Industry. June 2011.
- Department of Interior (DOI). 2018. An Unprecedented Response: *DOI Support to ESF-13 During the 2017 Hurricane Season, After Action Review*. March 2018.
- Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Victimization Survey. 1973–2016. Internet website: <https://www.bjs.gov/index.cfm?ty=dcdetail&iid=245>.
- EPA (Environmental Protection Agency). 1996. Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information. Washington DC. July 1996. Internet website: <https://www3.epa.gov/ttn/naqs/standards/pm/data/1996pmstaffpaper.pdf>.
- HGH AAR (Humboldt General Hospital). 2014. Humboldt General Hospital Burning Man Event After Action Report.
- NDPH AAR (Nevada Department of Public Health). 2014. Burning Man After Action Report. Reno, Nevada.
- PCSO AAR (Pershing County Sheriff's Office). 2014. Pershing County Sheriff's Office After Action Report. Pershing County, Lovelock, Nevada.
- PCSO Post Festival Report (Pershing County Sheriff's Office). 2017. Post Festival Report. Pershing County, Nevada. 2017.
- PCSO PMS (Pershing County Sheriff's Office). 2017. Pershing County Sheriff's Office – Post Mission Statement. Pershing County, Nevada. 2017.