

North Las Vegas Airport SJR-3 Flight Safety Review and Recommendations



**Submitted to the
Nevada Legislative Commission
by the
SJR-3 Stakeholder Group
November 1, 2009**

CLARK COUNTY
DEPARTMENT OF AVIATION



General Aviation

North Las Vegas Airport
Henderson Executive Airport
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October 27, 2009

Lorne Malkiewich, Secretary
Nevada Legislative Commission
401 South Carson Street
Carson City, NV 89701-4747

Dear Mr. Malkiewich:

Senate Joint Resolution No. 3 (SJR-3) of the 2009 Nevada State Legislature, urged the Federal Aviation Administration (FAA) and the Clark County Department of Aviation (CCDOA) to convene a stakeholder group comprised of representatives including the FAA, CCDOA, the City of North Las Vegas, the Clark County Aviation Association, the Aircraft Owners and Pilots Association, neighborhood residents and airport tenants to analyze concerns and make recommendations to improve flight safety standards at North Las Vegas Airport. Although the FAA did not participate as a stakeholder member, the Manager of the FAA Las Vegas Flight Standards District Office did provide extensive technical advice during the meetings. The attached report presents the unanimous findings of the stakeholder group.

The highlights of the report are featured in the executive summary. This information is supported by more detailed data reported in the main body of the report. A brief historical and operational overview of North Las Vegas Airport is provided, the responsibilities of the FAA and CCDOA are outlined, recent airport safety improvements are enumerated, and a review of aircraft accidents within approximately the past 10 years on and near the airport is included using data from the National Transportation Safety Board. The report concludes with 13 recommendations the stakeholder group believes can serve to improve the safe operation of general aviation aircraft using North Las Vegas Airport.

I would like to personally extend my appreciation to everyone that participated for their time and effort in the completion of this project.

Sincerely,

Cecil Johnson
Assistant Director, General Aviation, Clark County Department of Aviation
Chairman, SJR-3 Stakeholder Group

cc: Senator Steven Horsford
Assemblywoman Marilyn Kirkpatrick
Randall H. Walker, Director, Clark County Department of Aviation
Rosemary A. Vassiliadis, Deputy Director, Clark County Department of Aviation

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EXECUTIVE SUMMARY

North Las Vegas Airport is owned and operated by the Clark County Department of Aviation. Opened in 1941, it is a general aviation “reliever” airport designed to attract light aircraft traffic from nearby McCarran International Airport. It is the second busiest airport in Nevada and one of the 100 busiest airports in the United States with over 600 based aircraft. According to a recent study the airport annually contributes over \$136 million to the local economy.

Two aircraft accidents in the vicinity of North Las Vegas Airport in 2008 prompted the Nevada State Legislature to examine safety at the airport. A resolution of the Nevada State Legislature urged the formation of a stakeholder group to review current operational practices and make recommendations to improve flight safety at North Las Vegas Airport. This report presents the findings of this group, including the following:

- By law the Federal Aviation Administration (FAA) is solely responsible for monitoring and regulating aviation safety.
- The Clark County Department of Aviation (DOA) is responsible for maintaining infrastructure on airport grounds, including airfield lighting, signage, taxiways and runways.
- The Federal Aviation Administration and the Clark County Department of Aviation have partnered to improve safety at the airport in recent years through aviation education and facility improvements.
- Between January 1999 and September 2009, North Las Vegas Airport experienced 2.23 million takeoffs and landings. Forty-three accidents were recorded by the National Transportation Safety Board (NTSB) during this period within a 10-mile radius of the airport. The annual number of accidents has declined over this period. Those accidents range from a high of 7 in 2000 and 2003 to a low of 1 in 2007 and 2009 (Appendix C).
- Over this period, 75 percent of accidents were attributable to pilot error (Appendix D).
- Three of the 43 accidents involved experimental aircraft. Experimental aircraft account for 7 percent of the total number of based aircraft at North Las Vegas Airport and represent 7 percent of all accidents (Appendix G).
- Through examination of available data, it was determined that of a total of 43 accidents, 32 or 74 percent involved based aircraft, and 11 or 26 percent involved transient aircraft. Of a total of 32 based aircraft accidents, 8 or 25 percent involved flight instructional activities. Five of these 8 accidents, or 63 percent, involved the use of helicopters by flight schools (Appendix G).

- A review of accident data reveals different causes for accidents that occurred both on and off airport property. Loss of directional control was the most frequent cause of accidents on airport property. Fuel system mismanagement was the most frequent cause for accidents occurring off airport property (Appendix E).
- Additional research and analysis by the National Transportation Safety Board is warranted to better determine the causal effects of all aircraft accidents at North Las Vegas Airport.
- None of the accidents were attributable to airport infrastructure or other site conditions at North Las Vegas Airport.

This report presents specific recommendations to enhance flight safety standards at North Las Vegas Airport.

INTRODUCTION

Senate Joint Resolution No. 3 of the 2009 Nevada State Legislature (SJR-3) became effective on May 22, 2009 (Appendix A). On August 22, 2008 a Kilgore Velocity experimental aircraft experienced engine trouble and collided with a residence, resulting in the fatalities of the pilot and two occupants in the house. On August 28, 2008 a Navajo twin-engine aircraft manufactured by Piper Aircraft Corporation experienced an onboard fire and the aircraft impacted a house while attempting to return to the airport for an emergency landing. The pilot was fatally injured.

This resolution urged the Federal Aviation Administration to work closely with the Clark County Department of Aviation and the entire aviation community in Clark County to convene a stakeholder group with representation from each of the following for the purpose of improving safety:

- The Federal Aviation Administration
- The Clark County Department of Aviation
- The City of North Las Vegas
- The Aircraft Owners and Pilots Association
- Clark County Aviation Association
- Residents of neighborhoods surrounding the North Las Vegas Airport
- Tenants of the North Las Vegas Airport

This stakeholder group was directed to issue a preliminary analysis of concerns regarding the current flight safety practices at North Las Vegas Airport and to make recommendations to improve flight safety standards at the airport, particularly with respect to experimental aircraft.

On August 26, 2009, September 22, 2009 and October 13, 2009, meetings of the stakeholder committee were held with the following committee members:

- Anita Wood, North Las Vegas City Council
- Janice Ridondo, Resident of the City of Las Vegas¹
- Cecil Johnson, Clark County Department of Aviation
- Stacy Howard, Aircraft Owners and Pilots Association
- David Lerner, Clark County Aviation Association
- Kenny Scherado, North Las Vegas Airport Commercial Tenant
- Dave Edwards, North Las Vegas Airport Tenant²
- Dan Markoff, North Las Vegas Airport Tenant (Absent 10/13/09)

¹ Ms. Ridondo is a long term resident of a neighborhood near North Las Vegas Airport, and an employee of Clark County, Nevada

² Mr. Edwards is also Vice President of the Clark County Aviation Association and a member of the Experimental Aircraft Association

The following individuals participated in the SJR-3 meetings and provided extensive technical advice:

- Pete Yiakos, Manager, Federal Aviation Administration Las Vegas Flight Standards District Office (Absent 9/22/09)
- Ben Czyzewski, Airport Manager, Clark County Department of Aviation
- Doug McNeeley, Sr. Management Analyst, Clark County Department of Aviation

Discussion was held concerning the regulation of general aviation aircraft, previous steps taken by the Clark County Department of Aviation to improve safety at the airport, potential safety enhancements, and methods to improve communication with area residents. Based on this discussion and a review of the causal factors involved in aircraft accidents associated with the airport, it is the purpose of this report to analyze available data and provide recommendations to improve flight safety standards at North Las Vegas Airport.

AIRPORT BACKGROUND

The Clark County Department of Aviation owns and operates McCarran International Airport and four general aviation airports, including North Las Vegas Airport. The following information provides a brief historical and operational perspective:

- North Las Vegas Airport opened as the Sky Harbor Airport on December 7, 1941.
- Clark County purchased the airport in 1987. After it was purchased, Clark County Department of Aviation began a multi-million dollar renovation of the facility, including construction of a 15,600 square foot terminal building that opened in 1992.
- The primary mission of the airport today is to attract as many general aviation aircraft as possible from McCarran International Airport to reduce congestion at this busy commercial airport.
- In 2008 North Las Vegas had 165,197 takeoffs and landings, making it the second busiest airport in Nevada after McCarran International Airport.
- The North Las Vegas Airport has 286 enclosed hangars, 214 shade hangars and 171 outdoor parking spaces. Currently, there are 659 aircraft based at the airport, from two-seat training aircraft to business jets.

- The airport is 914 acres in size, making it larger than LaGuardia Airport in New York, Midway Airport in Chicago or Reagan National Airport in Washington, DC.
- In 2008 the Clark County Department of Aviation sold over 1.3 million gallons of fuel at North Las Vegas Airport.
- Over 1 million pounds of air freight, primarily small packages and documents were processed through the North Las Vegas Airport in 2008.
- The airport contributes 1,771 jobs and over \$136 million in annual economic benefits to the community, according to an economic impact study completed by the University of Nevada in 2005.
- There are 20 commercial businesses located at the airport, including flight schools, aircraft maintenance facilities, office and hangar rental companies, aircraft charter operators and a Grand Canyon sightseeing airline.
- The airport provides a host of community services. A senior Civil Air Patrol squadron based at the airport flies vital search and rescue missions. Air ambulance flights transport critically ill patients from the airport to receive care at specialized treatment centers throughout the region. Charitable organizations also fly needy patients for treatment throughout the Southwest United States. The Las Vegas Metropolitan Police fly patrols from the airport to help safeguard the community. Traffic reporters fly from the airport to broadcast reports that make daily commuting safer and easier.
- The airport is certified by the Federal Aviation Administration under 14 CFR Part 139 which provides increased inspection and maintenance activity.

DELINEATION OF RESPONSIBILITY

Federal law provides that the United States Government has exclusive sovereignty of airspace in the United States and requires the FAA Administrator to prescribe regulations regarding the flight of aircraft to prevent collisions and to protect persons and property on the ground. Accordingly, the functions of the FAA include such items as:

- Operation of the air traffic control system in the United States, including the North Las Vegas Air Traffic Control Tower
- The establishment of training requirements for pilots and aircraft technicians.
- The establishment of aircraft operating procedures.

- The issuance of pilot certificates and the enforcement of all Federal Aviation Regulations.
- The establishment of aircraft maintenance procedures, including the construction process for experimental aircraft.

It should also be noted that under Federal Aviation Regulations the FAA grants considerable responsibility and authority to the pilot in command. The following is stated in 14 CFR 91.3 (a):

The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.

The Clark County Department of Aviation owns and operates North Las Vegas Airport, along with three other general aviation airports, Henderson Executive, Jean Sport, Perkins-Field Overton and McCarran International. The Department of Aviation does not have jurisdiction over the regulation of aviation safety. They are primarily responsible for maintaining infrastructure on the ground including buildings, airfield lighting, signage, taxiways and runways. The specific responsibilities of Department of Aviation managers, supervisors, and employees fall into a number of broad categories, as follows:

- Daily inspection of pavement, safety areas, pavement markings, lighting, navigational aids, obstructions, fueling operations, construction areas, equipment related to emergency response, security measures for public protection, and potential wildlife hazards.
- Routine maintenance of all airport facilities, and 24-hour response to urgent maintenance requirements.
- Oversight of all airport construction projects.
- The promulgation and enforcement of rules and regulations regarding the use of airport facilities.
- Oversight of all airport security measures.
- Compliance with all local, state, and federal environmental regulations.
- Oversight of all airport fueling operations and the provision of various aviation services and products for based and transient aircraft and pilots.
- Drafting and issuing leases and other grants of occupancy for space at the airport for use by commercial and individual tenants.

- Drafting and issuing Requests for Proposals for companies wanting to provide commercial services at the airport.
- The preparation of and adherence to the annual airport operating budget.

AIRPORT SAFETY MEASURES

In recent years, the Clark County Department of Aviation has undertaken a significant number of capital projects and other measures to improve safety at the North Las Vegas Airport. The North Las Vegas Airport has received over \$80 million in grants from the FAA since 1987 for capital projects. The funding for federal grants used within the Clark County Airport System comes primarily from the users of the aviation system through a tax on aviation fuel purchased and airline tickets, not general tax revenue. Future capital projects at North Las Vegas Airport will be evaluated for their ability to improve safety and airport capacity. Although the airport is under a program of continuous improvement, there are no plans to expand the physical boundaries of the airport or change the type of air traffic that uses the facility.

- A new Runway 12R GPS instrument approach was commissioned in October 1996 at North Las Vegas Airport to enable pilots to maintain instrument flying proficiency.
- A new parallel Runway 12L – 30R was constructed in November 2001 at the airport to provide a more efficient flow of air traffic and segregate primary flight training activities.
- A new air traffic control tower with state-of-the art equipment was constructed and put into service in April 2000.
- Additional airport directional signage and pavement markings were installed throughout 2003 to help prevent runway incursions.
- An Enhanced Airport Lighting System was installed in December 2004 to help prevent runway incursions. This system included above ground lights placed at 29 taxiway intersections and in pavement lights at three intersections to increase situational awareness.
- Beginning in January 2005, bi-monthly meetings are conducted by the Department of Aviation to discuss safety procedures with based individual and commercial tenants.
- A Memorandum of Understanding was signed in August 2005 between the Department of Aviation and the Federal Aviation Administration to segregate helicopter training activity and reduce helicopter flights over neighborhoods surrounding the airport.

- In October 2005, North Las Vegas Airport was certified by the Federal Aviation Administration under 14 CFR Part 139, which provides increased inspections and maintenance activities at the airport facility.
- A new Runway 12L Instrument Landing System was commissioned in December 2005 to assist pilots in maintaining instrument proficiency.
- Runway End Identifier Lights were installed at the end of each runway at the airport in November 2006 to improve situational awareness for pilots approaching the airport at night.
- An educational brochure was created by the FAA in cooperation with the Department of Aviation and distributed to pilots throughout the region in October 2006 to help reduce runway incursions.
- General Aviation Airports Rules & Regulations were adopted by the Clark County Board of Commissioners in January 2007 to ensure a safe operating environment at the airport.
- In June 2007 interactive information was placed on the airport website outlining methods that based and transient pilots can use to guard against runway incursions.
- A Motor Vehicle Driving Safety Manual was issued in September 2007 by the Department of Aviation to provide information for the safe operation of vehicles on the airfield.
- The procurement and operational introduction of an airport ground support incident vehicle in July 2007. This vehicle is equipped with dry chemical and foam fire retardant.
- An airport emergency drill was conducted in September 2007 involving multiple agencies and utilizing National Incident Management System protocol.
- General Aviation Airports Operating Directives were adopted in December 2007 to further clarify safe operating procedures on the airfield.
- A capital project was completed in March 2008 to cover drainage channels on the airfield to eliminate potential obstructions.
- Information on aviation safety is continuously presented in a newsletter sent bi-monthly to each based tenant by the Department of Aviation.
- North Las Vegas became one of the first airports in the country to participate in an FAA Pilot Study and submit a Safety Management System

(SMS) study and manual to the FAA. This will be used to help establish SMS standards to be used by over 600 airports nationwide.

- A project to remove high-tension power lines immediately south of the airport along Carey Ave. and relocate them underground commenced in September 2009.

AIRCRAFT ACCIDENT ANALYSIS

The National Transportation Safety Board (NTSB) maintains the official database of aircraft accidents occurring within the United States. This database may be accessed by the general public at www.nts.gov, and it was used in compiling information for this report. Accident data for North Las Vegas Airport between January 1999 and August 2009 is summarized in Appendix B.

The committee reviewed accident data for North Las Vegas Airport. The following criteria were used as the basis for analysis:

- The geographic area of inquiry was narrowed to within a ten (10) nautical mile radius of the airport. The selected geographic area encompasses most of the “congested” area in the immediate vicinity of the airport, and it excludes accidents that were attributed to the airport but actually occurred in remote areas during the en route portion of flight.
- The analysis period was narrowed to the timeframe between January 1999 and September 2009. This is the time period when most of the airport safety improvements were incorporated. The FAA Las Vegas Flight Standards District Office (FSDO) also selected this timeframe as a representative sampling of aircraft accidents for analysis.

Based upon the stated criteria, a total of 43 accidents were selected for final analysis. The findings below are based upon that analysis:

- Between 1999 and 2009 there were 2.23 million takeoffs and landings at North Las Vegas Airport.
- The total annual number of aircraft accidents at North Las Vegas Airport has declined over the inquiry period, from a high of 7 accidents in 2000 and 2003 to a low of 1 accident in 2007 and 1 accident in 2009 year to date. However, while the number of on airport accidents has declined significantly in the past four years, the number of off airport accidents has remained relatively constant (Appendix C).
- Through examination of available data, it was determined that of a total of 43 accidents, 32 or 74 percent involved based aircraft, and 11 or 26 percent involved transient aircraft. Of a total of 32 based aircraft accidents, 8 or 25

percent involved flight instructional activities. A total of 28 accidents, 65 percent, occurred on airport property and 15 accidents, 35 percent, occurred off airport property. Five of these 8 accidents, or 63 percent, involved the use of helicopters by flight schools. NTSB accident data does not reveal in every case if the certified flight instructor or the student pilot was operating the controls at the time of an accident.

- Forty of the 43 total accidents, 93 percent, during the period analyzed involved manufactured aircraft (Appendix G).
- Three of the 43 accidents involved experimental aircraft. Experimental aircraft account for 7 percent of the total number of based aircraft at North Las Vegas Airport and represent 7 percent of all accidents (Appendix G).
- As a result of the above-referenced accidents, 14 fatalities resulted (Appendix F).
- The number of fatalities attributable to manufactured aircraft during this period was 11 and accounted for 73 percent of the total. One accident on December 25, 2003 resulted in 6 deaths (Appendix F).
- The number of fatalities attributed to experimental aircraft during this period was 3 and accounted for 27 percent of the total. Three of the 7 fatalities that occurred off airport, or 43 percent, involved experimental aircraft. These airport fatalities are attributed to the accident that occurred on August 22, 2008 (Appendix F)
- According to the NTSB Probable Cause Report, the experimental aircraft accident of August 22, 2008 resulted from a partial loss of engine power due to the owner/builder's inadequate installation of the supercharger system and belt-tensioning adjustment. This underscores the importance of the recent prohibition by the FAA FSDO of any Phase I flight activity at North Las Vegas Airport and the need to prohibit a waiver of the minimum number of required flight test hours under Order 8130.2F, *Airworthiness Certification of Aircraft and Related Products*.
- Of the 43 total accidents, 32 accidents, 75 percent, were attributable to pilot error. A total of 7 accidents, 16 percent, were due to mechanical issues including failure of components and maintenance errors. In addition, a total of 1 accident, 2 percent, was due to controller error, a total of 1 accident, 2 percent, was due to pilot incapacitation, and 2 accidents, 5 percent, were due to unknown causes (Appendix D).
- NTSB identified 28 accidents as occurring on airport property. The most prevalent factor involving aircraft was a loss of directional control (a total of 10 accidents, or 36 percent), primarily as a result of windy conditions. The

next most prevalent cause of aircraft accidents on airport property was the mechanical malfunction of landing gear (a total of 3, or 11 percent). There was one aircraft aerodynamic stall, or 4 percent. A total of 10 accidents, or 36 percent, were attributable to other factors including an unstable approach with excessive speed, pilot incapacitation, and controller error. The only factor involved in helicopter accidents on airport was inadequately performed autorotations that resulted in hard landings (a total of 4, or 14 percent) (Appendix E).

- The causal factors involved in the 15 accidents off airport property were very different than those on airport property. The most prevalent cause of these accidents was fuel system mismanagement (a total of 6 accidents, or 40 percent) involving either the incorrect positioning of switches or miscalculating the fuel consumption rate and exhaustion of the fuel supply. Additionally, 2 accidents, 13 percent, were caused by a loss of engine power for unknown reasons. There was one aircraft aerodynamic stall, or 7 percent. The remaining 4 aircraft accidents, or 26 percent, were attributable to unrelated factors including insufficient climb rate and striking an obstruction. Two accidents, or 13 percent, involved helicopters (Appendix E).
- Of the total number of accidents, 42 involved aircraft used for private business and recreational use (Part 91) and one involved an aircraft used for commercial purposes (Part 135 Charter).
- The number of aircraft accidents by type (manufactured/ experimental) could not be compared with the number of annual aircraft operations to determine an accident rate because the FAA does not retain this information.

RECOMMENDATIONS

Based on the analysis of aircraft accidents and other information presented in this report, the SJR-3 Stakeholder Group makes the following recommendations to improve flight safety at North Las Vegas Airport:

1. The Las Vegas FAA Flight Standards District Office FSDO issued a memorandum on December 9, 2008 to its inspectors to no longer permit any Phase I flight operations of experimental aircraft from North Las Vegas Airport. This bans experimental aircraft from using the airport until they have completed the first phase of flight time, either 25 or 40 hours depending on the aircraft's engine and propeller combination. The FAA FSDO should monitor and ensure adherence by local experimental aircraft builders to this published, prohibition. The FAA FSDO should not grant any waivers of the minimum number of flight test hours specified in Order 8130.2F, *Airworthiness Certification of Aircraft and Related Products*,

Section 9, Paragraph 152c(1). The FAA FSDO and the Clark County Department of Aviation should work collaboratively on any proposed changes in the prohibition of Phase I flight or the conditions under which waivers may be granted.

2. The FAA should continue to take immediate and appropriate enforcement action when it is determined that Federal Aviation Regulations have been violated. This FAA FSDO intervention should better promote pilot adherence to Federal Aviation Regulations.
3. The FAA FSDO should prepare a detailed annual report for distribution to the local aviation community regarding enforcement action initiated against any pilot or other certificate holder within their jurisdiction. This report will protect individual identity, but should include a brief description of each investigative case and enforcement action taken. The total number of investigative cases initiated compared with the total number for the previous year. This will provide comparative analysis to measure trends in enforcement activity.
4. The FAA should require local FAA Operations Inspectors, Designated Examiners, Certified Flight Instructors and the FAASTeam to emphasize the importance of proper fuel management techniques and the effect of crosswinds and density altitude on aircraft performance during all Bi-Annual Flight Reviews and Practical Flight Tests. Heightened awareness of these factors by pilots should increase safety.
5. The FAA FSDO should continue the periodic and unannounced monitoring of activities in the Air Operations Area of the airport to ensure that pilots, aircraft mechanics and flight instructors are following safe operating practices and adhering to Federal Aviation Regulations. Unannounced visits by the FAA FSDO inspectors should increase the overall effectiveness of the enforcement program.
6. Additional research and analysis by the National Transportation Safety Board is encouraged to provide as much information as possible regarding the causal factors involved in each general aviation aircraft accident. More detailed analysis will capture all available data and may suggest additional methods to reduce aircraft accidents.
7. The FAA FSDO should encourage awareness of and adherence to Federal Aviation Regulations and safe aircraft operating practices through educational initiatives at the local, regional, and national level, including information posted on the FAASTeam website, www.faasafety.com. The Aircraft Owners and Pilots Association should also be encouraged to communicate safety information to local pilots. Ongoing educational efforts

serve to increase situational awareness and prepare pilots to more effectively handle airborne emergencies.

8. The FAA Air Traffic Control Tower at North Las Vegas Airport should be encouraged to record announcements on the Automatic Terminal Information Service (ATIS) that pilots “check density altitude” when the air temperature is over 85 degrees Fahrenheit and state the actual reading. This information is used by pilots during flight planning to calculate aircraft takeoff and climb performance.
9. The FAA Air Traffic Control Tower at North Las Vegas Airport should adhere to guidance in the *Aeronautical Information Manual* regarding standard airport traffic patterns. To the extent possible they should minimize the requirement for pilots to fly extended downwind, base, or final legs. By remaining in close proximity to the airport pilots are in better position to return to the airport during emergency situations.
10. The Clark County Department of Aviation should be encouraged to purchase available vacant land adjacent to North Las Vegas Airport, particularly in or near any Runway Protection Zone (RPZ), to ensure that remaining open area is preserved in the immediate vicinity of the airport. This will provide an expanded area for aircraft to land during emergencies.
11. The cities of North Las Vegas and Las Vegas should be encouraged to enact legislation to prohibit the construction of new buildings, communication towers or other obstructions above a safe height in the immediate vicinity of North Las Vegas Airport. Existing structures that may be determined to pose a hazard to air navigation near the airport should be evaluated using a cost and benefit analysis for alteration or removal. This will help eliminate the possibility of aircraft striking tall structures within the immediate vicinity of the airport.
12. The cities of North Las Vegas and Las Vegas should be encouraged to enact legislation to prohibit the further construction of residential housing or other non-compatible land uses within the immediate vicinity of North Las Vegas Airport. The City of North Las Vegas is addressing this issue in the current revision of its Zoning Ordinance (Title 17). As part of this process, North Las Vegas has also submitted its draft Air Terminal Environs Ordinances to the Clark County Department of Aviation for review and comment. This reduces the possibility of non-compatible development near the airport and aids in future community planning.
13. The Clark County Department of Aviation, the Clark County Aviation Association and other stakeholders should be encouraged to work together to establish open communication with local residents regarding North Las Vegas Airport. The methods used to establish communication include, but

are not limited to, airport open house events, programming dedicated to the airport on Clark County Cable Television Channel 4, public meetings and the distribution of informational brochures. This will serve to increase awareness on the part of the general public regarding continued airport safety enhancements, economic contributions and community benefits.

SUMMARY

North Las Vegas Airport is an active general aviation airport ranked as the second busiest airport in Nevada. Between January 1999 and September 2009 there were 2.23 million takeoffs and landings and a total of 43 accidents in the immediate vicinity of the airport.

The annual number of accidents at the airport has declined in recent years. The Federal Aviation Administration and the Clark County Department of Aviation have each instituted a variety of proactive safety measures. The Department of Aviation has work closely with airport stakeholders to make constructive changes that enhance safety at all of their facilities, particularly North Las Vegas Airport. An important objective of the Department of Aviation is to work with residents to ensure that airport operations are compatible with the surrounding community.

While the risk of aircraft accidents can never be completely mitigated, the clear objective of aviation stakeholders as well as area residents is to reduce the number of aircraft accidents at North Las Vegas Airport. The most significant finding of this report is the very specific and unique factors involved in aircraft accidents that have occurred on and off the airport. None of the accidents reviewed for this report were attributable to infrastructure or other site conditions at North Las Vegas Airport, including the inspection, maintenance or repair of runways and taxiways, lighting, signage, pavement markings or navigational aids under the direct care, custody and control of the Clark County Department of Aviation.

The SJR-3 Stakeholder Group believes any initiatives to improve flight safety standards should involve a collaborative effort on the part of the Federal Aviation Administration, the Clark County Department of Aviation and other stakeholders. Recommendations from this SJR-3 Stakeholder Group have been presented in this report. These recommendations are specific and should result in an even safer operating environment at North Las Vegas Airport.

References:

14 Code of Federal Regulations, Part 91.3 (q)

14 Code of Federal Regulations, Part 139

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Senate Joint Resolution No.3-Nevada State Legislature (May 2009).

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www.faa.gov, *The Operations Network (OPSNET)*

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www.mccarran.com, *About the Airport, Finance & Statistics*

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Senate Joint Resolution No. 3—Senator Horsford

Joint Sponsor: Assemblywoman Kirkpatrick

FILE NUMBER.....

SENATE JOINT RESOLUTION—Urging the Federal Aviation Administration and the Clark County Department of Aviation to convene a stakeholders’ group to develop and make recommendations to improve flight safety standards at the North Las Vegas Airport, particularly with respect to experimental homebuilt aircraft.

Legislative Counsel’s Digest:

Federal law provides that the United States Government has exclusive sovereignty of airspace of the United States and requires the Administrator of the Federal Aviation Administration to prescribe regulations on the flight of aircraft to prevent collisions between aircraft and to protect persons and property on the ground. (49 U.S.C. § 40103) This resolution urges the Federal Aviation Administration to work closely with the Clark County Department of Aviation to convene a stakeholders’ group to develop and make recommendations to improve flight safety standards at the North Las Vegas Airport, particularly with respect to experimental homebuilt aircraft.

WHEREAS, The expansion of urban areas in Clark County increasingly places homes and neighborhoods directly in the flight paths of aircraft flying to and from the North Las Vegas Airport; and

WHEREAS, Flights of experimental homebuilt aircraft to and from the North Las Vegas Airport are increasingly common; and

WHEREAS, Experimental homebuilt aircraft have higher accident rates than other types of aircraft and accounted for more than 12 percent of airplane accidents nationwide in 2007; and

WHEREAS, Experimental homebuilt aircraft have been involved in nine accidents at airports within the Clark County airport system since 2003, three of which were at the North Las Vegas Airport; and

WHEREAS, A crash involving an experimental homebuilt aircraft flying from the North Las Vegas Airport resulted in the deaths of two persons on the ground in 2008; and

WHEREAS, The Federal Aviation Administration sets standards for the number of hours experimental homebuilt aircraft must be tested before such aircraft can be operated at airports such as the North Las Vegas Airport; and

WHEREAS, Some of the experimental homebuilt aircraft operated at the North Las Vegas Airport may have been operated without having met those national standards; and



WHEREAS, The safety of persons who live near the North Las Vegas Airport is of the highest concern to the people of this State; and

WHEREAS, The Clark County Department of Aviation cannot regulate the flights of experimental homebuilt aircraft to and from the North Las Vegas Airport because federal law provides the United States Government with exclusive sovereignty of airspace in the United States; now, therefore, be it

RESOLVED BY THE SENATE AND ASSEMBLY OF THE STATE OF NEVADA, JOINTLY, That the Nevada Legislature expresses serious concerns regarding the current flight safety practices at the North Las Vegas Airport; and be it further

RESOLVED, That the Nevada Legislature urges the Federal Aviation Administration to work closely with the Clark County Department of Aviation and the entire aviation community in Clark County to convene not later than June 1, 2009, a stakeholders' group, which must include, without limitation:

1. A representative from the Federal Aviation Administration;
2. A representative of the Clark County Department of Aviation;
3. A representative of the Clark County Aviation Association;
4. A representative of the City of North Las Vegas;
5. A representative of the Aircraft Owners and Pilots Association;
6. Residents of neighborhoods surrounding the North Las Vegas Airport; and
7. Tenants of the North Las Vegas Airport; and be it further

RESOLVED, That the stakeholders' group shall, on or before August 1, 2009, issue its preliminary analysis of the concerns regarding the current flight safety practices at the North Las Vegas Airport; and be it further

RESOLVED, That the stakeholders' group shall, on or before November 1, 2009, develop and make recommendations to improve flight safety standards at the North Las Vegas Airport, particularly with respect to experimental homebuilt aircraft, for submission to the appropriate entities for consideration and to the Legislative Commission; and be it further

RESOLVED, That the Nevada Legislature urges the Nevada Congressional Delegation to use its best efforts to encourage the Federal Aviation Administration to participate in this endeavor; and be it further

RESOLVED, That the Secretary of the Senate prepare and transmit a copy of this resolution to the Administrator of the Federal



Aviation Administration, the Board of County Commissioners of Clark County, the Director of the Clark County Department of Aviation, the North Las Vegas City Council and each member of the Nevada Congressional Delegation; and be it further

RESOLVED, That this resolution becomes effective upon passage.



AIRCRAFT ACCIDENT DATABASE JANUARY 1999 TO SEPTEMBER 2009

NORTH LAS VEGAS AIRPORT

**Data Source: National Transportation Safety Board
Accidents more than 10 nautical miles (NM) from the airport are excluded
and are identified as shaded**

Appendix B – Accident Summary Data

NORTH LAS VEGAS AIRPORT

Date	Location	N-Number	Make/Model	Mfr	Type of Operation	Fatal	Error	Description
4/22/2009	Off Airport	N17YS	Schweizer 269C	M	Based Part 91 Instructional	0	Awaiting Probable Cause Report	The helicopter lost engine power while attempting to land on high terrain, resulting in a hard landing. A probable cause has not yet been issued.
4/14/2009	On Airport	N4816D	Cessna 182	M	Based Part 91	0	PE	The pilot lost directional control while attempting to land and veered off the pavement into the dirt causing a prop strike and wing damage.
8/28/2008	Off Airport	N212HB	Piper PA-31-350	M	Transient Part 91	1	Awaiting Probable Cause Report	The aircraft departed VGT, experienced an onboard fire and was returning for an emergency landing when it crashed into a home 1.2 miles W of the airport. NTSB has not yet issued a probable cause.
8/22/2008	Off Airport	N415MK	Kilgore Velocity 173RG	E	Based Part 91	3	ME	An experimental homebuilt aircraft departed VGT on a test flight and crashed into a house 1.1 miles SE of the airport.
6/28/2008	Off Airport	N4063W	Piper Lance	M	Transient Part 91	4	PE	The pilot departed VGT and struck rapidly rising terrain in a mountain valley near Mt. Charleston. Lack of situational awareness and density altitude were causal factors.
2/29/2008	Off Airport	N958CP	Schweizer 269C	M	Based Part 91 Instructional	0	PE	A helicopter departed VGT and crashed in high terrain due to the student pilot's failure to maintain control and the instructor's inadequate supervision. Lack of suitable terrain for an emergency landing was also a contributing factor.

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11/8/2007	Off Airport	N881CP	Cessna T182	M	Transient Part 91	2	PE	An aircraft operated by the Civil Air Patrol departed VGT during night VFR conditions and subsequently crashed into high terrain 13 miles SW of Las Vegas.
4/7/2007	Off Airport	N1079M	Cessna 172	M	Based Part 91 Instructional	0	ME	A solo student pilot attempting to land on Runway 12L and landed on Decatur Blvd. adjacent to the airport after a loss of engine power for undetermined reasons.
11/26/2006	Off Airport	N414AY	Cessna 414	M	Based Part 91	0	PE	The aircraft's right engine experienced a loss of power and the aircraft collided with a fence during an emergency landing in a residential area. The probable cause was fuel starvation as the result of the pilot's improper fuel management.
11/24/2006	Off Airport	N977SA	Cessna T210	M	Transient Part 91	0	PE	The aircraft lost engine power and collided with a telephone line during the forced landing attempt 2 miles NE of VGT due fuel exhaustion and the pilot's fuel mismanagement.
8/8/2005	On Airport	N58431	Hughes 369D	M	Based Part 91 Instructional	0	PE	A student pilot was conducting an autorotation at VGT when the tail rotor and stinger contacted the ground due to his improper flight control use and the instructor's inadequate supervision.
7/21/2005	On Airport	N7UP	Aero Commander 680	M	Transient Part 91	0	PE	As the aircraft rotated and became airborne it settled and impacted the ground as the result of excessive flap selection and high density altitude.
7/20/2005	On Airport	N4961D	Cessna 172	M	Based Part 91 Instructional	0	PE	After touching down on Runway 12L, the aircraft veered left, struck a ditch and collided with an airport location sign due to the solo student pilot's failure to maintain directional control.

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5/5/2005	On Airport	N337DR	Gulfstream 695	M	Based Part 91	1	Pilot Incapacitation	A passenger took control of the aircraft and made a hard landing at VGT after the pilot experienced a cardiac event in the air and died. ⁵
	Off Airport	N6663P	Cessna P210	M	Based Part 91	0	PE	A pilot returning to VGT made a forced landing in an open field 6 mile NE after a total loss of engine power. The probable cause was determined to be fuel exhaustion.
10/30/2004	Off Airport	N6675X	Cessna 210A	M	Based Part 91	0	ME	While descending to land at VGT, the pilot experienced a total lack of power and landed on a nearby residential street. The NTSB could not determine a cause for the reported power failure.
9/5/2004	On Airport	N994RW	Robinson R-22	M	Based Part 91 Instructional	0	PE	A helicopter hit the ground hard during a practice autorotation due to the flight instructor's misjudged flare and delayed recovery.
5/27/2004	On Airport	N5010X	Raytheon Premier Jet	M	Based Part 91	0	PE	The aircraft was landing on Runway 7 when it left the pavement at the departure end and crashed through the perimeter fence due to an unstabilized approach, excessive speed and the presence of a tailwind.
5/22/2004	Off Airport	N154ZP	American Blimp Corp. A-1-50	M	Transient Part 91	0	PE	A blimp collided with a one story office building while attempting to takeoff from VGT due to winds and the pilot's inability to obtain a sufficient rate of climb.
12/25/2003	On Airport	N364JR	Beech A36TC	M	Transient Part 91	6	Unknown	On initial climb from Runway 12R the pilot declared an unspecified emergency and then crashed. The NTSB could not determine a specific cause of this accident.

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9/23/2003	On Airport	N8604N and N146PM	Piper Arrow and Piper Mirage	M	Transient and Based Part 91	0	CE	A landing Piper Arrow and a departing Piper Mirage collided at the intersection of Runways 12L and 7. The NTSB identified the failure of FAA personnel to maintain proper separation as the probable cause.
8/31/2003	On Airport	N103TK	Piper Malibu	M	Based Part 91	0	PE	The aircraft crashed short of Runway 12R due to the pilot's failure to maintain an adequate approach speed during approach for the aircraft's flight configuration.
7/27/2003	On Airport	N499R	Hogarty Lancair IV P	E	Transient Part 91	0	PE	The aircraft settled to the ground during takeoff and the main landing gear collapsed due to the pilot's premature lift-off before airspeed was attained resulting in a stall.
6/1/2003	Off Airport	N991RW	Robinson R-22 Helicopter	M	Based Part 91 Instructional	0	PE	The helicopter collided with a wire during a pinnacle approach due to the pilot's failure to maintain adequate visual lookout.
4/25/2003	On Airport	N43VB	Cessna 182	M	Based Part 91	0	PE	Aircraft landing on Runway 25 crashed during day VFR due to the pilot's inadequate compensation for gusty cross wind conditions and a failure to maintain directional control.
4/4/2003	Off Airport	N553CH	Cessna 172	M	Based Part 91 Instructional	2	PE	The aircraft descended near vertically to ground impact on a private pilot practical flight test due to the applicant pilot's failure to maintain adequate airspeed while maneuvering.
3/30/2003	Off Airport	N95DC	Beechcraft V35	M	Based Part 91	0	PE	The aircraft lost power on departure and crashed into nearby obstacles due to fuel starvation as a result of the pilot's mismanagement of his fuel supply.

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10/12/2002	On Airport	N2209F	Cessna 310	M	Based Part 91	0	PE	Pilot became distracted when approaching Runway 30L during night VFR conditions and slid to a stop with retracted landing gear. ⁷
9/25/2002	Off Airport	N601GM	Bell 206 Helicopter	M	Based Part 91	0	PE	The helicopter experienced an emergency hard landing 2 miles S of VGT due to inadequate pre-flight planning that resulted in fuel exhaustion.
8/31/2002	Off Airport	N3184	Breezy RLU-1A	E	Based Part 91	0	PE	While maneuvering around a large rock formation the aircraft entered a box canyon and crashed due to both pilot's failure to maintain an adequate terrain clearance altitude.
6/23/2002	On Airport	N160RA	Cessna 172	M	Based Part 91	0	PE	The aircraft was taxiing when it departed the taxiway and came to rest in a concrete drainage ditch due to the pilot's decision to fly after dark with an inoperative landing light and his unfamiliarity with the airport.
6/14/2002	Off Airport	N7041B	Robinson R-22 Helicopter	M	Based Part 91 Instructional	0	PE	The helicopter collided with the ground while attempting a downwind takeoff from a remote practice area due to the student pilot's control inputs and the instructor's lack of adequate supervision.
6/6/2002	On Airport	N7196W	Robinson R-22 Helicopter	M	Based Part 91 Instructional	0	PE	While attempting an autorotation the helicopter landed hard and was damaged due to the student pilot's improper control inputs and the instructor's lack of adequate supervision.

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3/29/2002	Off Airport	N7040C	Robinson R-22 Helicopter	M	Based Part 91 Instructional	0	PE	The helicopter collided with the ground and rolled over while practicing autorotations in a remote area due to the failure of the instructor to properly judge the landing flare.
11/9/2001	On Airport	N8232M	Cessna 210	M	Based Part 91	0	ME & PE	On the first flight following an annual inspection during night VFR conditions, the landing gear would not fully extend and the right main gear collapsed upon landing. This was due to the failure of maintenance personnel to properly diagnose the cause of a reported maintenance discrepancy and the pilot's improper handling of the emergency.
6/4/2001	On Airport	N209TA	Piper Navajo	M	Based Part 135	0	ME	When the aircraft touched down at VGT the right main gear collapsed due to fatigue failure of a landing gear component.
5/19/2001	Off Airport	N9820R	Beech M35	M	Based Part 91	1	ME & PE	The aircraft collided with obstructions during a forced landing precipitated by a loss of power. The probable cause was the pilot's failure to properly install an oil filter during an owner-assisted annual inspection, which resulted in oil exhaustion and a loss of power.
4/1/2001	On Airport	N9572H	Cessna 172	M	Based Part 91	0	PE	During an aborted landing the pilot collided with a fence due to his inadequate compensation for existing cross wind conditions and his failure to maintain runway alignment.

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12/14/2000	Off Airport	N7189K	Robinson R-22 Helicopter	M	Based Part 91 Instructional	0	PE	During an autorotation landing the helicopter touched down hard resulting in substantial damage due to the instructor's inadequate supervision of the second pilot.
9/22/2000	On Airport	N2963P	Piper PA-22	M	Transient Part 91	0	PE	During landing the aircraft veered off the runway and the nose gear collapsed due to the pilot's inadequate compensation for gusty and variable cross wind conditions.
9/16/2000	On Airport	N27CG	Stevens Starduster II	E	Based Part 91 Instructional	0	ME	On the landing rollout the aircraft ground looped causing substantial damage due to the failure of a mechanical component in the tail wheel.
9/2/2000	On Airport	N739HA	Cessna 172	M	Based Part 91	0	PE	While attempting to land on Runway 25 the aircraft landed in the dirt off the runway due to the failure of the pilot to maintain proper airspeed which resulted in a stall.
7/28/2000	On Airport	N3386D	Cessna 180	M	Transient Part 91	0	PE	The aircraft bounced on landing and veered off the runway causing the right main landing gear to separate from the aircraft due to the pilot's failure to maintain directional control.
4/28/2000	On Airport	N2193S	Cessna 210	M	Transient Part 91	1	PE	During a go-around attempt the aircraft impacted the ground and it was destroyed due to the pilot's failure to maintain control during cross wind conditions.
4/28/2000	On Airport	N9344C	Cessna 180	M	Based Part 91	0	PE	The aircraft landed right of the runway centerline and then nosed down causing substantial damage due to the pilot's inadequate compensation for existing cross wind conditions.

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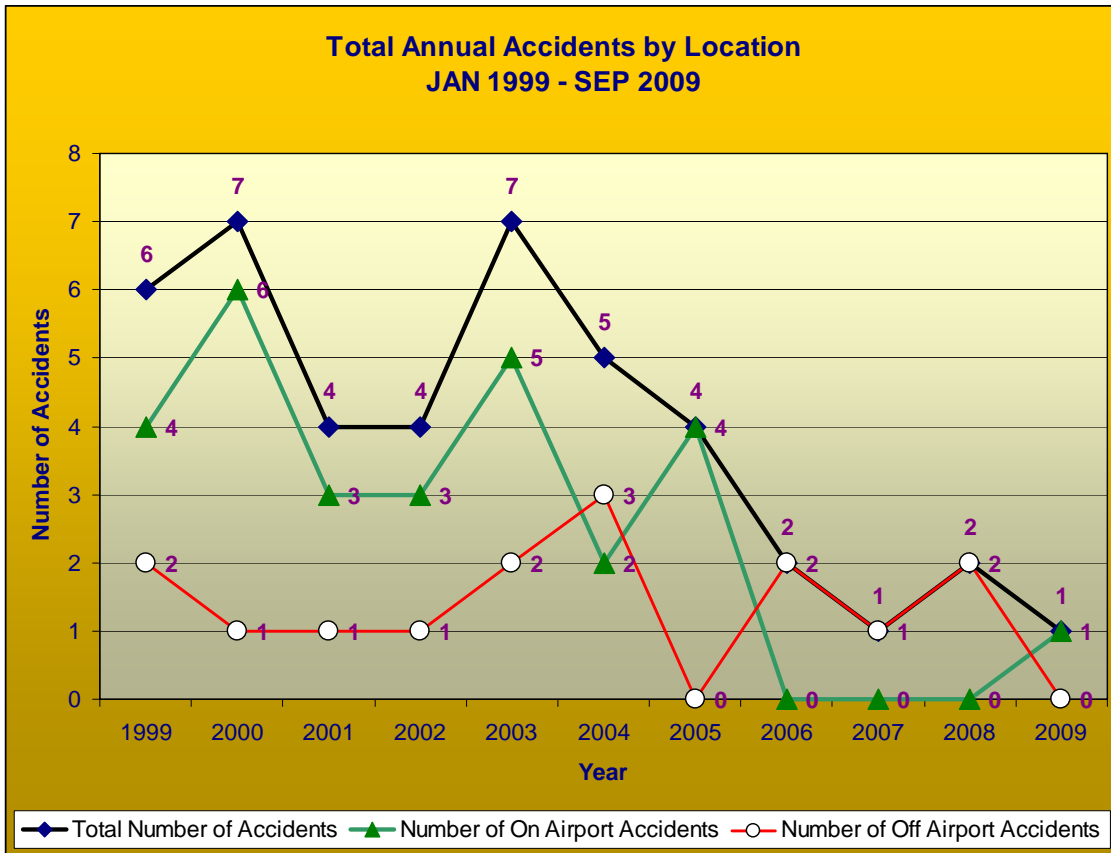
10/14/1999	Off Airport	N1024B	Piper Navajo	M	Based Part 135	1	PE	The aircraft collided with mountainous terrain after takeoff from VGT due to the pilot's lack of situational awareness and various errors on the part of air traffic controllers.
8/29/1999	Off Airport	N40RP	Cessna P210	M	Based Part 91	0	PE	The aircraft was in the traffic pattern when the engine lost power due to the pilot's failure to follow recommended procedures for use of the fuel pump. The aircraft subsequently collided with the ground causing substantial damage.
8/20/1999	Off Airport	N2654W	Mooney M20	M	Based Part 91	1	PE	The aircraft was in the traffic pattern when it began a wing rocking motion and descended until it collided with a tree and a residence, causing an explosion and fire. It was determined the pilot executed a steep turn at low altitude resulting in an accelerated stall and loss of control.
7/2/1999	On Airport	N180HW	Cessna 180	M	Based Part 91	0	PE	During the takeoff roll the aircraft experienced a gust of wind that nosed it over due to the pilot's failure to compensate for the existing cross wind conditions.
5/8/1999	On Airport	CGIUX	Cessna 172	M	Transient Part 91	0	PE	During an aborted landing the aircraft struck a chain link fence and impacted the ground due to the pilot's premature rotation and failure to attain and maintain sufficient airspeed.

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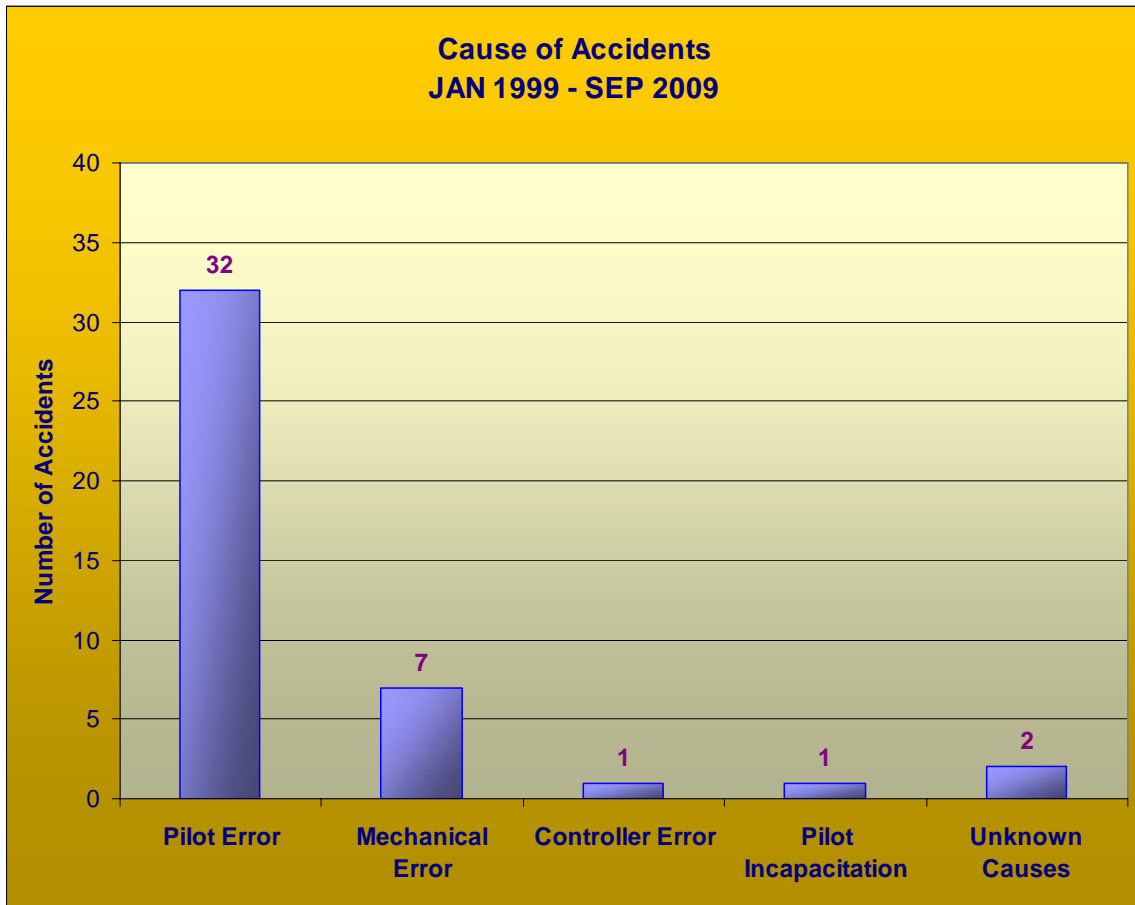
4/10/1999	Off Airport	N88212	Bellanca 7KCAB	M	Based Part 91	0	PE	While performing aerobatic maneuvers at altitude the control stick became jammed, the pilot was unable to regain control, and he abandoned the aircraft and parachuted to the ground. It was determined this was due to the pilot's failure to secure loose items in the cockpit before attempting aerobatic maneuvers.
4/10/1999	On Airport	N3289L	Cessna 172	M	Based Part 91	0	PE	On takeoff the aircraft veered to the right and struck a taxiway sign due to the pilot's failure to maintain directional control.
1/31/1999	On Airport	N58431	McDonnell Douglas 369D	M	Based Part 91	0	PE	While performing a practice autorotative landing the tail stinger contacted the ground due to the pilot's failure to properly judge the landing flare maneuver.
1/17/1999	Off Airport	N857JA	Abraham J G II/Erickson K One design	E	Based Part 91	0	ME	The pilot pressed the left rudder pedal while practicing outside snap rolls. The rudder pedal went all the way to the floor with no resistance. The cable had separated from the rudder horn due to the improper installation. The aircraft entered an unrecoverable right bank and the pilot parachuted to safety.

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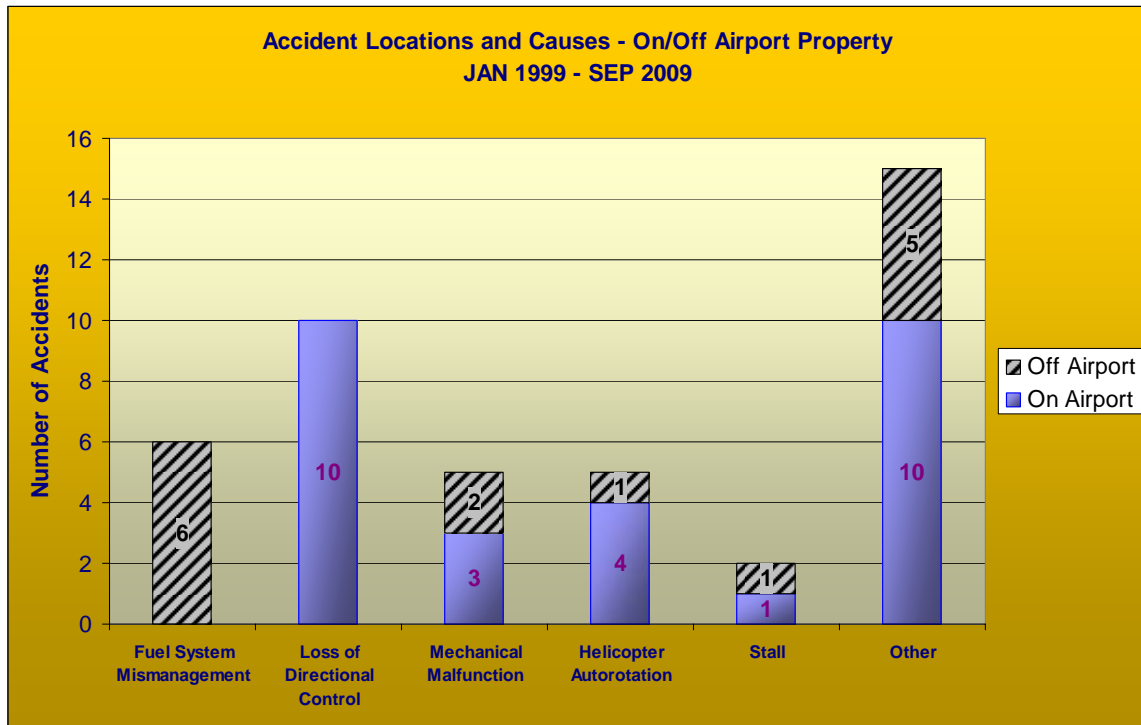
Appendix C – Total Annual Accidents by Location



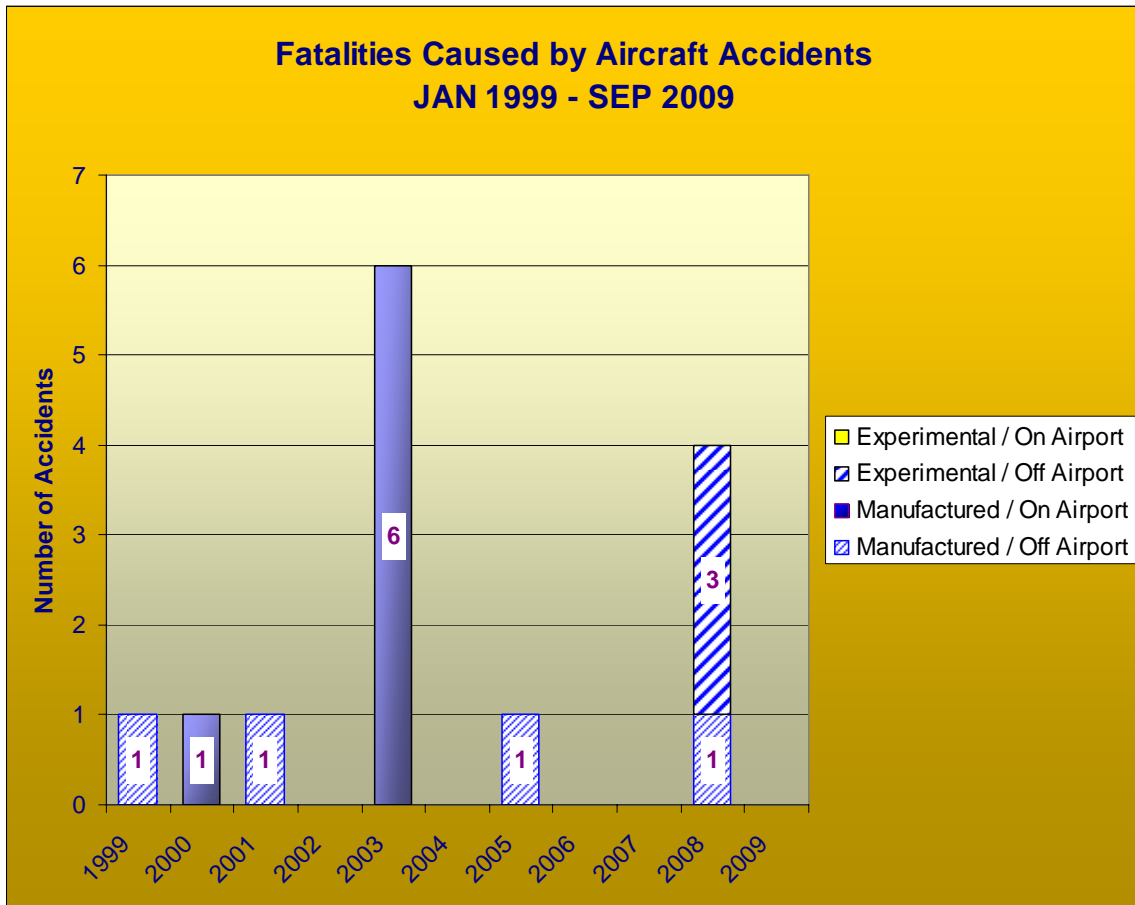
Appendix D – Cause of Accidents



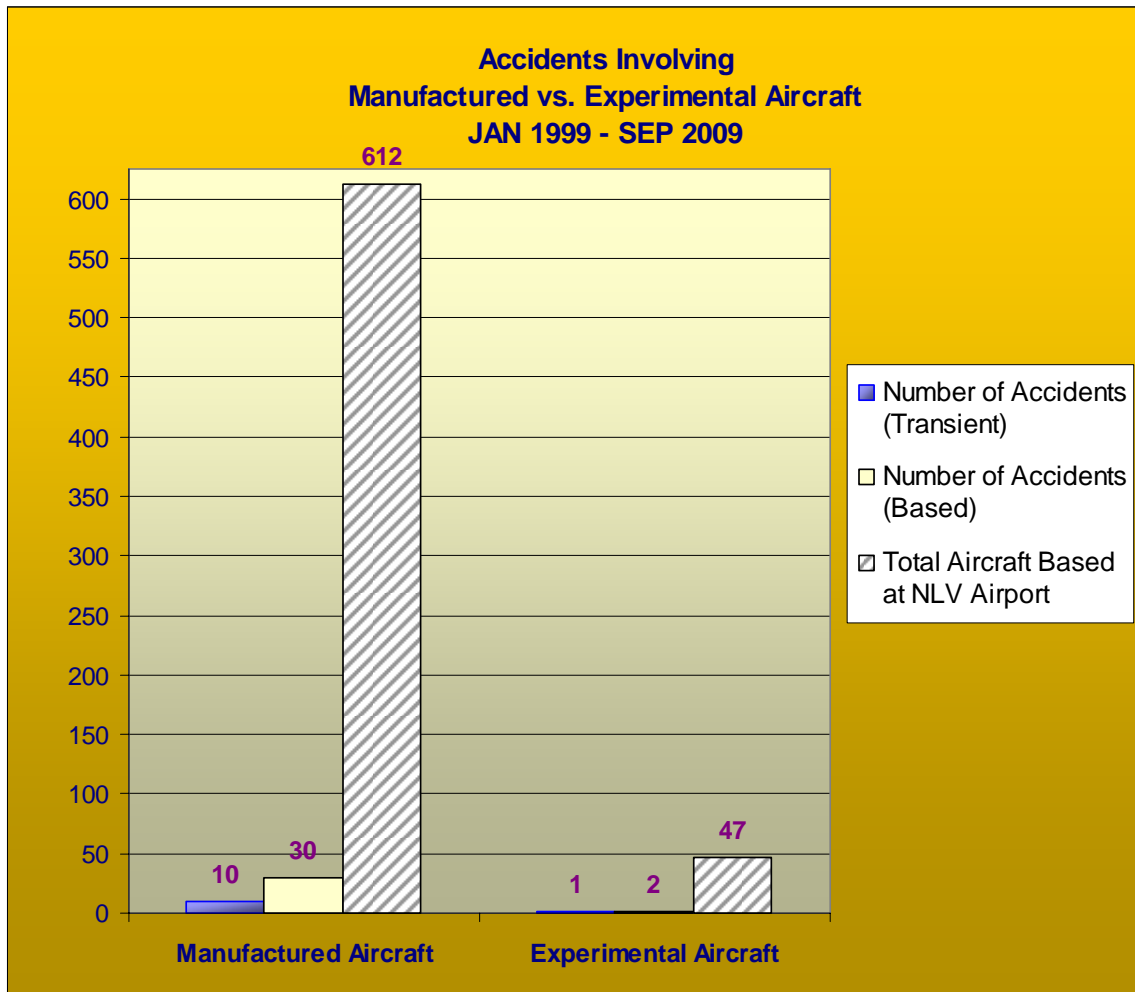
Appendix E – Accident Locations and Causes – On/Off Airport Property



Appendix F – Fatalities Caused by Aircraft Accidents



Appendix G – Accidents Involving Manufactured vs. Experimental Aircraft



GLOSSARY

Aircraft Accident – An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. (*National Transportation Safety Board, 49 Code of Federal Regulations, Part 830.2*)

Based Aircraft – An aircraft that is operational & air worthy, which is typically based at an airport for the majority of the year. (*Federal Aviation Administration, National Based Aircraft Inventory Program, Frequently Asked Questions*)

Experimental Aircraft – A special airworthiness certificate in the experimental category is issued to operate an aircraft that does not have a type certificate or does not conform to its type certificate and is in a condition for safe operation. Additionally, this certificate is issued to operate a primary category kit-built aircraft that was assembled without the supervision and quality control of the production certificate holder. Special airworthiness certificates may be issued in the experimental category for the following purposes: research and development, showing compliance with regulations, crew training, exhibition, air racing, and market surveys. (*Federal Aviation Administration website, www.faa.gov*)

Flight School – Any pilot school, flight training center, air carrier flight training facility, or flight instructor certified under 14 CFR Part 61, 121, 135, 141, or 142; or any other person or entity that provides instruction under 49 United States Code (U.S.C.) Sub-title VII, Part A, in the operation of any aircraft or flight simulator. (*Transportation Security Administration, 49 Code of Federal Regulations, Part 1552.1*)

Flight Training – Training, other than ground training, received from an authorized flight instructor in flight in an aircraft. (*Federal Aviation Administration, 14 Code of Federal Regulations, Part 61.1*)

Transient Aircraft – Operations that are performed by an aircraft, either Instrument Flight Rules (IFR), Special Visual Flight Rules (SVFR), or Visual Flight Rules (VFR) that lands at an airport, arriving from outside the airport area, or departs an airport and leaves the airport area (This is synonymous with itinerant aircraft). (*Federal Aviation Administration website, www.faa.gov*)

Part 91 – The Federal Aviation Regulation that governs the operation of aircraft within the United States, including such items as minimum safe altitude, radio communications and air traffic control procedures. Most general aviation pilots and aircraft operate under this regulation (14 CFR Part 91.1(a)).

Part 135 – The Federal Aviation Regulation that governs the commuter or on-demand operations of each person holding an Air Carrier Certificate or Operating Certificate (14 CFR 135.1(a)).

Part 139 – The Federal Aviation Regulation that governs the certification and operation of airports in the United States serving any scheduled passenger-carrying operation of an air carrier operating aircraft designed for more than 9 passenger seats (14 CFR Part 139.1(a)).

IFR – An acronym for Instrument Flight Rules, a set of rules governing the conduct of flight under instrument meteorological conditions, or periods of inclement weather with reduced visibility (www.faa.gov).

VFR – An acronym for Visual Flight Rules, a set of rules that governs flight during visual meteorological conditions, or periods of fair weather (www.faa.gov).