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Background

Scott Air Force Base
MidAmerica St. Louis Airport
Joint Land Use Study

Acknowledgements

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The Scott Air Force Base/ MidAmerica St. Louis Airport Joint Land Use Study (JLUS) is a cooperative land use planning initiative between the U.S. Air Force and the surrounding communities in the region. Partners in the JLUS include: the City of Lebanon, the City of Mascoutah, MidAmerica St. Louis Airport, the City of O'Fallon, Scott Air Force Base (AFB), the Village of Shiloh, and St. Clair County.

This document serves as an ongoing guide to local governments and Air Force actions to enhance compatibility around Scott AFB and MidAmerica St. Louis Airport and strengthen the military-civilian relationship.

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Study Purpose and Goals

The purpose of this Joint Land Use Study (JLUS) is to ensure that surrounding communities can sustain economic activity without degrading the military readiness activities of Scott Air Force Base and civilian airport operations at the MidAmerica St. Louis Airport.

The goals of the study are to:

- Clarify existing land use compatibility guidance and develop effective tools for assessing development around the base and Airport
- Increase communication among the military, the Airport and surrounding communities;
- Evaluate the potential impacts of current and future military and airport operations on surrounding communities;
- Evaluate the potential impacts of community growth on the long-term viability of Scott AFB and the Airport; and
- Recommend action items to reduce encroachment and facilitate future collaboration

Background

Scott Air Force Base (Scott AFB) and MidAmerica St. Louis Airport are in north central St. Clair County, Illinois, about 20 miles east of St. Louis, Missouri. (See Figure 1- *Study Area Region*). Surrounding communities include St. Clair County, the city of Mascoutah to the southeast, Lebanon to the northeast, O'Fallon to the northwest and the Village of Shiloh to the west and south west

Established as an airfield in 1917, Scott AFB has long been the home of the 375th Airlift Wing; and today hosts the Air Mobility Command, The United States Transportation Command (TRANSCOM), five headquarters, a reserve aeromedical airlift wing and an Air National Guard unit. Recent Base Realignment

and Closure (BRAC) activities will result in approximately 1,260 new personnel at the base.

The MidAmerica St. Louis Airport (Airport) is co-located with Scott AFB and shares airfield facilities under a joint-use agreement. St. Clair County operates the Airport as a Federal Aviation Administration (FAA) designated Non-Hub Primary Commercial Serving Airport. The Airport currently hosts charter service to Las Vegas, Nevada and Orlando, Florida and is beginning to establish a presence as an international air cargo center. Long term plans for the Airport will generate increased aviation activity, resulting in potential increased noise levels in the surrounding community.

What is Encroachment?

The long-term goal of the JLUS is to reduce potential encroachment, accommodate growth and sustain the regional economy. The term 'encroachment' describes the operational impacts of military and airport activities on surrounding communities and the reciprocal negative effects of adjacent and unmanaged community growth on training and aviation operations. Designated geographic boundaries that represent noise and air safety impacts—the military runway Accident Potential Zones (APZs), the civilian Runway Protection Zones (RPZs) and Noise Zones— extend beyond property owned by Scott AFB and the Airport into surrounding communities. Later sections of this report explore the interaction of these areas with nearby land uses.

While noise and safety concerns can affect residents living and working around the base and Airport, certain nearby civilian land uses that concentrate people, such as higher density housing or public gathering places can threaten aviation operations. Ongoing complaints about noise and night flights can place pressure on Scott AFB and the Airport to modify current operating procedures, thus reducing realistic training capabilities or curtailing business activity and economic growth.

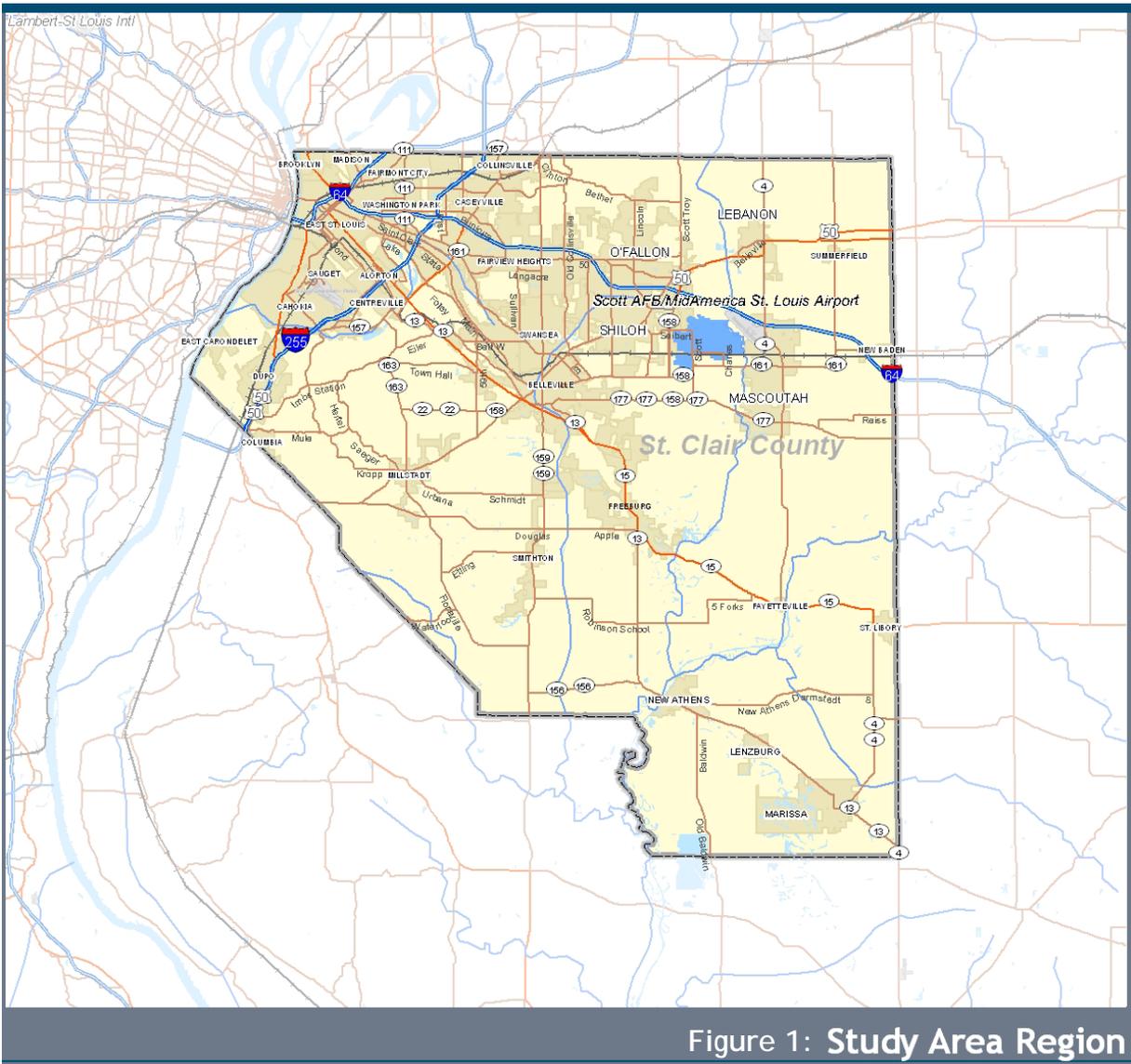


Figure 1: Study Area Region

Methods of reducing and preventing encroachment include a menu of tools, such as compatible land use planning, infrastructure planning, real estate disclosure, site development requirements, operational changes on the Airport and base, and wildlife habitat conservation. One of the purposes of the JLUS is to provide feasible and locally appropriate recommendations to minimize encroachment potential and develop clear guidance for assessing the compatibility of local growth options.

The JLUS report is not a binding document, but rather an advisory report that identifies best practices for ensuring compatible development around the base and the Airport. The report includes a series of recommended policies and

regulations for the Air Force and local governments to consider. It is the responsibility of each participating entity to review the proposals and implement recommendations appropriate for their local context.

Communication and Coordination Strategy

A main component of the JLUS is to increase communication among surrounding communities, Scott AFB, and MidAmerica St. Louis Airport. The JLUS process encourages residents, local decision-makers, military representatives, and airport operators to examine issues of compatibility and encroachment in an open and transparent forum, balancing both military and civilian interests.

The JLUS Report will include a coordination strategy to guide decision makers and the general public through the current planning process and to build the framework for successful implementation and monitoring.

Summary of Public Participation

The JLUS process seeks to create a community-based plan that builds consensus from varied interests, including residents, local elected officials, businesses, and military representatives.

Stakeholders

To achieve a community-based approach, the process organizes stakeholders into two bodies: the Working Group and the Policy Committee. The purpose of this organizational structure is to ensure that the final JLUS report includes a cross-section of opinions and reflects feasible, practical solutions.

Working Group

The Working Group consists of area planners, city and county managers, technical and professional staff, military planners and representatives from MidAmerica St. Louis Airport. This group is responsible for data collection, identifying and studying technical issues, and developing recommendations for consideration by the Policy Committee.

Policy Committee

The Policy Committee consists of local elected officials from each participating jurisdiction, along with leadership from Scott Air Force Base and MidAmerica St. Louis Airport. The Policy Committee oversees the JLUS process, reviews draft and final written reports, and evaluates policy recommendations. The JLUS study does not supersede the regular local legislative process. Locally elected officials remain responsible for formally adopting any recommended regulatory policies.

Summary of Community Participation

Table 1 below identifies milestones and meetings dates that occurred during the process.

Table 1: Meeting Dates and Schedule

Meeting	Date
Kick-off Meeting	October 26
Stakeholder Interviews	November 13 -14
Technical Memo #1	January 25
Working Group Meeting #1	January 31 and February 1
Technical Memo #2	March 3
Policy Committee Meeting	March 14
Working Group Meeting #2	April 15
First Public Meeting	April 29
Working Group and Policy Committee Meeting #3	June
Second Round of Public Meetings	July

Stakeholder Input

The planning team conducted a series of stakeholder interviews to establish priorities to guide policy development. In general, respondents identified the following issues:

- Concern about limitations on growth due to potential noise impacts and regulations;
- Lack of certainty about the use of DoD or FAA land use compatibility standards;
- The desire for a clear-cut line of land affected by Scott and MidAmerica operations and the lack of familiarity with definitions of compatible land uses;
- The long-term growth impacts of a new highway interchange on land use patterns in nearby communities;
- The ability of Facilities Planning Areas to influence development in the area;
- Only partial participation in Jurisdictional Boundary Agreements;

- Desire for existing community plans to correspond with JLUS and future MidAmerica Airport plans;
- Lack of community awareness of increased activity and future missions on Scott AFB; and
- One access road in and out of the Airport

Public Participation Opportunities

In addition to the Policy Committee and Working Group meetings, the JLUS planning team will conduct two rounds of public involvement events in each participating community. These meetings will give residents an opportunity to understand the existing issues, review draft land use compatibility tools, and provide input on implementation strategies.

In addition to public meetings, the public can access a website that tracks the progress and results of the Joint Land Use Study at <http://www.co.st-clair.il.us/> under the letter “J”. The site will host regular meeting notices, FAQs, links to participating entities, technical reports and maps, and contact information.

Overview of Previous Compatibility Actions And Ongoing Initiatives

Federal Compatibility Initiatives

Military Initiatives

Since its inception, Scott AFB has continued to grow in importance to the Air Force and the Department of Defense. Over the years, the cities and counties around Scott AFB have grown along with the military, reinforcing the close relationship between the complex and the nearby communities. This interdependence, however, raises the challenge that is central to the Joint Land Use Study effort. As military installations expand, they bring new people and economic activity to an area. The communities then build houses, schools and infrastructure,

and create new jobs to support military personnel, base workers, and their families. More people begin to live and work in proximity to the noise and safety risks generated by military installations. The presence of civilian uses can in turn place pressure on installations to modify their operations, possibly compromising the overall military mission.

The Department of Defense (DoD) has three major programs designed to address potential conflicts between military and civilian land uses. In 1972, the DoD established the Air Installation Compatibility Use Zone (AICUZ) program, to identify noise-affected areas around installations and to develop cooperative approaches for reducing adverse impacts. Scott Air Force Base updated their AICUZ study in 2001.

In 1985, the DoD initiated the Joint Land Use Study (JLUS) program to create a community-based framework for land use planning around military installations. The JLUS process encourages residents, local decision-makers, and installation representatives examine current and foreseeable land use conflicts and develop collaborative solutions that balance military and civilian interests.

Participating communities initiated this JLUS effort for the region around Scott Air Force Base and MidAmerica St. Louis Airport. The Office of Economic Adjustment (OEA) within the DoD funded 90 percent of the study, while the communities supplemented the initiative local resources.

In 2003, the DoD established the Readiness and Environmental Protection Initiative (REPI) to meet the complementary goals of protecting military installations from encroachment, while preserving the valuable habitat surrounding these installations. The REPI program allows installations to protect adjacent non-military

land through partnerships with state and local governments or non-governmental organizations. The partners share the cost of purchasing conservation easements from willing sellers, thus preserving high-value wildlife habitat and limiting incompatible development around installations.

Federal Aviation Administration Initiatives

The Federal Aviation Administration (FAA) addresses issues of noise and safety risk from civilian aircraft operations through the 1979 Aviation Safety and Noise Abatement Act (ASNA Act) called the Noise Compatibility Study, or Part 150 Study. The purpose of the Part 150 Study is to reduce existing and potential non-compatible uses surrounding an airport. Following completion of a Part 150 Study, an airport can seek funding for implementation, such as the voluntary purchase of aviation easements on affected properties.

In 2006, St. Clair County initiated an Airport Master Plan Update for MidAmerica St. Louis Airport. The Plan Update evaluates requirements for the modernization and expansion of the landside and airside facilities over the next 20 years at the Airport. Completed in July of 2007, the first phase of the study assesses market opportunities in aeronautical and non-aeronautical activity and identifies the capacity and capabilities necessary to support this growth. As part of the second ongoing phase, the study will develop alternatives for meeting the capacity and capability requirements and will evaluate commercial opportunities and regional economic impacts.

State Compatibility Initiatives

The State of Illinois passed the County Air Corridor Protection Act in 2003 to enforce compatible development surrounding military installations. HB 1338, 2003, enables counties with a U.S. Air Force installation with runways that are at least 7,500 feet in length to:

- “Protect the safety of the community by controlling” land uses designated in the Air Installation Compatible Use Zone (AICUZ) Study adopted by the United States Air Force.
- Utilize eminent domain powers to acquire land or an easement when a land use exists or when a municipality approves a use that is not compatible with the AICUZ and falls within the following areas:
 - clear zones and runway protection zones
 - accident potential zones I and II or
 - within the 65 decibel contour.

Operational Impact Reduction

Scott AFB and MidAmerica St. Louis Airport have jointly reviewed their aircraft operations for voluntary reduction of noise impacts on surrounding communities. The JLUS planning team reviewed these procedures for further potential changes to reduce the noise impact on the region.

The SAFB/MAA Airfield Management and Air Traffic Control (ATC) publication, dated January 9, 2007, the SAFB Air Installation Compatible Use Zone (AICUZ) Study, dated February 2001, and approach and departure procedure information published by the National Oceanic and Atmospheric Administration (NOAA), dated May 13, 2008 were reviewed for this analysis. The AICUZ study provides the most comprehensive source of representative flight tracks for military and civilian operations at the Airport.

NOAA approach and departure procedures information, which outlines procedures for civilian aircraft approaching or departing the Airport, were reviewed to identify any differences from the AICUZ data. Approach procedures for the airport are straight in from the Final Approach Fix (FAF) to the runway threshold.

No obstacle departure procedures are published for the Airport. Standard instrument departures and departure procedures instruct pilots to fly ATC issued vectors to the appropriate departure route. The SAFB ATC publication indicates that detailed Instrument Flight Rules (IFR) climb-out instructions are issued for non-local operations. The published NOAA approach procedures for civilian operations are represented in the AICUZ flight tracks. In the immediate vicinity of the Airport, departure procedures are dependent on ATC issued instructions, which are not reflected in the published information.

Noise abatement procedures published in the SAFB ATC document are as follows:

- All heavy or afterburner aircraft departing Runway 14R-32L will climb straight ahead to a minimum of 2,000' MSL and 1 NM from the departure end of the runway before entering a closed pattern for the respective runway.
- To the maximum extent possible, aircraft will avoid flying over the Cities of Lebanon and O'Fallon, Village of Shiloh, and Scott ADB noise-sensitive users.
- Transition training will not be performed on Runway 14R-32L from 2200 until 0600 local time unless coordinated and approved by the 375 OG/CC.

The AICUZ flight tracks, when considered in conjunction with the SAFB ATC noise abatement procedures, appear to minimize over-flight of surrounding noise sensitive land uses. Approach flight tracks extend over O'Fallon and Mascoutah, however, safe operating procedures provide little flexibility to adjust approach operations. In general, departure flight tracks provide multiple opportunities to avoid residential communities, and ATC vectoring and noise abatement

procedures should provide sufficient flexibility to minimize overflight of noise sensitive areas.

Short pattern fixed and rotary wing training for small aircraft appear to avoid over-flight of Shiloh and Mascoutah, while longer patterns partially over-fly residential areas. KC-135 transition training on Runway 14L-32R appears to avoid direct over-flight of noise sensitive areas. Noise abatement procedures directing pilots to avoid over-flight of residential areas should minimize use of closed pattern tracks over surrounding communities.

Based on the location of noise sensitive areas relative to the Airport and existing noise abatement procedures, there do not appear to be any changes to standard operating procedures that would significantly reduce noise or other operational impacts on the surrounding communities.

Other Compatibility Initiatives

St. Clair County MidAmerica Airport Sub-Area Plan, 1998

The St. Clair County Sub-Area Plan for MidAmerica Airport was a multi-jurisdictional study among St. Clair County, IDOT (Illinois Department of Transportation), Belleville, Lebanon, Mascoutah, O'Fallon, and Shiloh to preserve the future growth, expansion, and mission capabilities of both MidAmerica Airport and Scott AFB by providing a guide for development decisions within the surrounding areas.

The report included an analysis of existing development and infrastructure and established a set of goals and objectives. Using these objectives, the study produced a plan for land use, transportation system improvements, and water and sewer infrastructure improvements. The plan also anticipated the addition of two Airport runways to the east.

The final section of the plan recommended adoption of an Airport Environs Overlay district (AEO) to include all land in the study area. The majority of the recommendations focused on the creation of a Joint Airport Zoning Board (JAZB) comprised of local elected officials and the airport operator. The body would have the authority to decide land use, zoning and building permit issues within the AEO district and act in an advisory role for issues within a 3-mile radius of the AEO. Decisions of the JAZB would be binding and could not be overturned by any of the local governments. The Appeals Board of the JAZB would consist of a board appointed by members of the JAZB. Administrative staff in the St. Clair County Land Development Office would serve the JAZB.

During the planning process, the affected municipalities examined the feasibility of a Joint Airport Zoning Board. After discussion for more than a year following study completion, stakeholders discontinued official dialogue in 1999 without the formation of this board. However, individual municipalities adopted components of the Sub-Area Plan recommendations such as overlay zones and updated comprehensive plan language. The plan was also successful in providing affected communities an understanding of compatible land use planning around airports and military installations.

LEAM Lab

The LEAM lab, based at the University of Illinois at Urbana-Champaign, utilizes a computer modeling program called Land Use Evolution and Impact Assessment Model (LEAM) to map the possible effects of future land use decisions. The LEAM tool and process can assist military planners by visually depicting the consequences of emerging growth trends near installations. The LEAM lab worked with the East West Gateway Council of Governments and the Southwestern Illinois Resource Conservation and Development, Inc. to develop

a model visualizing future land use scenarios in the St. Louis region, including St. Clair County.

In an ongoing effort sponsored by East-West Gateway Council of Governments and the Army Corps of Engineers Engineer Research and Development Center (ERDC-CERL), the LEAM Lab held a special regional planning effort to provide key stakeholders an opportunity to consider the potential future growth patterns around Scott Air Force Base and its effects on the military installation. The summary report was published in 2006 and is available on the LEAM Lab website at <http://www.lead.uiuc.edu/lead/pdf/downloadable-doc>. A brief summary is outlined below.

The modeling process creates future scenarios and compares them to a base scenario of “Business as Usual”. This base scenario inputs current development and projects the future development using existing trends.

Other scenarios altered the base model to reflect a particular assumption. The model, for example, demonstrates that an increase of 50 percent in military personnel at Scott AFB by 50%, or 7,000 troops, does not have a significant impact on development patterns in the immediate area surrounding the base. The scenarios exploring the new I-64 interchange at Rieder Road and new commercial growth in planned business parks resulted in concentrated commercial activity in those areas. The Gateway Connector assumed that the outer loop project would be constructed as limited access, and therefore resulted in less commercial growth along the corridor. Because the Gateway Connector will use the existing right-of-way of IL-158, strip commercial growth will be limited, therefore reducing potential commercial encroachment on the base.

During the LEAM charrettes, there were two recurring themes: the need for a mechanism to facilitate a long term dialogue on important planning issues for Scott Air Force Base and its

surrounding communities, and the need of a regional comprehensive land use plan. Participants were emphatic about the importance of maintaining a forum for Scott AFB and local communities beyond the project.

St. Louis Metropolitan Area Aviation System Study

The East West Gateway Council of Governments is currently involved in the St. Louis Metropolitan Area Aviation System Study to examine the region's aviation assets and to establish a strategic regional approach for the future development of these assets. Study objectives are to provide recommendations and strategies for:

- Identifying the long-range air transportation needs of the region;
- Maximizing the efficiency, effectiveness, and safety of existing and planned aviation assets; and
- Creating mechanisms for improved regional cooperation and integration in the development and operation of aviation assets.

Although the main purpose of the study is to provide expansion strategies for the aviation system, land use conflicts and encroachment concerns can significantly influence future growth opportunities for the region's airports. Promoting land use compatibility through encroachment reduction tools can contribute to sustained growth at the shared-use airport.

Scott Air Force Base Activities

Installation History

Scott Air Force Base began as Scott Field in 1917, named after Corporal Frank S. Scott who was the first enlisted man to be killed in an airplane crash on base. Scott Field began with a primary mission of training ground crews and pilots. The United States War Department originally designated the field as a "lighter than air" station for airships and balloons. Scott saw

its first medical lift mission in 1948, when the Military Transportation Service received responsibility for airlifting all military and other government medical patients.

Training activities on the base ended in 1957. Reorganization brought the 375th Military Airlift Wing onto Scott AFB, and since 1975, the 375th has managed the domestic aeromedical evacuation system. Another round of reorganization established Air Mobility Command, now hosted at the base.

Current and Foreseeable Activities

Scott AFB is unique in that it hosts two major commands, the Air Mobility Command (AMC), the Air Force branch of Transportation Command, and the US Transportation Command (TRANSCOM). U.S. TRANSCOM provides the transportation, distribution and sustainability that makes possible the projection of United States national power, and ensures our global influence. Sixty-seven percent of U.S. TRANSCOM's active duty personnel are from military services other than the Air Force. Air Mobility Command's mission is to provide airlift, air refueling, special air missions and aeromedical evacuation for all United States forces.

The 375th AW is the host unit at Scott AFB, providing basic infrastructure and support services for day-to-day operations. The 375th AW has managed the domestic aeromedical evacuation system since 1975 by providing timely airlift of seriously ill or injured military personnel, military family members, and other Department of Defense patients to medical treatment centers.

In addition, Scott is home to over 25 tenants, including 18th Air Force, 126th Refueling Wing, Defense Information Contracting Organization (DITCO), Air Force Communications Agency (AFCA) and the Air Force Mobility Command

and US Transportation Command (TRANSCOM).

The 18th Air Force tasks and executes all air mobility missions. As part of its war-fighting role, the 18th Air Force commands assigned forces, presents air mobility forces (airlift and air refueling) and supports forces to the combatant commanders through U.S. TRANSCOM. The 126th Refueling Wing (ARW) is an Illinois Air National Guard Unit, which relocated to Scott AFB from Chicago in 1998. The 126th ARW is responsible for air refueling in support of combat forces during contingency operations.

DITCO provides contracting and financial services in support of the Defense Information Systems Agency (DISA), including the procurement of telecommunications services, equipment, networks, and information technology services and information processing equipment. DISA plans, develops, fields, operates and supports Communications, Command, Control and Intelligence systems that serve the Department of Defense.

Air Force Communications Agency (AFCA) is the “solution provider” for communications and information-related issues. AFCA is a field operating agency reporting directly to the Headquarters U.S. Air Force Deputy Chief of Staff for Warfighting Integration. Their efforts focus on providing communications and information capabilities throughout the Air Force and supporting the warfighter. About 560 active-duty military members and civilian personnel that are assigned to Scott serve in the Air Force's Enterprise C4 and Information Technology Center for Excellence.

The location of multiple branches of the military creates a multiservice community atmosphere at Scott that reflects the coordination and streamline operations of today's US military. The mission of Scott Air Force Base is to provide a Total Force team, engaging globally by providing priority airlift, aeromedical

evacuation, combat support and medical expertise, while ensuring an outstanding quality of life.

The units based at Scott are in the process of adding and replacing aircraft. The 126th Air Refueling Wing is replacing its KC-135E with the KC-135R and may add C-21 and KC-X aircraft in the future. Also, the 932nd Airlift wing is replacing its C-9 aircraft with the C-40. In addition to the military operations, Scott Air Force Base maintains an aero club with six based aircraft. The club flies an average of 10 operations each day.

The FAA forecasts a constant 30,467 military operations for the years 2006 through 2025. Representatives from Scott AFB indicate that no major changes to operations are expected in the foreseeable future.

Installation Facilities and Personnel

Scott AFB is approximately 2,560 acres and has 1,029 acres of easements and right-of way. The Scott runway is 8,000 feet long and shares a taxiway with the MidAmerica St. Louis Airport. The base has over 963 buildings and 57 miles of paved roads. Housing on base includes over 1,400 family housing units, 4 dorms and 19 temporary quarters.

The Scott AFB Historic District encompasses approximately 375 acres of the base and is listed on the National Register of Historic Places. An 18-hole golf course, four baseball fields and a running track encircling the entire installation offer residents and personnel recreational opportunities.

Scott AFB currently employs approximately 14,248 persons. In addition to active military personnel and civilian workers, the installation supports approximately 17,020 retirees. The total Scott AFB community, on- and off-base, comprises approximately 39,952 military and civilian personnel and their families. Table 2 contains a breakdown of installation personnel.

Table 2 Installation Population

PERSONNEL POPULATION	
Active Duty Military	6,850
Air Force Reserve	1,138
Air National Guard	854
Federal Civilian Employees	3,100
Non-Appropriated Fund Contract Civilians	2,400
<i>TOTAL WORK FORCE</i>	<i>14,258</i>
Family Members (Dependants)	8,314
Retired Military	17,020
TOTAL POPULATION	39,592

Source: USAF 2005

Due to 2005 Base Realignment and Closure (BRAC) activities, Scott AFB will incur an increase of over 1,000 new personnel. 12 new KC-135R aircraft will relocate from Grand Forks AFB in Nevada, and 8 KC-135E aircraft will be retired. A Mobility Logistics Support Center (LSC) will be established on Scott AFB with personnel from Hurlburt Field, Florida; Sembach, Germany; Little Rock, Arkansas; and Altus Airfield Base.

Another major reorganization from BRAC that will increase Scott personnel is the collocation of Surface Deployment and Distribution Command from Newport News, Virginia with the existing Air Force Mobility Command and TRANSCOM on Scott AFB. This move will join common function activities and facilitate large scale transformations as proposed by the TRANSCOM Commander.

Economic Impacts of Scott AFB

The economic impact of Scott AFB in the region is based on FY 03 Scott Economic Impact Analysis. According to this study, the installation generated a \$1.66 billion impact in the region, including base payroll to personnel and civilian contractors, base expenditures for goods and services purchased, and an estimated dollar value of indirect jobs. Indirect jobs are those that provide goods and services to individuals who locate in the region due to Scott AFB. An example of an indirect job would be a teacher who is hired because more school-aged children have moved into the region with their military parents.

The FY03 payroll for Scott AFB was \$970 million and included \$412 million in annual expenditures. Scott AFB contributed \$42 million to the region's economy in the form of construction contracts, over \$190 million in materials, equipment, and supplies, and another \$112 million in additional services.

Midamerica St. Louis Airport Activities

Airport History

Planning for MidAmerica St. Louis Airport began in the 1980s, when the sole full-service commercial airport serving the region, Lambert-St. Louis International Airport (Lambert) functioned as a Trans World Airlines (TWA) hub. In 1986, the Illinois Department of Transportation published a Feasibility Study of Joint Military-Civilian Use of Scott Air Force Base that predicted a shortage of airport capacity in the St. Louis area by 1990. The study concluded that locating additional facilities at Scott Air Force Base would help to reduce congestion at Lambert, improve the local economy, and enhance the capabilities of Scott Air Force Base.

In 1991 the Department of the Air Force and St. Clair County signed a joint use agreement to establish a shared-use airport. The agreement specified that St. Clair County would purchase land to construct an Airport consisting of a runway, an air traffic control tower, terminal facilities, fuel storage, and an independent aircraft rescue and firefighting (ARFF) facility. The agreement also identified improvements to the Scott Air Force Base airfield, relocation of a residential development for Air Force personnel and their families, and operating procedures for the facility.

Construction of the Airport began in 1994 and MidAmerica St. Louis Airport officially opened in 1998. Since the inauguration of the Airport, commercial service has developed slowly. Sweeping changes in the aviation industry as a result of the post-technology boom economic slowdown and the events of September 11, 2001, strongly affected aviation demand in the St. Louis region. American Airlines acquired Trans World Airlines (TWA) and drastically cut service to St. Louis Lambert International Airport, reducing the number of passengers connecting through the airport. In addition, St. Louis Lambert International developed a new runway, increasing available airfield capacity in the region, and thereby reducing the demand for MidAmerica St. Louis Airport passenger services.

Ongoing Airport Planning

Today, MidAmerica St Louis Airport is engaged in a master planning process to assess the strategic options available for airport development. The process is being conducted in two phases. Phase I, which was completed in July 2007, assessed the market opportunities that could contribute to growth in aeronautical and non-aeronautical activity, and identified the capacity and capabilities necessary to support this growth. Phase I focused on the following four main tasks:

- Existing Conditions

- Market Demand
- Demand/Capacity and Facility Requirements
- Public Involvement

The Existing Conditions documentation provides an inventory of existing facilities, defines the current operating conditions, and summarizes the environmental considerations. Market Demand assesses how the various activities related to the Airport may develop over time. Demand segments include commercial passenger service, cargo, general aviation, military activity, aircraft maintenance and repair, and non-aeronautical activity. The market demand assessment prepared a baseline activity forecast and a series of alternative scenarios to capture the range of potential demand that could develop at the Airport over the planning timeframe. Table 3 presents the baseline activity forecast in terms of commercial passenger enplanements, cargo tonnage, aircraft operations, and based aircraft. Table 4 presents the alternative demand scenarios, grouped into Planning Activity Levels (PAL).

The Demand/Capacity and Facility Requirements analysis compares the existing conditions with the potential future demand. When future demand exceeds the capacity or capability of existing airport facilities, expansion will be required. The analysis developed requirements for airport facilities such as: airfield, passenger terminal, air cargo, general aviation, support facilities (e.g. fire protection), ground access, utilities, and non-aeronautical facilities.

Community and stakeholder involvement is an important component of the master planning process, providing critical input on issues such as the regional economy, growth drivers, environmental constraints and community concerns. In Phase I, the Public Involvement task consisted of a series of stakeholder briefings and development of a project website.

Table 3: Market Demand Summary

Year	Enplanements	Cargo Tonnage	Operations				Total	Based Aircraft
			Commercial Passenger	Cargo	General Aviation	Military		
2007	29,386	-	522	-	7,362	30,467	38,351	-
2008	30,627	6,435	544	52	7,727	30,467	38,790	1
2009	31,909	12,870	567	104	8,123	30,467	39,261	1
2010	33,234	12,870	591	104	8,525	30,467	39,686	2
2011	45,656	19,305	812	156	8,932	30,467	40,367	3
2012	47,522	19,305	845	156	9,343	30,467	40,811	4
2013	49,450	25,740	879	208	9,760	30,467	41,314	5
2014	51,442	32,175	915	260	10,181	30,467	41,823	5
2015	53,499	38,610	951	312	10,604	30,467	42,334	6
2016	55,623	45,045	989	364	11,032	30,467	42,852	7
2017	57,817	64,350	1,028	520	11,463	30,467	43,477	8
2018	60,082	70,785	1,068	572	11,898	30,467	44,005	9
2019	62,421	77,220	1,110	624	12,338	30,467	44,538	9
2020	76,180	83,655	1,354	676	12,781	30,467	45,279	10
2021	79,109	90,090	1,406	728	13,229	30,467	45,830	11
2022	82,132	96,525	1,460	780	13,681	30,467	46,388	12
2023	85,252	102,960	1,516	832	14,137	30,467	46,951	13
2024	88,473	102,960	1,573	832	14,597	30,467	47,469	14
2025	91,797	109,395	1,632	884	15,062	30,467	48,045	15
2026	95,226	115,830	1,693	936	15,531	30,467	48,627	15
2027	98,765	115,830	1,756	936	16,006	30,467	49,165	16
2028	102,417	122,265	1,821	988	16,484	30,467	49,760	17
2029	106,184	122,265	1,888	988	16,967	30,467	50,309	18
2030	110,070	135,135	1,957	1,092	17,393	30,467	50,909	19

Table 4: Demand Level Forecasts

	Existing - 2006	PAL 1	PAL 2	PAL 3	PAL 4	PAL 5	PAL 6
ENPLANED PASSENGERS							
Annual	35,386	53,499	110,070	148,920	265,532	335,790	455,729
Peak Month	4,439	5,350	11,007	14,892	26,553	33,579	45,573
Average Day	535	428	570	1,045	1,625	1,957	2,470
Peak Hour	143	150	150	203	354	310	423
COMMERCIAL PASSENGER AIRCRAFT OPERATIONS							
Annual	548	951	1,957	3,913	5,997	8,674	11,482
Peak Month	55	95	196	391	600	867	1,148
Average Day	5	6	10	20	30	44	58
Peak Hour	2	2	2	4	6	7	9
GENERAL AVIATION OPERATIONS							
<u>SAFB Related</u>							
Annual	9,920	8,098	9,684	8,098	9,684	9,684	9,684
Peak Month	992	810	968	810	968	968	968
Average Day	50	26	31	26	31	31	31
Peak Hour	7	7	8	7	8	8	8
<u>MidAmerica Related</u>							
Annual	765	2,506	7,709	7,063	15,418	23,030	23,030
Peak Month	77	251	771	706	1,542	2,303	2,303
Average Day	4	8	25	23	50	74	74
Peak Hour	1	2	6	6	12	19	19
MILITARY OPERATIONS							
Annual	19,875	30,467	30,467	30,467	30,467	30,467	30,467
Peak Month	1,988	3,047	3,047	3,047	3,047	3,047	3,047
Average Day	99	98	98	98	98	98	98
Peak Hour	25	25	25	25	25	25	25
ALL-CARGO OPERATIONS							
Annual	-	312	1,092	1,768	2,704	3,692	3,692
Peak Month	-	26	91	147	225	308	308
Average Day	-	1	4	7	11	15	15
Peak Hour	-	1	2	4	5	7	7

Phase II of the process began in late 2007. It will prepare development alternatives to identify the options for providing the capacity and capability requirements. Phase II will include a strategic alternatives analysis process designed to evaluate options within the context of commercial opportunities, regional benefit, cost and impact. A decision framework will be developed to guide near-term actions to maximize the ability of the Airport and the region to capitalize on the ultimate direction and scale of growth.

Airport Facilities

The existing runway configuration between Scott AFB and MidAmerica St. Louis Airport consists of two parallel runways that are oriented northwest-southeast. The Airport runway is 10,000 feet long and 150 feet wide, while the military runway is 8,001 feet long and 150 feet wide. The two are connected by Taxiway G, which crosses Silver Creek. See Figure 2- *Airport Areas*, for a regional view of the Airport.

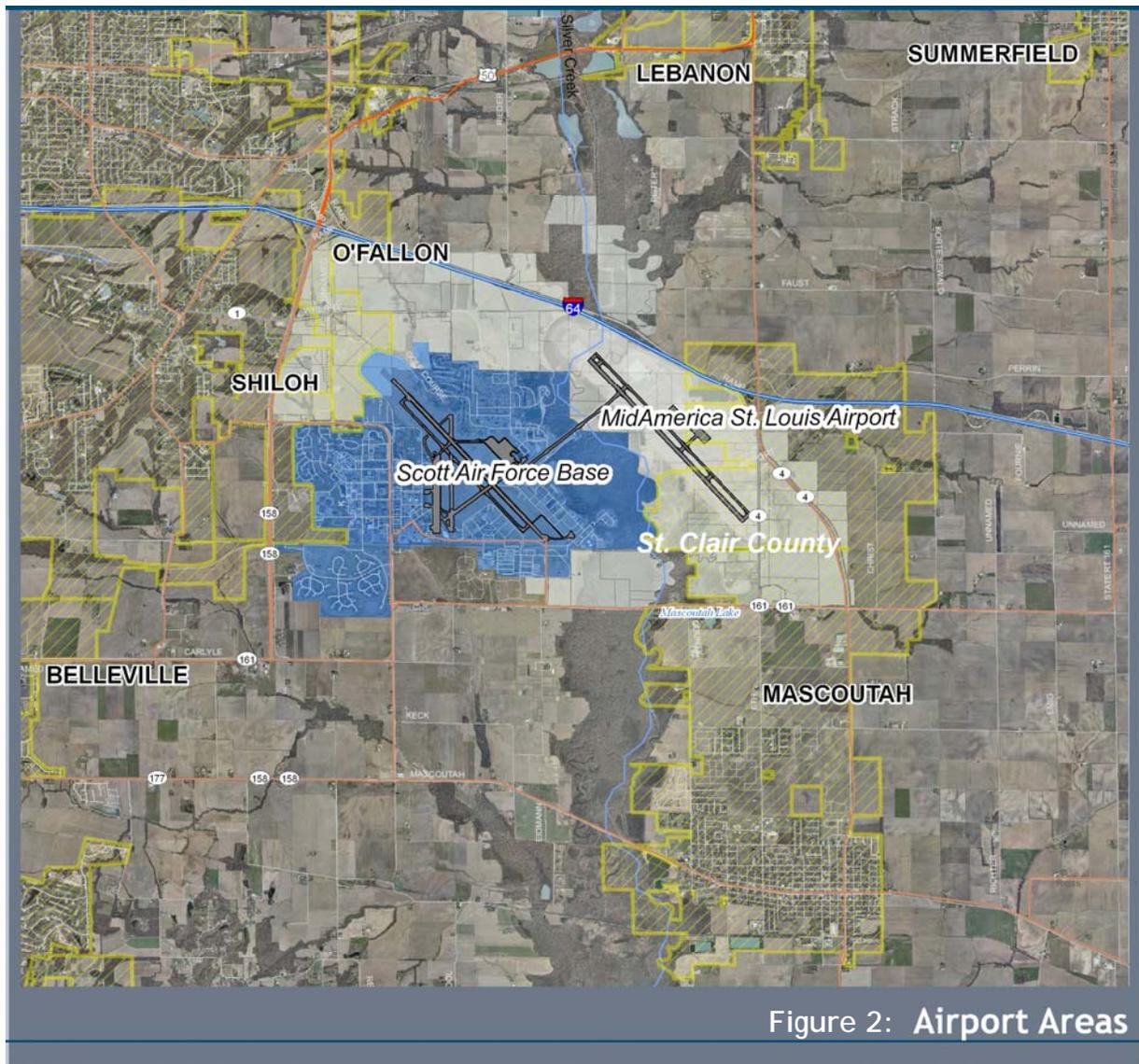


Figure 2: Airport Areas

The Air Traffic Control Tower is on Airport property and operates the two airports as a single facility. Currently, Air Force personnel staff the tower. When operations exceed an established threshold, as defined by FAA Order 7031.2C, the FAA will assume control of the tower.

MidAmerica St. Louis Airport facilities include a passenger terminal built in 1997 and an air cargo terminal constructed in 2005. The main warehouse has 50,000 square feet of floor space, approximately half of which is leased by Trade Zone Partners. The Airport sets aside an additional 5,000 square feet for use as Foreign Trade Zone 31, a secure area that contains international shipments waiting to clear customs. The cargo facility has 37 landside bays and 10 airside bays that are designed for compatibility with standard semi-trailers.

Support activities include aircraft rescue and fire fighting (ARFF), airport maintenance, snow removal, fueling and security. A 9,000 square foot facility housing these activities is in a complex just south of the general aviation facilities.

One road, Airport Boulevard, serves the entire Airport campus. This road connects to the Route 4 and serves the passenger terminal, the cargo facility, and the aircraft rescue and fire fighting facility.

Current and Foreseeable Activities

In 2005, Allegiant Air began commercial service at the Airport, increasing passenger levels. Allegiant Air currently operates four weekly departures, two each to Las Vegas and Orlando Sanford International Airport, and began a third seasonal Orlando departure in late February, 2007. The Airport conducted a total of 31,039 operations in 2006, slightly down from a peak of 31,945 operations in 2003. Military activity represented roughly 64 percent of the

operations in 2006, trending downward from a high of 87 percent in 2002 as general aviation activity has increased. General aviation operations accounted for 34 percent of the 2006 activity, up from 13 percent in 2002.

According to Airport senior management, future operations will include two new cargo services: daily drops of 400 tons of product each and bi-weekly drops of 110 tons of product each. Boeing-747 civilian aircraft will conduct both cargo drops.

Regional Demographics and Growth Trends

Population Projections

The East West Council of Government, St. Clair County, the City of O'Fallon, the City of Mascoutah, and the Village of Shiloh provided population projections for this analysis. Population projections for small areas are challenging due to the disproportionate influences of variables, such as local real estate markets, municipal boundaries, available vacant land, and large scale projects. Population projections presume the continuation of current trends and general stability in the national and regional economy. Because projections for small areas are inherently unstable, this section does not provide population projections for areas below 5,000 in population.

St. Clair County

After population losses during the 1990s, St. Clair County regained population during the first half of the decade and shows steady growth through 2030. Over the next two and half decades, the county will add close to 24,000 new residents

Table 5: St. Clair County Population Forecast

	1990	2000	2005	2010	2015	2020	2025	2030
Number	262,852	256,082	260,100	265,800	270,600	274,300	279,600	284,100
% Increase			1.6%	2.2%	1.8%	1.4%	1.9%	1.6%

Source: Long Range Population and Employment Projections, 2004, EWCOG

The East West Council of Government's projections also include population and employment projections for five geographic sub-areas of the county. All participating JLUS governments fall within sub-area 35.

Table 6: St. Clair County Sub-area 35 Population Forecast

	1990	2000	2005	2010	2015	2020	2025	2030
Number	NA	160,424	165,600	172,100	175,400	178,300	182,300	185,500
% Increase			3.2%	3.9%	1.9%	1.7%	2.2%	1.8%

Source: Long Range Population and Employment Projections, 2004, EWCOG

City of O'Fallon

The City of O'Fallon has seen strong population growth since 1990, and this trend has accelerated since 2000. The rate of population growth in the city has significantly outpaced population growth in St. Clair County. The City's 2006 Comprehensive Plan includes high, medium, and low population forecasts through 2030. The medium-range population forecast shown below is based upon an extrapolation of past 25-year population trends and reflects steady growth through 2030.

Table 7: City of O'Fallon Population Forecast

	1990	2000	2005	2010	2015	2020	2025	2030
Number	16,064	21,910	25,791	28,328	NA	33,690	NA	39,052
% Increase			17.7%	9.8%	NA	18.9%	NA	15.9%

Source: O'Fallon Comprehensive Plan, 2006

City of Mascoutah

The City of Mascoutah does not have available population forecasts. The 2006 Census estimate indicated a population of 6,737 people. During the 1990s, Mascoutah saw virtually no population growth, but since 2000, has reversed this flat trend. According to City staff, the City has been issuing a consistent number of single family building permits every year since 2000. Assuming that the City of Mascoutah continues issuing an average of 100 single-family permits per year until 2020 and 75 single-family permits per year until 2030, and that the average household size is similar to the national average, the City will double its population with an additional 5,128 residents by 2030.

Table 8: City of Mascoutah Population Forecast

	1990	2000	2005	2010	2015	2020	2025	2030
Number	5,511	5,659	6,737	8,037	9,278	10,178	11,040	11,865
% Increase		2.7%	19%	19.3%	15.4%	9.7%	8.5%	7.5%

Source: EDAW Forecast based on City-provided permit data and US Census Factfinder projected household size, 2007

Village of Shiloh

The Village of Shiloh has seen exceptional population growth and development since 1990. The Village's 2004 Comprehensive Plan provides population projections through 2012 and assumes approximately 200 new housing starts a year and a household size of approximately 2.8 persons per household. This growth rate would produce about 2,800 new residents every five years. Assuming that growth will decrease as the supply of vacant land shrinks, the village is likely to sustain a more modest growth rate in the years ahead. The projections below assume that the village will increase by approximately 2,500 people every 5 years.

Table 9: Village of Shiloh Population Forecast

	1990	2000	2005	2010	2015	2020	2025	2030
Number	2,650	8,069	10,779	13,579	16,079	18,579	21,079	23,579
% Increase			33.6%	26.0%	18.4%	15.5%	13.5%	11.9%

Source: EDAW Forecast based on Village of Shiloh Comprehensive Plan data, 2007

Regional Infrastructure

Locating and funding of public works projects can exert strong influences over land use trends and demands. Wastewater treatment capacity and roadways in particular tend to induce growth at intensities that typically exceed un-serviced surrounding areas. When exercised judiciously, such capital improvement projects can guide growth and thus act as a powerful tool for promoting compatible land use around military installations.

Sewer Infrastructure

Facility Planning Areas (FPAs) are centralized sewer service areas within a specific geographic boundary used to ensure water quality. Each FPA has a designated management agency for collection, treatment and transport that must maintain the standards set by the Illinois Water Quality Management Plan. Wastewater treatment plants are located in each FPA, and permits are approved by the agency after considering the

capacity of current and planned treatment facilities. There are five FPAs within the study area, and two sub-FPAs. The five FPAs include Belleville Plant #1, Lebanon, Mascoutah, O'Fallon and Caseyville Township East. The sub-FPAs are for the Village of Shiloh, which has a sub-FPA to the O'Fallon FPA and the Belleville Plant #1 FPA. These sub-FPAs do not currently send any wastewater for treatment to the Belleville Plant, but O'Fallon treats wastewater from Shiloh-owned lines.

The City of Mascoutah recently placed trunk lines parallel to Route 4 just north of I-64. Lebanon placed sewer lines south along Route 4, just shy of Mascoutah lines. They plan to continue the lines pending approval of an Environmental Protection Agency 2% loan. The wetlands area west of Lebanon between O'Fallon serves as a natural delineation between the two cities. Other than the regulations pertaining to FPA boundaries, none of the cities in the study area has signed Joint

Agreements to determine future growth and annexations.

Transportation Infrastructure

Along with sewer and water infrastructure, the transportation network plays a major role in shaping the future development patterns of a community. Interstate 64 runs east-west from St. Louis through the study area, just north of Scott AFB and MidAmerica St. Louis Airport. Other major road corridors near the base and airport are Route 4, IL 161, and IL 158. Route 4 is oriented north-south just east of the airport. It intersects with I-64 at exit 23 and serves as the main entrance into MidAmerica St. Louis Airport.

IL 161 is oriented east-west and is directly south of both the base and the airport. IL 158 is oriented north-south and is directly east of Scott AFB. Also called Air Mobility Drive, this road serves as the main access into the base, and intersects with I-64 at Exit 19. Other major corridors in the study area include IL 177 through Mascoutah, Route 22 through Shiloh, and US 50 through Lebanon and O'Fallon.

Major projects such as new roads offer the strongest indicator of future development patterns. The East West Gateway Metropolitan Planning Organization is responsible for planning transportation projects in the St. Louis region, in which St. Clair County and the study area are located. Based on a review of the Long Range Transportation Plan Legacy 2035 and the Transportation Improvement Plan 2008-2011 several planned and potential projects that could induce shifts in future land uses include: the Gateway Connector, the MetroLink extension to MidAmerica St. Louis Airport and a new interchange along I-64 near Rieder Road.

The Gateway Connector is an outer loop around the St. Louis region, connecting I-255 in Monroe County to I-70 in Madison County, through St. Clair County and directly west of Scott AFB. The corridor utilizes the existing IL 158 Air Mobility Drive right-of-way and Exit 19 interchange with I-

64, therefore eliminating any realignment concerns. Providing much needed regional mobility among Monroe, St. Clair and Madison Counties will likely result in increased demand for commercial and highway services along the corridor. Interchanges, especially with existing interstates like Exit 19 at Air Mobility Drive will have the highest potential for future commercial development.

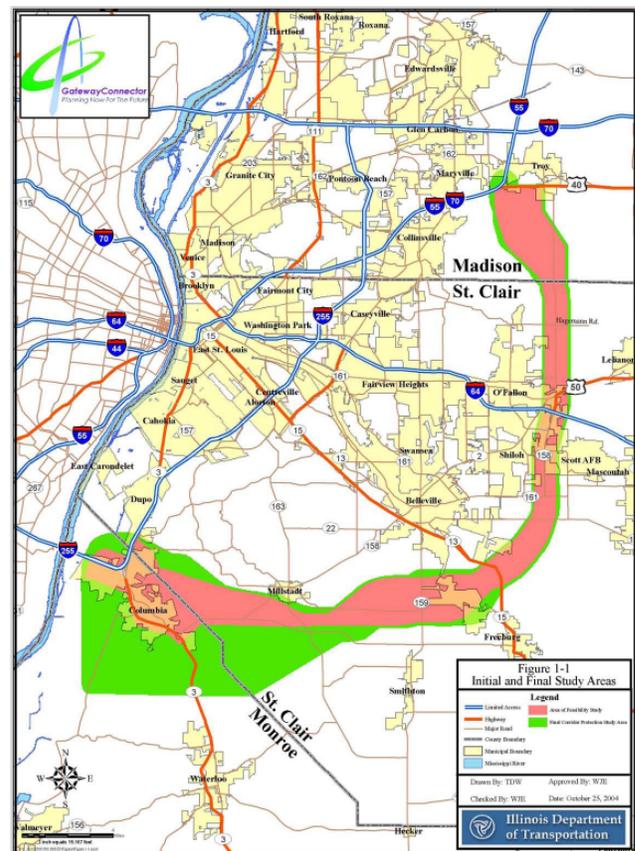


Figure 3- Gateway Connector Study Area



Figure 4- Proposed land use around the Scott AFB MetroLink Light Rail Station

The extension of MetroLink light rail may also affect land use around the base and airport, especially if the Station Area Plan seeks to maximize transit ridership by planning for more intense development within walking distance of the transit station.

The third transportation project that may influence land uses within the study area is the proposed new interchange on I-64 at Rieder Road, just north of Scott AFB. This project is in conceptual design only and has not been included in the Long Range Transportation Plan or three-year Transportation Improvement Plan (TIP 2008-2011).

During interviews, representatives with MidAmerica St. Louis Airport noted that the airport has one entry and exit point, Airport Boulevard, thus raising concerns over possible traffic delays and dangerous bottlenecks.

Water and Other Infrastructure

The Illinois-American Water Company (IAWC) provides drinking water for Scott AFB and the installation has no potable water wells. As a result of poor groundwater supplies, the IAWC uses the

Mississippi River as its source of drinking water for services areas throughout Illinois.

IAWC also supplies water to a portion of the Village of Shiloh and the City of O'Fallon. Summerfield-Lebanon Mascoutah Water Commission (SLM) supplies water wholesale to Lebanon and Mascoutah. Mascoutah in turn provides water service to the MidAmerica St. Louis Airport.

Summary of Recent Development

Recent development activity is mostly focused west of the study area in O'Fallon and Belleville. A large commercial development recently opened in the Village of Shiloh along North Green Mount Road, Exit 18 on I-64 and west of Scott AFB. The Frank Scott Parkway was built parallel to I-64 and serves an array of commercial centers and hotels.

In O'Fallon, residential development is also more concentrated on the western side of the City, with over 3,000 planned or recently permitted homes. A 200 acre sports park is under construction on State Street, and most commercial development is west of the base between exits 14 through 16.

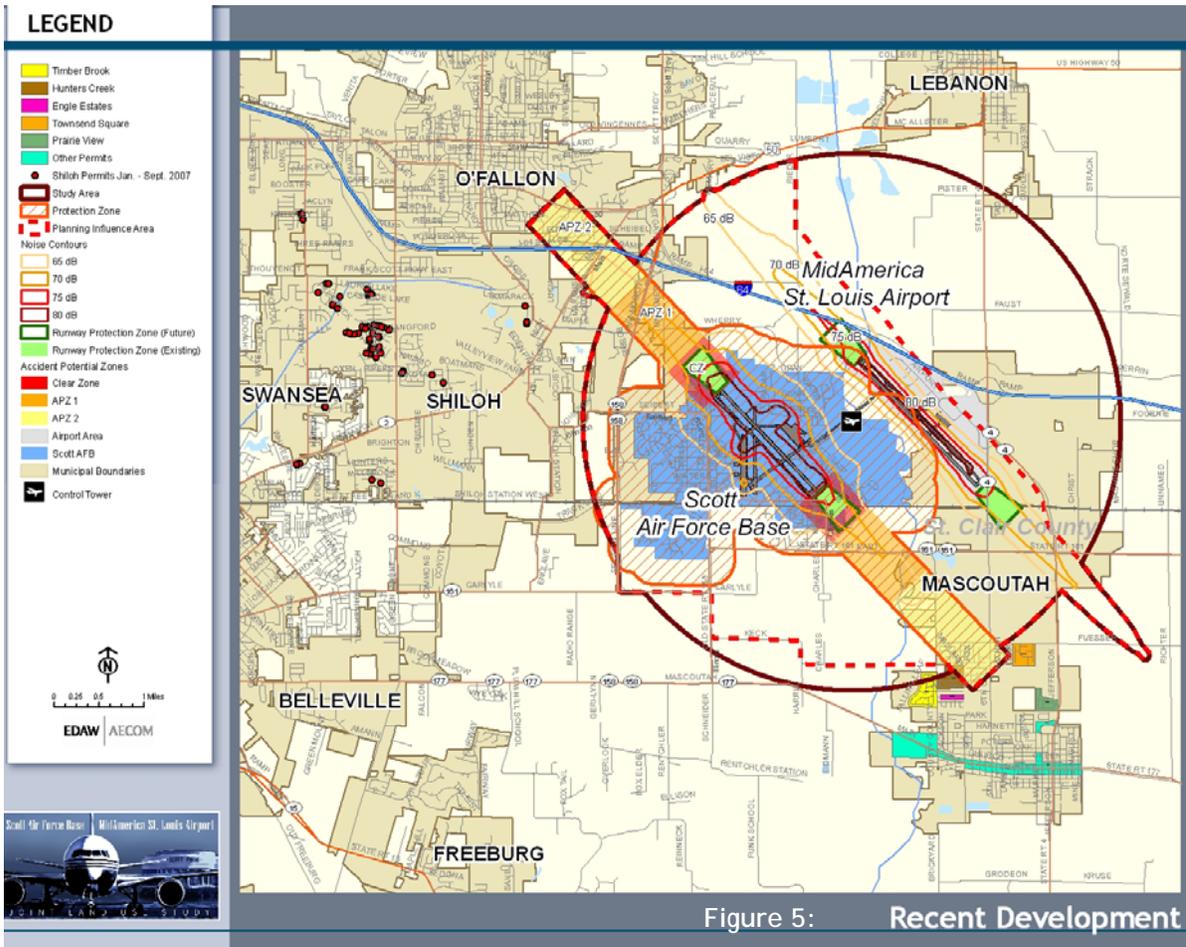


Figure 5: Recent Development

Lebanon growth is focused more along the northern side of the City and well to the north of both the base and the Airport. The Federal government is looking to build a warehouse for document storage along Route 4 near Faust Road. Family farms along Route 4 are active and see very little new development. Such homesteads, however, are likely to experience increased development pressure to convert into residential uses as the economics of farming shift.

To the south of the base and Airport, Mascoutah is another area of active development. Recent neighborhoods have sprouted from the fertile farm lands, especially along West Feusser Road. This growth has been accompanied by small pockets of new commercial development, but most of the commercial activity has occurred in the Village of Shiloh Green Mount Crossing development.

Figure 5 - *Recent Development*, shows the permit and development activity in the vicinity of the base since January 2007. The table below summarizes this permit activity.

Table 10: Recent Permit Activity

New Home Permits Since January 2007		
	Mascoutah Permits	Shiloh Permits
Hunters Creek	16	
Prairie View	29	
Townsend Square	19	
Timberbrook	36	
Engel Estates	5	
Other	6	
New Home Permits	111	80
Total		191

The figure shows that most of Shiloh's permit activity is located around the Green Mount commercial development and outside of the study area. Analyzing recent development activity reinforces the potential encroachment concern of residential development in Mascoutah in close proximity to the Scott runway APZ.

Regional Environment and Sustainability

Overview of Regional Resources

The gentle topography in the study area is typical of the Effingham Plain Section, which was formed by the most recent glacial period. Originally the land was mostly prairie interspersed with forests along major stream valleys and glacial ridges.

The JLUS study area is about 19 miles east of the Mississippi River, in the Kaskaskia Watershed, which drains to the Kaskaskia River and discharges to the Mississippi River near the Illinois/Missouri border. The Kaskaskia River is fed by local tributaries such as Ash Creek and Silver Creek. Ash Creek originates approximately one mile northwest of Scott AFB and flows through the installation before discharging into Loop Creek, a tributary of Silver Creek. Silver Creek originates 51 miles north of Scott AFB and MidAmerica St. Louis Airport in an agricultural area of Madison County before bisecting Scott AFB and the Airport.

Two separate 100-year floodplains, associated with Ash and Silver Creeks, exist in the JLUS study area. A wetland delineation and evaluation took place at Scott AFB in 1992, determining that a majority of the bottomland bordering Silver Creek, approximately 390 acres, is wetland (USAF 2004b)

Although much of Scott AFB is highly developed, remaining areas contain biological resources organized into three main groups consisting of: forested wetlands or bottomlands; uplands; and

grasslands (USAF 2003). The Integrated Natural Resources Management Plan, completed for Scott AFB in June 2003, details many of the biological resources on the installation, including a wide range of plants and animals, as well as a diverse array of ecological habitats. Scott AFB completed an Environmental Assessment of Selected Fauna and their Habitats in 2001. The assessment included bird surveys, bat surveys, and botanical surveys of the majority of the high quality habitats (USAERDC 2002).

Since many of these species are migratory and have large area habitats, the study assumed that these habitats extend beyond the borders of Scott AFB into MidAmerica St. Louis Airport and the surrounding communities. External entities have not performed specific studies of these species, although the Illinois Department of Natural Resources does conduct random monitoring of habitats and ecosystems through their Critical Trends Assessment Program (CTAP).

The Scott Air Force botanical survey did not identify the presence of any state or federally listed endangered/threatened plant species on the installation, although suitable habitats for these species do exist within Scott AFB boundaries. (USAERDC 2002). The survey identified the presence of the federally endangered Indiana bat (*Myotis sodalis*).

In addition to the Indiana Bat, studies have documented two state endangered bird species, as designated by the Illinois Endangered Species Protection Board (IESPB), both in 2001 and in 2004: the Snowy Egret (*Egretta thula*) and the Little Blue Heron (*Egretta caerulea*) (IESPB 2004).

Operational Impacts and Compatibility Guidelines

Routine training and readiness activities at Scott Air Force Base and daily operations at MidAmerica St. Louis Airport produce various impacts that can affect the quality of life in surrounding

communities. Examples of these impacts include noise and vibration or the risk of an aircraft accident. Conversely, these military and airport operations are susceptible to hazards created by certain proximate civilian activities that may concentrate people or noise sensitive users, obstruct air space, compete for electromagnetic spectrum use or generate light or other visual impairments. Understanding the overlapping spatial patterns of these impacts around the installation and airport is essential for promoting compatible and fully coordinated land use decisions.

The Air Force's Air Installation Compatible Use Zone Study (AICUZ) is the principle document for evaluating the noise footprint of Scott AFB and the hazards associated with military training operations. MidAmerica St. Louis Airport has not performed a similar FAA Noise Compatibility Study, Part 150 study, due to the low volume of flights. However, the 2001 Scott AFB AICUZ Study generated noise contours for MidAmerica. The Airport noise contours are based on military and civil aircraft operations

Aircraft Operations

The 2001 AICUZ Study updated the previous 1993 study with changes in military operations on Scott AFB, including the arrival of the KC-135E formal training program. It also accounted for changes in the length of both runways and flight patterns at MidAmerica St. Louis Airport.

According to the AICUZ, the majority of aircraft used at the two airports are C-9s, C-21s, KC-135s, Aero Club general aviation aircraft, or civilian passenger crafts like the B-727. C-9s are flown by the 11th Airlift Squadron. The C-9 is used for approximately two pilot training flights, which typically consist of multiple instrument departures and approaches, and two mission departures each day. The C-21s are flown by the 458th Airlift Squadron. These aircraft are used for one pilot training flight everyday and about two mission departures. These departures leave everyday from Scott AFB and proceed to another base.

The KC-135E is flown by the 126th Air Refueling Wing (ARW). In addition to its air refueling mission the 126th ARW provides formal aircrew training. Therefore, almost twice as many departures and landings occur using the KC-135 than other aircraft, for about four mission flights a day. Because some of these are training flights, multiple instrument departures and landings and circling approaches occur on the Scott AFB runway. Aircraft from the 126th Air Refueling Wing operated 260 days per year, or five days a week.

The Aero Club is a general aviation (GA) club for active and retired military. The Club operates three types of single engine and one twin engine aircraft, all of which are propeller driven. There are typically 50 or more daily GA flights a day.

MidAmerica St. Louis Airport supports three passenger service flights four days a week and two flights on the other three days of the week. Table 11 below summarizes the annual number of flight operations at MidAmerica St. Louis Airport only. A flight operation is defined as either one takeoff or one approach. A flight that arrives and unloads passengers, then re-loads passengers and departs is actually two flight operations. Table 12 summarizes all of the types of aviation activities on both runways.

Table 11: Airport Historical Operations

Year	Military	General Aviation	Air Carrier	Other	Total
1995	27,584	2,795	5	50	30,434
1998	24,600	6,356	5	42	31,003
1999	30,467	6,356	5	42	36,870
2000	30,467	6,356	240	42	37,105
2005	30,467	7,189	320	57	38,003

Source: St. Louis Regional Aviation System Study, 2007 and FAA Terminal Area Forecasts

Table 12: Historical Annual Operations by Type on Both Runways

Historical Annual Operations by Type – Combined Airfield					
Year	Air Carrier	Military	General Aviation	Total	
1998	17	15,198	3,149	18,364	
1999	133	26,704	4,290	31,127	
2000	425	26,094	3,644	30,163	
2001	561	16,524	2,471	19,556	
2002	37	18,867	2,821	21,725	
2003	890	24,386	6,669	31,945	
2004	548	21,237	8,312	30,097	
2005	345	19,671	8,710	28,726	
2006	485	19,865	10,669	31,039	

Source: FAA Terminal Area Forecast, MidAmerica St. Louis Airport Operations Data
Prepared by: Ricordo & Associates, Inc.

Noise Contours

Military success is achieved through realistic training. To prepare aviators for their military mission, Scott AFB must conduct high-quality training throughout the year. The 375th Airlift Wing typically operates aircraft on a 365 days-per-year basis, or seven days a week. A natural by-product of this training is noise.

Noise is unwanted sound. In a world of constant natural and manmade sounds, those sounds perceived as noise vary among people in the community. Noise generated at Scott AFB and MidAmerica St. Louis Airport emanates from fixed-wing civil and military aircraft. BRAC will increase the number of military personnel on Scott AFB, but no increase in aircraft noise is expected at this time.

Day-Night Sound Level and Decibels

To measure environmental noise, the Department of Defense (DoD) and the Federal Aviation Administration (FAA) use a widely accepted evaluator, the day-night sound level (DNL). The DNL evaluator describes the average daily acoustic energy over the period of one year—meaning that it averages moments of quiet with moments where loud noises can be heard. It is important to note that the 2001 AICUZ Study uses the DNL for both the civilian and military airports.

Noise levels are measured in terms of a quantity known as decibels (dB). Normal speech has a noise level of approximately 60 dBA and a busy street corner has a noise level of approximately 80 dBA. Table 13 below expresses common sound levels in dBA for comparison.

Table 13. Comparable Noise Levels

SOUND	dBA	EFFECT
Jet Engines (Near)	140	
Shotgun Firing	130	
Jet Takeoff (100-200 Fort)	130	Threshold of pain (125 dBA)
Thunderclap (Near)	120	Threshold of sensation (120 dBA)
Power Saw (Chain Saw)	110	
Jet Fly-over (1000 Fort)	103	
Garbage Truck/Cement Mixer	100	Regular exposure for 1 minute or more risks permanent hearing loss
Farm Tractor	98	
Lawnmower, Food Blender	85-90	Level at which hearing loss begins (8 hour exposure)
Recreational Vehicles, TV	70-90	
Diesel Truck (40 Mph, 50 Fort)	84	
Garbage Disposal	80	Annoyance; constant exposure may cause hearing loss
Washing Machine	78	
Dishwasher	75	
Vacuum Cleaner	70	Intrusive, interference with conversation
Hair Dryer	70	
Normal Conversation	60-65	Comfortable (under 60 dBA)
Refrigerator Humming	40	
Whisper	30	Very quiet
Rustling Leaves	20	Just audible
Normal Breathing	10	
	0	Threshold of normal hearing (1000-4000 Hz)

Source: National Institute of Deafness and Other Communication Disorders

Noise Zones

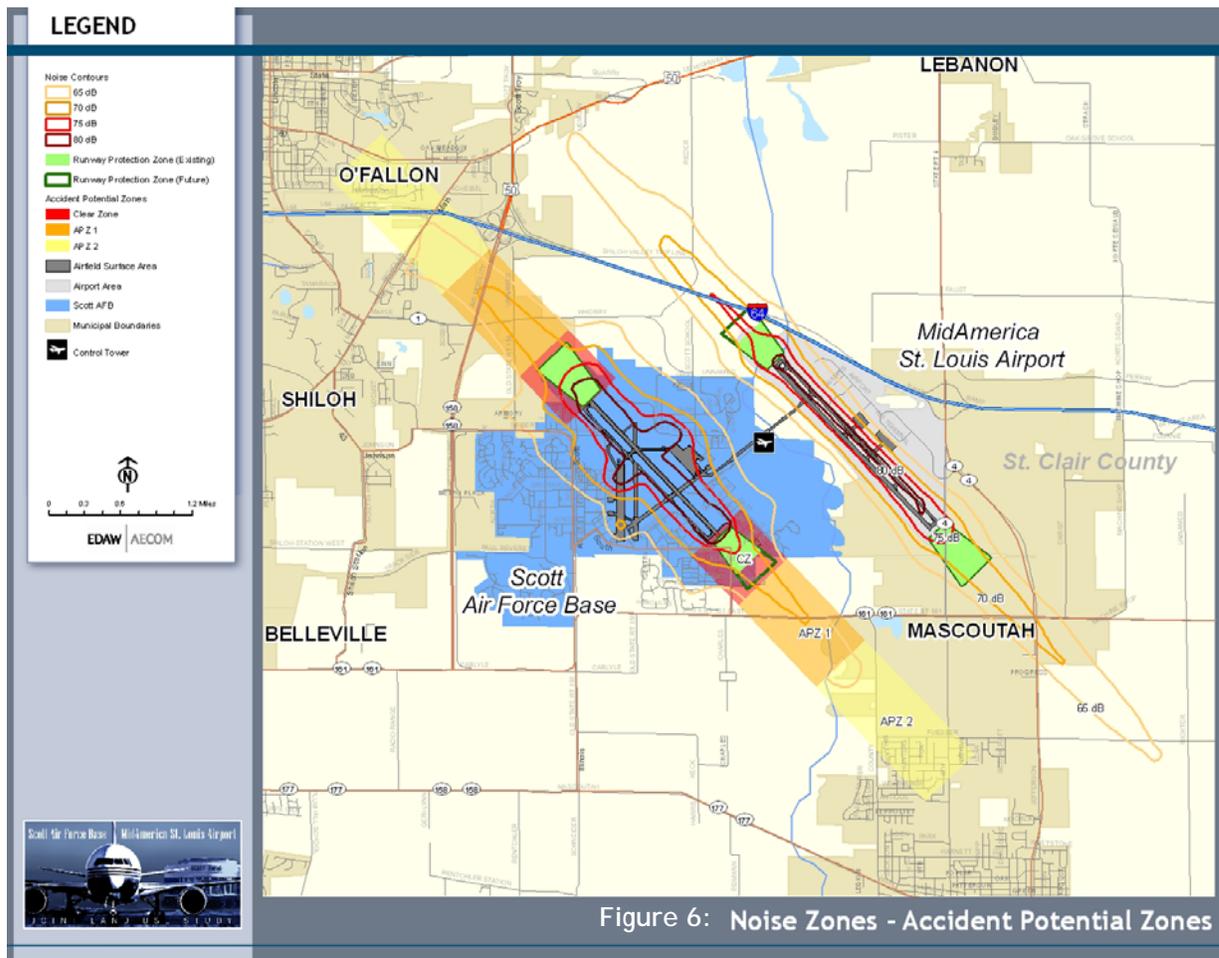
To assist the surrounding communities in land use decisions, the DoD and the FAA use decibel noise contours to illustrate the exposure to noise associated with aviation activities. Below is a general definition of these zones:

- Noise Zone III :This is an area around the source of noise in which the DNL is greater than 75 dBA. This zone is considered an area of severe noise exposure and is deemed unacceptable for noise sensitive activities.
- Noise Zone II :This area is considered to have significant noise exposure and is normally unacceptable for noise-sensitive land uses. It consists of an area where the DNL is between 65 and 75 dBA.
- Noise Zone I :This area, considered to have minimal noise exposure, includes areas in which DNL is less than 65dBA and is acceptable for all types of land uses.

Noise Contours around Scott AFB and the Airport

The Noise Contours created in the 2001 AICUZ Study account for current activity on both the Scott AFB runway and the MidAmerica St. Louis Airport runway. BRAC activities will not impact aviation activity levels at Scott AFB.

Figure 6 - *Noise Zones- Accident Potential Zones*, shows the noise contours around the two runways. The DNL 65 dB noise contour for Scott AFB extends about 1.7 miles to the southeast from the runway into Mascoutah and 1.8 miles to the northwest into Shiloh and O'Fallon. The same noise contour for MidAmerica St. Louis Airport extends 2.8 miles to the southeast across Mascoutah and 2.4 miles northwest into unincorporated St. Clair County.



Runway Airspace Imaginary Surfaces

Imaginary surfaces are three-dimensional areas around airfields that define the spaces that must be kept clear of obstacles to ensure safe aviation. The Department of Defense (DoD) and the Federal Aviation Administration (FAA) have differing sets of airspace surfaces, due in part to the types of aircraft in use.

Military Clear Zones and Accident Potential Zones

Clear Zones (CZ) and Accident Potential Zones (APZ) are established near military airfields based on the analysis of military aircraft accident history and a determination of where, within airfield environs, an accident is likely to take place and how large an impact area is likely to result from any single accident.

- The Clear Zone (CZ) is located at the end of the runway, extends outward 3,000 feet, and is 1,500 feet on either side of the runway centerline. The accident potential in this area is so high that all structures are incompatible.
- Accident Potential Zone I (APZ I) is less critical than the CZ, but still possesses significant potential for accidents. Located just beyond the CZ, APZ I extends an additional 5,000 feet from the end of the CZ. Like all runway zones, the APZ I is 3,000 feet wide.
- Accident Potential Zone II (APZ II) extends beyond APZ I, is less critical than APZ I, but still poses some risk for accidents. The APZ II extends 7,000 feet from the end of APZ I.

Figure 6 - *Noise Zones- Accident Potential Zones*, shows the Clear Zones and APZs associated with Scott Air Force Base. All three zones extend outside the installation boundary fence.

FAA Runway Protection Zones

The Runway Protection Zone (RPZ) is defined as an area off the runway end intended to protect people and property on the ground. The RPZ is trapezoidal in shape, centered about the extended runway centerline, and starts 200 feet after the end of the runway. Not all RPZs are the same size,

since they reflect the aircraft in use on the runway. The MidAmerica St. Louis Airport RPZs are 2,500 feet long and end 2,700 feet from the end of the runway. The narrow width closest to the runway is 1,000 feet and the width farthest from the runway is 1,750 feet.

Figure 6- *Noise Zones- Accident Potential Zones*, depicts the RPZ for MidAmerica St. Louis Airport. The Airport or Scott AFB owns all land within the Airport RPZs and the property contains no incompatible uses or structures.

Other Surfaces

Figures 7- *MidAmerica St. Louis Airport Imaginary Surfaces*, and Figure 8- *Scott AFB Imaginary Surfaces and Glideslope*, is a graphic of the 3-D model of the Scott AFB/Airport aerodrome, including glide angles over the APZ and FAA clear zones produced for the JLUS. These surfaces are defined in the FAA Part 77 regulations and differ between the military and civilian runways. The 3-D model is in GIS format (Geographic Information System). The 3-D model is used in Part 2, *Recommendations and Implementation*, to assist identifying height limitations to protect navigable air space around the two air fields. The military airport imaginary surfaces include:

- Primary Surface - Symmetrically centered on the runway, extending 200 feet beyond each runway end. The width of the primary surface is 2,000 feet or 1,000 feet on each side of the runway centerline.
- Approach-Departure Clearance Surface - symmetrically centered on the extended runway centerline, beginning at the end of the primary surface, and extending horizontally for 50,000 feet. The slope of the approach-departure clearance surface is 50:1 until it reaches an elevation of 500 feet about the established airfield elevation. It then continues horizontally at this elevation to a point 50,000 feet from the starting point. The width of this surface at the runway end is 200 feet; flaring uniformly to a width of 16,000 feet at the 50,000 foot point where it stays a uniform 16,000 feet.

- Inner Horizontal Surface - An oval plane at a height of 150 feet above the established airfield elevation. The inner boundary intersects with the approach-departure clearance surface and the transitional surface. The outer boundary is formed by scribing arcs with a radius 7,500 feet from the centerline of each runway end and interconnecting these arcs with tangents.
- Conical Surface - Extends outward and upward at a slope of 20:1 from the outer periphery of the inner horizontal surface for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.
- Outer Horizontal Surface - Located 500 feet above the established airfield elevation and extends outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
- Transitional Surface - Extends outward and upward at right angles to the runway centerline and extended runway centerline at a slope of 7:1 (7 feet horizontally for every vertical foot). The transitional surface connects the primary and the approach-departure clearance surfaces to the inner horizontal, the conical, and the outer horizontal surfaces.

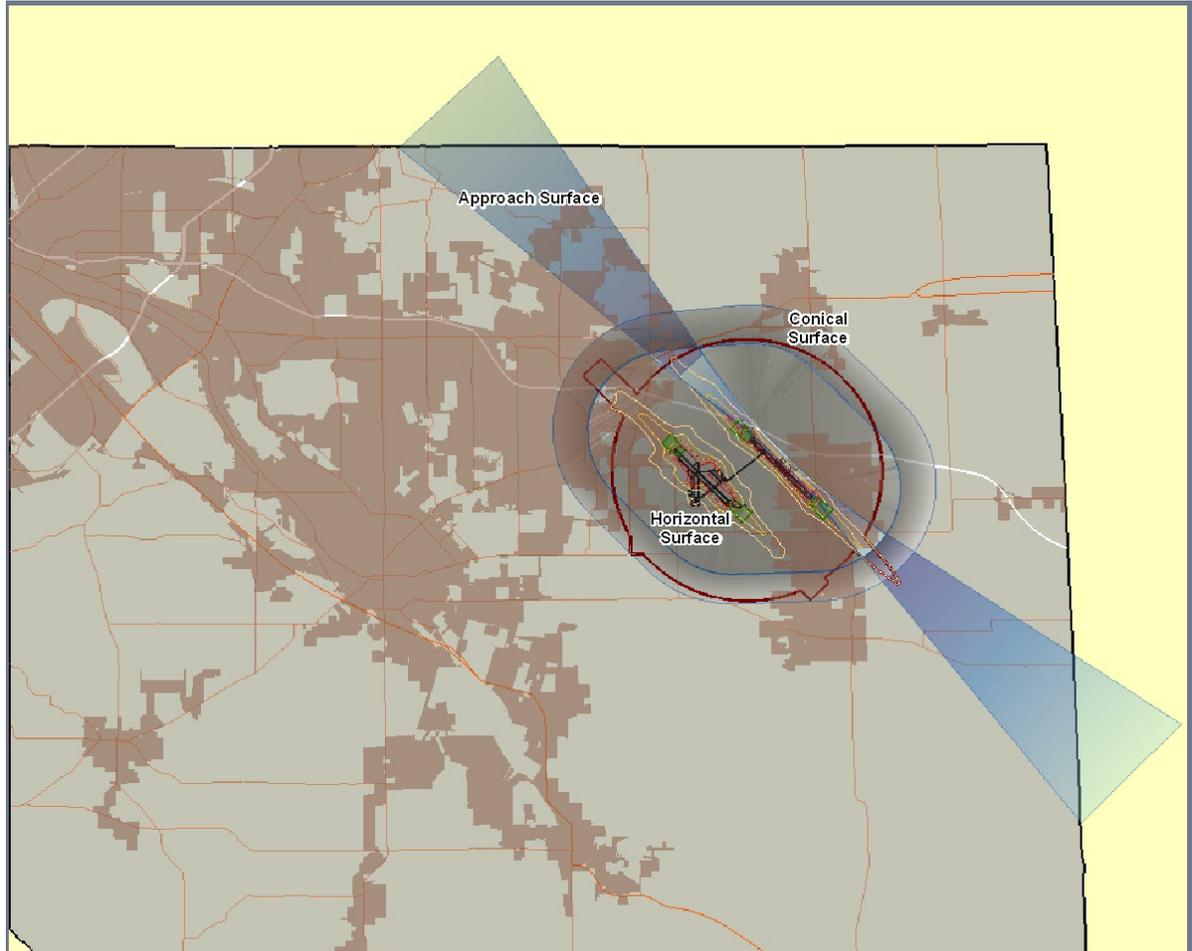


Figure 7: Study Area - MidAmerica Airport Imaginary Surface Area

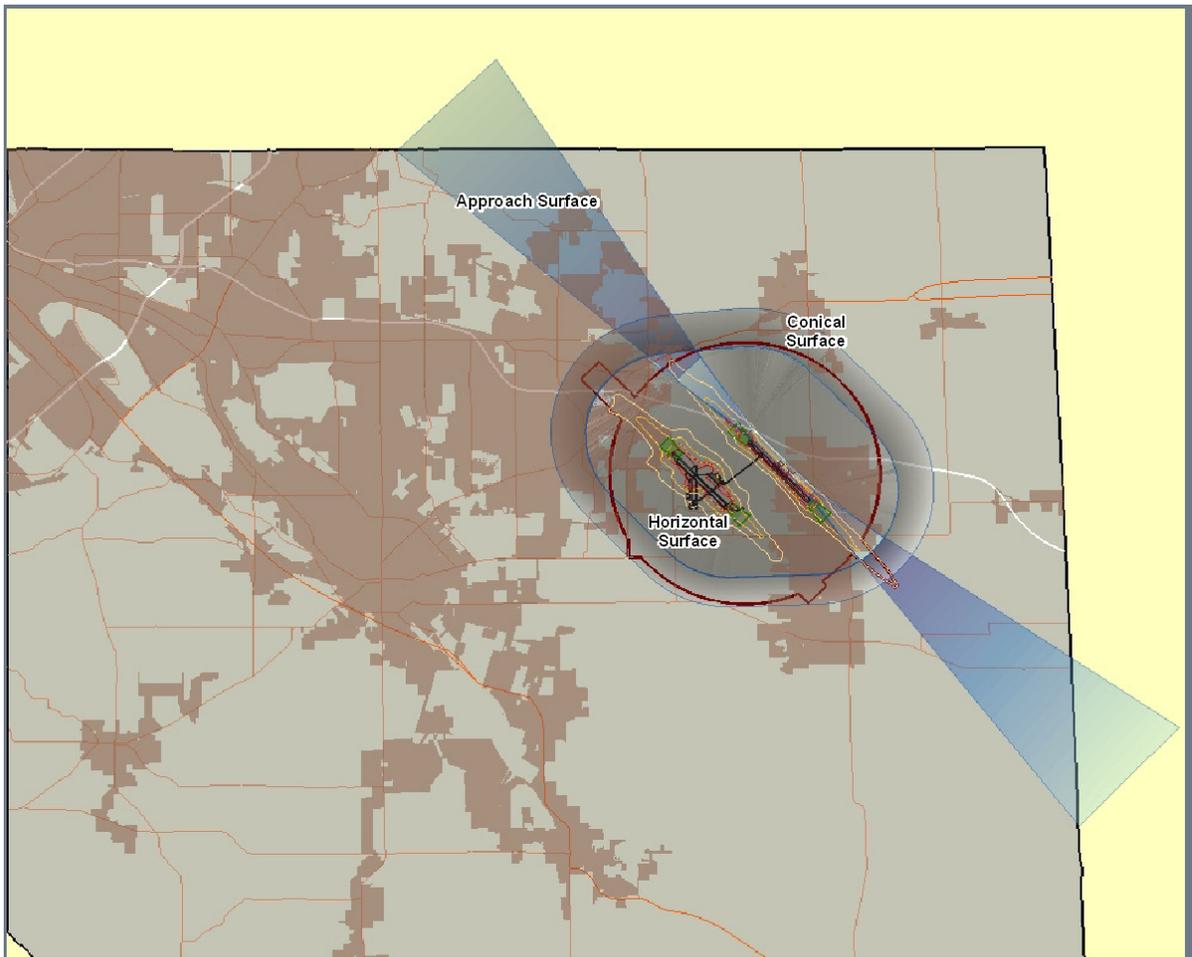


Figure 8: Study Area - MidAmerica Airport Imaginary Surface Area

The civilian airport imaginary surfaces vary slightly from the military surfaces in that there are fewer surfaces and some measurements differ. The civilian airport surfaces include:

- Primary Surface - Symmetrically centered on the runway, extending 200 feet beyond each runway end. The width of the primary surface is 2,000 feet or 1,000 feet on each side of the runway centerline.
- Approach-Departure Clearance Surface - symmetrically centered on the extended runway centerline, beginning at the end of the primary surface, and extending horizontally for 5,000 feet. The slope of the approach-departure clearance surface is 20:1 until it reaches a width of 16,000 feet.
- Horizontal Surface - An oval plane at a height of 150 feet above the established airfield elevation. The outer boundary is formed by scribing arcs with a radius 10,000 feet from the centerline of each runway end and interconnecting these arcs with tangents.
- Conical Surface - Extends outward and upward at a slope of 20:1 from the outer periphery of the Horizontal Surface for a horizontal distance of 4,000 feet.
- Transitional Surface - Extends outward and upward at right angles to the runway centerline and extended runway centerline at a slope of 7:1 (7 feet horizontally for every vertical foot). The transitional surface connects the primary and the approach-departure clearance surfaces to the horizontal and the conical surfaces.

Compatibility Guidelines

Encroachment occurs when physically adjacent military and civilian land uses generate one or both of the following effects:

- Nearby community development interferes with the ability of the military or the airport to perform its mission or causes modifications to military or airport operating procedures; or
- Members of the public are exposed to a higher than normal levels of operational impacts associated with military and airport activities, such as noise or the risk of an aircraft mishap.

When compatible, land uses can exist next to each other without causing interference with military exercises or exposing people to undue safety risks or nuisance. In this JLUS context, aviation activities raise compatibility issues when next to the following nearby land uses:

- Noise sensitive uses, such as housing, schools, medical facilities or places of worship;
- Uses that tend to concentrate people (certain higher residential densities, schools, churches, hospitals);
- Uses that can interfere with safe air navigation, such as tall structures, or activities that throw off excessive lighting, smoke or dust and may impair vision; and/or
- Uses which attract birds and other wildlife that can interfere with safe aviation.

For purposes of evaluating compatibility in designated noise and air safety zones, the JLUS draws guidance from The Federal Interagency Committee on Urban Noise land use guidelines (FICUN 1980) as shown in Table 14. Uses shown in green are typically compatible with the level of noise exposure or safety risk associated with each particular zone. Use depicted in yellow are conditionally compatible and may require further protection measures, such as indoor noise reduction. The guidelines deem activities shown in red as unacceptable within the given zones,

indicating that strict prohibition of the use is the most appropriate regulatory action.

Table 14: Land Use Compatibility Guidelines, A-Weighted

FICUN	NZ I		NZ II		NZ III	
	< 55 DB	55 to 65 DB	65 to 70 DB	70 to 75 DB	75 to 80 DB	80 to 85 DB
Households	Y	Y	Y	Y	N	N
Manufacturing	Y	Y	Y	Y	Y	Y
Retail - General	Y	Y	Y	Y	Y	N
Restaurants	Y	Y	Y	Y	Y	N
Services	Y	Y	Y	Y	Y	N
Hospitals	Y	Y	Y	Y	N	N
Government	Y	Y	Y	Y	Y	N
Education	Y	Y	Y	Y	N	N
Public Assembly	Y	Y	Y	N	N	N
Parks	Y	Y	Y	Y	N	N
Agriculture	Y	Y	Y	Y	Y	Y

Source: FICUN 1980

These guidelines are only advisory in nature. Only local governments retain the authority to determine permissible uses of land around an installation. Section 2 contains specific recommendations for uses as proposed by the Working Group.

While aircraft noise and air safety hazards are the major operational issues generated by Scott Air Force Base and the Airport, impacts from the surrounding community can also interfere with military training or civilian airport operations.

Air Space Intrusion

Cell towers can act as a physical intrusion into active air space, particularly for aircraft participating in low altitude operations. Communications towers may also be a source of electromagnetic 'noise,' which may affect military

avionics and radio frequency (RF) dependant weapons systems and communications.

Radio Frequency Spectrum

Adequate radio frequency spectrum is essential to almost all aviation operations. Civilian radio frequency devices (ex., radios, radars, keyless entry devices) can sometimes transmit in military assigned frequencies, affecting electronic systems and communications equipment.

Exterior Lighting

Outdoor lighting systems, especially interstate interchange streetlights or exterior security lighting associated with large buildings often allow significant light to travel upward into an otherwise darkened sky. The resulting “light pollution” can obscure pilot vision or interfere with the use of night vision training devices.

Night vision flight training, in which aviators use night vision goggles (NVGs) or other types of night vision systems, is essential to the missions of the modern military. Night vision systems are designed to operate away from civilization and electric lighting. Exposure to stray light can cause the vision screen to white-out, temporarily robbing the aviator of vision. In some cases, light pollution can hinder night training resulting in a relocation of training routes or rendering it feasible.

Current Local Government Compatibility Tools

Overall, a review of current local policies clearly indicates that each of the jurisdictions directly affected by the joint use airports has begun to address compatible land use planning. Each of the local jurisdictions, except the City of Lebanon which has no noise or safety constrained property within its jurisdiction, has adopted a form of an Airport Overlay. Some jurisdictions have adopted other tools, such as lighting standards to reduce glare for night vision flight training.

Below is a summary of each jurisdiction’s airport overlay, adopted Comprehensive Plans, and other tools, as well as a summary table of all ordinances currently in place.

Airport Overlay Ordinance

St. Clair County, O’Fallon, Mascoutah and the Village of Shiloh have all adopted an Airport Overlay ordinance addressing land use planning and noise attenuation on properties within the 65 L_{dn} Noise Zone. Most of the codes seek to define incompatible uses as those activities that could interfere with airport operations or aircraft maneuvering. The St. Clair County and Shiloh overlays affect lands within the 1991 65 L_{dn} Noise Zone, while the O’Fallon and Mascoutah overlays are tied to the most recent 2001 65 L_{dn} Noise Zone, and allow for updates. O’Fallon and Mascoutah enable, but do not require, Avigation Easements as part of approval of a rezoning, variance, or a special use permit request. A summary table comparing local regulatory codes is included below.

St. Clair County

The Airport Overlay Ordinance includes all lands within the 65 L_{dn} Noise Zone of Scott AFB and the MidAmerica St. Louis Airport that are not incorporated into municipalities. The regulations are based on the 1991 AICUZ Study. (This study was updated in 2001, but the zoning code does not reflect this).

The underlying zoning of all lands in the overlay is “A, Agricultural Industry District.” All uses in zoning district “A” are permitted by right. These uses include basic agricultural production, livestock husbandry, and forestry operations. Also permitted uses that could be considered encroachment are colleges and universities, schools, billboards, and growing of crops that could attract fowl.

There is a general statement that land use controls are based on the need to limit incompatible uses. Although no definition of incompatibility is included, the code lists specific prohibited uses. The code states that airport accessory and ancillary uses are permitted; however, the ability to apply for a Special Use Permit could introduce some ambiguity into the assessment of incompatible uses. The Airport Overlay Zone allows Special Use Permits for uses that are permitted in “HB, Highway Business”, “B-1 and B-2, Business District”, and “I-1, Industrial District”, that are not specifically prohibited previously in the code, but could pose a threat to the airport. Some examples of potentially conflicting land uses are: bowling alleys, churches, funeral chapels, colleges and universities, auditoriums, and theaters.

After listing permitted and prohibited land uses, Section 40-4-110 of the Overlay grants general guidance for land use decisions, whether explicitly permitted or not, that includes radio interference, light glare, bird strike hazard or interference with landing and maneuvering.

The Airport Overlay Ordinance continues with Noise Attenuation Requirements based on land use for all properties within the 1991 65 L_{dn} Noise Zone. Overall, the Airport Overlay has several areas that could be further refined:

- Based on the 1991 65 L_{dn} Noise Zone, which shrunk with the 2001 update.
- Does not define incompatible land uses or encroachment specifically, but does include some indication within the code in Section 40-4-110.

- Treats all land within this zone equally. This does not coincide with FAA or DoD recommendations, which differentiates between land located in the Clear Zones, Accident Potential Zones, and higher L_{dn} Noise Zones.
- The permitted and prohibited land uses combine three codes: the underlying zone, the special use permits for commercial and industrial zones, and the land uses contained in the Noise Attenuation Compatibility Table.

Each of these issues can be easily addressed by updating the Noise Contours to the most recent set, and adding a definition of compatible or incompatible land uses. Greater specificity of impacts can be addressed by referring to higher L_{dn} Noise Zones, APZ, and RPZ and Clear Zones. Finally, permitted / prohibited land uses within each zone and noise attenuation requirements should be consolidated into one table.

City of O’Fallon

Lands within the 65 L_{dn} and higher noise contours, Clear Zones, APZ I and II, height hazard zones, and airport property are all part of the Airport Environs Overlay Zone (AEO). The City of O’Fallon uses military APZ on both the civilian and military runway. The AEO is divided into two sub-districts: AEO1, Airport Zone and AEO2, Airport Compatible Use Zone. All Airport property holdings are in the AEO1 Zone, everything else is in the AEO2 Zone.

The Ordinance begins with guidance for incompatible land uses, similar to the St. Clair Section 40-4-110, with the notable exception of bird strike prevention. Following this definition is the permitted uses and noise reduction requirements within AEO1 and AEO2. Guidance closely follows existing federal land use compatibility standards.

Within the Land Use Compatibility Table, Sub-district AEO1 does not allow any residential. Sub-district AEO2 restricts any residential except single

family in the 65-70 Noise Zone where it is prohibited except with restrictions, and APZ 2 where it is permitted with restrictions. It is unclear how a land use can be prohibited and still have restrictions; this could be clarified by restating as “prohibited, with exceptions.” Residential densities are not discussed except in reference to underlying zoning.

Following the land use and noise attenuation requirements are height restrictions, based on the Imaginary Surfaces as defined by Federal Aviation Regulations. These surfaces were modeled in a 3-D projection as part of the Joint Land Use Study and included in the previous section.

The AEO Zone Section 6.120 also enables the City to require aviation easements for the right to fly in the air space above property requesting a change in zoning, variance or special use permit.



Housing in the City of O'Fallon

City of Mascoutah

This ordinance is comparable to O'Fallon policy, but clarifies some land use compatibility issues and includes Runway Protection Zones or RPZs. Other similarities include the enabling of aviation easements for rezonings, variances and special use permit requests. The Federal Aviation Regulation Imaginary Surfaces are also defined for the aviation approach hazard areas.

Village of Shiloh

The Village of Shiloh Scott Airport Overlay Zone is based on the Scott Joint Use Environs and Site Plan as adopted by St. Clair County, which uses the 1991 AICUZ Noise Contours. The Airport Overlay Zone Ordinance includes all lands within the 65 L_{dn} Noise Zone of Scott AFB and MidAmerica St. Louis Airport

The Shiloh Land Use Compatibility table is based on Noise Contours; however, the Shiloh Table does not include Clear Zones and APZs.

Within the Land Use Compatibility Table, footnotes specify when noise attenuation is appropriate. The ordinance continues by restricting height compliance with the Illinois Department of Transportation Airport Hazard Zoning Plan for Scott Joint Use Airport Sections 77.10 through 77.140.



New housing in the Village of Shiloh

Other Locally Adopted Encroachment Tools

Lighting Standards

Encroachment issues can result from both poor land use decisions, as well as poor site design. Many outdoor lighting systems are often used to advertise a building's tenants without due consideration for light intrusion onto surrounding properties or into the night sky. A well crafted lighting ordinance, especially one that states a specific goal to reduce hindrance on military night vision training, is an effective tool for addressing "light pollution."

The Village of Shiloh has a complete lighting ordinance, most closely meeting the goal to reduce upward-directed light. O'Fallon's lighting ordinance was recently repealed, but the parking lot standards include specifics about lighting design to reduce spillage on surrounding properties. Neither Mascoutah nor St. Clair County has any specific lighting requirements, but a general statement in the Airport Overlay ordinance mentions reducing glare and confusing lighting signals for safe airplane maneuvering.

Avigation Easements

As mentioned above, avigation easements are enabled in the Airport Overlay for both Mascoutah and O'Fallon as part of approval for rezoning, variance, and special use permit requests. They are not enabled for building permits. The easements are not required in the code, and it is unclear how often they are made a condition of approval for these requests.

Flexible Development Patterns

One way to address encroachment, especially for property that straddles the 65 L_{dn} Noise Zone or Accident Potential Zone II, is to cluster development on property that is not within the affected area and leave the remainder of constrained land as open space or other compatible land uses.

Both St. Clair County and Shiloh have created a conservation ordinance, but neither can be effectively applied to noise or safety affected properties. St. Clair County's is applied to all lands within the 100-year floodplain or in stormwater retention basins. Shiloh has created a Conservation Overlay district in their Development Code tied to their comprehensive plan. The lands included for conservation are those in the floodplain, or characterized with steep slopes, wetlands and forests. Very few of these types of lands are located within noise or safety impacted lands.

The other two jurisdictions, O'Fallon and Mascoutah, have ordinances similar to Planned Use Developments. O'Fallon's Planned Uses ordinance states that the intent is to "increase the flexibility of development design through evaluation and approval of a site plan applying site-specific regulations" and allows the applicant to submit a narrative describing the needs for modification from the district regulations. Although not specified in the language of the ordinance, it could be inferred that reducing encroachment onto aviation noise and safety zones meets the intent of the ordinance. Explicitly stating this goal would reduce ambiguity.

The Mascoutah Planned Development Procedure, PDP, is structured like a typical Planned Unit Development. The PDP allows for a property owner to develop land in a method meeting the multiple goals of reducing encroachment, maximizing development potential and meeting the spirit and intent of Mascoutah's Comprehensive Plan and Unified Development Code.

Overview Of Comprehensive Plans

St Clair County Comprehensive Plan, 1991

The St. Clair County Comprehensive Plan was developed in 1991, before the Scott Air Force Base was a joint use facility but anticipates this conversion to joint use and especially its potential economic development impacts.

Within the Comprehensive Plan, much of the northeastern corner of St Clair County, including the area around the Scott Air Force Base is planned as a subarea known as the “Development Corridor.” This is an area of anticipated increased development due to the interstate corridor for I-64 and the introduction of commercial air service to the Scott Air Force Base. The area around Scott Air Force Base (and including the Air Force Base) in the County’s future land use plan is labeled the “Scott Joint Use Area.” The plan calls for a variety of commercial and industrial uses in this area, including light industrial, distribution, aircraft-related businesses, and corporate offices. The future land use plan shows large areas planned for industrial and commercial development around the perimeter of the Scott Joint Use Area. Development restrictions in the vicinity of Scott Air Force Base, are not mentioned in the Comprehensive Plan.

In terms of future planning, the Comprehensive Plan suggests that a Special Development Overlay District should be developed to guide appropriate land use in the Scott Joint Use Area. Also, the Comprehensive Plan suggests that the county and proximate cities engage in an intergovernmental “development compact” in order to jointly manage land use, compatibility issues, and infrastructure issues in the Scott Joint Use Area.

A few infrastructure issues are also discussed in relation to Scott Air Force Base. The Comprehensive Plan suggests that land should be set aside for right-of-way for an “outer belt” roadway in the vicinity of Scott Air Force Base.

Village of Shiloh Comprehensive Plan, 2004

The Village of Shiloh Comprehensive Plan mentions the impacts of Scott Air Force Base and

the MidAmerica Airport on future land use in its Development Limitations section. The airport impacts discussed in the plan include FAA regulations on maximum structure heights, accident potential zones, and noise zones. The Village has an Airport Noise Zone in its zoning code, which addresses land use regulations as well as noise insulation requirements. The Village’s Comprehensive Plan notes the particular impact of these airport zones on the southwest corner of I-64 and IL 158, which would otherwise be appropriate for intensive commercial development.

The Comprehensive Plan includes a map of the various height and hazard airport zones. The future land use map also displays the airport zones, and indicates that these areas are generally planned for either business or highway business land uses.

The Village of Shiloh acknowledges Scott Air Force Base and the MidAmerica Airport as valuable economic development assets. The preservation of the functionality of Scott Air Force Base and MidAmerica Airport and the prevention of land use conflicts in the vicinity of these airports are not explicit goals of the Comprehensive Plan.



Village of Shiloh Memorial

City of O'Fallon Comprehensive Plan, 2006

Scott Air Force Base and the MidAmerica Airport are located to the south and east of the City of O'Fallon. The O'Fallon Comprehensive Plan incorporates the impacts of these airports in Chapter 4, which covers natural and man-made constraints on land use patterns. This chapter reviews the impacts of Scott Air Force Base and MidAmerica Airport on adjoining land including accident potential zones, noise contour areas, and height limitations. The City developed an Airport Environs Overlay District in 1999 to regulate land uses in the vicinity of these airports. Also, the Comprehensive Plan includes a map of Airport Zones, which includes accident potential zones and noise contours. The Airport Zone map also reflects a set of future land uses that are largely compatible with these airport zones.

There is a brief discussion of current land uses and their compatibility with the adjoining airports. The part of the City west of Scott-Troy Road within the airport zones is predominantly developed as single family. This suggests that there is already some incompatible development within the airport zones. East of Scott-Troy Road, land within the airport zones is undeveloped and unincorporated. The City has a plan for a business and industrial park east of Scott-Troy Road, part of which is under the mapped airport zones. A master land use and roadway plan is illustrated for this area in the Comprehensive Plan under the name "MidAmerica Commerce Center Plan."

Airport facilities and shared infrastructure facilities with Scott Air Force Base are little discussed in the Comprehensive Plan. The Comprehensive Plan mentions the planned extension of the MetroLink to the MidAmerica Airport. Also, a fiber optic line that connects the Scott Air Force Base to the City of O'Fallon is noted.

Mascoutah Comprehensive Plan, 2007

The City of Mascoutah's Comprehensive Plan includes extensive discussion of Scott Air Force Base, MidAmerica Airport and their impacts on the future growth and development of the City. Much

of the City's policy is guided by the 2001 AICUZ Study, which designated zones affected by noise and accident potential and provided guidance on appropriate development types within each zone.

Goal 2.4.4 of the Comprehensive Plan speaks of balancing development in the vicinity of Scott Air Force Base and MidAmerica Airport to protect the interests of the base and airport, while promoting the economic development needs of the community. This overall land use goal is then supported by a number of sub-goals and policies that promote advanced planning and collaboration between the City and the Scott Air Force Base on land use review.

The land use portion of the Comprehensive Plan provides detailed guidance on appropriate land use in and around Scott Air Force Base and MidAmerica Airport. There is a land use classification for MidAmerica Airport-related uses and a land use classification for areas affected by Scott Air Force Base. There are also two overlay districts, an Airport Overlay District which is governed by noise contours and adheres to FAA guidelines for land use compatibility, and an APZ Overlay District that conforms to the accident potential zones as determined by the 2001 AICUZ study. Any proposed land use change in the APZ Overlay District must be reviewed and commented on by Scott Air Force Base personnel before approval. In general, the City of Mascoutah seeks to discourage residential development in proximity to the Scott Air Force Base and instead seeks to promote business and industrial land uses in this area.

The Comprehensive Plan also anticipates the current JLUS study. The City of Mascoutah Comprehensive Plan looks to the JLUS as an opportunity to continue its policy of joint planning for airport-community impacts and seeks further clarification on appropriate land uses as designated by the AICUZ guidelines.

Scott Air Force Base and MidAmerica Airport are also both included in the review of current infrastructure and future infrastructure needs. A proposed North County Road improvement is discussed as being important in improving the flow of traffic to Scott Air Force Base. The City provides water and sewer service to MidAmerica Airport and houses a 500,000 gallon water storage tower at the airport. The City of Mascoutah, Scott Air Force Base, and MidAmerica Airport are highly linked by a common infrastructure and this further emphasizes their need for joint planning and coordination.

In terms of economic development, the City of Mascoutah is seeking to expand its commercial and industrial development to increase its tax base (Goal 5.3.1). This is relevant because one of the mechanisms the City would like to use is an expansion of St. Clair County's MidAmerica Enterprise Zone, which could be expanded in areas planned for business or industrial development near the airport.



Housing in the City of Mascoutah

Summary Table of Local Jurisdiction Tools

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Airport Overlay	Airport Overlay District (AO)	Airport Environs Overlay (AEO) District	Scott Airport Overlay Zone	Scott Airport Overlay Zone (O-3)
<i>Requires coordination or consultation with either the Base or the Airport for all zonings, subdivisions, or building permits when within close proximity</i>	Not specifically, but the City has adopted a policy to have all land use requests within the APZ submitted to Scott AFB, the Airport and St. Clair County	No	Yes, per Sec.6.4.07.09, applicant for building or zoning permit must obtain Scott AFB concurrence	No
<i>Tied to most recent Noise Contours</i>	Yes, specifies current runways, and allows for updates. Sec. 34-6-5	Yes, allows for updates, Sec. 6.040	No, tied to Scott Joint Use Environs and Site Plan currently adopted by St. Clair, which is the 1991 plan. Sec. 6.4.07.01	No, tied to 1991 AICUZ, sec. 40-4-103
<i>Includes lands within the 65 Ldn and greater Noise Contours</i>	Yes, and APZs and CZs for current runways, and height hazard areas, Sec. 34-6-5	Yes, Sec. 6.040	Yes, sec. 6.4.07.01	Yes, sec. 40-4-103
<i>Provides definition of incompatible land uses</i>	Defines need to protect 'noise sensitive uses'. Also general definition as uses that could adversely affect airport operation or safety in Sec. 34-6-4	Guidance in Sec. 6.050	General definition as uses that could adversely affect airport operation or safety in sec. 6.4.07.02	General definition as uses that could adversely affect airport operation or safety in sec. 40-4-104

Summary Table Of Local Jurisdiction Tools, *continued*

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Airport Overlay, <i>continued</i>	Airport Overlay District (AO)	Airport Environs Overlay (AEO) District	Scott Airport Overlay Zone	Scott Airport Overlay Zone (O-3)
<i>Lists permitted and prohibited uses</i>	Yes, prohibited uses in 34-6-8	Yes, Sec. 6.060	Yes, Land Use Compatibility Table in sec. 6.4.07.03	Yes, but located in multiple sections
<i>Differentiates between Civil and Military Airport</i>	Yes, uses RPZ on Land Use Compatibility Table, Table 6-1	No, uses Military APZs and CZ on Civilian airport.	No, makes no mention of APZs, CZs, or RPZs.	No, makes no mention of APZ, CZs, or RPZs.
<i>Differentiates between noise and safety impact areas</i>	Yes, in Land Use Compatibility Table	Yes, in Land Use Tables	No	No
<i>Discusses residential density</i>	Although not specifically listed in the prohibited uses, residential is not included on the Land Use Compatibility Table 6-1. Sec. 34 6-7 states that Tables 6-1 and 6-2 establish permitted uses. Table 6-2 does not address density other than differentiating between single family and multi-family residential.	No. But sub-district AEO1 does not allow any residential. Sub-district AEO2 restricts any residential except single family in 65-70 Noise Zone where it is prohibited except with restrictions, and APZ 2 where it is permitted with restrictions. Sec. 6.060	No. But residential is prohibited in Ldn 75 and greater, and permitted only with noise attenuation in Ldn 65-75. Sec. 6.4.07.03	Yes, permits agricultural density of 1 du per 40 acres, but then Noise Compatibility Guide states that all residential is incompatible. Sec.40-4-105 and 40-4-116

Summary Table of Local Jurisdiction Tools, *continued*

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Noise Attenuation				
<i>Provides general noise attenuation requirements in airport impact areas</i>	Yes, with noise leak reduction through ventilation systems, doors and windows. Sec. 34-6-7	Yes, Sec.6.060.B and Land Use Tables	Yes, 6.4.07.05 and Land Use Tables	Yes, with some explanation of reducing noise leaks through ventilation systems, doors, and windows. Sec. 40-4-114
<i>Provides specific noise attenuation standards based on location within impact areas</i>	Yes, Noise Level Reduction of 25 or 30 dB in Sec. 34-6-7	Yes, Noise Level Reduction of 25 or 30 dB in Sec. 6.060.B and Land Use Tables.	Yes, section 6.4.07.05 adds additional requirement of STC 25 between mixed uses and Sec. 6.4.07.06 lists similar noise leak reduction as St. Clair County ordinance	No specific reduction required other than reducing noise leaks in sec. 40-4-114
<i>Which Building Code standards, if any, are used for noise attenuation?</i>	ICC 2003- no specific codes for indoor noise attenuation	ICC 2003- no specific codes for indoor noise attenuation	ICC 2003- no specific codes for indoor noise attenuation	ICC 2003- no specific codes for indoor noise attenuation
Electromagnetic or Radio Frequency Interference				
<i>Specifically prohibits interference with airport electromagnetic and radio frequency communications links</i>	Yes, Sec. 34-6-6	Yes, Sec. 6.050	Yes, Sec. 6.4.07.04	Yes, Sec. 40-4-110

Summary Table of Local Jurisdiction Tools, *continued*

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Height Standards				
<i>Other than FAA requirements, additional requirements related to airports</i>	Yes, must not exceed airport approach area height limits. Sec. 34-3-1. Specific reference to Federal Aviation Regulations Imaginary Surfaces Sec. 34-6-9	Within AEO District, height restrictions specific to Federal Aviation Regulations Imaginary Surfaces Sec. 6.070	Specifically requires Illinois Department of Transportation Airport Hazard Zoning Plan for Scott Joint Use Airport IDOT Sections 77.10 through 77.140 in sec. 6.4.07.08	Height and Hazard regulations for Scott AFB and Civilian Airport mentioned in Sec. 40-1-18, but no specifics given in O-3 ordinance.
Bird Strike Hazards				
<i>Specifically addresses bird strike hazards</i>	No	No	Yes, Sec. 6.4.07.04	Yes, Sec. 40-4-110
Lighting Standards				
<i>Light spillage addressed</i>	No	Yes, within parking lots. Sec. 11.090	Yes, onto residential lots only. Sec.6.3.16 6.4.09.08	None found
<i>Specific Light Ordinance</i>	None found	Repealed in either 2007 or 2006.	Yes, and restricts light directed upward or not on a building or walkway. Sec. 6.7.22	None found
<i>Specific lighting standards related to safety for airplan maneuvering</i>	Yes, Sec. 34-6-6	Yes, Sec.6.050	Yes, Sec. 6.04.07.04	Yes, Sec. 40-4-110
<i>Specific lighting standards related to night vision and military training</i>	No	No	No	No

**Summary Table of Local
Jurisdiction Tools, *continued***

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Avigation Easements				
<i>Easements required as condition of approval of request</i>	Enabled only, but not required. For rezoning, variance, or special use permit. Sec. 34-6-14	Enabled only, not required. For rezoning, variance, or special use permit. Sec. 6.120	No	No
Noise Easements				
<i>Easements required as condition of approval of request</i>	No	No	No	No
Flexible Development Patterns				
<i>Creates or has available a conservation subdivision ordinance</i>	None found	None found	Yes, based on Comprehensive Plan Sec. 6.4.07.11	Yes, but only for lands within the 100 yr flood plain and stormwater retention basins Sec. 40-4-90
<i>Creates or has available flexible development regulations, such as a Planned Unit Development, to allow clustered development</i>	Yes, PDP Planned Development Procedure. Sec. 34-6-30	Planned Uses, but does not appear to allow clustering. Sec. 9.010	Yes, PUD Sec. 6.11.01	None found
Disclosure				
<i>Requires property owners to disclose location within Noise Contours, APZs, or Clear Zones to potential buyers or renters</i>	No	No	No	No

Summary Table of Local Jurisdiction Tools, *continued*

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Comprehensive Plan				
<i>Comprehensive Plan updated on a regular basis either by adopted policy or practice</i>	No	No	No	No. The Comprehensive Plan Update is underway.
<i>Plan includes language supporting compatible land use planning surrounding Scott AFB and MidAmerica St. Louis Airport</i>	Yes	Yes	Not explicitly, but it does acknowledge both the Base and the Airport as important economic engines for the Village	Yes.
<i>Future Land Use Plan reflects desire for compatible land uses surrounding the Base and the Airport</i>	Yes	In most cases	In most cases except along Il-158 and Maple Street	No future land use plan adopted
<i>Plan is specifically tied to the Capital Improvement Plan or to individual capital improvement projects</i>	Unknown, not mentioned in Comprehensive Plan.	Unknown, not mentioned in Comprehensive Plan.	Unknown, not mentioned in Comprehensive Plan.	Unknown, not mentioned in Comprehensive Plan.
<i>Capital Improvement Plan and/or individual infrastructure improvements are developed to support compatible land uses surrounding Scott AFB and MidAmerica St. Louis Airport</i>	Current Comprehensive Plan discusses the importance of linking capital improvements to promote desired development	Unknown	Unknown	Unknown

Summary Table of Local Jurisdiction Tools, *continued*

Encroachment Tool	City of Mascoutah	City of O'Fallon	Village of Shiloh	St. Clair County
Local Coordination Agreements				
<i>Local jurisdictions have signed agreements with each other pertaining to future annexations and potential land uses/ densities on those properties</i>	No	No	No	No
<i>Local jurisdictions have signed a Memorandum of Understanding with each other, Scott AFB and MidAmerica St. Louis Airport concerning communication procedures</i>	No	No	No	No
Education and Outreach				
<i>Local Jurisdiction has an outreach program about Base and/ or Airport impacts on surrounding properties</i>	No	No	No	No
Implementation and Enforcement				
<i>Local Jurisdiction has an implementation and/ or enforcement body that regularly addresses encroachment and compatible land use decisions</i>	No	No	No	No

Analysis of Current Land Use Compatibility

This section reviews current land uses to identify existing incompatibilities and to develop indicators of future land use conflicts. The following sections review current land uses within the Scott AFB runway Accident Potential Zones (APZ), Clear Zones, and Noise Contours as well as the MidAmerica St. Louis Airport Runway Protection Zones (RPZ) and Noise Contours. Some communities in the region use military APZ on the civilian runway. For purposes of the JLUS analysis, APZ compatibility will only be reviewed for the military runway.

APZs, Clear Zones and RPZs

Figure 9, *Existing Land Use*, shows the current built conditions around the base and Airport. Northwest of Scott AFB, within the northern Clear Zone, the majority of the land is either within Scott

AFB boundaries, or classified as vacant farmland by the St. Clair GIS dataset. Both the City of O'Fallon's and The Village of Shiloh's municipal boundaries converge within APZ 1; however, a vast majority of this land is owned by St. Clair County purchased with FAA funds. Property on the northwest corner of the intersection of IL 158 and Maple Street, which lies within the APZ 1, is classified as residential and farm.

Land within APZ 2, which reaches into the centers of O'Fallon and Shiloh, are much more developed. Property southeast of Main Street is largely used for farming and classified as vacant farms. A portion of Valley View Farms Mobile Home Park, south east of Main Street, is located within APZ 2. A recent expansion of this park was denied by the Village of Shiloh based on its location within the Accident Potential Zone. Some large lot residential properties exist along Main Street adjacent to Interstate 64.

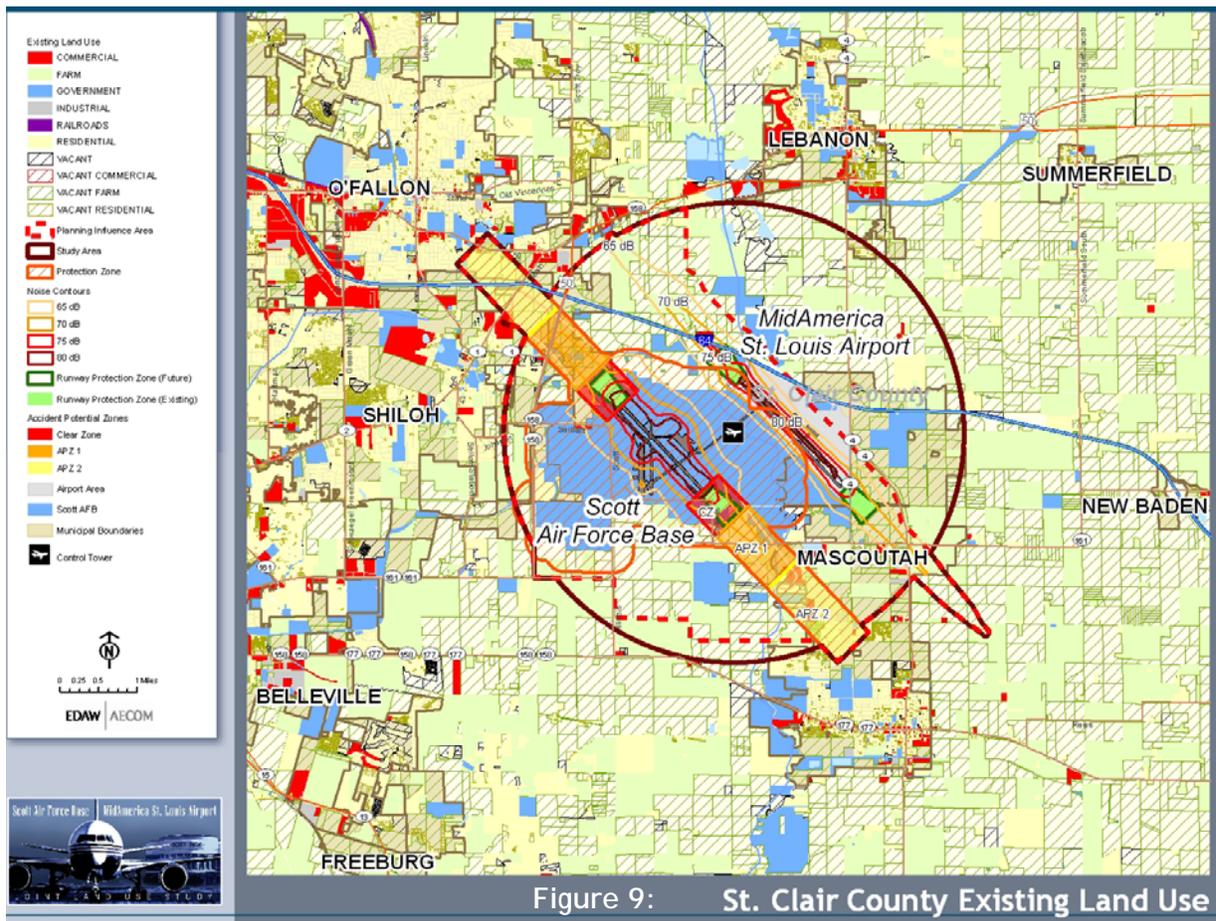


Figure 9: St. Clair County Existing Land Use

North of I-64 are the established residential developments of Timber Creek Estates, The Manor at Timber Creek, and Oak Tree Estates, all within the APZ 2. According to the O'Fallon Comprehensive Plan, these developments existed before the 1991 AICUZ study performed for Scott AFB. When the Scott AFB runway was extended another 2,000 feet, the APZs were also extended, therefore including these properties. Also in this area is Laverna Evans Elementary school, which is split along APZ 2 with the structure outside of the APZ and the ballfields within the APZ. At the time the school was built, the property was not within the APZ.

In the most northern tip of APZ 2, at the intersection of South Seven Hills Road and Highway 50 are two places of worship including Crossview Independent Assembly and the campus of First Baptist Church of O'Fallon. Although the property owned by these entities split the APZ, both congregation halls are within the APZ. Other commercial land uses along Highway 50 in the APZ include a bank, a small commercial center, and a horse farm. The remaining land is categorized as farm or vacant.

In the southern portion of the Scott AFB Clear Zones and APZ, all of the land within the Clear Zone is either within the Scott fence line or owned by St. Clair County for the Airport. Within APZ 1, all the land north of IL 161 is also owned by the County. South of IL 161 lies a large farm, the bottomlands of Silver Creek and the Caseyville Gun Club. At the time of this study, St. Clair County is in negotiation with the Gun Club to purchase their property.

Along North County Road, within the APZ 2, the majority of land use is farming. A parcel along the west side of North County Road is designated as government or another tax exempt user, and a parcel along the east side is classified as commercial for GTE Phone Operations. South of West Feusser Road, several small-lot subdivisions

have been developed within the APZ 2, including Greystone Manor, Quail Point, Hunters Creek, Windshire, and North Towne.

Another residential development is under construction on the south side of West Feusser Road, west of North 6th Street, on property that was once a large farm. At the intersection of West Feusser Road and North 6th Street, a small church, commercial building and daycare lie within the Accident Potential Zone 2.

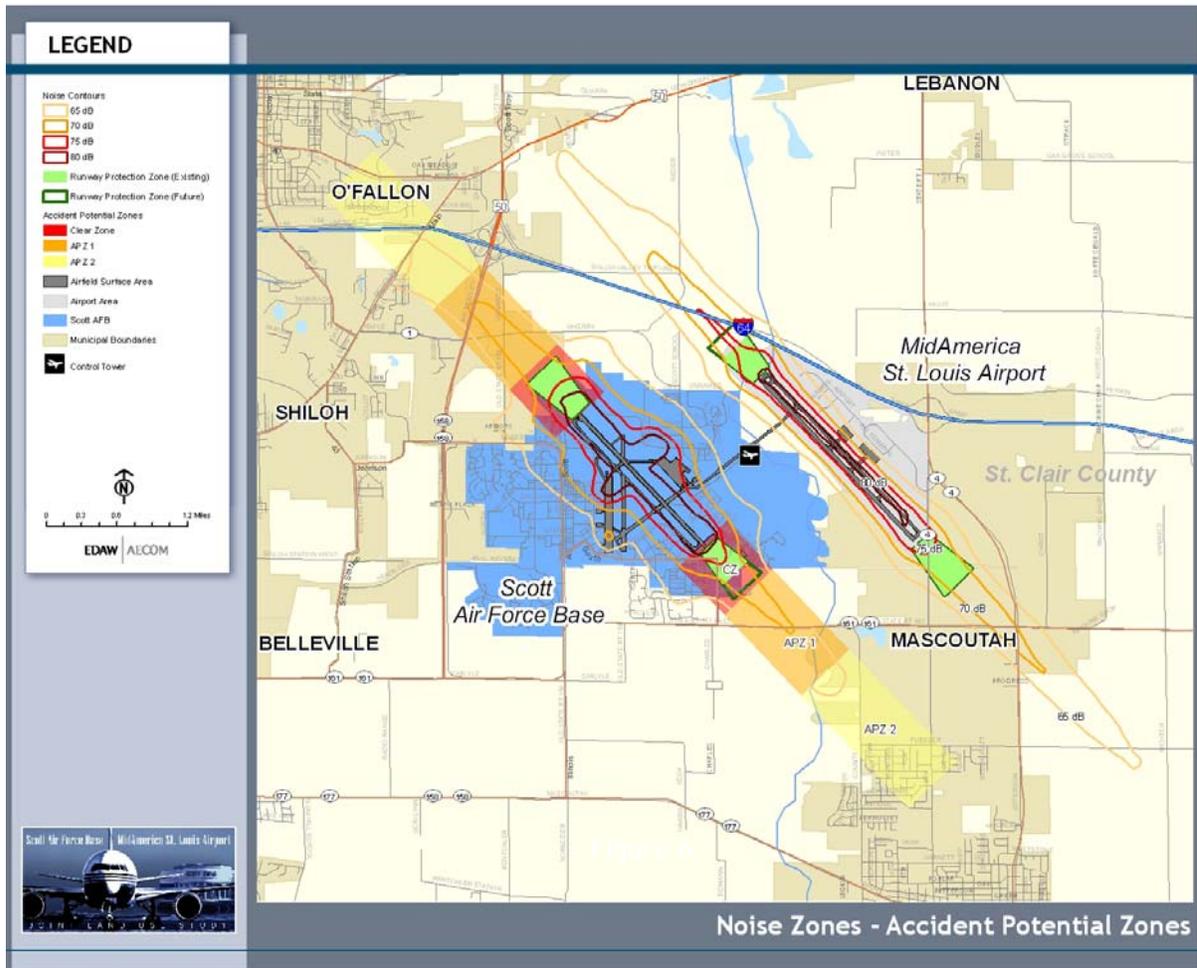
All of the property within the MidAmerica St. Louis Airport Runway Protection Zones (RPZs) is owned by the County for the Airport use.

Noise Contours

Figure 6, *Noise Zones – Accident Potential Zones*, shows the noise contours associated with Scott AFB and the Airport. Flights using the Air Force runway and the civilian runway produce noise, which is then measured in decibels and categorized into Noise Contours. These contours extend beyond the boundaries of both the Air Force Base and the Airport into the surrounding communities.

Almost all of the land within the 75 dB Noise Contour for the runway is within installation boundaries; and if it is outside of the boundaries, the land is owned by the County for the Airport. Almost all of the land within the 70 dB Noise Contour for the Scott runway is owned by the County for the Airport. The southernmost tip of the contour laps onto a private farm just south of IL 161.

While the majority of land within the 65 dB Noise Contour is also within the purview of Scott AFB or the County-owned Airport lands, a significant portion does fall on private landowners. Just south of I-64, west of IL 158 and east of Main Street, property that is currently categorized as vacant farm is within the Noise Contour. This property is also within the Accident Potential Zone 2 as described above. South of the Scott runway, the 65



dB Noise Contour extends south of IL 161 onto a private farm, the bottomlands of Silver Creek and the Caseyville Gun Club.

Only a few parcels within the Valley View Farms Mobile Home Park are in the 65 dB Noise Contour but are not within the Accident Potential Zones.

All of the land within the MidAmerica St. Louis Airport 75 dB Noise Contour is owned by the County. A few properties in the southern point of the 70 dB Noise Contour are owned by private individuals and classified as vacant farmland. A small portion of the northern tip of the 70 dB Noise Contour extends onto private property north of I-64 and west of South Rieder Road that is classified as active farmland.

A vast majority of the property in the 65 dB Noise Contour is in private ownership and is classified as either active or vacant farm land.

Summary of Existing Land Use Areas of Concern

Figure 10, *Compatibility Analysis*, shows the results of the existing land use compatibility analysis. Based upon the Guidelines for Considering Noise in Land Use Planning and Control (FICUN, 1980) and the DoD Compatible Land Use Guidelines for Clear Zones and Accident Potential Zones (US Army, 1981), parcels have been coded green (compatible), yellow (conditionally compatible), and red (incompatible). In cases in which a parcel was found to be only partially within the boundaries of a noise contour or APZ, the parcel was coded as though it were entirely within the boundary.

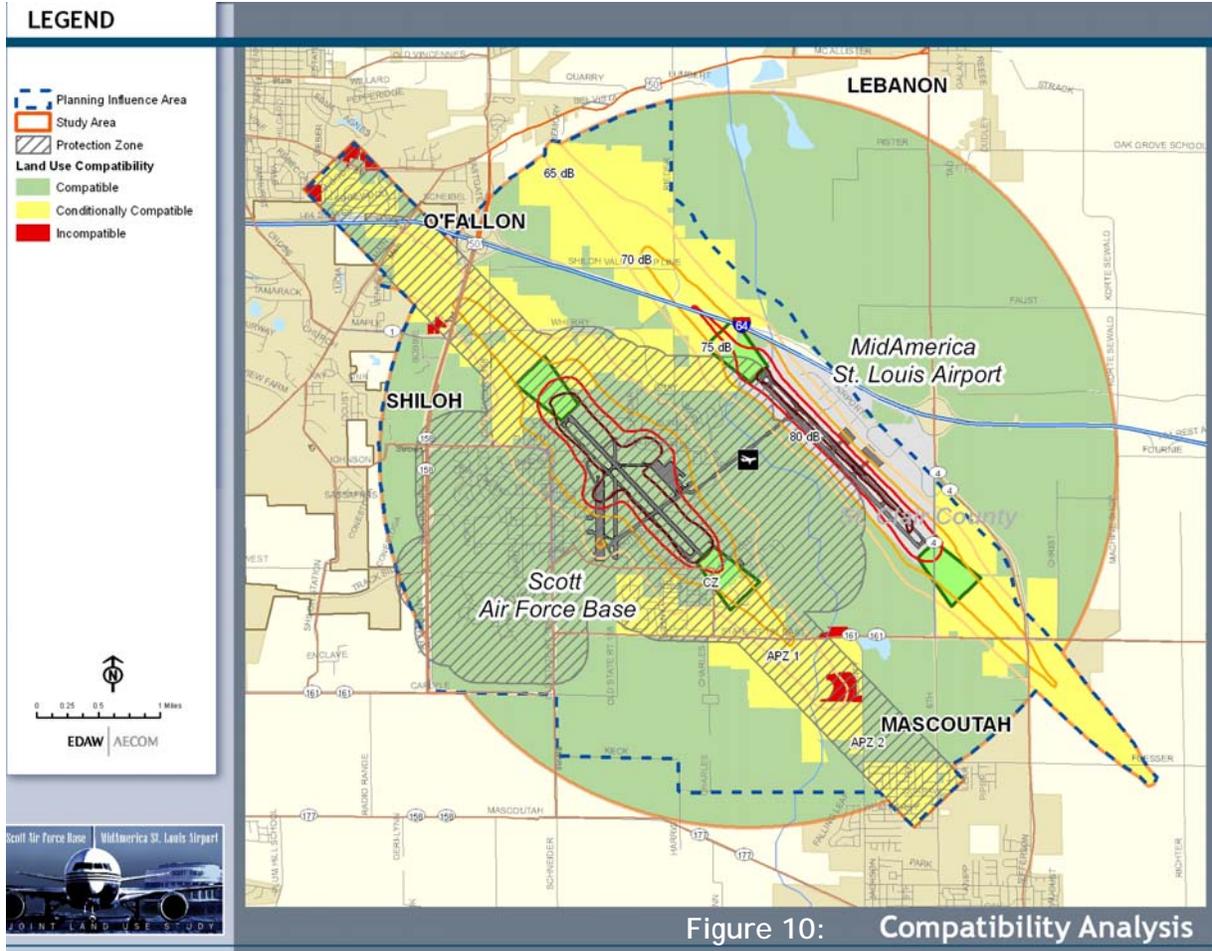


Figure 10: Compatibility Analysis

Conditionally compatible refers to a land use that is compatible with special protections as identified in the guidelines. Most of the parcels within the noise contours and APZs at Scott Air Force Base are either compatible or conditionally compatible. However, there are a few parcels that are considered incompatible under the guidelines. Some areas of specific concern are:

- The existing and developing neighborhoods along West Feusser Road and North County Road in the southern Scott APZ 2;
- The Caseyville Gun Club in the Scott APZ 2 and 65 dB Noise Contour;
- Spring Valley Baptist Church at the intersection of IL-158 and Maple Road (a small corner of the property is in the northern Scott APZ 1);

- The Valley View Farms Mobile Home Park in the Scott APZ 2 and 65 dB Noise Contour;
- The established neighborhoods south of Highway 50 and north of I-64 in the Scott APZ 2;
- Laverna Evans Elementary school; and
- The cluster of church campuses at the intersection of Highway 50 and South Seven Hills Road.

Table 15: Compatibility Analysis Summary of Acreage

Category	Total Acreage
Compatible	16,379
Conditionally Compatible	4,886
Incompatible	97

Analysis of Zoning Compatibility

St. Clair County

Overall, all of the land that is located in the APZs, Clear Zones, RPZs, or Noise Contours and is within the purview of St. Clair County is zoned Airport Overlay (O-3). The County requires some level of land use compatibility within the Airport Overlay, as described above in the Zoning Code analysis section. See Figure 11- St. Clair County Zoning.

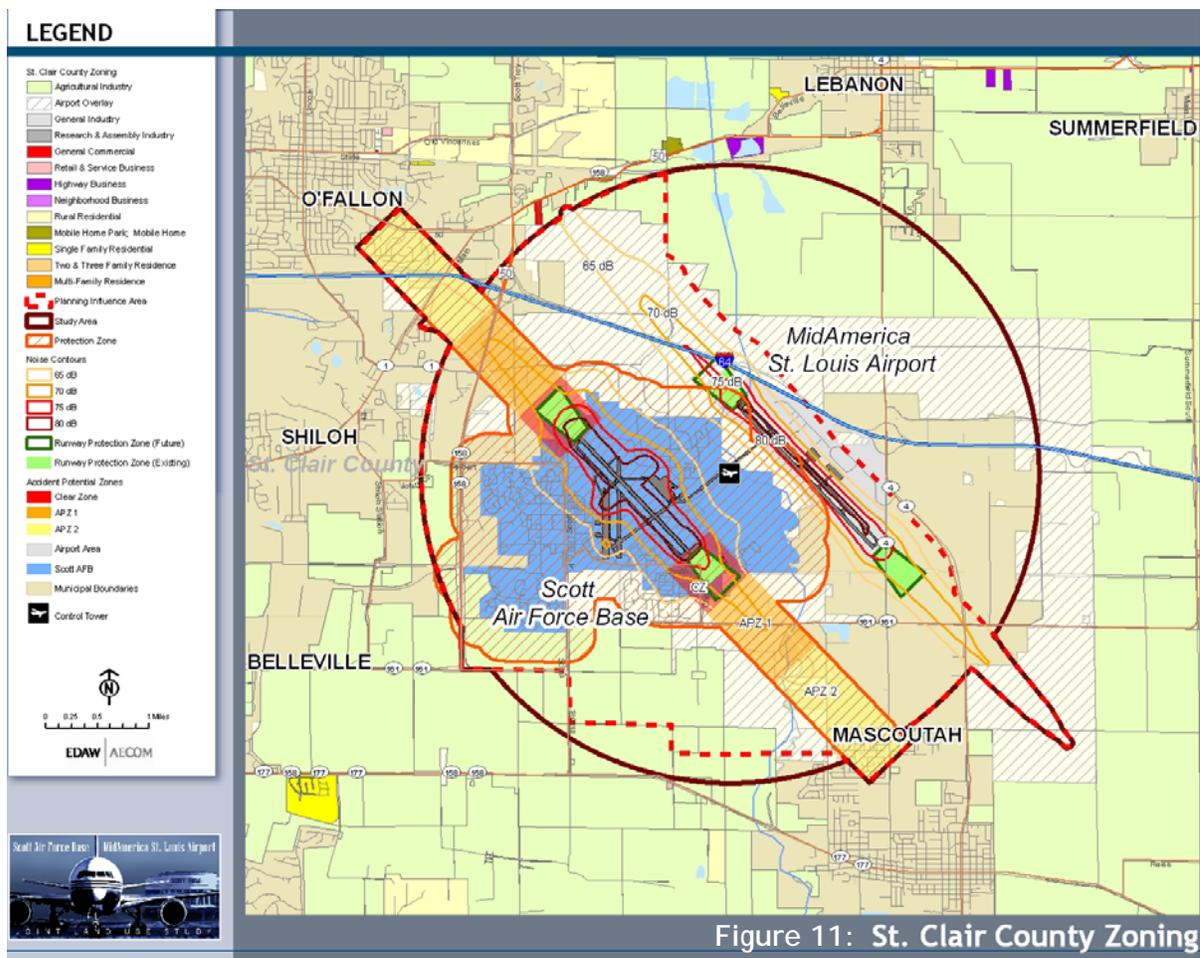


Figure 11: St. Clair County Zoning

Mascoutah

All properties within the Noise Contours and APZs are within the Airport Overlay Zone and therefore have some level of compatibility requirements. Properties within the MidAmerica St Louis Airport Noise Contours are zoned as either “Airport”, “General Industrial”, “Light Industrial”, or “General Commercial.”

Properties within the Scott AFB runway Noise Contours are zoned “General Industrial.” See Figure 12- *Mascoutah Zoning*.

Properties within the Scott AFB APZ 1 are zoned “General Industrial”, but lands within the APZ 2 are much more varied. Zoning includes Agricultural, Single Family Residential (RS-10), General Commercial, Neighborhood Commercial and a section of Multi-Family Residential in the southern most section of the APZ. The Single-Family

Residential Zone (RS-10) requires a minimum lot size of 10,000 square feet; the Multi-Family Residential (RM) property is developed with duplexes on a minimum of 6,000 square foot lots. The General Commercial zone allows for more intense commercial development than the Neighborhood Commercial zone, while the General Industrial zone allows for more intense industrial development than the Light Industrial zone.

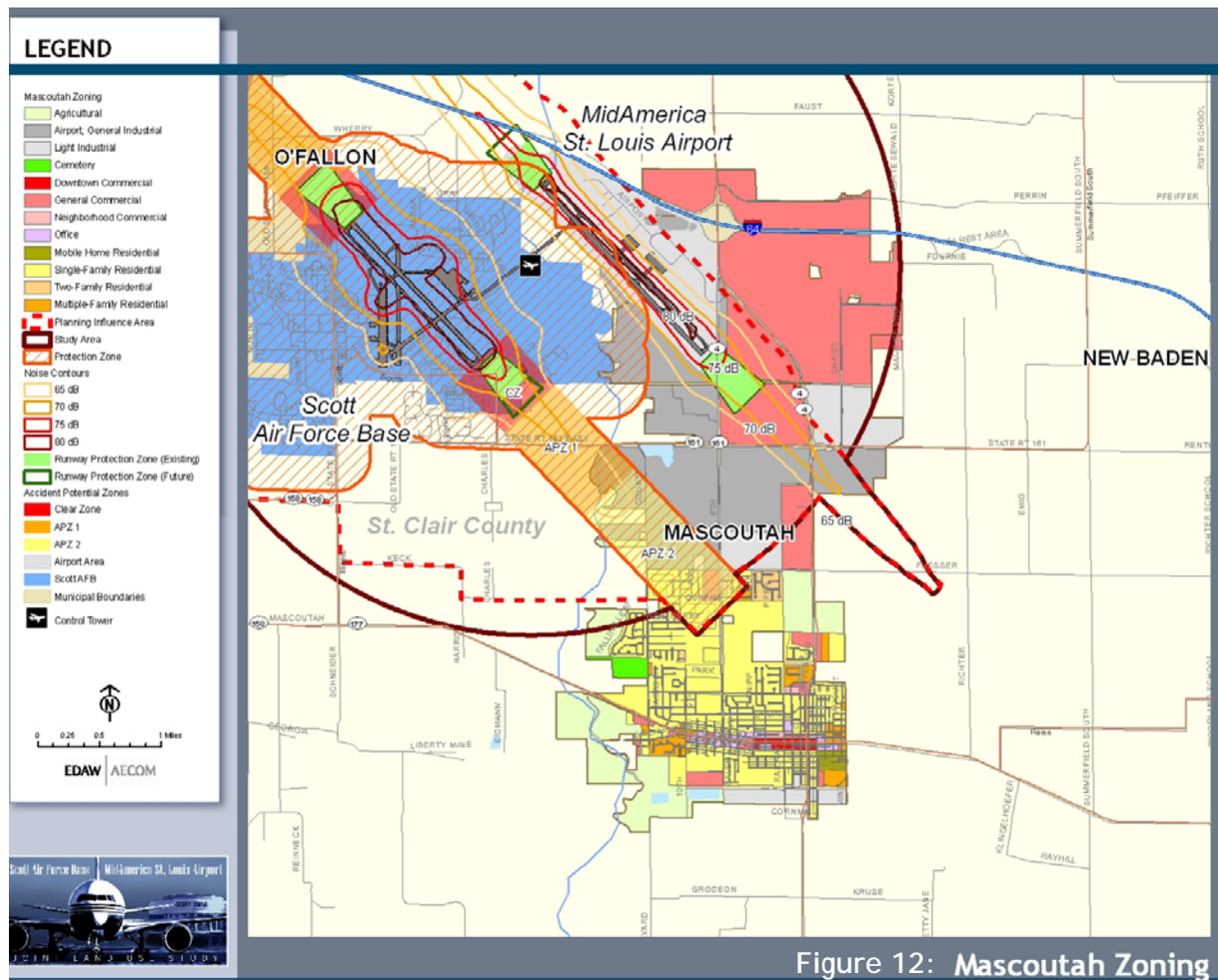


Figure 12: Mascoutah Zoning

Village of Shiloh

All land within the Noise Contours are also within the Scott Airport Overlay Zone; but this does not include properties that are within the Accident Potential Zones. Zoning for properties within an APZ include “B-4 General Business District,” “B-3 Office Business District,” “PB Planned Business District,” and a wedge of “MH Mobile Home Park.” The B-3 district is for businesses serving the community and surrounding area, while the B-4 district is intended to accommodate a wide range of more intense and larger scale retail, service, office and other uses meant to serve both the community and the larger region. The PB District allows for maximum flexibility in developing and designing a commercial site, and the MH district sets Mobile Home Park standards. See Figure 13 - *Shiloh Zoning*.

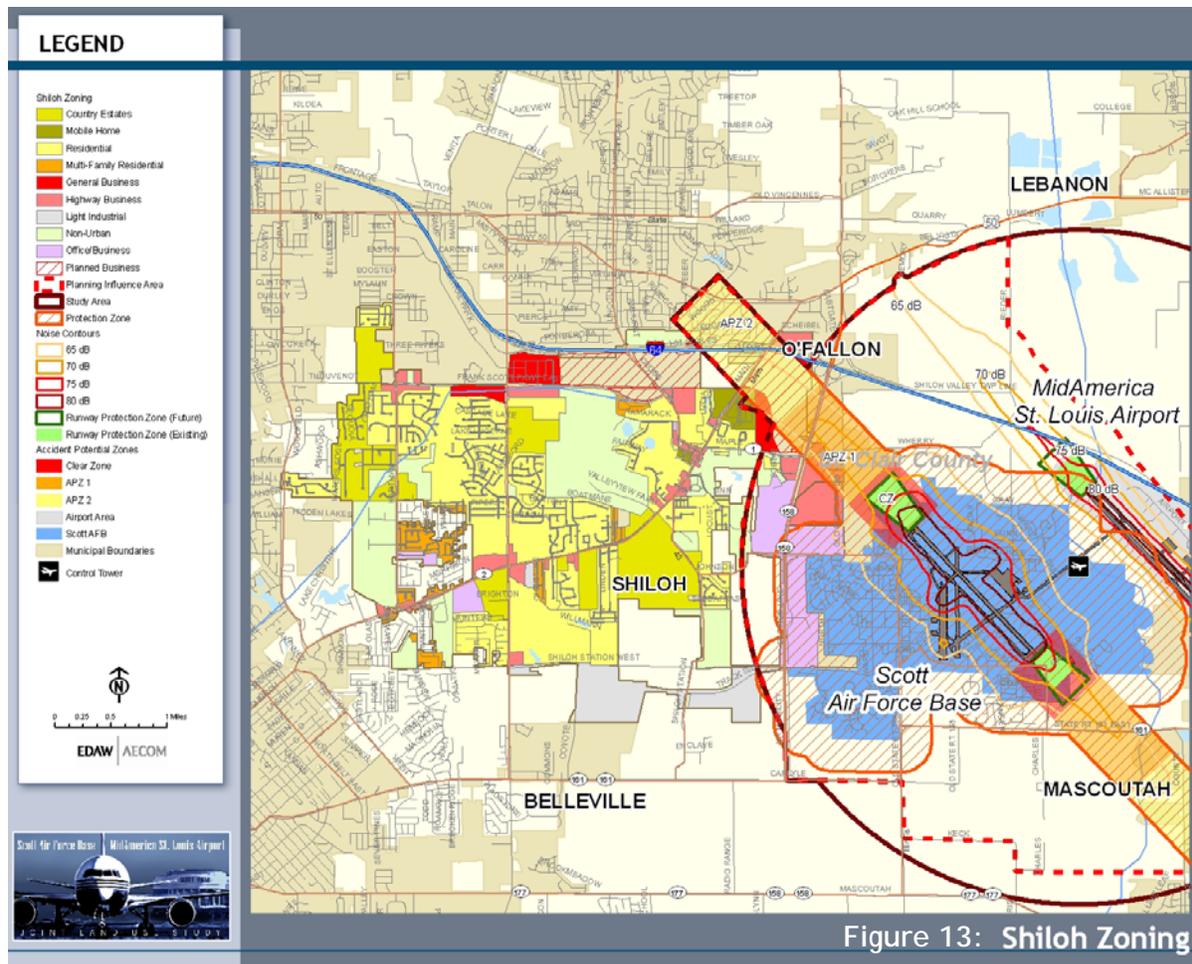


Figure 13: Shiloh Zoning

O'Fallon

All properties within the 1991 Noise Contours are within the “O-3 Airport Overlay” Zoning District. This also includes an APZ over the civilian airport. Because of the Airport Overlay District, some level of land use compatibility is required, as described in the Zoning Code Analysis section above.

Property adjacent to Scott AFB south of I-64 is zoned “B-1 Community Business District” and “A Agricultural.” Most of this property is undeveloped as zoned. Properties within APZ 2 north of I-64 are zoned “SR-2 Single Family Residential” “SR-1 Single Family Residential” and “B-1 Community Business District.” Most of the properties north of I-64 are developed; however, a large agricultural tract may convert to a higher use in the future. See Figure 14 - *O'Fallon Zoning*.

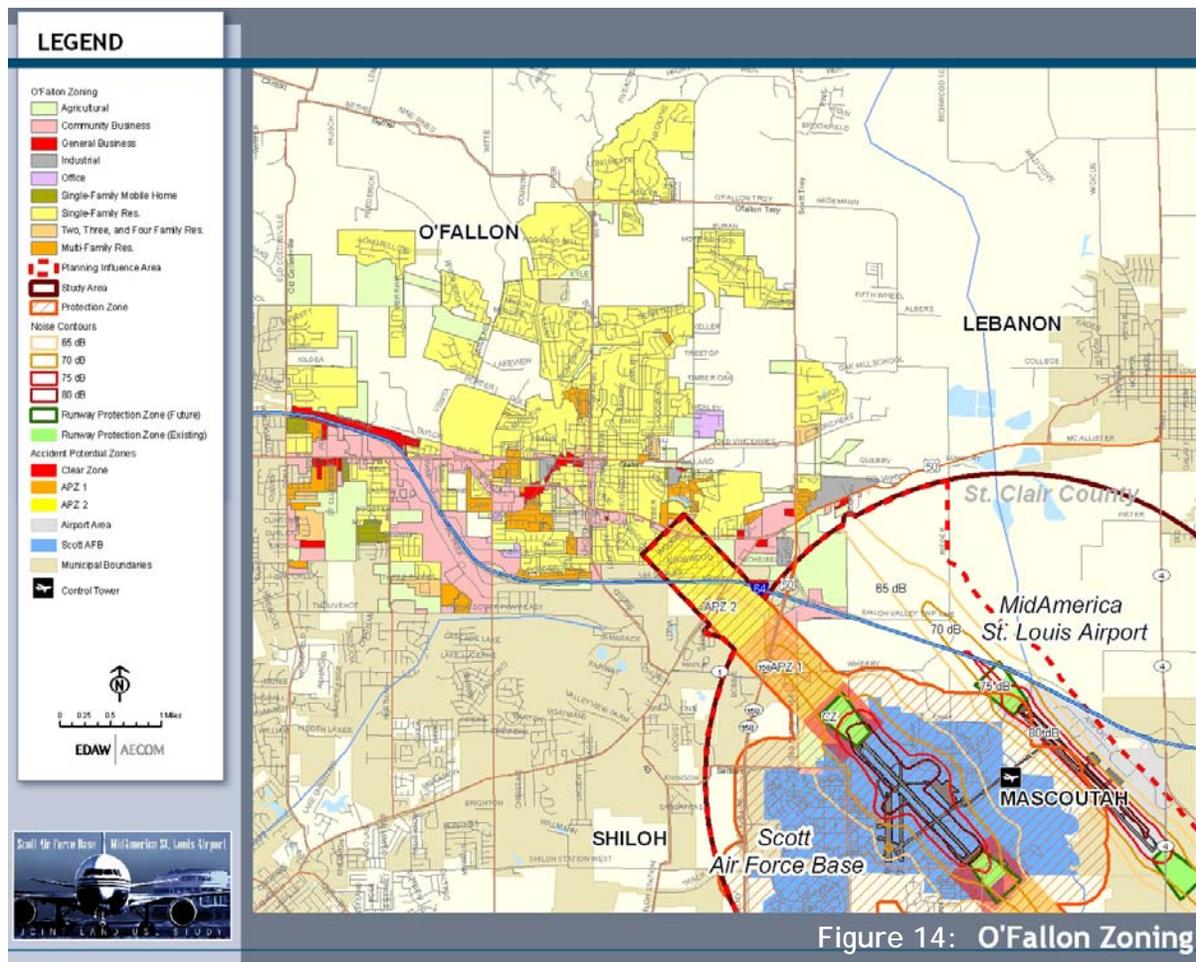


Figure 14: O'Fallon Zoning

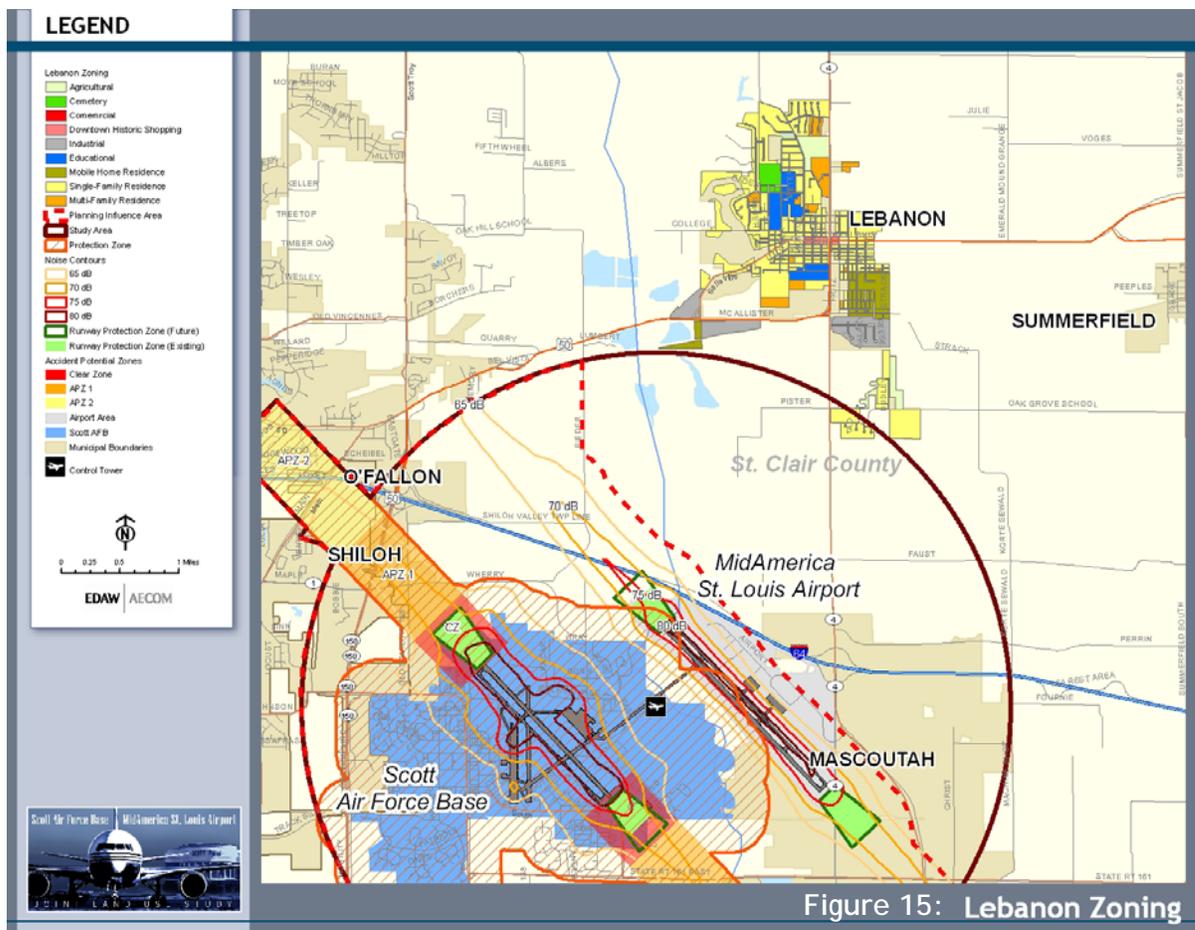
Lebanon

Since no land within the Lebanon municipal boundaries is within the Noise Contours or APZs, there is no pressing zoning concern for the City. See Figure 15 - *Lebanon Zoning*.

Existing Zoning Areas of Concern

Although most zoning in the impacted areas reflects current use, some undeveloped properties are zoned for higher intensity development. Most of these areas are affected by a protective overlay, and therefore subject to some level of land use compatibility:

- A large portion of land in Mascoutah within the APZs and Noise Contours is undeveloped but zoned for commercial and industrial uses.
- The PB zoned property along the western side of IL-158 and the B-3 zoned property along the eastern side of IL-158 within the APZ 2 allow for commercial development which may have an impact on Scott AFB.
- The B-4 zoned property along Maple Street is partially located in APZ 2 and allows for regional commercial development that could have an impact on Scott AFB.
- The undeveloped O'Fallon land zoned B-1 in close proximity to Scott AFB along IL-158.



Analysis of Future Land Use Compatibility

The purpose of this section is to identify foreseeable land use conflicts around Scott AFB and MidAmerica St. Louis Airport based on future land use plans, recent development activity and a build out analysis. The intent is to ensure that the planning boundaries as established for this JLUS encompass lands with significant growth pressure in proximity to the airfields. Figure 19 - *Regional Future Land Use* combines all of the available future land use plans into one map for a comprehensive view of the region at the end of this section.

City of Mascoutah

Figure 16 - *Mascoutah Future Land Use* depicts the city's recently adopted plan. Areas that may pose a concern in the future are:

- Land along IL-161 south of Scott AFB within the Clear Zone and APZ 1 are planned for Scott AFB Related Use. In the Comprehensive Plan, this is defined as land where the base may expand and include supportive services such as base housing, day care and commercial services.
- Land designated for industrial use south of IL-161 along Lake Road and north of Fuesser Road within the APZ 1 and 2.
- Commercially designated land along Feusser Road is within APZ 2.
- Low Density Residential property south of Feusser Road within APZ 2 is defined in the Comprehensive Plan as allowing up to 5 dwelling units per acre. Also permitted within this designation are schools and places of worship.

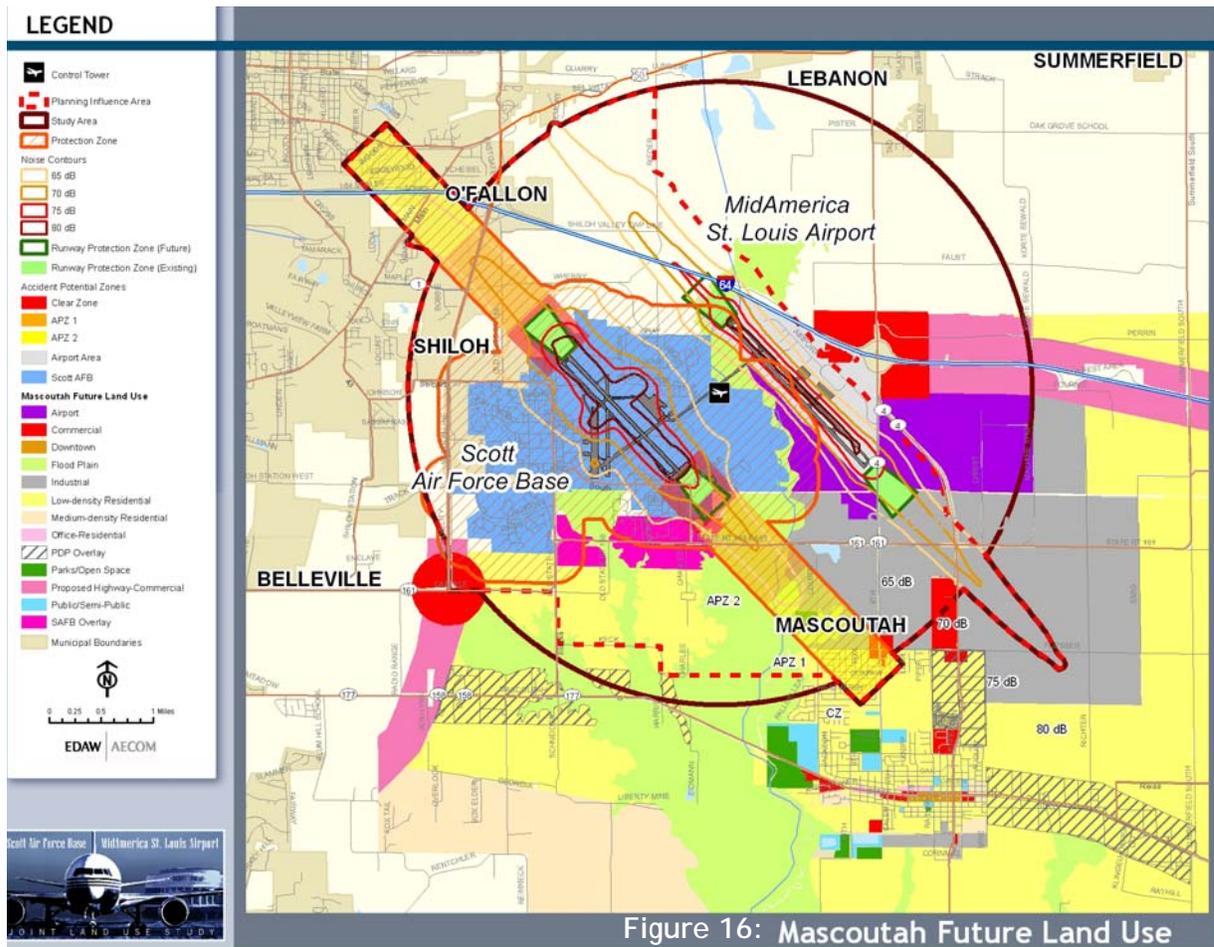


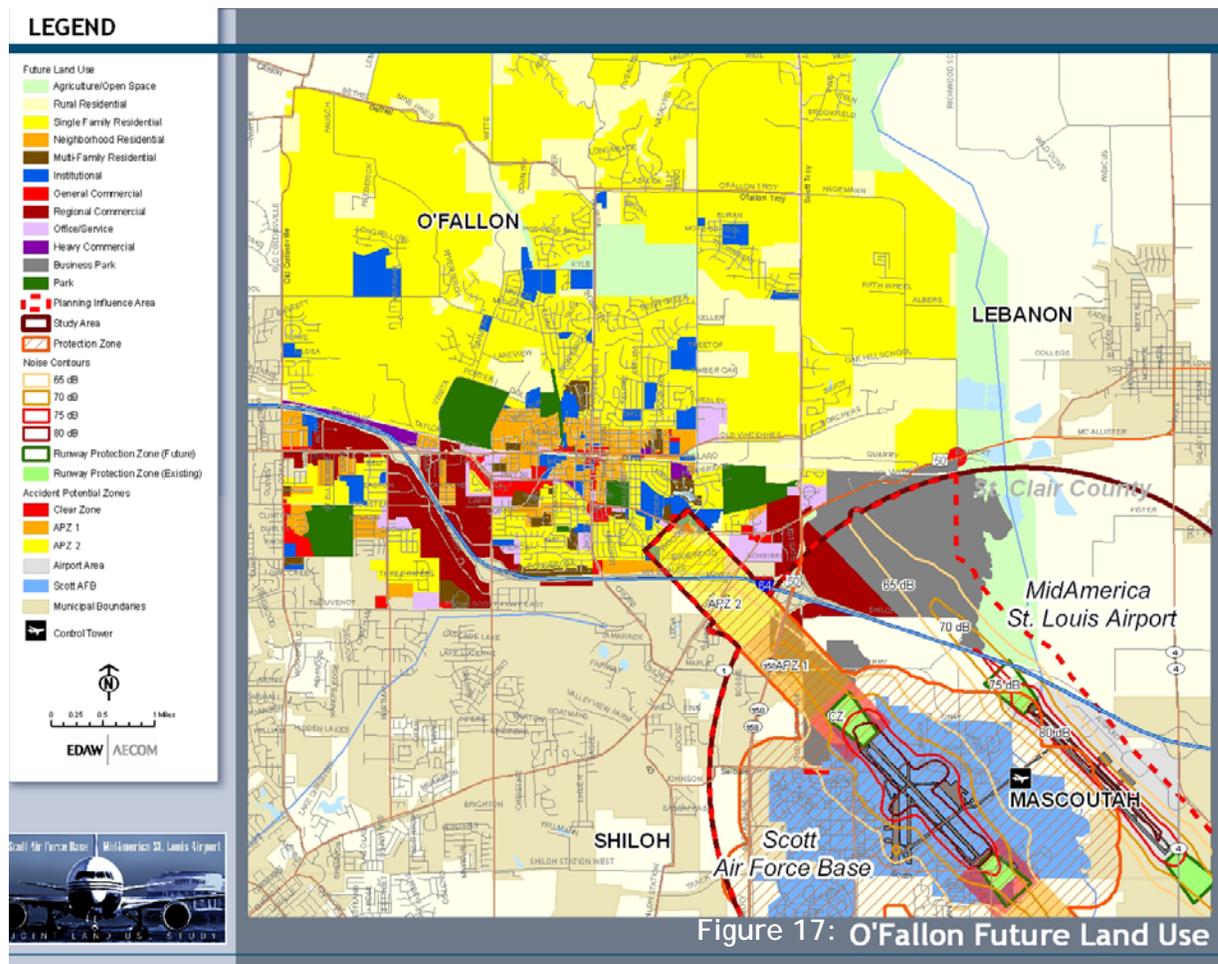
Figure 16: Mascoutah Future Land Use

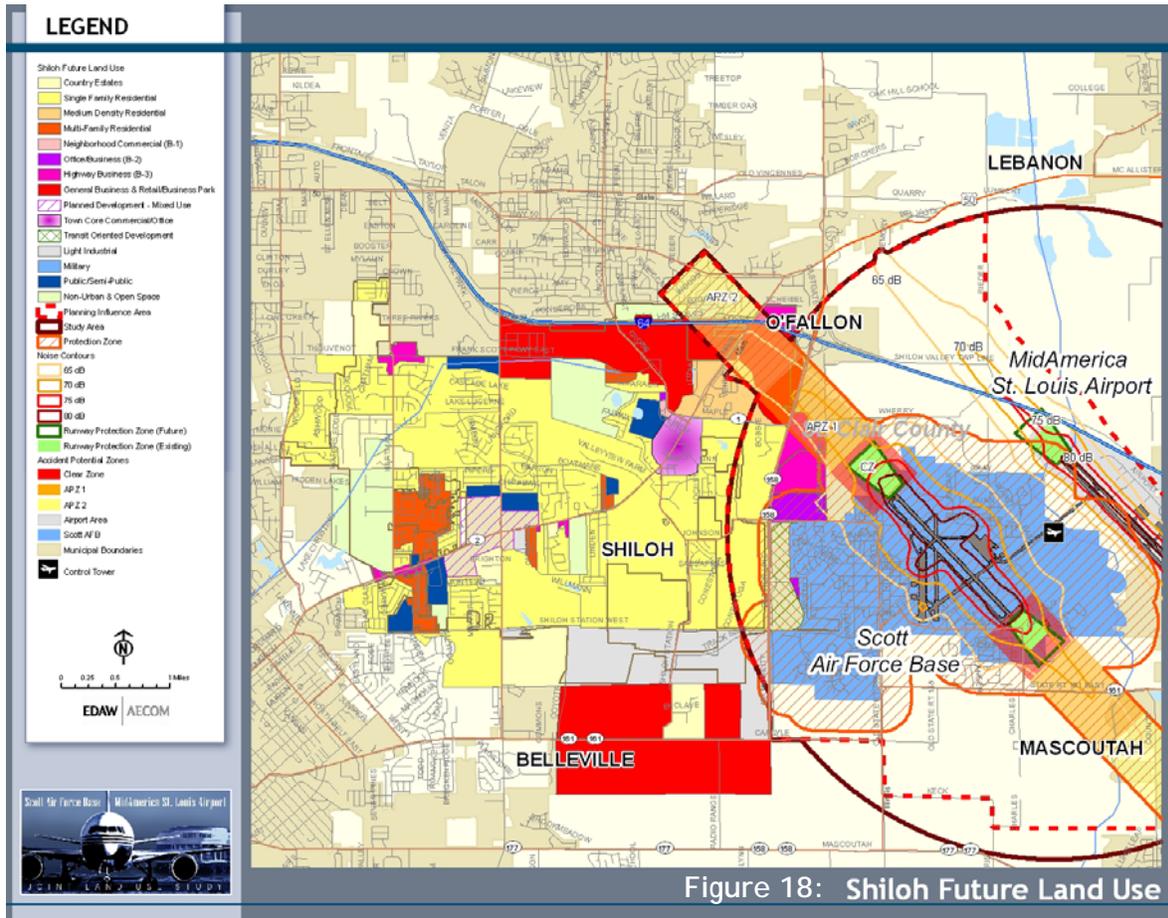
City of O'Fallon

Figure 17- *O'Fallon Future Land Use* shows the City's long term plan. Most of the land north of I-64 and west of IL-158 is already developed and the future plans call for those lands to remain in the same use category. Some undeveloped parcels on the south side of Highway 50 are recommended for office/service, which is defined as either office or light retail uses with a recommended Floor to Area Ratio (FAR) of 0.25 to 0.33. Property on the east of IL-158 and south of Highway 50 is part of the MidAmerica Commerce Center sub-area plan which calls for the development of a business and warehouse park with some regional-scale retail. The land use plan for the MidAmerica Commerce Center demonstrates the City's use of military APZ designations on the civilian airport.

Generally, the Comprehensive Plan defines Business Industrial Park for light manufacturing, warehousing, dairies, and distribution with a recommended FAR of 0.25. Areas that may pose a concern in the future are:

- Undeveloped land north of I-64 and south of Highway 50 within APZ 2 designated for office/service use, especially the large parcel at the end of Edgewood Drive.
- Undeveloped property south of I-64 at the intersection of Wherry Road and Old IL-158 designated as business/industrial park within the APZ 2 and noise contour 70 L_{dn}
- Undeveloped property north of I-64 and south of Highway 50 within the noise contour 65 L_{dn} designated for business/ industrial park.





Village of Shiloh

The Comprehensive Plan for the Village concentrates retail and business services near I-64 and IL-158, as shown in Figure 18 - *Shiloh Future Land Use*. The districts around the Scott AFB safety zones and noise contours are “Highway Business” and “Retail Business Park.” The uses generally recommended for this area are retail, office and service uses intended to serve the local community and surrounding area. Also permitted with a Special Use permit are places of worship, schools, health care providers, and day care. Areas of potential future concern are:

- Retail Business Park designation for property west of IL-158 and north of Maple Street within the APZ 1 and 2 and within the 65 L_{dn} noise contour
- Highway Business designation for property along the east side of IL-158 near Wherry Road within the APZ 2 and noise contours 65 and 70 L_{dn}

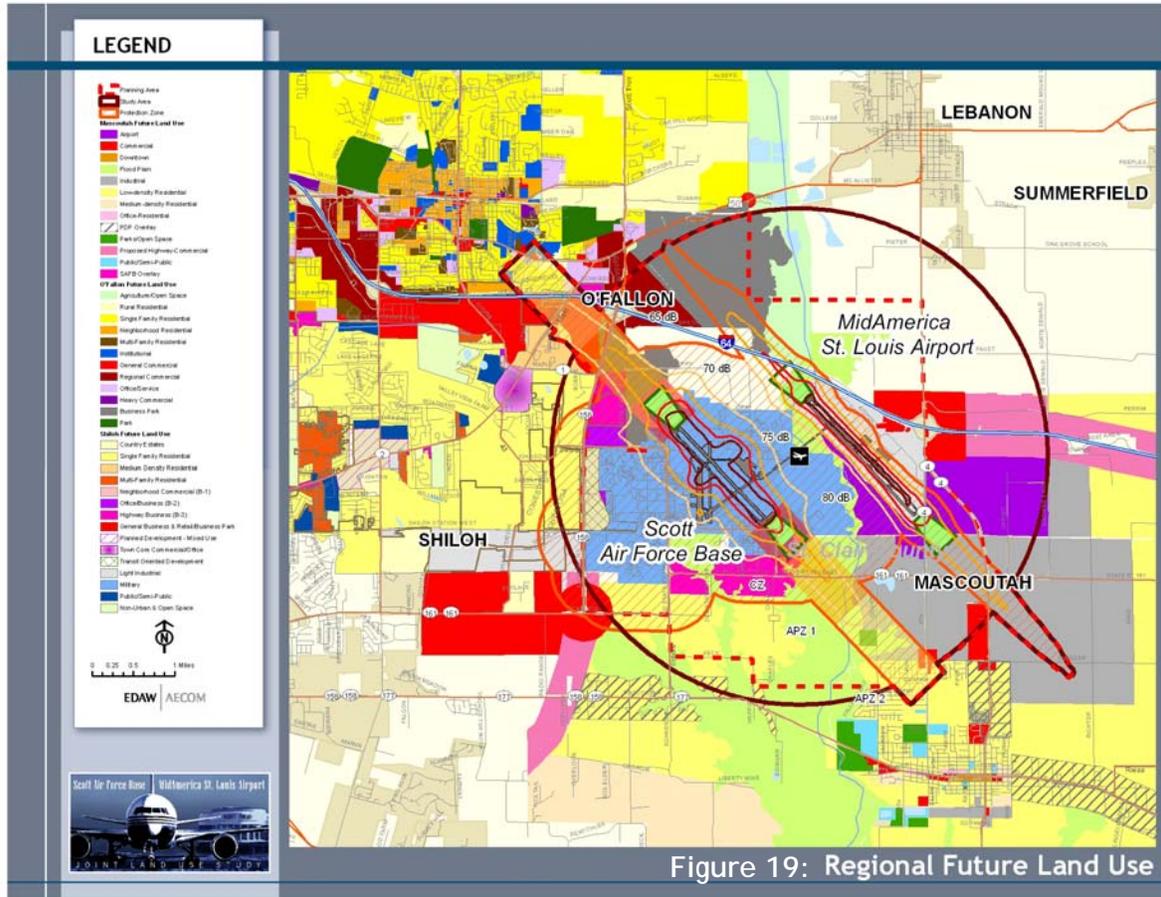


Figure 19: Regional Future Land Use

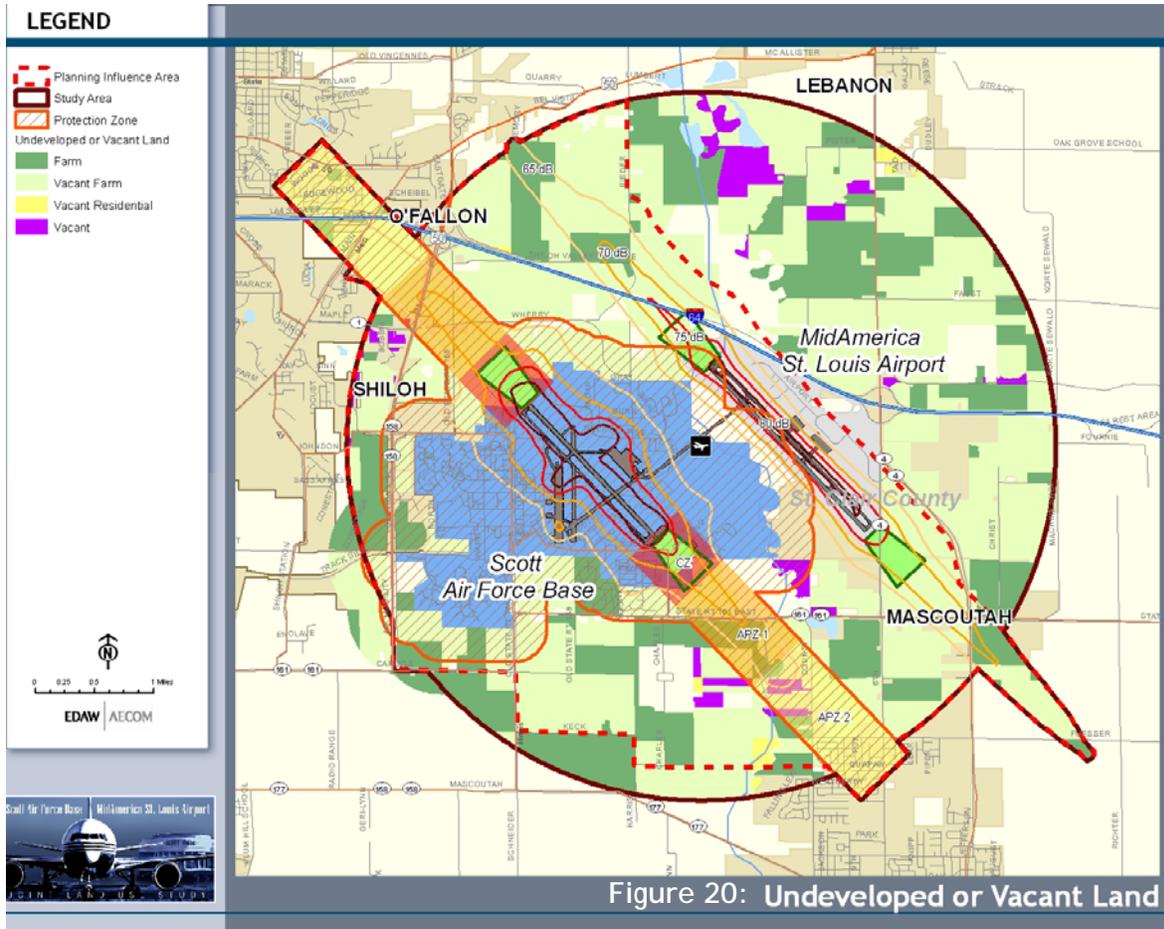


Figure 20: Undeveloped or Vacant Land

Build Out Analysis

The St. Clair County GIS database defines the vast majority of the land surrounding Scott AFB and MidAmerica St. Louis Airport as vacant (includes several categories: Farm, Vacant, Vacant Farm, and Vacant Residential). Many of the vacant parcels are large tracts that are relatively unencumbered by development constraints.

The planning team conducted a 'build-out' analysis to determine the potential maximum development of the study area. This analysis is not market-based, and is best used as a tool to determine areas in which future encroachment mitigation measures may be warranted.

Figure 20 - *Undeveloped or Vacant Land* shows all lands with future development potential. The planning team removed areas of parcels with environmental constraints, including the 100-year flood plain and wetlands. Then using current

zoning categories and development regulations, the analysis calculated the potential square footage of commercial, industrial, office and residential. Below is the table summarizing these calculations for the entire study area:

Table 16: Summary of Build Out

Land Use	Additional Units	Additional Square Feet
Single-family	336	
Multi-family	5	
Light Industrial		2,435,275
Industrial (other)		9,062,730
Office		1,990,342
Office/Commercial		3,261,148
Commercial		16,464,354

It was assumed that areas currently served by water and sewer would remain the same except for

the property north of the base where the City of O'Fallon plans to build a new sewer main.

Therefore, because much of the property in the study area is not served by these utilities, development intensity would remain low density rural residential or farm.

The resulting numbers do not necessarily reflect market conditions, but identify these areas of potential encroachment concern:

- Commercial development could be very intense along Route 4 in the City of Mascoutah
- Commercial development could be very intense along IL-158 Air Mobility Drive in the Village of Shiloh
- Industrial and commercial development could be very intense just north of the base on either side of I-64 within the City of O'Fallon
- Residential development within the City of Mascoutah could have a negative impact

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