FINAL

Fairchild JLUS

prepared for

Spokane County

prepared by

Matrix Design Group, Inc.
An Employee Owned Company

in association with
Harris Miller Miller & Hanson Inc.

September 2009

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The Joint Land Use Study (JLUS) process was designed to create a community-based plan that builds consensus and obtains support from varied interests, including residents, property owners, local elected officials, business interests, the military, Native American Tribal governments and state and federal agency representatives. To achieve this objective, the Fairchild JLUS process incorporated a public outreach program that included a variety of opportunities for interested parties to contribute to the development of this study.

This JLUS was developed with the help of two dedicated committees made up of policy leaders (the JLUS Policy Steering Committee) and technical staff from the region (Technical Advisory Group).

In addition to these committees, public forums were also held during the development of the JLUS. These forums provided an opportunity for the exchange of information with the greater community, assisted in identifying issues to be addressed in the JLUS, and gained input on the strategies proposed.

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JLUS Policy Steering Committee (JPSC)

The JPSC served an active and important role in the development of the Fairchild Joint Land Use Study (JLUS). The JPSC was established at the beginning of the project and provided guidance and input on policy issues, provided overall direction to the process, and reviewed study findings. Spokane County would like to thank the following individuals for their review, guidance and assistance:

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JLUS Consultants

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Matrix Design Group, Inc.
An Employee Owned Company

- Richard Rust, AICP
- Celeste Werner, AICP
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The main JLUS document is supported by a number of appendices. Due to their size, these documents are provided in electronic format and are not bound with this document. To download, see www.landusecompatibility.com/fairchild.

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Acronyms

A

A330.....Airbus 330

ABN.....Air Base Noise Overlay

ACC .....Air Combat Command

ACSC .....Areas of Critical State Concern

AETC.....Air Education and Training Command

AFB.....Air Force Base

AFI.....Air Force Instruction

AFRC .....Armed Forces Reserve Center

AGL .....above ground level

AHCC.....Airway Heights Corrections Center

AICUZ.....Air Installation Compatibility Use Zone (study)

AIPD .....Airfield Influence Planning District

AMC .....Air Mobility Command

ANG.....Air National Guard

AO .....Airport Overlay

AOZ .....Airport Overlay Zone

APZ.....accident potential zone

APZ I.....Accident Potential Zone I (Air Force installations)

APZ II .....Accident Potential Zone II (Air Force installations)

APZ-A .....Accident Potential Zone A (FAA / civilian airports)

ARNG .....Army National Guard

ARW .....Air Refueling Wing

ATCT .....Air Traffic Control Tower

B

BASH .....Bird / Wildlife Aircraft Strike Hazard

BHWG .....Bird Hazard Working Group

BNSF .....Burlington Northern-Santa Fe

BRAC.....Base Realignment and Closure

C

CEQ.....Council on Environmental Quality

CIP .....Capital Improvement Plan / Program

CSD .....Cheney School District

CTED .....Community, Trade, and Economic Development

CTR .....Commute Trip Reduction

CUPs .....conditional use permits

CWPPs .....Countywide Planning Policies

CZ.....Clear Zone

D

dB .....Decibel

dBA.....A-Weighted Decibel

DNL.....Day-Night Average Sound Level

DOD .....Department of Defense

E

EA.....environmental assessment

EDC .....Economic Development Council

EIAP .....Environmental Impact Analysis Process

EIS .....environmental impact statement

EOD.....Explosives Ordinance Detachment

EPA.....Environmental Protection Agency

EPF .....Essential Public Facility

ER.....Eastern Region

F

FAA .....Federal Aviation Administration

FAFB.....Fairchild Air Force Base

FICUN.....Federal Interagency Committee on Urban Noise

FONSI.....Finding of No Significant Impact

FY .....Fiscal Year

G

GIS.....geographic information system

GMA.....Growth Management Act

GS.....General Schedule

H

HCP .....Habitat Conservation Plan

HE.....high explosive

HRMA .....Housing Requirements and Market Analysis

HUD .....Housing and Urban Development

I

IFR .....Instrument Flight Rules

ICRMP.....Integrated Cultural Resources Management Plan

ILS.....Instrument Landing System

IMCs.....instrument meteorological conditions

INM.....Integrated Noise Model

INRMP .....Integrated Natural Resources Management Plan

J

JLUS.....Joint Land Use Study

JPA.....joint planning area

JPSC.....Joint Land Use Study Policy Steering Committee

L

LRFP .....Long Range Facilities Plan

LWCF .....Land and Water Conservation Fund

M

MAJCOM .....Major Command

MIA.....Military Influence Area

MIDD .....Military Influence Disclosure District

MILCON.....Military Construction

MIOD .....Military Influence Overlay District

MIPD.....Military Influence Planning District

MOA .....Military Operating Area

MOU .....Memorandum of Understanding

MPO.....Metropolitan Planning Organization

MSA .....Metropolitan Statistical Area

MSL.....mean sea level

MTP.....Metropolitan Transportation Plan

MTR .....Military Training Route

N

NACO .....National Association of Counties

NAP.....Natural Area Preserve

NEPA.....National Environmental Policy Act

NGOs.....nongovernmental organizations

NHPA .....National Historic Preservation Act of 1966

NPIAS.....National Plan of Integrated Airport System

NRCA.....Natural Resources Conservation Area

NSPS .....National Security Personnel System

NVD.....night vision device

NWR.....National Wildlife Refuge

NZs.....noise zones

O

OEA.....Office of Economic Adjustment

OSPI .....Office of the Superintendent of Public Instruction

P

PCC.....Palouse and Coulee City

PUD .....Planned Unit Development

R

RCW.....Revised Code of Washington

RDP.....Route Development Plan

REPI .....Readiness and Environmental Protection Initiative

RMI .....Region of Military Influence

RQF.....Rescue Flight

S

SAC .....Strategic Air Command

SDC .....system development charge

SEPA .....State Environmental Policy Act of Washington

SERE .....Survival, Evasion, Resistance and Escape

SIA .....Spokane International Airport

SRTC .....Spokane Regional Transportation Council

STC.....Sound Transmission Class

SUA.....Special Use Airspace

SUPs .....special use permits

T

TAG.....Technical Advisory Group

T&E .....threatened and endangered (species)

TG .....Training Group

TIP.....Transportation Improvement Plan

TWG.....Technical Working Group

U

UGA.....Urban Growth Area

US .....United States

USFWS.....US Fish and Wildlife Service

USURA.....US Urban Renewal Administration

V

VFR.....Visual Flight Rules

W

WAANG.....Washington Air National Guard

WSDOT .....Washington State Department of Transportation

Others

141 ARW.....141st Air Refueling Wing
(Washington Air National Guard)

1-168 GSAB .....1st Battalion, 168th Regiment General Support Aviation Battalion (Washington Army National Guard)

92 ARW.....92d Air Refueling Wing

Glossary

A-Weighted Decibel (dBA) – Is a numerical method of rating human judgment of loudness. The A-weighted scale reduces the effects of low and high frequencies to simulate human hearing.

Accident Potential Zone (APZ) - The safety zone area immediately beyond the end of the clear zone of a runway that possesses a high potential for accidents.

Air Installation Compatible Use Zone (AICUZ) - A Department of Defense (DOD) program designed to promote compatible development around military airfields and to protect the integrity of the installation's flying mission. Some services refer to the program in a singular form "Air Installation Compatible Use Zone."

Avigation Easement – An easement that grants one of the following rights: the right of flight; the right to cause noise, dust, etc. related to aircraft flight; the right to restrict or prohibit certain lights, electromagnetic signals, and bird-attracting land uses; the right to unobstructed airspace over the property above a specified height; and the right of ingress/egress upon the land to exercise those rights. Also referred to as an aviation easement.

Bird/Wildlife Aircraft Strike Hazard (BASH) – An Air Force term for wildlife-related hazards to aircraft. The Air Force maintains a program to reduce these hazards at all of its installations.

Capital Improvement Program (CIP) - A timetable for the installation of permanent public structures, facilities, roads, and other improvements based upon budget projections.

Clear Zone (CZ) – The safety zone area of highest accident potential beginning at the runway threshold and extending along the runway's centerline for a length of 3,000 feet. The width of the CZ is based on the class of runway and Service policy.

Code Enforcement - Code enforcement is a process that works to ensure that property owners maintain property or bring substandard structures and conditions up to Building and Zoning Code standards.

Comprehensive Plan – In a general sense, this term is used to describe any planning process that addresses the broad spectrum of issues and resources for a jurisdiction, installation, or other large planning area. For local governments, this can include the jurisdictions general plan or a large area specific plan. The Air Force uses this term to describe a

compilation plan that includes the plans and specific resource documents and processes determined to be essential for planning and managing an installation's physical assets in support of the mission.

Conservation Easement – Any limitation in a deed, will, or other instrument in the form of an easement, restriction, covenant, or condition, which is or has been executed by or on behalf of the owner of the land subject to such easement and is binding upon successive owners of such land, and the purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural, forested or open-space condition.

Day-Night Average Sound Level (DNL) – The energy-averaged sound level measured over a 24-hour period, with a 10-dB penalty assigned to noise events occurring between 10:00 p.m. and 7:00 a.m. The 10-decibel penalty for nighttime noise events accounts for the added intrusiveness of noises when background levels are low and noise sensitive activities (such as sleeping) take place. DNL is the preferred noise metric of Department of Housing and Urban Development (HUD), Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), and Department of Defense (DOD) for modeling airport environs. DNL is otherwise known by the mathematical symbol "Ldn"

Decibel (dB) – A unit of measure for describing the amplitude of sound as it is heard by the human ear.

Easement – The right to use property owned by another for a specific purpose. Power line easements are a common example.

Encroachment – The DOD defines encroachment as the cumulative result of any and all outside influences that inhibit normal military training and testing. As communities develop and expand in response to growth and market demands, land use decisions can push urban development closer to military installations and operation areas. The resulting land use conflicts (encroachment) can have negative impacts on community safety, economic development, and sustainment of military activities and readiness. This threat to military readiness activities is currently one of the military's greatest concerns.

Flight Path – The line connecting the successive positions occupied, or to be occupied, by an aircraft, missile, or space vehicle as it moves through air or space.

General Plan – A statement of policies, including text and diagrams, setting forth objectives, principles, standards, and plan proposals, for the future physical development of the city or county.

Growth Management Act (GMA) – An Act (Chapter 36.70A RCW) adopted by the Washington State Legislature in 1990 in response to the determination of the legislature that uncoordinated and unplanned growth posed a threat to the environment, sustainable economic development, and the quality of life in Washington.

The GMA requires state and local governments to manage Washington's growth by identifying and protecting critical areas and natural resource lands, designating urban growth areas, preparing comprehensive plans and implementing them through capital investments and development regulations. This approach to growth management is unique among states.

Habitat Conservation Plan (HCP) – Incidental take permits help landowners legally proceed with activities that might otherwise result in the illegal impacts to a listed species. An HCP is a document that supports an incidental take permit application pursuant to section 10(a)(1)(B) of the Federal Endangered Species Act. HCPs are an evolving tool. Initially designed to address individual projects, HCPs are more likely today to be broad-based plans covering a large area. The geographically broader HCP is then used as the basis for an incidental take permit for a project within the boundaries of the HCP. Regardless of size, an HCP should include measures that would be implemented to minimize and mitigate impacts to the species to the maximum extent possible, and the means by which these efforts will be funded.

Impact Fees – See *Development Fees*

Infrastructure – A general term for public and quasi-public utilities and facilities such as roads, bridges, sewer plants, water lines, power lines, fire stations, etc.

Joint Land Use Study (JLUS) – The Joint Land Use Study is a collaborative land use planning effort involving a military installation and adjacent local governments. The study evaluates the planning rationale necessary to support and encourage compatible land use development surrounding the installation. Its purpose is to provide support to sustain and provide flexibility to military missions on the installation while guiding the long-term land use needs of the neighboring counties and communities.

Joint Planning Area (JPA) – Areas designated as Urban Growth Areas assigned to a city or town for future urban development but located in the unincorporated county where a coordinated planning process between the cities, towns and the County will be conducted.

Memorandum of Understanding (MOU) – A Memorandum of Understanding is a document describing a bilateral or multilateral agreement between parties. It expresses a convergence of will between the parties, indicating an intended common line of action. MOUs are generally recognized as binding, even if no legal claim could be based on the rights and obligations laid down in them.

Military Construction (MILCON) – Appropriations fund major projects such as bases, schools, missile storage facilities, maintenance facilities, medical/dental clinics, libraries, and military family housing.

Military Influence Area (MIA) – A Military Influence Area is an official geographic planning or regulatory area where military operations impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. (These areas are also referred to as a Region of Military Influence (RMI), Military Influence Planning District (MIPD), Military Influence Overlay District (MIOD), Military Influence Disclosure District (MIDD), Airfield Influence Planning District (AIPD), and Areas of Critical State Concern (ACSC)).

Military Influence Overlay District (MIOD) – A designated contiguous overlay-zoning district that may conform to the perimeter boundaries of an MIPD. The zoning addresses compatible uses related to hazards, safety, and noise issues.

Military Operating Area (MOA) – An MOA is airspace established to segregate certain non-hazardous flight activities from Instrument Flight Rules (IFR) traffic and to identify Visual Flight Rules (VFR) traffic. Within these areas, the military conducts flight activities, such as acrobatic or abrupt flight maneuvers, intercepts, air combat maneuvering missions, and aerial refueling. These areas are used to maintain military readiness in the air and to train student pilots.

MOAs are three dimensional areas. In addition to the mapped boundaries, MOAs have a defined floor (minimum altitude) and ceiling (maximum altitude). These altitudes can range from the surface up to the maximum ceiling of 18,000 feet above mean sea level (MSL). MOAs can be "stacked" vertically, as illustrated in the figure. On sectional charts, IFR enroute charts, and terminal area charts, these are identified in magenta lettering that states a specific name followed by the letters "MOA".

Military Training Route (MTR) – An airspace of defined dimensions established for the conduct of military aircraft training flights. MTRs are similar to complex systems of interrelated and interdependent highways in the sky that connect military installations and training ranges. They are used by the DOD to conduct low-altitude navigation and tactical training at airspeeds in excess of 250 knots and at altitudes as low as 200 feet above MSL. These low-level, high-speed routes allow pilots to develop the skills necessary to avoid detection by enemy radar.

National Environmental Policy Act (NEPA) – The United States' basic national charter for protection of the environment, which establishes policy, sets goals, and provides means for carrying out the policy.

Noise Contours – Continuous lines of equal noise level usually drawn around a noise source. The lines are generally drawn in 5-decibel increments so that they resemble elevation contours found in topographic maps except that they represent contours of equal noise level. Noise contours are commonly used in depicting the noise exposure around airports, highways, and industrial plants.

Overlay Zone – A zone which is superimposed upon other zoning. Overlay zones are used in areas which need special protection (as in a historic preservation district) or have special problems (such as steep slopes or flooding). Development of land subject to an overlay must comply with the regulations of both zones.

Planned Unit Development (PUD) - Land use zoning which allows the adoption of a set of development standards that are specific to a particular project. PUD zones usually do not contain detailed development standards; those are established during the process of considering proposals and adopted by ordinance upon project approval.

REALTOR® – The term REALTOR® identifies a licensed professional in real estate who is a member of the National Association of REALTORS®. Not all licensed real estate brokers and salespersons are members of the National Association, and only those who are can identify themselves as REALTORS®.

Restricted Areas (RA) – Restricted Areas are an important asset to the DOD because they allow for the use of weapons for training purposes. These areas are necessary for ground weapons and artillery firing, aerial gunnery, live and inert practice bomb dropping, and guided missile testing. Military Restricted Airspace ensures the combat readiness of aviation and ground combat units while separating these activities from the public and general aviation users. . These areas are identified by the letter "R" followed by a number on sectional charts, IFR enroute charts, and terminal area charts. The floor and ceiling altitudes, operating hours, and controlling agency can be found in the sectional chart legend.

Sound Attenuation – Sound attenuation refers to special construction practices designed to lower the amount of noise that penetrates the windows, doors, and walls of a building.

Special Use Airspace (SUA) – Airspace wherein activities must be confined because of their nature or wherein limitations are imposed upon aircraft operations that are not a part of those activities, or both. Except for controlled firing areas, special use airspace areas are depicted on aeronautical charts.

Subdivision Ordinance – An ordinance used by local governments that sets forth the regulations that guide site development standards such as road and grading requirements, utility provision, etc.

Urban Growth Areas (UGAs) – Urban growth areas are areas designated by a county, with input from towns and cities, where urban development is to occur. The UGA is one of the major tools provided by the Washington State Growth Management Act (GMA) for deciding where urban development should be encouraged and where the limits to that development should end. UGAs are areas where growth and higher densities are expected and supported by urban services. Each Washington State county that is required or chooses to plan under RCW 36.70A.040 designates an urban growth area or areas within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature. As defined in RCW 36.70A.030(18).

Zoning – Local codes regulating the use and development of property. The zoning ordinance divides the city or county into land use districts or "zones", illustrated on zoning maps, and specifies the allowable uses within each zone. It establishes development standards such as minimum lot size, maximum structure height, building setbacks, and yard size.

1 Introduction

Military installations are critical to local economies, generating thousands of jobs and millions of dollars in economic activity and tax revenue annually. In past instances, incompatible development has been a factor in the curtailment of training operations and restructuring of mission critical components to other installations. To protect the missions of military installations and the health of the economies and industries that rely on them, encroachment must be addressed through collaboration and joint planning between installations and local communities. This study attempts to mitigate future issues and improve coordination between Spokane County, local communities, and Fairchild Air Force Base (AFB).

Located adjacent to the City of Spokane, the region surrounding Fairchild AFB is expected to experience economic and population growth in the future. As development moves closer to the base, a coordinated effort is needed to ensure that the growth which occurs in the surrounding areas allows the installation to maintain its role in the nation's defense while concurrently remaining a vital member of the local community and a major contributor to the local economy.

1.1 Fairchild AFB – Strategic Importance

Developed in 1942, the site for Fairchild AFB was chosen for its strategic position within the northwest United State (US). Located 300 miles from the Pacific coast and protected by the Cascades Mountain range, the installation is well positioned to provide support for national defense while remaining protected against attacks by a natural barrier. Fairchild AFB has played many roles in the defense of the US throughout its distinguished history. Originally founded as a repair depot for damaged aircraft in World War II, the installation was later transferred to the Strategic Air Command. Dubbed the "tanker hub of the Northwest," the 92d Air Refueling Wing (ARW) operating out of Fairchild AFB is capable of supporting US and allied forces around the world. Missions supported by the 92d ARW have included special airlift missions, combat operations, and humanitarian relief missions. The installation was also an integral and necessary component during the 1990s in conflicts with Iraq including Operation Desert Storm. Figure 1-1 illustrates the regional setting of the Joint Land Use Study (JLUS).

Fairchild AFB –Local Importance

Fairchild AFB is integral to the overall mission of the US Air Force and is also extremely important to the Spokane County economy, security, and social fabric of the Spokane region and the State of Washington. According to the base, Fairchild has indirectly created approximately 2,000 jobs, and in Fiscal Year (FY) 2007 had a total economic impact to the community of over $420 million. The total economic impact is summarized as follows:

- Gross Payroll of Personnel Employed – $215,639,434
- Total Annual Expenditures – $140,436,016
- Estimated Annual Value of Jobs Created – $65,203,226

1.2 Fairchild and Local Communities – Working Together

It is very important for military installations to work closely and interact as good stewards to their local communities. Although there is on-base housing for military personnel, the Department of Defense's (DOD) recent housing privatization initiatives will ultimately result in over 400 fewer housing units being provided on the installation. In FY 2007, 78 percent of the military personnel stationed at Fairchild AFB and their families resided off-base in nearby cities such as Airway Heights, Medical Lake, Spokane, and Spokane Valley. With the reduction of available on base housing, the percentage of military personnel and families residing in local communities will increase. Local jurisdictions and agencies provide a range of services for military personnel, from public schools, libraries, and shopping to police and fire protection. Fairchild AFB hosts and encourages a variety of volunteer and interactive activities throughout the year as a way of reaching out to local communities. Military personnel also respond when critical services are needed in adjacent communities.

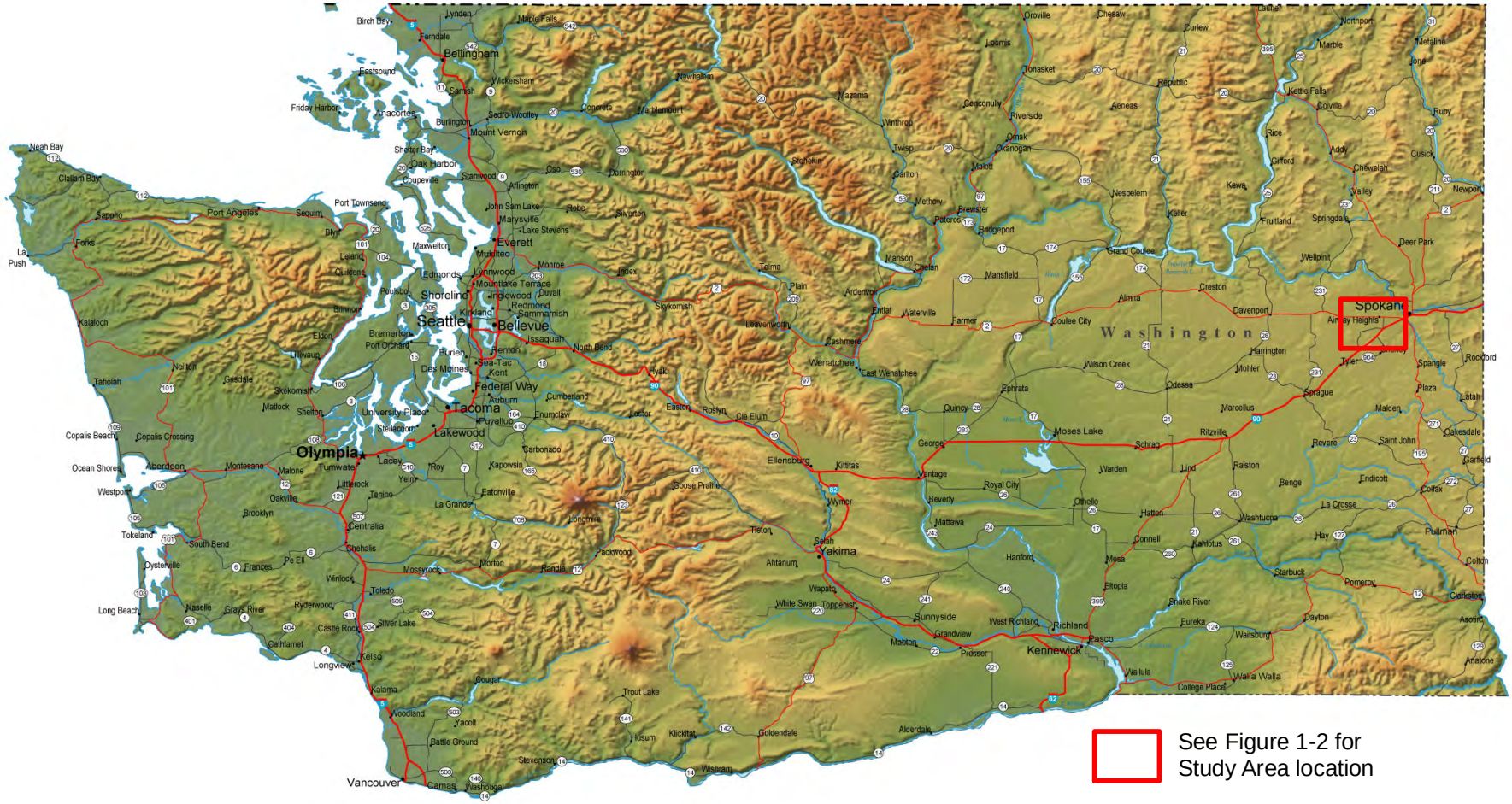


Fig 01-01 Regional Location 2009 04 22 RRR

Figure 1-1
Regional Location

1.3 A Growing Region

Spokane County has experienced steady population growth mostly due to consistent growth in its diverse industrial and commercial economic base. The population of Spokane County has grown 65 percent between 1960 and 2008. Extensive residential, commercial, and industrial uses have been developing near Fairchild AFB over the past 15 years as a result of a shift in urban density population and economic activity to semi-rural areas. Population growth of the Spokane area is projected to continue with the area's robust diverse economy attracting an estimated 131,000 additional residents by 2030. *(Source: www.ofm.wa.gov)*

1.4 Why Prepare a Joint Land Use Study?

In addition to the many positive interactions between local communities and Fairchild AFB, the activities or actions of one entity can also negatively impact another, which can result in conflicts. As communities develop and expand in response to growth and market demands, land use decisions can push urban development closer to military installations and operational areas. The result can include land use and other compatibility issues, often referred to as encroachment, which can have negative impacts on community safety, economic development, and sustainability of military activities and readiness. This threat to military readiness activities is currently one of the military's greatest concerns.

Collaboration and joint planning between the military and local communities should occur to protect the military mission and the health of the economies and industries in surrounding communities before land use compatibility becomes an issue. Recognizing the symbiotic relationship between installations and communities within their vicinity, the DOD Office of Economic Adjustment (OEA) implemented the Joint Land Use Study (JLUS) program in an effort to mitigate land and air conflicts and to build better relationships between all parties. This program endeavors to preserve the sustainability of local communities while protecting current and future operational missions at Fairchild AFB. The balancing of community and military needs and desires provides opportunities for growth in the existing mutually beneficial relationship for all entities.

By including Fairchild AFB and other US Air Force stakeholders in the JLUS process, Spokane County is complying with the State Growth Management Act, Revised Code of Washington (RCW) 36.70A.530, which requires that counties and cities with federal military installations consult with commanders of those installations when amending comprehensive plans and development regulations.

1.5 What is a Joint Land Use Study?

A JLUS is a collaborative planning effort involving local communities, federal officials, residents, business owners, and the military to identify compatible land uses and growth management guidelines near active military installations, such as Fairchild AFB. The program establishes a mechanism for Fairchild AFB and local jurisdictions to act as a team to prevent incompatible land uses. A JLUS is implemented, essentially, to protect the residents' quality of life, the property owners' rights, and the current and future mission of the base. Although primarily funded by the DOD OEA, a JLUS is produced by and for local communities. The primary objectives of the OEA JLUS program are as follows:

Community

- Protect the health, safety, and welfare of residents and maintain quality of life
- Manage development in the vicinity of military installations that would interfere with the continued operations of these facilities
- Provide for sustainable growth in an economically, environmentally, and socially sustainable manner
- Maintain the economic vitality of the community

Military

- Promote the health, safety, and welfare of the military and civilian personnel living and working at or near the military installation
- Ensure the ability of the installation to achieve its mission, maintain military readiness, and support national defense objectives
- Preserve the ability of the installation to expand or adapt its mission to changing conditions

1.6 Fairchild JLUS Study Area

A study area was defined to help identify the area in which information was collected during the development of this JLUS. As shown on Figures 1-2 and 1-3, the study area is an irregularly shaped oval encompassing approximately 78 square miles (49,723 acres) in the West Plains area west of the City of Spokane. Originally established to mirror the 1995 Fairchild AFB AICUZ 65 dB Ldn contour, the study area was refined throughout the course of the study.

1.7 JLUS Goals

The goal of the Fairchild JLUS is to protect the viability of current and future missions at Fairchild AFB while at the same time accommodating growth, sustaining the economic health of the region, and protecting the public health and safety. To help meet this goal, three primary guiding principles were identified:

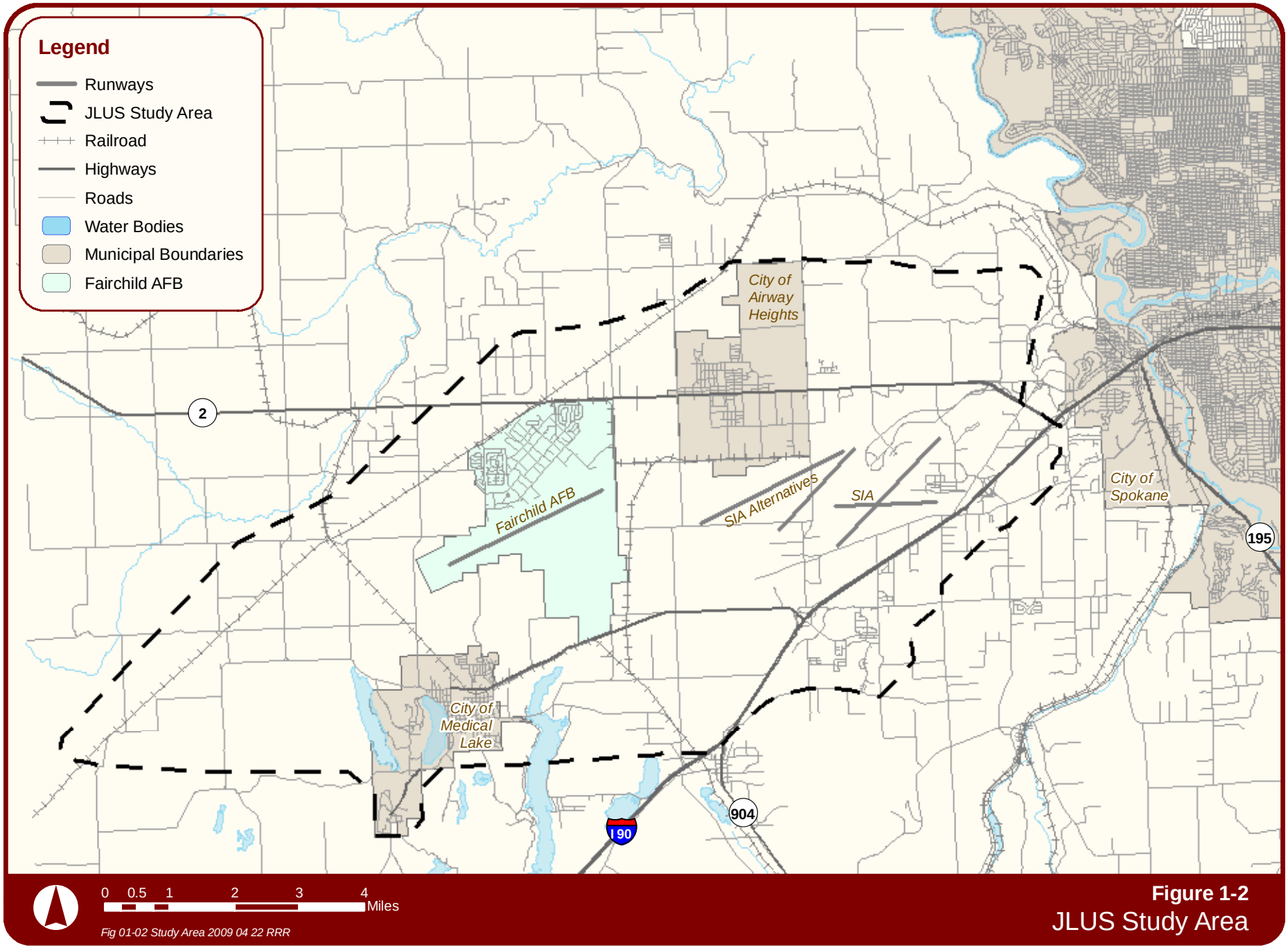


Figure 1-2
JLUS Study Area

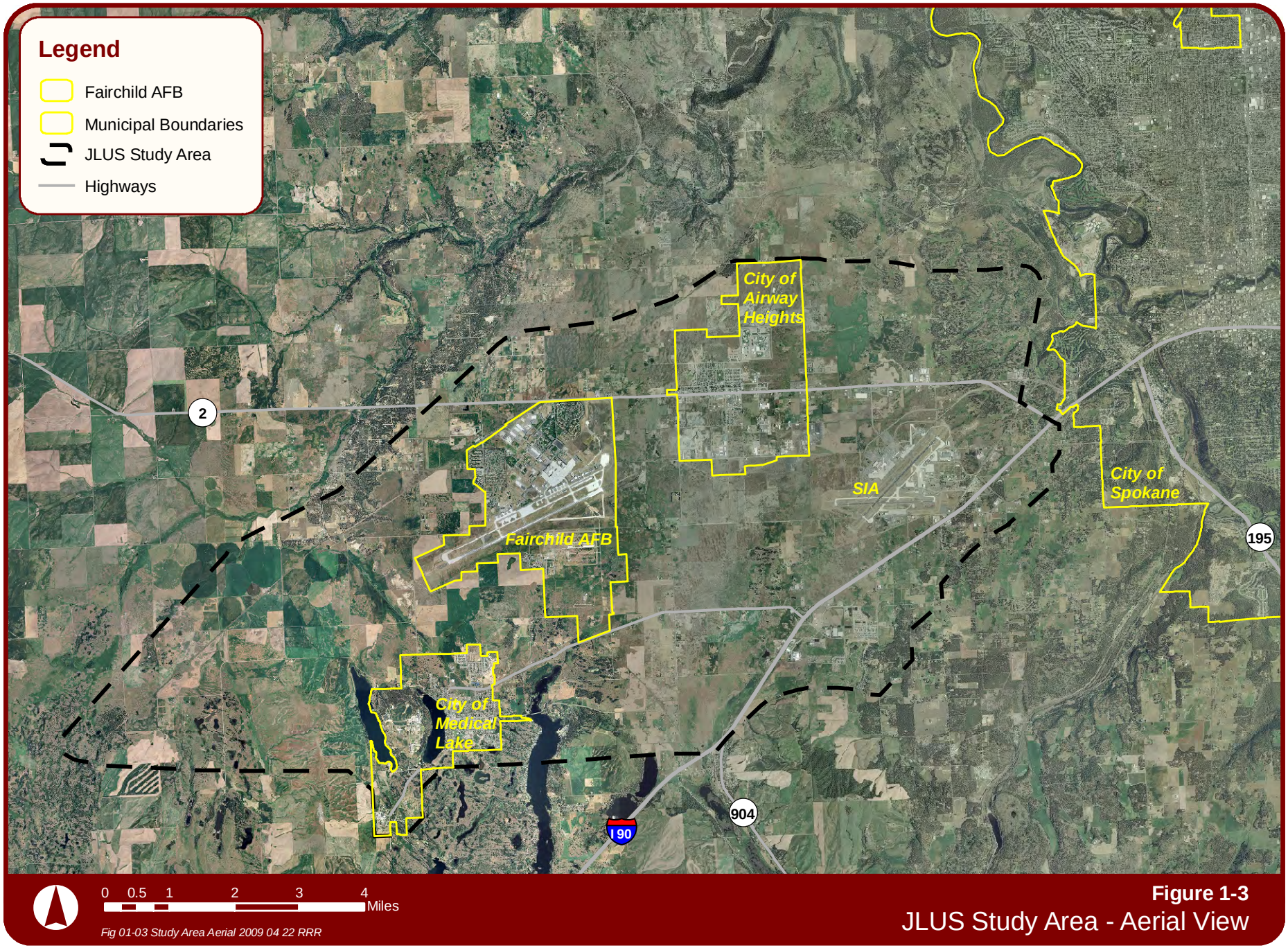


Figure 1-3
JLUS Study Area - Aerial View

- **Understanding**. Convene community and Fairchild AFB representatives to study the issues in an open forum, taking into consideration both community and military viewpoints and needs. This includes public outreach and input.
- **Collaboration**. Encourage cooperative land use and resource planning between Fairchild AFB and surrounding communities so that future community growth and development is compatible with the training and operational missions on the installation while at the same time seeking ways to reduce operational impacts on adjacent lands.
- **Actions**. Provide a set of tools, activities, and procedures from which local jurisdictions, agencies, and the installation can select and then use to implement the recommendations developed during the JLUS process. The actions proposed include both operational measures to mitigate installation impacts and local government and agency approaches to reduce impacts on Fairchild AFB operations.

1.8 Public Outreach

As highlighted in the objectives stated above, the JLUS process was designed to create a community-based plan that builds consensus and obtains support from varied interests, including residents, property owners, local elected officials, business interests, the military and state and federal agency representatives. To achieve the JLUS goal and objectives, the Fairchild JLUS process incorporated a public outreach program that included a variety of opportunities for interested parties to contribute to the development of this study.

Stakeholders

Identifying stakeholders is a key component to any planning process. Informing or involving them early in the project is instrumental in the identification of stakeholder concerns and the development of plans to address these concerns. Stakeholders include individuals, groups, organizations, and political entities interested in, affected by, or affecting the outcome of a decision or project. For the Fairchild JLUS, identified stakeholders included, but were not limited to:

- County and city elected officials, representatives, and staff
- Local, regional, and state planning regulatory and land management agencies
- DOD officials (including OEA representatives) and military installation personnel
- Environmental advocacy organizations
- Nongovernmental organizations (NGOs)
- Public landowners and other interested persons
- Native American tribes
- Other special interest groups

Policy and Technical Committees

The development of the Fairchild JLUS was guided by two groups, the Joint Land Use Study Policy Steering Committee (JPSC) and the Technical Advisory Group (TAG). The JPSC was established at the beginning of the project to provide guidance and input on policy issues, provide overall direction to the process, and review study findings. The JPSC consisted of representatives designated by Spokane County and cities within the study area and adjacent areas, Fairchild AFB, and representatives from other stakeholder groups.

The TAG was established to provide technical expertise to the JPSC and the project team (Matrix Design Group, Inc.). The TAG consisted of county and city planners, military planners and technical specialists, and state agency and tribal representatives. This group identified issues to be addressed, provided feedback on report development, and evaluated implementation options for the JPSC.

Figure 1-4 summarizes the participants and responsibilities of the JPSC, TAG, and the JLUS sponsors.

The JPSC and TAG served as liaisons to their respective stakeholder groups. JPSC and TAG members were charged with conveying committee activities and information to their organizations or constituencies and, subsequently, relaying their organization's comments and suggestions back to both committees for consideration. Meetings were held throughout the process to ensure the JLUS identified and appropriately addressed local issues. The JPSC held two meetings before the TAG was formed; therefore, their meeting numbers vary by two. Objectives accomplished at each meeting are highlighted as follows:

Committee Meetings

- **Meeting #1** – This meeting involved discussion of the objectives and scope of a JLUS along with the role of the JPSC during the course of the study.
- **Meeting #2** – During this meeting, the JPSC reviewed the study area, discussed topics to be considered by the study, and presented a status of the consultant selection process.
- **Meeting #3** – This meeting was conducted to educate committee members on military and community activities, review the JLUS process, and identify compatibility issues based on a defined set of criteria.
- **Meeting #4** – This meeting reviewed the identified compatibility issues, prioritized issues, and discussed initial strategies and tools for addressing identified issues.
- **Meeting #5** – This meeting refined the draft strategies and tools developed to address compatibility issues.
- **Meeting #6** – This meeting presented Sections 1, 2, and 4 of the draft JLUS report for committee review.
- **Meeting #7 –** This meeting focused on review of Sections 3 and 5 of the draft JLUS report.
- **Meeting #8** – The final meeting with the JPSC reviewed comments received from the public and committee members concerning the draft JLUS. Following direction received at this meeting, the final JLUS was prepared and published.

Joint Land Use Policy Steering Committee

Meeting #1
December 11, 2007
Meeting #2
January 31, 2008
Meeting #3
May 1, 2008
Meeting #4
July 31, 2008
Meeting #5
December 10, 2008
Meeting #6
February 19, 2009
Meeting #7
June 11, 2009
Meeting #8
September 17, 2009

Technical Advisory Group

Meeting #1
May 1, 2008
Meeting #2
July 30, 2008
Meeting #3
December 4, 2008
Meeting #4
February 19, 2009
Meeting #5
May 28, 2009
Meeting #6
June 8, 2009
Meeting #7
September 1, 2009

Figure 1-4. Committee Participants and Responsibilities

Sponsors

Participants

- OEA
- Spokane County

Responsibilities

- Coordination
- Accountability
- Grant Management
- Financial Contribution

Joint Land Use Policy Steering Committee (JPSC)

Participants

- City of Airway Heights
- City of Medical Lake
- City of Spokane
- Fairchild AFB
- Fire District #3
- Fire District #10
- Forward Fairchild
- Greater Spokane Incorporated
- Kalispel Tribe of Indians
- Neighborhood Alliance of Spokane County
- Spokane Airports Tenants Association
- Spokane Association of REALTORS®
- Spokane County
- Spokane Homebuilders Association
- Spokane International Airport
- Spokane Tribe of Indians
- Thorpe-Winsor Neighborhood
- Washington Department of Transportation

Responsibilities

- Policy Direction
- Study Oversight
- Monitoring
- Report Adoption

Technical Advisory Group (TAG)

Participants

- City of Airway Heights
- City of Medical Lake
- City of Spokane
- Fairchild AFB
- Kalispel Tribe of Indians
- Spokane County
- Washington Department of Transportation – Aviation Division Spokane International Airport
- Spokane Tribe of Indians
- Spokane County Boundary Review Board

Responsibilities

- Technical Issues
- Alternatives
- Report Development
- Recommendations

TAG Meetings

- **Meeting #1** – Discussed purpose and scope of the JLUS and land use compatibility issues. Conducted jointly with the JPSC, this meeting educated committee members on the JLUS process and identified initial compatibility concerns.
- **Meeting #2** – During this meeting, the committee reviewed the compatibility issues identified at the previous meeting and prioritized these issues based on an established set of criteria.
- **Meeting #3** – During this meeting, the committee discussed initial compatibility tools and reviewed the noise analysis prepared as a component to the JLUS process.
- **Meeting #4** – The meeting presented Sections 1, 2, and 4 of the draft JLUS report for committee review.
- **Meeting #5 –** The meeting focused on review of Sections 3 and 5 of the draft JLUS report.
- **Meeting #6** – The TAG continued discussion relative to Section 5.
- **Meeting #7** – The TAG reviewed comments received from the public and committee members concerning the draft JLUS. Following direction received at this meeting, the final JLUS was prepared and published.

Public Forums

In addition to the JPSC and TAG meetings, a series of public forums were held throughout the development of the study. These forums provided an opportunity for the exchange of information with the greater community, assisted in identifying the issues to be addressed in the JLUS, and provided input on the strategies proposed. Each forum included a traditional presentation and oral comment session preceded by an informal, open house. These meetings included facilitated exercises providing a "hands on," interactive opportunity for stakeholders to participate in the development of the plan.

- **Public Forum #1** **July 30, 2008**
  This forum introduced the JLUS program and process to the public, defined the project, presented the initial land use analysis, and collected information from the public on encroachment concerns. During this meeting, residents were asked to participate in surveys and discussions used to identify compatibility issues relevant to Fairchild AFB and the surrounding community.
- **Public Forum #2** **August 24, 2009**
  This forum provided an overview of the proposed draft Fairchild JLUS, including a discussion of the proposed compatibility strategies. Input from this forum, as well as other public comments during the review period for the draft, were discussed by the JLUS TAG and JPSC at their September 2009 meetings.

Public Outreach Materials

Early in the JLUS process, a Fact Sheet was developed describing the JLUS program, objectives, methods for the public to provide input into the process, the Fairchild JLUS proposed study area, results of a noise study, study area profile and trends analysis, and an initial assessment of the existing plans and programs applicable to this JLUS. This Fact Sheet was made available at all meetings for all interested members of the public.

Augmenting the Fact Sheet, a project website was developed and maintained that provided stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire project to ensure information was easily accessible. Information contained on the website included: program points of contact, schedules, documents, maps, public meeting information, downloadable comment forms, and other links and contacts facilitating public feedback.

www.landusecompatibility.com/fairchild

In addition, extensive information on the project was maintained on the Spokane County website. The final Joint Land Use Study may be viewed at the following address:

www.spokanecounty.org/bp/content.aspx?c=2298

1.9 JLUS Implementation

Once completed, it is important to note that this JLUS is not an adopted plan. It is a strategy guide that will be used by local jurisdictions, Fairchild AFB, state and federal agencies, and other identified stakeholders in the study area to guide their future compatibility efforts. For instance, local jurisdictions will use the strategies in this JLUS to guide future general plan updates and land development code decisions, as well as assist in the review of development proposals. Fairchild AFB will use the JLUS to guide their interaction with local jurisdictions on future projects, as well as manage internal planning processes with a compatibility based approach. It is through the future actions of the stakeholders involved that the JLUS strategies will become a reality.

The key to implementation of the strategies presented in this JLUS is the establishment of the JLUS Coordinating Committee that oversees the implementation of the JLUS after it is complete. Through this committee, local jurisdictions, Fairchild AFB, and other interested parties will be able to work together to establish procedures, recommend or refine specific actions for member agencies, and make adjustments to strategies over time to ensure the JLUS remains relevant to the planning issues of the area.

1.10 JLUS Organization

The following is a brief overview of the organization of the Fairchild JLUS, including the contents of each section and materials included in the appendices.

Section 1, Introduction. Section 1 provides an introduction and context for the Fairchild JLUS. This section describes the goals and objectives used to guide development of the JLUS, who was involved in developing the JLUS, public outreach methods, and the organization of the document.

Section 2, Study Area Profile. In developing a JLUS, a comprehensive understanding of the installation and local jurisdictions within the study area is necessary. For the Fairchild JLUS, this section provides: an overview of the installation's history, a description of the primary activity areas on the base, a look at the current mission and military units located at the base, military family housing assets, the economic impact of the base on the region, and a discussion of future missions. This is followed by an overview of the region's growth potential and a profile of the county and cities within the study area, including population, housing, and employment statistics.

Section 3, Compatibility Factors. Compatibility, in relationship to military readiness, can be defined as the balance or compromise between long-term community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully. In order to develop potential solutions, it is critical to understand the nature of existing and potential compatibility factors in the study area. In this section, the JLUS presents the compatibility factors identified for the Fairchild JLUS. These factors were identified based on input from the JPSC and TAG, members of the public, existing plans and technical reports, and evaluation by the project team.

Section 4, Existing Plans and Programs. This section provides an overview of currently available and relevant plans, programs, and studies used to address compatibility issues in the study area. This includes technical studies, such as the current Fairchild AFB Air Installation Compatible Use Zone (AICUZ) Study, as well as local general plans and zoning ordinances.

Section 5, Recommendations. This section of the JLUS lays out a specific course of action that has been developed cooperatively with representatives from local jurisdictions, Fairchild AFB, state and federal agencies, local organizations, and interested individuals and landowners. The result of a collaborative planning process, the recommendations in this section represent a true consensus plan: a realistic, coordinated approach to compatibility planning developed with the support of the stakeholders involved.

Appendices. The main JLUS document is supported by the following key reference documents. These documents are available electronically from Spokane County.

A. Fairchild JLUS Fact Sheet

B. Fairchild Compatibility Factors Brochure

C. Fairchild Compatibility Tools Brochure

D. Fairchild AICUZ Study (2007), Volume I

E. Sample Avigation Easement

F. Sample Letter of Understanding

G. FAA Part 77

H. Spokane County Overlay Zones

I. WSDOT Aviation Land Use Compatibility Program Information

J. Airport Land Use Compatibility Program Evaluation

K. Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations

L. Noise Technical Report for the Fairchild AFB Joint Land Use Study

2

Study Area Profile

This chapter provides important information about the military and civilian entities within the Fairchild Joint Land Use Study (JLUS) study area. The following sections present an overview of the history and current operations at Fairchild Air Force Base (AFB). Additionally, they provide profiles and analyses of development trends and growth potential in the jurisdictions within the Fairchild JLUS study area.

Describing the various activities performed on the military installation provides valuable insight into the importance of Fairchild AFB as a national strategic asset. This information will enable stakeholders to make informed decisions about the future development and economic growth of their communities, which ultimately impacts the continued existence and future of Fairchild AFB.

2.1 FAIRCHILD AFB

History

Fairchild AFB traces its roots to January 1942, when Spokane businesses and private citizens presented a donation of more than $125,000 to the War Department to purchase the initial 1,400 acres of land for the development of a strategic air facility. That same year, the government designated $14 million to purchase additional land and begin construction of a new Spokane Army Air Depot.

From 1942 to 1946, the base served as a repair depot for damaged aircraft returning from the Pacific Theater. In the summer of 1946, Fairchild AFB was transferred to the Strategic Air Command (SAC) and assigned to the 15th Air Force. Beginning in the summer of 1947, the 92d and 98th Bomb Groups arrived. Both of the units flew the B-29 Superfortress, which was the most advanced bomber of that day. In January 1948, the base received the second of its three official names: Spokane AFB.

The installation's two bomber groups were deployed to Japan and Guam during the Korean War. In November 1950, the base took its current name in memory of Air Force Vice Chief of Staff, General Muir S. Fairchild. A native of Bellingham, Washington, General Fairchild entered service as a sergeant with the Washington National Guard in June 1916, and died while on duty in the Pentagon in March 1950. The formal dedication ceremony was held on July 20, 1951 to coincide with the arrival of the wing's first B-36 Peacemaker bomber.

Prior to 1959, Fairchild AFB transitioned from the B-36 Peacemaker to the B-52 Stratofortress and then to the KC-135 Stratotanker. The installation also played host to the Atlas intercontinental ballistic missile; however, the missiles were removed in 1965.

In 1971, the 336th Combat Crew Training Group at Fairchild AFB assumed control over all Air Force survival schools. Today, the 336th Training Group continues to perform this mission as part of the Air Education and Training Command (AETC).

KC-135s and B-52s stationed at Fairchild AFB provided air refueling and bomber support for operations in Southeast Asia in the mid-1960s. By 1976, the 141st Fighter Interceptor Group of the Washington Air National Guard (ANG) was converted to the 141st Air Refueling Wing (141 ARW) and moved to Fairchild AFB. At that time, eight KC-135E aircraft transferred to the new 141 ARW. Today, the 141 ARW continues its air mobility mission, flying the KC-135.

Fairchild refueling equipment and personnel participated in the 1990-1991 Desert Shield and Desert Storm operations supporting both United States (US) and coalition aircraft. Shortly after their return in September 1991, the 92d Bombardment Wing (Heavy) was re-designated the 92d Wing, emphasizing a dual bombing and refueling role. The following year, the wing became part of the Air Combat Command (ACC) and was re-titled the 92d Bomb Wing. Fairchild's B-52 bomber fleet permanently transferred to another base from December 1993 through the spring of 1994.

With the departure of its bombers, the 92d Bomb Wing was re-designated the 92d Air Refueling Wing (92 ARW) in mid-1994, and Fairchild AFB was transferred from the ACC to the Air Mobility Command (AMC) in a ceremony marking the creation of the largest air refueling wing in the Air Force. Dubbed as the new "tanker hub of the Northwest," the wing

is capable of maintaining an air bridge across the nation and the world in support of US and Allied Forces.

Since 1994, the 92 ARW has been involved in virtually every contingency mission around the world. Fairchild tankers have been force extenders during combat operations or humanitarian relief missions, enabling US and Allied aircraft to successfully complete their missions. In addition, 92 ARW KC-135s have routinely supported special airlift missions in response to world events or international treaty compliance requirements.

In October 2003, the 92 ARW was reassigned from Fifteenth Air Force to Eighteenth Air Force, which was headquartered at Scott AFB, Illinois. Today, the installation remains a strategic air facility for the US military providing a variety of missions. The primary units at the installation, along with their respective missions, are described below.

Units at Fairchild AFB

Fairchild AFB is home to a wide variety of units and missions. Most prominent is its air refueling mission performed by two wings (the 92 ARW [active duty] and the 141 ARW [ANG]). The 92 ARW is the host unit at Fairchild AFB, responsible for the management and operation of the installation. Other key units at the installation include the Air Force Survival, Evasion, Resistance and Escape (SERE) School, a rescue flight, and the Joint Personnel Recovery Agency.

92D AIR REFUELING WING

The 92d Air Refueling Wing is composed of more than 3,200 active duty military personnel in four groups located at Fairchild AFB. The wing's vision statement is "Professional Expeditionary Airmen . . . Serving America; Teaming for Excellence," and its mission is to "support America's War Fighter with Global Reach & Agile Combat Support." (*Source: http://public.fairchild.amc.af.mil/and Fairchild AFB FY07 Economic Impact Statement*)

141ST AIR REFUELING WING (WASHINGTON AIR NATIONAL GUARD)

The 141st Air Refueling Wing (ANG) is a component of the Military Department of the State of Washington. In its federal role, the 141 ARW provides worldwide air refueling to US and Allied aircraft, counter-drug surveillance and interdiction, and combat support across the spectrum of conflict. In its state role, the wing mobilizes under the authority of the governor of Washington to protect life and property during state emergencies and natural disasters. The unit shares the aircraft assigned to the 92 ARW. (*Source: http://public.fairchild.amc.af.mil/ and Lt Tristan Hinderliter, Deputy PAO, 92 ARW, 27 August 2008*)

336TH TRAINING GROUP

The 336th Training Group (TG) operates the US Air Force Survival School, which provides Survival, Evasion, Resistance, and Escape training primarily to aircrew members.

Instruction concentrates on the principles, techniques, and skills necessary to survive in any environment and return with honor. Instructors assigned to the Survival School teach seven different courses to approximately 6,500 students annually. Five of the seven courses are taught at Fairchild, with the other two courses conducted at Naval Air Station Pensacola, Florida, and Eielson AFB, Alaska. *(Source: http://public.fairchild.amc.af.mil/)*

JOINT PERSONNEL RECOVERY AGENCY

The Joint Personnel Recovery Agency's Personnel Recovery Academy serves under the Joint Forces Command. It provides Code of Conduct/Survival, Evasion, Resistance and Escape training and subject matter expertise for the Department of Defense (DOD), including all related training in the US Government, enabling isolated persons to return with honor. The Personnel Recovery Academy has a long history of support to the Personnel Recovery mission.

(Source: http://public.fairchild.amc.af.mil/)

Current Mission Operations

Aircraft based at the installation include the KC-135 and UH-1. According to the Fairchild AFB Air Installation Compatible Use Zone (AICUZ) study released in October 2007, the average number of daily operations (defined as one takeoff, one landing, or half of a closed pattern) for these aircraft is as follows:

KC-135	184
UH-1	11

Source: Fairchild AFB AICUZ Study, October 2007

The operations for the KC-135 include those conducted by both the 92 ARW and the 141 ARW. The AICUZ study does not provide a detailed breakdown of operations between the two wings. As part of the Base Realignment and Closure (BRAC) Commission's recommendations, in 2007, the 141 ARW transferred its eight KC-135 refuelers to the 185th Air Refueling Wing (ANG) in Sioux City, Iowa. The current AICUZ study data and assessment account for the KC-135s assigned to the 141 ARW prior to the 2007 transfer.

As a result of the realignment, a noise study was conducted as a component of the JLUS planning process to assess current conditions and provide relevant implementation strategies to today's operational environment. Four future mission scenarios were modeled, all of which included replacement of the current KC-135 tanker aircraft with new tanker aircraft that are based on civilian passenger aircraft. In all cases these aircraft are larger and more modern than the KC-135 they would be replacing. The results of these scenarios were combined with the 20-year forecast modeling results for Spokane International Airport (SIA) to provide an overall perspective on the effect of aircraft operations on the local environs. This noise assessment addressed the maximum possible mission scenario and is discussed further in

Fairchild AFB KC-135

Section 3. Additionally, the noise study assumed a third SIA runway oriented parallel to the Fairchild AFB runway because it is closer to Fairchild; therefore, the noise potential in conjunction with Fairchild AFB operations would be higher with this alternative. The new third SIA runway is discussed in detail later in this section.

In addition to aircraft assigned to the installation, aircraft from other military installations, called transient aircraft, use the Fairchild AFB airfield for training and other operational activities. There is an average of seven daily transient aircraft operations at Fairchild AFB.

Fairchild AFB is also host to rotary wing aircraft operations from the Army and Air Force. In addition to the Air Force helicopter flights from Fairchild AFB, the Washington Army National Guard's 1st Battalion, 168th Regiment General Support Aviation Battalion (1-168 GSAB) is located at the far northeast end of the Fairchild flightline. The 1-168 GSAB provides aircraft maintenance and training support for the Washington Army National Guard, is a first-responder to state emergencies, and also performs its federal mission to support the defense of the nation.

Washington Army National Guard UH-60, 1-168 GSAB

The 1-168 GSAB has over 60 full and part-time personnel serving as mechanics, instructor pilots, administrative staff, and duty pilots. The unit also has four UH-60 Blackhawk helicopters that perform various missions including VIP transportation, tactical training, and fire fighting. The Army UH-60s average approximately 30 flying hours each month with the majority of departures to the north, west of Airway Heights. The aircraft use the Deer Park Airport, which takes them out of SIA's Class C airspace and eliminates conflicts with commercial air traffic. From the Deer Park Airport, the 1-168 GSAB's helicopters use Camp Seven Mile for low-level and other tactical training, both during daylight and at night. Camp Seven Mile Camp consists of approximately 321 acres of federally-owned land in eastern Washington along the Spokane River, approximately seven miles northwest of the City of Spokane. Upon completion of helicopter maintenance performed at Fairchild AFB, the 1-168 GSAB uses airspace approximately 10 miles south of Fairchild AFB for a maintenance test flight area to ensure the aircraft are safe and operating properly. This airspace is coordinated by the unit directly with SIA and is conducted primarily during SIA's non-peak hours. *(Source: LTC David Caporicci, 1-168 GASB Commander, 24 March 2009).*

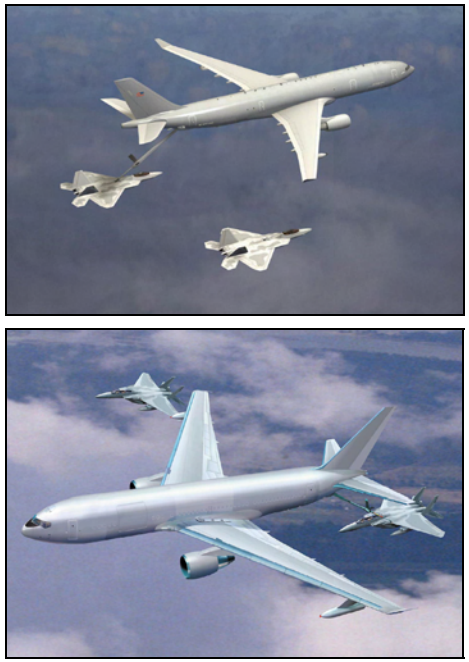
As part of the 336 TG, the 36th Rescue Flight (RQF) operates the UH-1 Huey helicopter. The primary mission of the 36 RQF is to support the USAF Survival School's training program with vector training, hoist instruction, and parachute demonstration.

36 RQF UH-1 with a jungle penetrator extraction device

Future Mission Operations

The 2005 BRAC Commission recommended the realignment of various elements of Fairchild AFB resulting in the net loss of 26 military personnel and 172 civilians. Currently geographically separated, the 256th and 242d Combat Communications Squadrons will be moved into available facilities at Fairchild AFB.

The BRAC Commission also recommended the closure/consolidation of various Washington Reserve Centers. Fairchild AFB will support the impacted Reserve units with a new consolidated Armed Forces Reserve Center (AFRC) and Organizational Maintenance Shop. The new 155,000-square foot AFRC is currently under construction on 23 acres in the northeastern portion of Fairchild AFB north of the runway. Estimated for completion in August 2009, the center is designed to have the capability to accommodate units from the Army Reserves and the Washington Army National Guard (ARNG) Armory and Organizational Maintenance Shop located at Geiger Field, otherwise known as SIA. Two Army Reserve units from the Spokane area are expected to move into the AFRC. Together, these units consist of over 620 medical, transportation, legal, maintenance, recruiting, training, and construction support personnel. Five Washington National Guard units comprised of over 280 personnel will also occupy the center. These personnel are in the specialties of chemical, intelligence, Special Forces, transportation, and recruiting. *(Source: Gerald Johnson, Chief, Asset Management Flight, Fairchild AFB, March 24, 2009; and www.safie.hq.af.mil)*



KC-X refueling variants of Airbus 330 (top) and Boeing 767 (bottom)

Other than the planned loss of limited personnel and the consolidation of small lower-level Reserve and Air National Guard units onto the installation, no other missions are currently planned to come to Fairchild AFB. However, of note is the Air Force's anticipated procurement of its next-generation aerial refueling tanker, referred to as the KC-X program. As part of that effort, Fairchild AFB is expected to receive this new aircraft. Under consideration for this role are military tanker versions of Northrup Grumman's Airbus 330 (A330) and Boeing's 767.

To ensure the safety of current and future air operations, Fairchild AFB has undertaken a runway improvement project, which is currently in the design phase. The purpose of this runway enhancement project is to upgrade the 50-year-old existing runway, which has significant deterioration and spall. These hazards pose safety concerns for pilots, aircraft, and personnel on the ground. The project will repair by replacement all existing runway pavement with new medium load pavement, paved shoulders, associated airfield lighting systems, lighting controls, and lighting vault equipment and building modifications. The load-bearing runway pavement shall be narrowed from 200 feet to 150 feet, but the runway will remain at its current length of 13,899 feet. The runway will be narrowed since the KC-135 requires less space than previous Fairchild AFB aircraft. The design phase is anticipated to be complete in July 2009. The installation will pursue funding with end-of-year funds (October 2009). Once funding is approved, runway improvements are slated to begin in first quarter 2010, with a 10-month constructions schedule.

Installation Setting

Located 12 miles west of the City of Spokane, Fairchild AFB consists of 4,223 acres and 1,260 buildings. The installation sits south of and adjacent to US Highway 2 and is three miles north of Interstate 90. SIA is located less than two miles east of the installation. The communities nearest to the base include the cities of Airway Heights to the northeast and Medical Lake to the south. *(Source: Matrix Design Group and www.globalsecurity.org)*

Figure 2-1 shows the primary features of Fairchild AFB.

Main Cantonment Area. The main cantonment area is generally located in the north central portion of the installation adjacent to US Highway 2. The area is oriented generally northeast to southwest and is anchored by family housing areas at each end.

- **Family Housing** – The installation has four family housing areas, which are located to the northeast and southwest of the main cantonment area.
- **Unaccompanied Housing** – These areas are centrally located on the base adjacent to the cantonment area and administrative areas.

Airfield. The Fairchild AFB airfield is located in the center of the base. The runway and supporting airfield facilities are oriented northeast to southwest.

Gates. The installation has four gates – Main Gate, Rambo Gate, Thorpe/Rambo Gate, and Graham Gate.

- The Main Gate serves as the primary entry point for base personnel and visitors to the base and is located south of US Highway 2 on Mitchell Drive.
- Rambo Gate is located south of US Highway 2 on Rambo Road and is the entry point for commercial vehicles.
- Thorpe/Rambo Gate is also located south of US Highway 2 on Rambo Road, south of the Rambo Gate. This gate is only used for special occasions.
- Graham Gate, located southwest of the Main Gate along Graham Road, is only used for special occasions.

Munitions Storage Area. The installation maintains a munitions storage area south of the runway along the base's southern boundary adjacent to State Highway 902. The installation's M-203 grenade launcher range and demolition/explosives ordnance range is also located in this area, south of the munitions storage area.

(Source: Fairchild AFB General Plan, April 2004, Appendix B and TSgt VanAusdal, 92 ARW/PA, 26 September 2008).

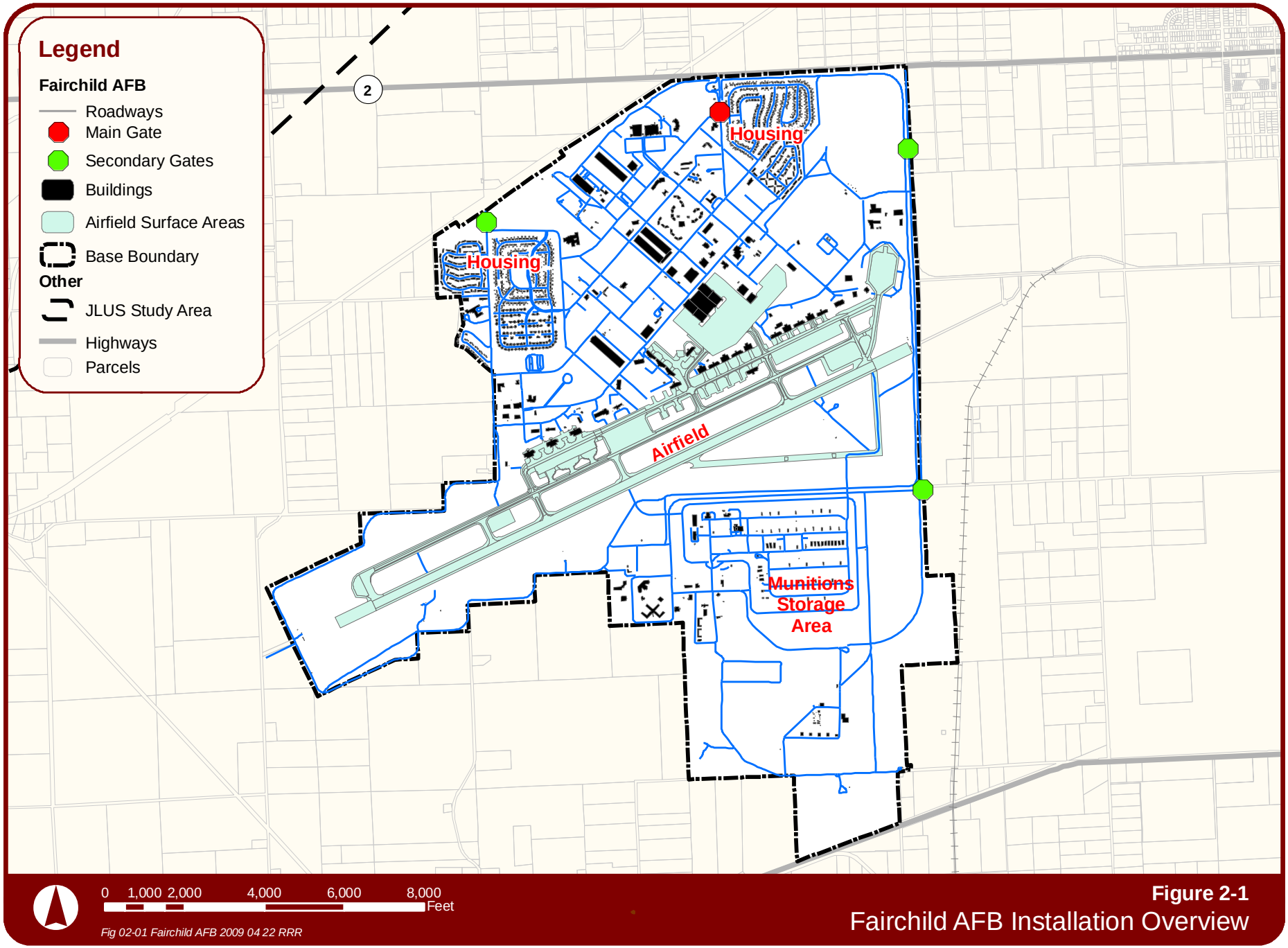


Figure 2-1
Fairchild AFB Installation Overview

Base Demographics

In Fiscal Year 2007 (FY07), the installation reported a total population (employment plus military duty dependents) of 10,138 people. Table 2-1 provides a breakdown of the direct employment figures. In addition to these personnel, Fairchild AFB services 27,220 retirees, of which 16,982 are in the immediate local area.

Family Housing

Fairchild AFB has four housing areas comprised of a total of 1,055 family housing units (see Table 2-2). All units are equipped with stove, refrigerator, and dishwasher. Military members in the pay grade of E-1 and above with accompanying family members are eligible to apply for military family housing. Priority of on-base housing assignments may be made for properly-supported medical or financial hardship reasons. *(Source: Mary Hammer, Capital Asset Management Element Chief, 92 CES/CEH, 26 September 2008 and http://apps.mhf.dod.mil)*

As of August 31, 2007, personnel desiring family housing at Fairchild AFB had to wait a minimum of 34 days to receive a housing unit. Table 2-3 shows the average wait times for the various types of housing units at the base. These wait times can be significant and illustrates the need for service members and their families to find housing in local communities during these periods.

According to the most recent Housing Requirements and Market Analysis (HRMA), Fairchild AFB has a requirement for 641 housing units, meaning they have excess stock at this time. *(Source: Commander's Direct Line: On-base Housing dated 28 February 2008 at www.fairchild.af.mil/news/)*

Table 2-1. Population Breakdown, Fairchild AFB FY07

Variable	Subtotal	Total
Appropriated Fund Military		**3,723**
Active Duty	*2,672*	
Air Force Reserve/National Guard	*1,051*	
Military Dependents		**5,179**
Active Duty Dependents	*3,409*	
Air Force Reserve/National Guard Dependents	*1,770*	
Appropriated Fund Civilians		**468**
National Security Personnel System (NSPS)	*125*	
General Schedule (GS)	*226*	
Federal Wage Board	*117*	
Non-appropriated Fund, Contract Civilians, and Private Business		**768**
Civilian NAF	*307*	
Civilian AAFES	*145*	
Contract Civilians	*300*	
Private Businesses On Base (1)	*16*	
TOTAL BASE POPULATION		**10,138**

Note: (1) Includes employees of the Armed Forces Bank and the Global Federal Credit Union.

Source: Fairchild AFB FY07 Economic Statement

Table 2-2. On-Base Military Family Housing

Housing Type	Total Units	Bedroom		
		2	3	4
NCO Capehart	**158**			
Enlisted		*62*	*96*	*0*
Galena Station	**465**			
Enlisted		*278*	*170*	*17*
Officer Capehart	**92**			
Company Grade Officer		*8*	*27*	
Enlisted		*4*	*8*	
Senior NCO			*45*	
Ft Wright Village	**340**			
Company Grade Officer		*40*	*21*	*9*
Field Grade Officer			*1*	*37*
Senior Officer				*10*
Enlisted		*60*	*28*	*104*
Senior NCO			*20*	*10*
TOTAL	**1,055**	**452**	**416**	**187**

Source: Mary Hammer, Capital Asset Management Element Chief, 92 CES/CEH,18 April 2008.

Table 2-3. Military Housing Wait Times

Housing Classification	Number of Bedrooms	Wait Time (Days)
Senior/Field Grade Officer	N/A	70
Company Grade Officer	4	80
Company Grade Officer	3	54
Company Grade Officer	2	34
Senior NCO	4	82
Senior NCO	3	158
Junior Enlisted	4	54
Junior Enlisted	3	67
Junior Enlisted	3	67
Junior Enlisted	2	38

Source: http://apps.mhf.dod.mil dated 12 February 2008.

Table 2-4 provides a breakdown of those living on-base and off-base. About 30 percent of the military personnel stationed at Fairchild AFB and their dependents reside on base, and according to the Fairchild Capital Asset Management Element Chief, the remaining personnel and families live primarily in the cities of Spokane, Airway Heights, Medical Lake, and Spokane Valley in Spokane County and in Reardan and Davenport in Lincoln County.

Table 2-4. Military Housing Status

Military Housing	Living On-Base	Living Off-Base	Total
Active Duty	808	1,864	2,672
Air Force Reserve / Air National Guard	9	1,042	1,051
Active Duty Dependents	1,842	1,567	3,409
Air Force Reserve / Air National Guard Dependents	9	1,761	1,770
TOTAL	**2,668**	**6,234**	**8,902**

Source: Fairchild AFB FY07 Economic Impact Statement

Family Housing Privatization

The Military Housing Privatization Initiative allows the Department of Defense and the Department of the Air Force to work with the private sector to upgrade the quality of family housing and to operate and maintain that housing. The family housing assets are typically leveraged with private investment to accomplish housing construction and renovation goals faster and at a lower cost than military construction.

Fairchild AFB has been selected by the Department of the Air Force for privatization of its family housing under the Air Mobility Command West Privatization Project. The project includes two other bases – Travis AFB, California, and Tinker AFB, Oklahoma. On October 31, 2007, GMH Communities Trust was selected as the highest ranked offeror for the development, management, construction, and renovation of high-quality homes and other ancillary facilities and amenities to meet the community housing needs of each installation. The project term is 50 years, which includes estimated project costs in excess of $400 million and cumulatively encompassing an estimated 2,435 end-state housing units (641 units at Fairchild). GMH Communities Trust has since sold its Military Housing Division to Balfour Beatty.

The entire inventory of Fairchild AFB family housing units was conveyed to Balfour Beatty on July 21, 2008. Within the initial period of seven years, Balfour Beatty will overhaul the existing housing stock by demolishing 282 inadequate units, renovating 500 units, and constructing 57 new units.

Source: Mary Hammer, Capital Asset Management Element Chief, 92 CES/CEH, 26 September 2008; www.gmhmilitaryhousing.com; and Ronald Horlacher, Base Community Planner, 92 CES/CECE, Fairchild AFB, 18 April 2008.

Dormitories

There are currently 10 dormitories totaling 532 rooms on Fairchild AFB, all of which are designated for enlisted personnel. Six of the dormitories have 50 rooms each. These units are configured with two bedrooms and a shared kitchenette and bathroom. The remaining four dormitories have 58 rooms each with suites having two individual bedrooms and a shared bathroom but no kitchenette. At this time, six of the 10 dormitory buildings (300 rooms) are planned for demolition; however, replacement dormitories will be constructed based on need and available funding. The current average occupancy rate for the dormitories is 72.9 percent.

Source: Ronald Horlacher, Base Community Planner, 92 CES/CECE, Fairchild AFB, 18 April 2008 and Sgt Lewis, 92 CES/CECD, Fairchild AFB, 23 April 2008.

Installation Economic Impact

Fairchild Economic Impact Statement

The total economic impact of Fairchild AFB on the surrounding region is measured in the categories of annual payroll, annual expenditures, and the value of jobs created.

- **Annual Payroll** – Payroll expenditures are payment for direct employment at the installation, such as military and civilian employees. For FY07, Fairchild AFB spent over $215 million on payroll.
- **Annual Expenditures** – Expenditures include a range of direct purchases at the installation. The major component under expenditures was nearly $40 million spent on construction.
- **Value of Jobs Created** – While the other two categories reflect direct expenses, this value represents secondary impacts in the region. That is, given payroll and expenditures, the value of additional jobs generated by this increase in the economy. For FY07, this was estimated at $65 million.

All summed, the total economic impact of the installation for FY07 was just over $421 million. The breakdown of the total economic impact by category is shown on Figure 2-2 and in Table 2-5. Further details on expenditures are shown on Figure 2-3.

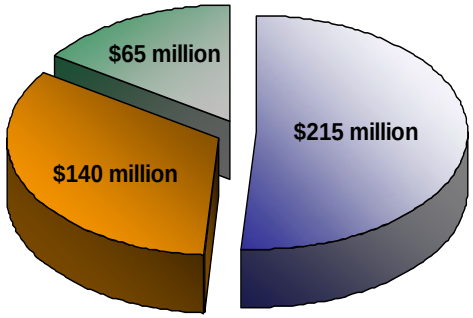


Figure 2-2. Total Annual Economic Impact, Fairchild AFB FY07

Table 2-5. Economic Impact Details, Fairchild AFB FY07

Variable	Value
Annual Payroll	$215,639,434
Military	$176,672,452
Appropriated Fund Civilian	$30,001,973
Non-Appropriated Civilian and Private Business	$8,965,008
Annual Expenditures (1)	$140,436,016
Annual Dollar Value of Jobs Created (Estimated)	$65,203,226
Indirect Jobs Created (Estimated)	1,942
Average Annual Pay	$33,567
TOTAL	$421,278,676

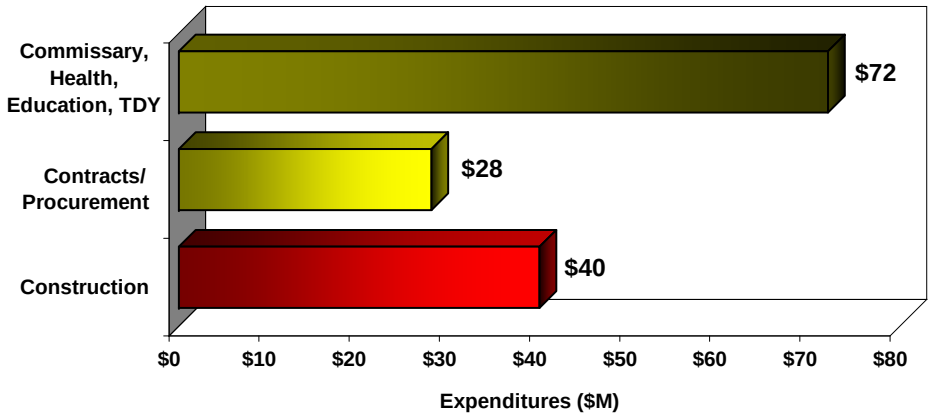


Figure 2-3. Breakdown of Expenditures, Fairchild AFB FY07

Inland Northwest Military Economic Impact

Additional analysis was conducted focusing on the economic impacts of active military, reserve, and National Guard units, including Fairchild AFB, in Spokane County. Using FY08 data, this analysis determined the overall economic impact of military activities within the region to be $697 million. Of this amount, direct expenditures (payroll, operations, procurement, and construction) accounted for approximately 50 percent of the total. As the largest military facility, Fairchild AFB accounted for $675 million or 97 percent of the total. This Fairchild AFB figure is nearly 38 percent greater than the economic impact calculated by Fairchild AFB in their FY07 Economic Impact Statement. This can be attributed, in part, to this study's inclusion of secondary economic impacts, which Fairchild does not factor into its calculations.

In addition to military operations, military retirees also provide a substantial economic benefit to the region. In 2008, $378 million was distributed to nearly 20,000 veterans in the greater Spokane metropolitan area. Using a conservative multiplier, the study estimated a secondary military impact of $208 million, for a total military retirement impact of $587 million.

It is clear that Fairchild AFB makes an important annual contribution to economic growth in Spokane County. This contribution serves to channel non-local spending into the production of goods, services, and income for the region. Fairchild AFB and other regional military assets represent a stable, consistent source of annual economic

stimulus. This spending originating from outside the region, acts to offset impacts associated with regional and domestic business cycles.

Source: Inland Northwest Military Economic Impact, Randy Barcus, January 19, 2009.

2.2 Study Area Profile

Study Area Overview

The Fairchild JLUS study area is irregularly shaped and is elongated from northeast to southwest. The study area's southwestern, northern, and northeastern boundaries mirror the 1995 Fairchild AFB AICUZ 65 dB Ldn contour, which includes the City of Airway Heights. The southern and eastern boundaries extend to include the City of Medical Lake and a majority of SIA. Although not located within the study area boundary, the City of Spokane is an important influence to land use planning within the region and the JLUS planning process. As such, information for the City of Spokane is analyzed throughout the document. Figure 1-2 in Section 1 identifies the study area boundaries and local jurisdictions.

Spokane County

Situated east of the Cascade Range on the western slope of the Coeur d'Alene Mountains, Spokane County encompasses 1,764 square miles (approximately 2.7 percent of the total land area within the state). Spokane County is one the oldest counties in the state, incorporated in 1861 only six years after the creation of the Washington Territory. The county's northeastern portion has mountainous areas, and most of the northern section has strongly rolling to hilly areas. Rolling prairie is found in county's southeastern section and part of the southwestern section. Spokane County is bordered by Lincoln and Stevens counties on the west, Whitman County on the south, Pend Oreielle County on the north, and the State of Idaho (Benewah, Kootenai, and Bonner counties) to the east.

The Spokane area has made significant progress diversifying from an agrarian-based economy to one focused on industry and services. Although there has been a recent decline in several industrial sectors (most notably mining and aluminum), employment has been added in other sectors. Fairchild AFB remains the second largest employer in the area.

The county's primary north-south transportation corridors include US Highways 2 and 395 to the north and US Highway 195 to the south of the city. Interstate 90 provides the county's main east-west transportation corridor with US Highway 2 connecting the City of Spokane to areas to the west.

The City of Spokane

Prior to 1800, Spokane was a Native American encampment located near the falls of the Spokane River. The city was incorporated as "Spokane Falls" in 1881; ten years later, "Spokane" became the official city name when "Falls" was dropped. The city limits at that time encompassed a total of 20 square miles. Spokane grew rapidly in its early years, from a mere 350 people in 1880 to over 100,000 in 1910; however, the city's growth slowed and even declined between 1960 and 1990.

The City of Spokane is located in the center of Spokane County less than 10 miles from Fairchild AFB. The city measures approximately 58 square miles and is considered the heart of the Inland Northwest. It serves as the shopping, entertainment, and medical hub for an area that includes

Eastern Washington, Eastern Oregon, North Idaho, Western Montana, and southern portions of Alberta and British Columbia, Canada. The Spokane River runs through the city's downtown and culminates in waterfalls on the western end of the city core.

Spokane County's primary transportation corridors flow through the city. It is bisected by Interstate 90, which runs east-west and by US Highway 2 north of the interstate.

City of Airway Heights

The City of Airway Heights is still a young and evolving community. The city's history is traced to 1946, when, as World War II was coming to an end, three subdivisions were filed: Airway Heights Addition, Airway Heights First Addition, and Airway Heights Second Addition. In 1953, plans were announced to incorporate one square mile of the West Plains into the City of Airway Heights. At the time, this area had approximately 400 residents and a service station, café, furniture store, barber shop, lumber yard, post office, and school. On April 15, 1955, the city was incorporated by a 50 to 8 vote. Today, the city encompasses an area just under five square miles.

One of the city's most important features is its proximity to Spokane and its inclusion in the Spokane Metropolitan Statistical Area (MSA). It is centrally located between Fairchild AFB to the west, and SIA to the southeast. Both facilities have an influence on the economic climate of Airway Heights and also play a major part in the overall community population. Airway Heights is approximately seven miles west of the City of Spokane.

A significant element of the city is the Airway Heights Corrections Center (AHCC), which was opened in 1992 by the Washington State Department of Corrections. It is located approximately 10 miles west of the City of Spokane and consists of a main facility that houses medium- and long-term minimum-custody offenders. A separate perimeter adjacent to the main facility accommodates a minimum-security unit for offenders with minimum-custody or lower.

The city is bisected by US Highway 2 and is located just north of Interstate 90. Both highways are major east-west freight corridors with Interstate 90 linking to US Highway 395, a designated international trade route linking the US to Canada and Mexico.

In addition to traversing the city, US Highway 2 has an extensive right-of-way, which further divides the city into its "South" and "North" districts. The city is also heavily influenced by the Fairchild AFB AICUZ, with noise contours and Accident Potential Zones extending into much of the city's southern half. The South district is comprised primarily of industrial and commercial activities with scattered residential development while the North district consists of mostly residential and commercial uses.

(Sources: Airway Heights 2006 Comprehensive Plan; http://www.cawh.org/; www.city-data.com; www.doc.wa.gov/facilities/airwayheights.asp; and Matrix Design Group)

The majority of residential development in Airway Heights is in the form of single family residential development located in the northwest sector of the city, north of 12th Avenue and west of Russell Street. There has been only a handful of multi-family and apartment developments (four or five buildings) in the area. There is also new development occurring west of the city in the West Plains area. Commercial development tends to occur primarily along the US Highway 2 corridor; however, most of the commercial business involves using vacant existing space instead of new construction.

City of Medical Lake

Incorporated in 1890, Medical Lake's history is closely tied to the natural features of the area. Before European settlers arrived, many Native American tribes inhabited the region. The Native Americans believed in the healing properties of the lake water. The first European settlers in the area were also attracted to the lakes and other natural resources found nearby.

The 160-acre lake's reputation allowed the marketing of Medical Lake soap, salts and powders, which according to distributors, could cure most health problems. People flocked to the lake to see and experience the healing powers for themselves. Medical Lake developed an excellent reputation as a health spa and vacation area.

From the 1880's to the early part of the century, Medical Lake remained a flourishing town and popular vacation destination, and boasted a growing community. The lake was dredged of most of its mineral deposits over the years and people began to question if the lake had qualities to heal bathers. The lake also began to show the effects of the adjacent land developments. Algae blooms appeared diminishing the lake's desirability. Tourism plummeted, and many people left the city with businesses following in rapid succession. However, in 1977, the lake was treated with liquid alum to reduce phosphorous levels, which dramatically changed the quality of the lake. The lake was brought back to life in 1986 when an aerator was installed in the lake to increase oxygen levels and decrease algae blooms. Surrounded by recreational trails and state land, the lake takes center stage.

An incorporated jurisdiction, the City of Medical Lake sits at an elevation of 2,420 feet, 14 miles southwest of the City of Spokane within Spokane County. The community is located between Interstate 90 and US Highway 2, with access from State Route 902, Brooks Road, and Espanola Road. Fairchild AFB is located approximately four miles to the north, and the City of Airway Heights is just over eight miles to northeast.

(Sources: Medical Lake 2007 Comprehensive Plan; www.medical-lake.org/community; and Matrix Design Group)

2.3 Study Area Trends

Summary of Key Trends

Key trends observed related to population and compatibility with Fairchild AFB include the following:

- Spokane County has experienced steady population growth due to a diverse industrial and commercial economic base.
- Changing demographics between the "Baby Bust" generation of the late 1960s and early 1970s led to a significant drop in birth rates within the region since the 1990s; however, this trend is starting to increase again.
- As the "Baby Boom Echo" generation enters the housing market and starts having children the lower housing demands witnesses from the Baby Bust generation will start to increase.
- Net in-migration for the region is expected to continue resulting from the area's relatively low unemployment and lower cost of living than other regions within the state.
- Extensive residential, commercial and industrial uses have been developing near Fairchild AFB over the past 15 years as a result of available infrastructure,

proximity to Fairchild AFB and SIA, and affordable land prices.

- Prior to 1990, significant conflicts between civilian and military land and airspace were rare as a result of the installation's isolation and very limited development occurring near the base.

Population Growth Trends

Growing from a population of 221,551 in 1950 to approximately 459,000 in 2008, Spokane County's steady population growth is a result of the region's diverse industrial and commercial economic base. This trend is projected to continue into the future as the region's economic base continues to expand and diversify. Figure 2-4 and Table 2-6 present historical growth rates and future projections for the study area.

As shown in Figure 2-4 and Table 2-6, annual growth rates in the state and most of the study area peaked in the 1990s, and declined during the first eight years of this decade. Growth projections for Spokane County are expected to follow current trends, while rates are projected to increase for the cities of Spokane and Airway Heights and decrease for Medical Lake. Annual growth rates in Airway Heights and Medical Lake are above state and county levels during this decade. In looking at growth potential, the smaller population sizes of these jurisdictions make their growth percentages more reactive to population increases. For example, annual growth rates can be substantially influenced by the development of a few large subdivisions. Although this explains some of the growth witnessed during the recent decade, there are growing development pressures in these communities due to lower land costs, the availability of infrastructure, and the growing availability of support services in these areas.

Table 2-6. Annual Population Growth Rates

	Change		
	1980 – 1990	1990 – 2000	2000 – 2008
Washington	0.7%	2.9%	1.4%
Spokane County	0.6%	1.5%	1.2%
Spokane	0.3%	1.0%	0.5%
Airway Heights	1.3%	8.6%	1.9%
Medical Lake	0.2%	0.4%	2.9%

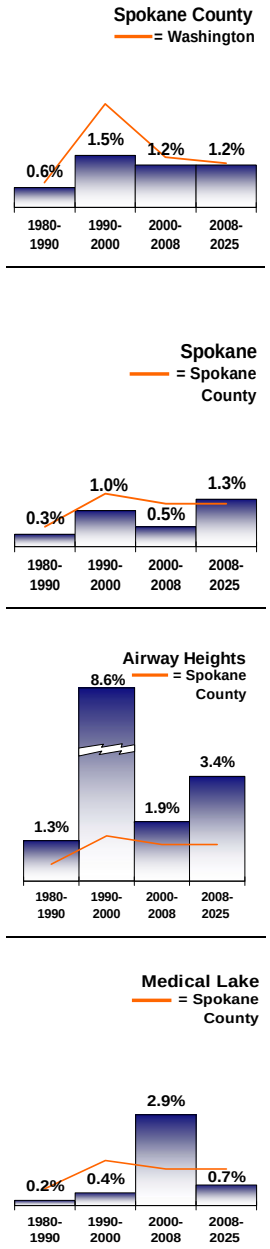
Sources: Washington Office of Financial Management; US Census Bureau; and Matrix Design Group, 2008.

Historically, the West Plains has always been slow to develop due to the area's poor suitability for agriculture and lack of surface water. Areas such as Spokane Valley and the Palouse (south of Spokane) were historically much more conducive to development activities. However, with the development of Fairchild AFB, communities such as Airway Heights and Medical Lake began to prosper.

Housing Quantity Trends

Growth of new housing units in the study area mirrors the general trends of population growth (see Table 2-7 and Figure 2-5). Both Spokane County and the City of Spokane witnessed recent increases in the number of housing units, but these rates have been declining over the past two years. Airway Heights posted the most varied increases of the jurisdictions included in the Fairchild JLUS. Rates ranged from negative growth to increases of approximately 9 percent, with the most significant and consistent growth occurring between 2005 and 2008. Housing growth in Airway Heights peaked in 2007, one year after the other jurisdictions.

Figure 2-4. Annual Population Growth



Like Airway Heights, Medical Lake's housing growth rates have increased in recent years from approximately three percent in 2000 to over six percent in 2006.

Table 2-7. Total Housing Units

	Total Housing Units		Change	
	2000	2008	#	%
Washington	2,451,081	2,805,340	354,259	14.5
Spokane County	175,005	196,219	21,214	12.1%
Spokane	87,941	93,753	5,812	6.6%
Airway Heights	1,095	1,468	373	34.1%
Medical Lake	1,197	1,640	443	29.8%

Source: Washington State Office of Financial Management (www.ofm.wa.gov)

These housing quantity figures are important since an influx of new housing in close proximity to Fairchild AFB could result in compatibility issues between residents and the installation's mission. The table below depicts the housing quantity data for all jurisdictions evaluated within this JLUS.

According to Spokane County building permit data from 2003 to 2008, there were a total of 1,009 family units completed. Of those, nearly 67 percent were single family units, with the remainder being multi-family units. The number of completed single family and multi-family unit projects fluctuates, sometimes drastically, from year to year. Single family project completions jumped from 68 in 2004 to a five-year high of 195 in 2005 (an increase of almost 187 percent). Completion of multi-family units saw its greatest increase (3,700 percent) between 2006 and 2007, with only 7 units completed in 2006 and 266 units completed in 2007.

Commercial and industrial square footage completions between 2003 and 2008 resulted in the construction of just over 920,000 square feet of buildings. Of that figure, commercial facilities comprised almost 76 percent (just over 696,000 square feet). The greatest commercial project completion year-to-year increase occurred between 2006 and 2007. In that period, completions rose from nearly 38,500 square feet to over 250,500 square feet (an increase of 552 percent). For industrial projects, the largest yearly increase was between 2004 and 2005, where square feet completed rose from only 6,000 square feet to nearly 94,500 square feet. This represents a 1,474 percent increase in that period. As of March 3, 2009, completion of single family units is outpacing multi-family units by a 12 to 4 ratio, while industrial space completions are topping commercial space completions by a ratio of 2,160 square feet to none. *(Source: Jim Falk, Spokane County, Department of Building and Planning, March 5, 2009)*

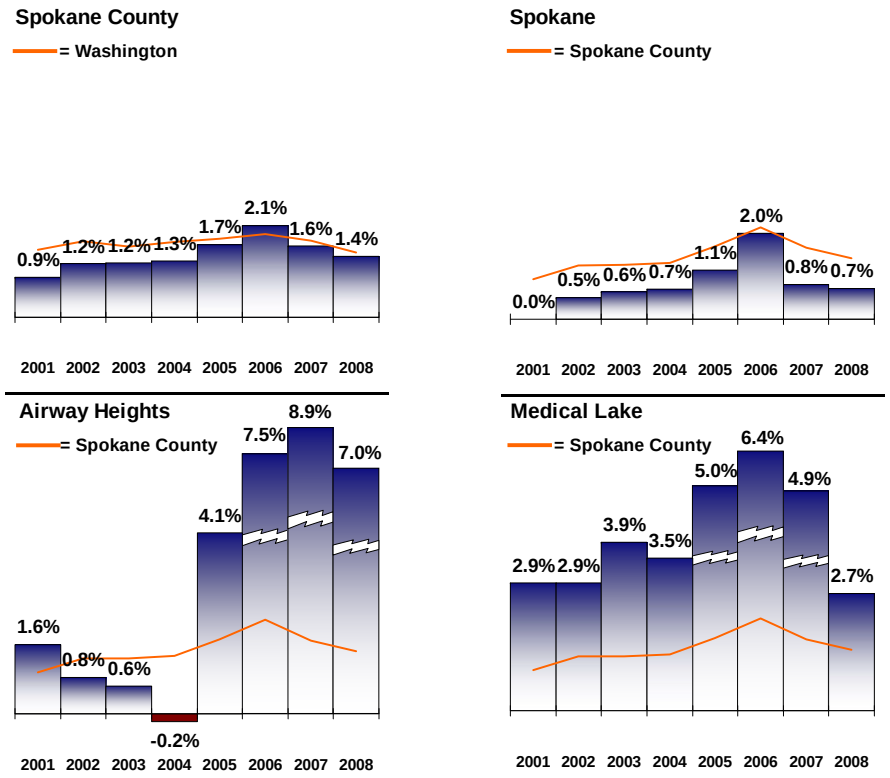


Figure 2-5. Annual Population Growth

Overall, median housing values within Spokane County and the cities of Spokane, Airway Heights, and Medical Lake increased substantially between 2000 and 2005 (see Table 2-8 and Figure 2-6). The rate of housing value increase between 2000 and 2005 for the three cities analyzed in this JLUS are separated by only 1.6 percent, with Spokane having the largest rate increase (31 percent). This value increase does not appear to be impacted by Spokane's population increase of only 1.6 percent over those same five years. Medical Lake posted the largest monetary increase of the cities at nearly $32,000, which corresponds to the city's population increase between 2000 and 2005 of 14 percent. Although Airway Heights has seen the lowest monetary value increase ($28,000) of the three JLUS cities, its percent change equals that of Medical Lake (29.8 percent).

Housing Values Trends

When examining regional growth trends, the cost of housing can provide insight into areas that may be more attractive. Rapidly expanding housing prices in the first half of the decade was a key factor in assessing future growth within the Spokane region. However, the significant decline in home values over the last few years has decreased the reliance on using housing values as an indictor of future growth potential.

Nationally, housing values have dropped significantly in recent months. The impact of this trend on housing values within the Spokane Metropolitan region remains to be seen as updated information is not currently available.

Table 2-8. Median Housing Values

Jurisdiction	2000	2005	Value Change	% Change
Washington	$168,300	$227,700	$59,400	35.3%
Spokane County	$113,200	$162,315	$49,115	43.4%
Spokane	$97,000	$127,500	$30,500	31.4%
Airway Heights	$93,900	$121,900	$28,000	29.8%
Medical Lake	$106,900	$138,800	$31,900	29.8%

Source: http://quickfacts.census.gov and www.city-data.com

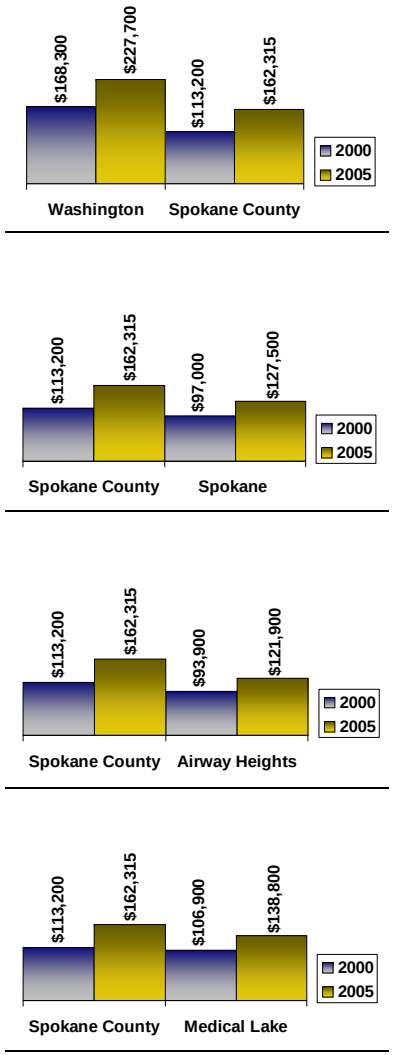


Figure 2-6. Median Housing Values

2.4 Regional Assessment

Regional Economic Development

Many factors contribute to the overall economic conditions in the Spokane area and the study area. Natural resources have traditionally provided much of the economic activity for the Spokane area making it a major center for the timber, agriculture, and mining industries in the region. A number of manufacturing companies have located in Spokane, drawn by the easy access to raw materials. The outlying areas are part of an abundant agricultural system, providing a large amount of the nation's apples, peas, hops, pears, asparagus, lentils, soft wheat, and sweet cherries. A number of wineries and breweries also operate in the area. These industries continue to be important elements in the local economy, but in recent years the economy has diversified to encompass high-technology and service companies. *(Source: http://www.city-data.com)*

In looking at development in the study area, Spokane County was able to provide a database of all building permits (unincorporated areas only) issued from between 2000 and 2008. Excluding permits for accessory buildings and minor construction, a picture of new residential and non-residential construction was developed (see Figure 2-7).

Within the study area, development is scattered, with concentrations located along and south of Interstate 90 (I-90). Concentrated residential development was located southeast of I-90 near the Aero Road/Medical Lake Highway interchange, along Silver Lake between I-90 and the City of Medical Lake, and to the east of the City of Airway Heights.

In looking at Figure 2-7, there has been only limited non-residential development near Fairchild AFB, with most development staying northwest of the base near US Highway 2. Extension of the Geiger Spur into the area between Fairchild AFB and SIA is expected to encourage future industrial and some commercial development. Care will be needed with this development to avoid impacts to flight operations at the base.

The Airway Heights Corrections Center (AHCC) is located on 160 acres and is a significant employer, with approximately 600 staff members.

Kalispel Tribe of Indians

As indicated by Wally Hubbard, the Kalispel Tribe Planner, the Tribe's plans for their Airway Heights property are very fluid in light of the general economic picture. The Tribe's Land Use Plan was developed five years ago and is in a constant state of change. The plan reflects a very general picture of the 250 acres south of the Northern Quest Casino. This acreage begins at Sprague Avenue and fronts US Highway 2. The land has been designated with Trust status and is categorized as Commercial, Business Office, Recreation, and some Light Industrial. The Tribe's general goal is for diversification and developing a variety of businesses, shopping venues, open space recreation and other uses.

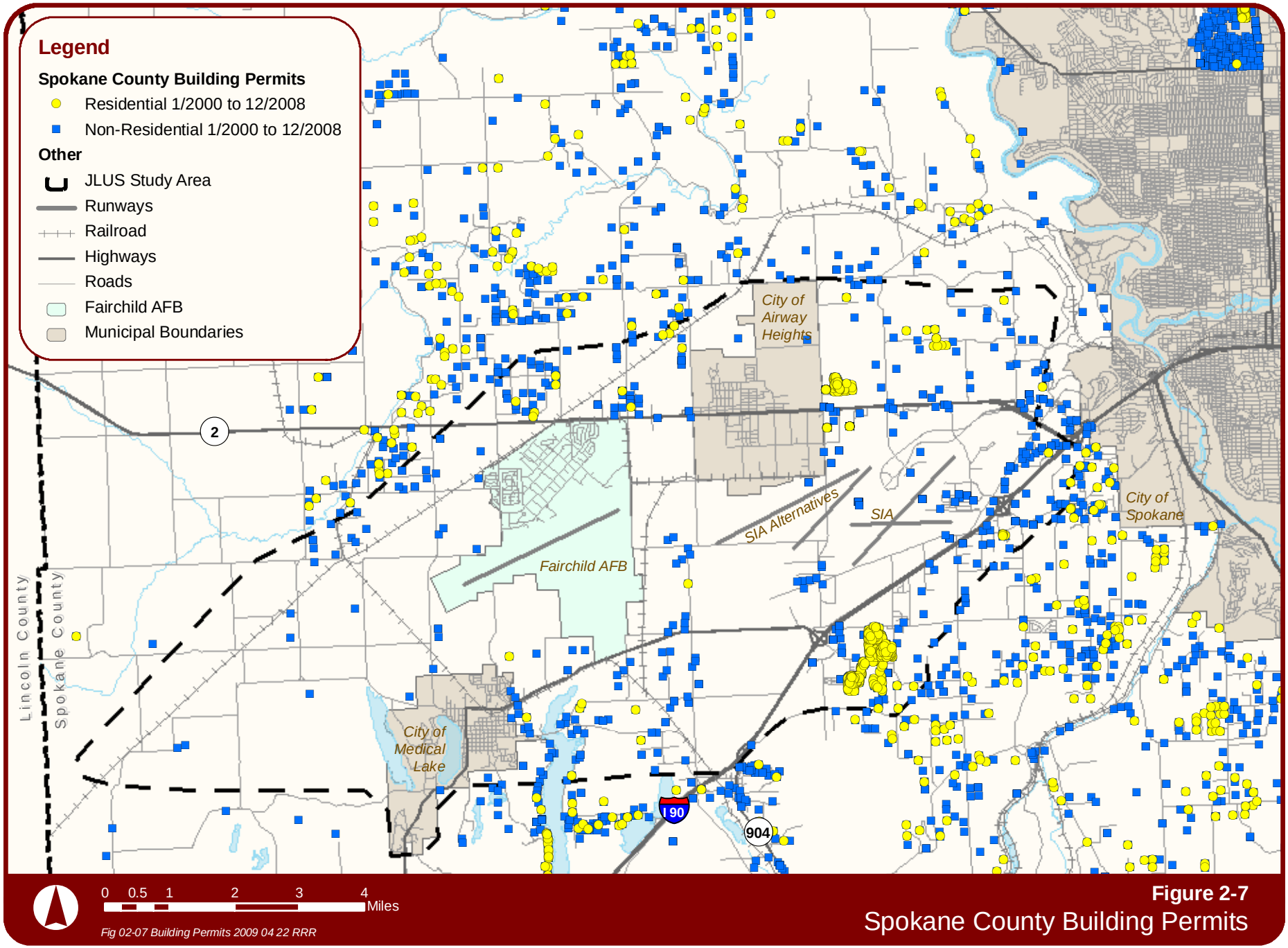


Figure 2-7
Spokane County Building Permits

The 250 acres of Trust property combined with 50 acres of fee status property in the same area is expected to be developed at medium density. To achieve this, the Kalispel Tribe has begun to install infrastructure to serve the property, such as a surface water disposal system that will handle runoff from impervious surfaces by utilizing a paleo channel for drainage. The Tribe's main effort is to establish a back-bone road system to serve the property. Currently the Tribe is investigating establishing a convenience store as their first business on the site.

The Northern Quest Casino, operated by the Kalispel Tribe, is located in the City of Airway Heights, approximately one mile north of US Highway 2, next to the Spokane Raceway Park. This casino currently employs approximately 1,500, and has annual sales of between $5 million and $10 million.

The Kalispel Tribe is expanding the current casino to include a 250-room hotel, parking garage, and a 10,000-square foot spa. Additional phases may occur as-needed in the future which include a 2,300-seat special events venue and a 50,000-square foot nine-story glass atrium that connects two hotel towers. By its anticipated opening in early 2010, the total project will encompass 660,000 square feet and expected to create up to 500 construction jobs and employ an additional 300 people, bringing the total number of employees to 1,800. *(Sources: http://start.cortera.com; Jennifer Simmons, Community Relations Coordinator, Northern Quest, 11 February 2009)*

A Transportation Impact Study will be completed soon and will provide information on traffic, access, and routes. Other studies and plans are expected to be conducted and developed but outside of the JLUS report planning window.

Spokane Tribe of Indians

The Spokane Tribe of Indians is a sovereign government body led by the Spokane Tribal Business Council. Tribal Headquarters is located in Wellpinit, Washington, which is approximately 50 miles northwest of Spokane, Washington on the Spokane Indian Reservation.

In Spokane County, the tribe controls 145 acres just west of Airway Heights at the northwest corner of US Highway 2 and South Craig Road. According to an article in the Spokesman-Review newspaper (February 6, 2009), the Spokane Tribe is proposing to develop a commercial complex that could include a hotel, casino and shopping center anchored by a big box retailer. The project will likely be developed in three phases. The first phase will include gasoline station and convenience store. Additional project details had not been provided by the Spokane Tribe at the time of this report.

Transportation Infrastructure

The Spokane Regional Transportation Council (SRTC) is the federally designated Metropolitan Planning Organization (MPO) for the Spokane Metropolitan area. As a local intergovernmental agency, SRTC maintains the Transportation Improvement Plan (TIP), a three-year list of state and federally funded transportation projects, as well as the Metropolitan Transportation Plan (MTP), a 20-year document mapping the future of transportation in Spokane County.

The Metropolitan Transportation Plan (MTP) documents the inter-modal approach taken to develop Spokane's regional transportation system and meet the mobility needs of people, freight, and goods between the present and the year

2030. The MTP was last updated in 2007, but revised in 2008 to reflect minor suggestions and recommendations made by area transportation agencies throughout the year.

According to the MTP, the Spokane area's transportation system is starting to feel the strain of population growth in the area. Motorists are making almost 35,000 additional trips on area roads today compared with traffic volumes reported in 2003. With the population expected to grow by over 130,000 people by 2030, the local transportation network will need to efficiently and effectively absorb the additional traffic volume without resulting in additional congestion and traffic accidents. Public awareness campaigns have shown to be effective in reducing the number of fatal collisions in recent years and programs such as Commute Trip Reduction (CTR) are gaining participants who find alternate ways to commute, reducing congestion. Local agencies are looking to the future and attempting to be proactive through measures such as bike boulevards, increased number of park and ride lots, and eventually, possible alternative transportation methods such as light rail.

In addition to impacts of increased vehicle traffic on roadways, the MTP notes that the next 23 years will also start a new era for bridges. As critical mobility links between communities, many of the region's bridges are either at or nearing the end of their functional or physical design life. The need to close or place severe weight restrictions on bridges could have a significant impact on commerce and travel patterns within the region by redistributing trips to areas unprepared for the increase in both traffic and trucks.

Roadways

The majority of the Spokane County road improvements are taking place in parts of the county that do not fall within the Fairchild JLUS study area. The sole road improvement currently proposed in the West Plains area by the Spokane County Department of Public Works Engineering Division is a project to enhance road access to the Jolt Industrial Park located at the Medical Lake Road and I-90 interchange.

Based in Spokane, the Washington State Department of Transportation (WSDOT) Eastern Region (ER) is responsible for building and maintaining the state-owned highway system within the study area. Future projects impacting the area include the development of the Route Development Plan (RDP) for a 16-mile stretch along US Highway 2 from the Lincoln County line to I-90.

RDPs are planning studies on state highway facilities that identify deficiencies and recommend solutions to accommodate future transportation needs. These studies include analysis of operating conditions, environmental issues, population and land use changes, customer needs, as well as right-of-way and other issues affecting the future of a state highway and its neighbors. RDPs serve as a tool for discussion, utilized to facilitate integration of the needs of WSDOT with the needs of cities, counties, the traveling public, and other stakeholders in the development of transportation solutions.

The US 2 RDP seeks to create a community consensus on the most challenging problems and the best solutions for the development of US Highway 2 both now and over the next 20 years. WSDOT initiated this project in January 2007 beginning with the formation of the US Highway 2 RDP Steering Committee and the first Advisory Group meeting. Three Listening Posts were held in the first week of May 2007 with

US 2/Lincoln County Line to I-90 project area

the all results and feedback being tabulated. Using that information, the RDP team began evaluating potential alternatives and solutions. This process included ongoing meetings with the Steering Committee and the Advisory Group to revise conceptual solutions developed. An open house is scheduled for late spring 2009 for public review and comment. Once completed, this plan could recommend increased capacity or lanes to be built along US Highway 2.

WSDOT is also working on other road improvements to include a five-mile portion of US Highway 195 from I-90 to Hatch Road, which is in the design phase. This section, which runs through the Latah Valley, will eliminate several existing at-grade intersections and instead include interchanges at Hatch Road, Meadowlane Road, and Cheney-Spokane Road. This project will increase traffic flow and allow for more residential growth in the area.

The RDP is scheduled to be completed in February 2009. Preliminary recommendations presented to the Advisory Group on November 13, 2008 included enhanced deceleration and acceleration lanes in the vicinity of Fairchild AFB, acquisition of access rights from the Lincoln County line to Fairchild AFB for future US Highway 2 widening, improvements to US Highway 2 alternate routes (18th Avenue and 21st Avenue) south of and parallel to US Highway 2 between Fairchild AFB and SIA, and widening of selected segments of US Highway 2 in Airway Heights. A total of six alternate routes were proposed for Highway 2 including a route through Medical Lake. With the potential to encourage new development south and west of Fairchild AFB, this new high-speed corridor could bring potentially negative impacts to the installation.

Source: www.wsdot.wa.gov; Dave Dean, WSDOT Eastern Region, Route Development Engineer; and US 2 Lincoln County Line to I 90 Route Development Plan, Advisory Group Meeting #3 presentation.

Air

In addition to ground transportation, the Spokane area also has several public and private use airports that provide access to the national aviation system (see Figure 2-8). These airports are recognized by the National Plan of Integrated Airport System (NPIAS), meaning they are eligible to receive Federal-aid funding to ensure they are maintained to acceptable standards. Spokane International and Felts Field are two key airports, providing general aviation, freight and goods movement via air cargo, and air passenger service to the community.

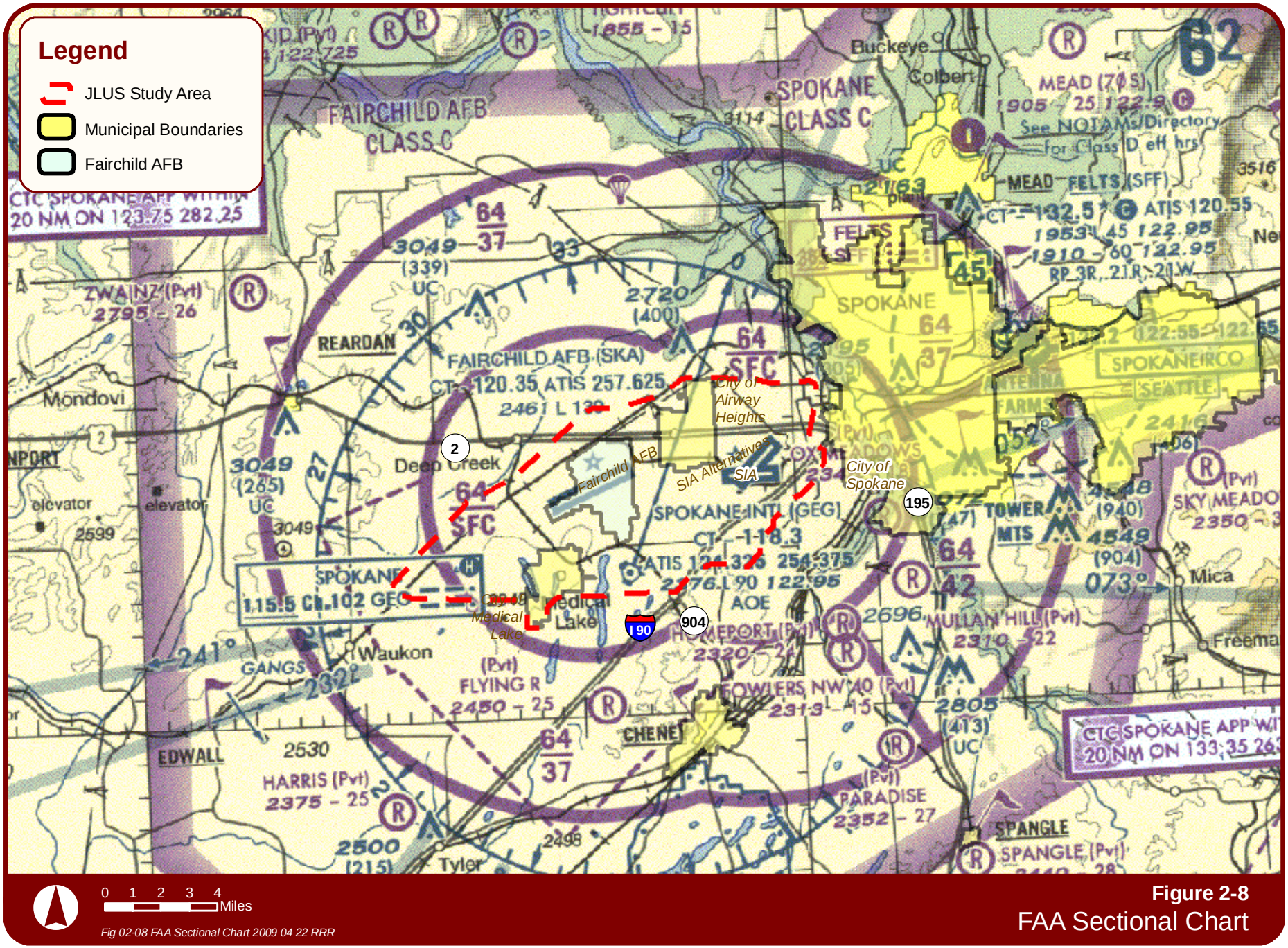


Fig 02-08 FAA Sectional Chart 2009 04 22 RRR

Figure 2-8
FAA Sectional Chart

Spokane International Airport

SIA is designated as a small hub airport in the NPIAS and provides air passenger service from national carriers such as United, Delta, and Alaska Airlines. Regional commuter service, with regular schedules to almost 30 cities throughout the northwest, provides linkages to communities economically tied to the Inland Northwest. International flights are available to British Columbia and Alberta, Canada. While SIA also has fixed base operations serving private and business aircraft needs, its primary role is air passenger and air cargo transportation.

According to SIA records, the airport supported 101,614 aircraft operations, serviced 3,472,901 passengers, and handled 54,798 tons of freight in 2008. An aircraft operation is defined as either a landing or a take-off and includes passenger and cargo carriers, general aviation, charter flights and military aircraft. *(Source: Ryan Sheehan, Air Operations Manager, Spokane International Airport, March 25, 2009; and www.spokaneairports.net)*

The airport has one main 9,000-foot runway (Runway 3/21) and one secondary 8,199-foot runway (Runway 7/25). SIA is equipped with a Category I Instrument Landing System (ILS). The Instrument Landing System (ILS) is a ground-based instrument approach system that provides precision guidance to an aircraft approaching a runway, using a combination of radio signals and, in many cases, high-intensity lighting arrays to enable a safe landing during instrument meteorological conditions (IMC), such as low ceilings or reduced visibility due to fog, rain, or blowing snow.

Fairchild AFB is equipped with a Category I ILS system, and depending on the severity of weather, the installation's aircraft are periodically diverted to SIA because of its more capable ILS system. According to SIA, Fairchild's aircraft use SIA for approximately 18 operations per year. *(Source: Ryan Sheehan, Air Operations Manager, Spokane International Airport, March 25, 2009; and www.wikipedia.org)*

The airport shares controlled airspace with Fairchild AFB and Felts Field, a general aviation reliever airport. According to the airport's master plan which reviewed airspace procedures, there are no airspace conflicts among these facilities; however, the close proximity of Fairchild AFB, combined with the fact that the runway orientation is not parallel with that at SIA, requires Air Traffic Control Tower (ATCT) personnel to follow close coordination procedures. This alignment issue also results in a reduction of effective capacity at both facilities.

A runway alignment study is currently underway to confirm a final alignment for a future third runway at Spokane International Airport located west of the current runway and terminal. Two proposed orientations for the new runway are being reviewed. Option A (Runway 3/21) runs parallel to SIA's main runway, and Option B (Runway 5/23) is oriented parallel to Fairchild's runway (see Figure 2-9). Washington State is funding the runway alignment study as part of its growth management efforts, because the orientation of the new runway will significantly impact development around the airport. It will also affect the use of airspace, which is shared with Fairchild AFB and Felts Field. The Federal Aviation Administration (FAA) conducted an airspace study as part of the runway alignment study. The FAA study's simulation results did not favor one runway alignment alternative over another. *(Source: Jennifer Morris, Capacity Analysis Group Manager, FAA, March 20, 2009)*

The runway alignment study was recently accepted by the SIA Board and released for public review. The study is recommending the alternative runway that is parallel to SIA's main runway. A final decision on which alternative will be pursued is pending.

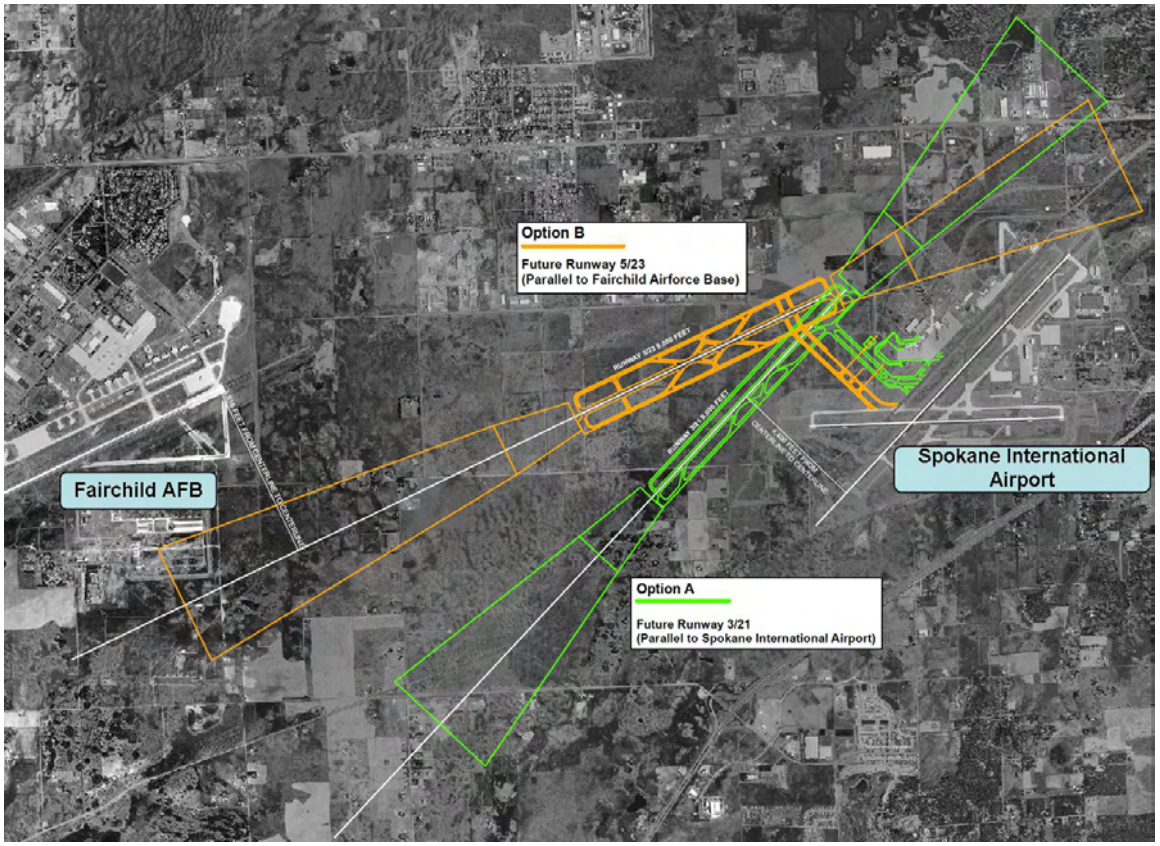


Figure 2-9. Third Runway Options – Spokane International Airport
Source: Runway End Coordinates, Meade and Hunt, June 6, 2008.

According to the Spokane Airport Board's Request for Qualifications for the new runway study, orientation of the third runway should address: 1) SIA's needs and future operational demands, 2) the community's needs and future growth, and 3) Fairchild AFB's needs and mission demands. The study should consider and incorporate the impact and findings of the JLUS. *(Source: Spokane International Airport Master Plan Update, March 2003)*

Felts Field

East of Spokane, Felts Field Airport is designated as an air cargo and reliever airport for Spokane International Airport. Felts Field's role is primarily based on its air cargo and general aviation activity. Fixed base operations at the airport provide air taxi, maintenance, and servicing for personal, business, and commercial aviation operations. Felts Field is equipped with an Instrument Landing System (ILS) enabling approaches during adverse weather conditions. This approach system, while not as sophisticated as SIA, provides reliable service to the general aviation, business, and air cargo operations using the airport.

In recent years, improvements to both Felts Field and Spokane International airports have increased the potential for growth and development in the aviation industry within the region. These improvements include a new communications tower in 2007, airport access development, terminal building expansions, and operational improvements. The recent completion of landing system and runway/taxiway rehabilitations at Spokane International have improved the ability for certified aircraft to land in conditions that would have previously been prohibitive.

The Spokane Airport Board has a master plan for the Spokane International Airport aimed at developing a 20-year forecast of aviation activity, from 2000 to 2020. The following are projections from the master plan:

- **Passenger Projections.** Considering historical levels, passenger activity at the Spokane International Airport is forecasted to nearly double by 2021. Passengers using the airlines at SIA will grow from the year 2000's 1.7 million per year to 3.3 million by 2020.
- **Air Cargo Projections.** Growth in air cargo at Spokane International is expected to be even more dramatic. From 1995 to 2000, activity levels doubled, and even more dramatic increases are expected in the future. By 2020, 275,000 tons of air cargo is expected to pass through SIA annually.
- **Aircraft Operations Projections.** Aircraft operations, or the number of takeoffs and landings, include air carriers, air cargo operations, general aviation and military flights. For the future, it is expected that overall operations will not increase at the same rate as passenger and freight volumes. Rather, the airlines, air cargo carriers and general aviation users are expected to use larger capacity aircraft. This change will be seen primarily in the regional carriers that will increase the number of regional jets. Air cargo carriers are expected to employ more MD-11 and Boeing 757 size aircraft, and general aviation will increasingly see larger private aircraft such as the Boeing GA jets, the Gulfstream V, or other business jets.

Other Airports

Other smaller airports such as Mead and Deer Park north of Spokane provide an important contribution to the regional transportation system. These general aviation airports provide opportunities for private and business aircraft to be based closer to their homes or businesses. While general aviation airports typically do not have the same level of facilities, amenities, and radio/navigational aids, their ability to reduce air traffic for practice operations and general activity at Felts Field or Spokane International makes them an integral part of the overall transportation system.

Source: Draft Spokane Metropolitan Area Metropolitan Transportation Plan, 2008 – 2030, 2008 Update by the Spokane Regional Transportation Council.

Rail

Rail transportation has long been a component of the mobility infrastructure of the Spokane Metropolitan region. As such, the historical growth patterns within the region mirrored the location of the early rail lines. Although bankruptcies, acquisitions, and mergers occurring over the year have reduced the number of rail lines operating within the region, rail remains a dominant influence within transportation infrastructure.

Today, the Burlington Northern / Santa Fe (BNSF) and the Union Pacific are the two mainline providers serving the Spokane Metropolitan area. With the increased international trade activity between the United States and pacific-rim countries, rail services provides an efficient method for good movement from deep water ports on the western coast and interior locations. Presently, BNSF operates approximately 65 trains per day and the Union Pacific operates an average of 6 to 10 trains a day through the Spokane region.

The benefits that the State of Washington can obtain from a robust rail system are threatened because the system is nearing capacity. Service quality is strained and rail rates are going up for many Washington State businesses.

The pressure on the rail system will increase in the next decades. Between 2005 and 2025, the output of the Washington State economy (measured as gross state product) is expected to grow at an average of 3.5 percent per

year. The total freight tonnage moved over the Washington State rail system is expected to increase by about 60 percent over the period. To accommodate this growth, many more rail lines within Washington State will be operating at or above their practical capacity.

Growth in rail traffic and rail congestion issues are also affecting Washington communities by increasing delays for automobile and truck drivers at rail-highway crossings, creating noise and safety problems, and disrupting communities and environmentally sensitive areas with construction projects.

As freight and passenger trains compete for time and space on the rail system, the capacity constraints may also frustrate the service and ridership plans for the State's passenger-rail program. The cost of resolving the rail choke points in the I-5 corridor on the state's west coast to meet passenger service and ridership goals is increasing, potentially reducing the cost-effectiveness of the passenger rail program. Without capacity improvements, rail will not maintain its share of the Washington State freight market, rail shipping prices will increase, and service reliability will deteriorate for many of the State's industrial and agricultural shippers.

Geiger Rail Spur Realignment. Located on the West Plains of Spokane County, the Geiger Rail Spur Realignment project will relocate a portion of the Geiger Rail Spur currently located inside the secure area of Fairchild AFB. Due to national security concerns, the rail line will be relocated off installation to continue freight service to existing customers currently located on the line. The realignment will connect the Geiger Spur to the Palouse Coulee City (PCC) Rail Line and interchange with the Burlington Northern / Santa Fe in Cheney, Washington.

In addition to the Geiger Rail Spur realignment, the Geiger Transload and Logistics Center is also being proposed. This facility would provide new industrial customers east of Fairchild AFB direct access to rail service. Although a economic anchor for the area with the potential to create new jobs, the added commercial and industrial activity could impact operations on the installation if not carefully coordinated and considering potential compatibility factors such as vertical obstructions, density, production of industrial outputs (smoke, dust and particulates), lighting, and frequency considerations.

Support Infrastructure

Water

The City of Spokane and Airway Heights are the water purveyors serving the JLUS study area. The City of Spokane is extending a water transmission line towards Fairchild AFB and the West Plains area. The project is set for three phases over the next four years. The new 36-inch line is designed to provide the needed water for the area for the next 100 years. Currently, Fairchild AFB receives its water from dedicated wells on base and pumps on the Spokane River; however, the new line will provide the installation with the option of obtaining its water supply from the water lines currently connected to an aquifer near the Spokane River or from the new line.

Wastewater

The City of Airway Heights is in the process of developing a new water reclamation plant aimed at increasing the city's strained wastewater treatment capacity and eliminating wastewater discharge to the Spokane River. The plant's design includes an eight-foot deep, four million gallon short-term storage lagoon. The current site for this project is

located in the southern portion of Airway Heights and is bounded by McFarland Road to the south, Russell Street to the east, 21st Avenue to the north, and Lawson Street to the west. This location is less than two miles east of Fairchild AFB.

The plant is set for two phases. The first phase will treat up to one million gallons of wastewater per day. Plant startup is scheduled for the spring of 2011. The second phase is planned for sometime in the future when additional treatment capacity is needed. This phase will increase capacity to 1.5 million gallons per day. It is anticipated that the new plant's reclaimed water will be used for aquifer recharge, irrigation applications, and commercial and industrial uses. The increased amount of potable water will also free up enough water to support 1,000 new homes.

(Source: http://www.cawh.org/water_reclamation_plant.asp)

Environmental Resources

Eastern Washington and northern Idaho offer a diverse range of outdoor recreational opportunities. The nearest public natural areas in the general vicinity of Fairchild AFB are the Colville National Forest, Turnbull National Wildlife Refuge (NWR), Dishman Hills Natural Resources Conservation Area (NRCA), Pinecroft Natural Area Preserve (NAP), Riverside State Park, Mt. Spokane State Park, and the Spokane River Centennial Trail. Characteristics of these areas are highlighted as follows:

- Colville National Forest is approximately 50 miles to the north of Spokane and includes the Salmo-Priest Wilderness Area.
- Turnbull NWR is approximately 20 miles south of the Base, outside of Cheney.
- Dishman Hills NRCA is a 518-acre natural area just east of Spokane described as the wilderness version of New York City's Central Park that preserves rocks, landforms, and vegetation as it was before this area was settled.
- Pinecroft NAP is a 100-acre preserve on a knoll just east of Spokane that preserves the largest of the few remaining examples of ponderosa pine/grassland ecosystems that were historically more common in the Spokane Valley.
- Riverside State Park covers 7,655 acres with 44,000 feet of shoreline along the Spokane River.
- Mt. Spokane State Park is northeast of Fairchild AFB, offering year-round recreation opportunities, including downhill and cross country skiing, snowmobiling, and hiking.
- The Spokane River Centennial Trail is a 35-mile multiuse paved trail that runs along the Spokane River from 8 miles east of Coeur d'Alene, Idaho, to Nine Mile Falls, Washington.

There are several national forests, two national parks, and several state parks within a 200- to 400-mile proximity to Fairchild AFB in Washington, Idaho, and Oregon. See Table 2-9 for a list of NWRs, National Forests, NRCAs, NAPs, and State Parks in the Vicinity of Fairchild AFB.

(Source: Fairchild AFB Final Integrated Natural Resources Management Plan, March 2005)

Water Resources

Numerous lakes and large ponds exist south of Fairchild AFB, including Silver Lake approximately 1.5 miles from the installation. Other lakes south of the base include Clear, Medical, West Medical, Granite, and Otter. There are also many rivers associated with these water bodies, making canoeing, kayaking, motor boating, and waterskiing readily accessible.

Within one mile south of Fairchild's Main Base are several large, open water wetlands. Activities in and around installation wetlands most likely do not impact offsite wetlands and surface waters. *(Source: Fairchild AFB Final Integrated Natural Resources Management Plan, March 2005)*

Table 2-9. Natural / Recreation Areas

Park / Forest	County
Colville National Forest	Stevens and Pend Oreille
Turnbull National Wildlife Refuge	Spokane
Dishman Hlls Natural Resources Conservation Area (NRCA)	Spokane
Pinecroft Natural Area Preserve (NAP)	Spokane
Riverside State Park	Spokane
Mt. Spokane State Park	Spokane
Spokane River Centennial Trail	Spokane

Source: Fairchild AFB Final Integrated Natural Resources Management Plan Table 2.3, March 2005

Cultural Resources

Spokane County and the West Plains have a rich cultural history. The following provides an overview of pertinent cultural resources in the study area.

Five historical and archaeological surveys were conducted on Fairchild AFB properties between 1985 and 1994. One of the surveys identified six archaeological sites. The most significant of these sites is the GKAW Water System Annex No. 1. Another survey identified six buildings dating from World War II, the Cold War, and the Vietnam War that are potentially eligible for register on the National Register of Historic Places. One of the World War II buildings has been deemed eligible for nomination on the National Register of Historic Places. Other cultural and historic resources on Fairchild AFB lands include 19th century farmstead sites, a 19th century hand dug well and homestead, and a prehistoric bedrock mortar site. No culturally important Native American sites have been identified on lands owned by Fairchild AFB. *(Source: Integrated Cultural Resources Management Plan for Fairchild AFB, April 12, 2005)*

The City of Spokane contains 4 Spokane Register Historic Districts and 18 National Register Historic Districts. These districts consist of 19th and 20th century developments built by Euro-Americans and represent historic or important areas in the development and history of the city. There are no historic districts located within the study area. *(Source: http://www.historicspokane.org)*

The Spokane Tribe and the Coeur d'Alene Tribe are the two Native American tribes that inhabited the study area. The potential for cultural and historic resources within the remainder of the study area include archaeological sites of both Native American and Euro-American habitation. Several structures, including houses and barns, have also been

identified and placed on the National Register of Historic Places and the Washington Heritage Register. *(Source: http://www.dahp.wa.gov)*

Threatened and Endangered Species

The purpose of the Washington Endangered, Threatened, and Sensitive Wildlife Species Classification Rule (WAC 232-12-297) is to identify and classify native wildlife species that have need of protection or management to ensure their survival as free-ranging populations in Washington and to define the process by which listing, management, recovery, and delisting of a species can be achieved. These rules are established to ensure that consistent procedures and criteria are followed when classifying wildlife as endangered, or the protected wildlife subcategories threatened or sensitive. The rule defines endangered wildlife species as "any wildlife species native to Washington that is seriously threatened with extinction throughout all or a significant portion of its range in the state." Threatened species are defined as "any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats". Sensitive species are defined as "any wildlife species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats."

There are a variety of native species and habitats that can be found on the lands owned and operated by Fairchild AFB. One species in particular, Spalding's catchfly (*Silene spaldingii*), is federally and state listed as threatened. This is the only identified federally threatened species on Fairchild AFB. This herbaceous perennial plant is a member of the carnation family and is predominantly found in moist bunchgrass grasslands and sage-brush-steppe, and sometimes in pine forests. Spalding's catchfly typically ranges from 8 to 24 inches tall and is characterized by greenish-white flowers, lance-shaped leaves, and sticky foliage and flower pedals. *(Source: http://www.fws.gov)*

Spalding's catchfly was first identified on Fairchild AFB in 1994, and placed on the federally threatened list in 2001. This species occurs in the southwestern portion of Fairchild AFB, known as South Base, near the Survival Training School. Some of the factors that are a threat to catchfly populations within the area include non-native species, grazing, fire suppression activities, and military use of the land. *(Source: Fairchild AFB INRMP)*

An official survey completed in 2004 identified a total of 67 plants at eight different monitoring sites on Fairchild AFB. This is compared to 49 plants in 2003, 66 plants in 2002, 26 plants in 2001, and 77 plants in 1999. Although the number of recorded plants varies from year to year, the locations in which they are recorded remains the same. *(Source: 2004 Fairchild Spalding's catchfly survey report)*

An announcement from the US Fish and Wildlife Service (USFWS) on March 19, 2009 stated that the results of a five-year status review of the species will keep it on the federal threatened species list. A Recovery Plan was finalized by the USFWS in October 2007 for this species that provided detailed goals and recovery management procedures in order to delist the species from the threatened list. According to

Spalding's catchfly

the plan, prompt and effective recovery actions could delist Spalding's catchfly in 2040. *(Source: http://www.fws.gov and USFWS Recovery Plan for Spalding's Catchfly 2007)*

Several other federal or state species that are considered for inclusion on the threatened or endangered lists, or are already on the state threatened list have also been observed at Fairchild AFB. Observation does not necessarily mean that these species reside or breed on the installation, however. These species include the bald eagle (delisted from the federal threatened list in 2007), the golden eagle (state candidate for listing), the burrowing owl (federal species of concern and state candidate for listing), the white-tailed jackrabbit (state candidate for listing), the inch-high rush and mousetail (both state sensitive plant species), and two state threatened plant species: American pillwort and northwestern yellowflax. *(Source: Fairchild AFB Final Integrated Natural Resources Management Plan, March 2005)*

3 Compatibility

Based on input from the JLUS committees, the public, and the JLUS consulting team, factors to be addressed in the Fairchild JLUS were identified under 19 of the 24 common compatibility factors evaluated.

Compatibility, in relation to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully.

A number of factors influence whether community and military plans, programs, and activities are compatible or in conflict. For this Joint Land Use Study (JLUS), a list of 24 common compatibility factors was used to help characterize local factors (see the complete list in the text box provided on the following page). These common compatibility factors fall into three broad categories: man-made, natural resources, and competition for scarce resources.

This section provides an overview of the compatiblity factors identified in the Fairchild JLUS Study Area. This assessment of current and future incompatibilities drives the development of the strategies presented in Section 5, which are designed to address the current and future factors.

3.1 Methodology and Evaluation

The purpose of this section is to detail the genesis of developing the compatibility factors associated with the Fairchild JLUS. The JLUS evaluation approach consisted of a comprehensive and inclusive discovery process identifying the key stakeholder factors which could directly or indirectly affect the compatibility strategies proposed in Section 5. During the preparation of the Fairchild JLUS, the public, the Joint Policy Committee (JPSC), and the Technical Working Group (TWG) assisted in working through all 24 factors to identify, describe and prioritize the extent of existing and potential future compatibility factors that could impact lands within or near the study area.

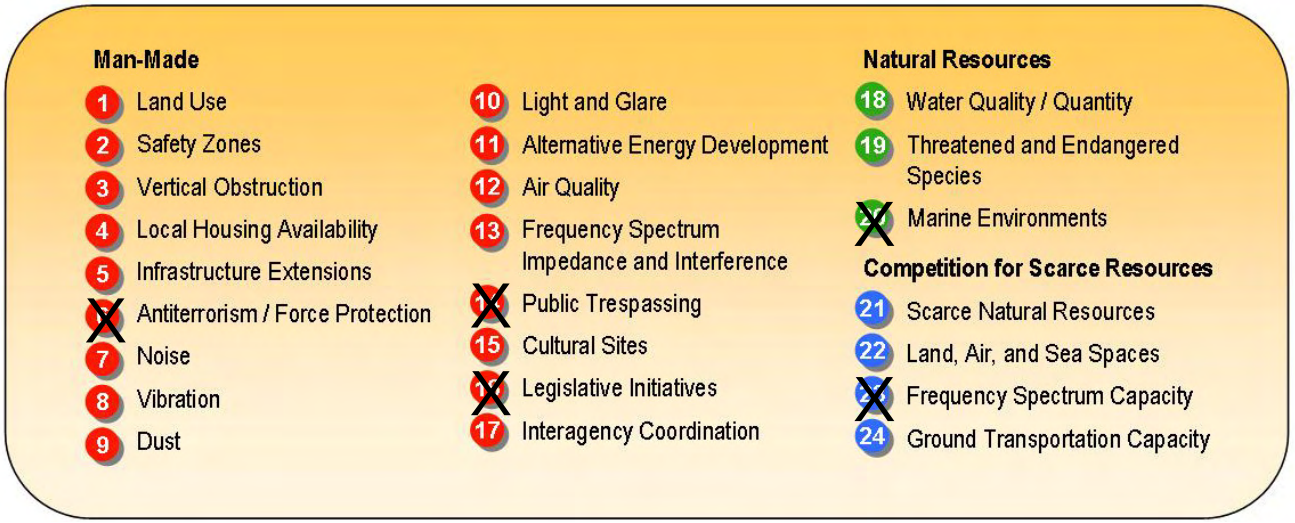
At the initial committee workshops and public meetings, these groups were asked to identify the location and type of compatibility factors they thought existed today or could occur in the future. Other factors were also added by the consulting team based on their evaluation of available information and relevant experience on similar projects.

When reviewing this information, it is important to note the following:

- This section provides a general technical background on the factors discussed based on available information. The intent is to provide an adequate context for awareness, education, and development of JLUS recommendations. As such, it is not designed or intended to be utilized as an exhaustive technical evaluation of existing or future conditions within the study area.
- Of the 24 standard compatibility factors, five were determined not to be a factor for this area: 6, Antiterrorism/Force Protection; 14, Public Trespassing; 16, Legislative Initiatives; 20, Marine Environments; and 23, Competition for Frequency Spectrum Capacity.

Factors that were found to not apply to the Fairchild JLUS are crossed out on the chart to the right.

JLUS Compatibility Factors



- The compatibility factors identified were consolidated into groups of similar factors. For example, a number of development project locations were identified under Compatibility Factor 1, Land Use. These items were further grouped into a single factor called "Urban Growth Potential." These grouped items (shown in Table 3-1) were then reviewed and evaluated by the JLUS committees.

Three criteria were utilized to evaluate the identified factors: current impact, factor location, and potential impact. Utilizing a scale ranging from "1" (most critical) to "3" (least critical), the JLUS committees scored each factor group.

The criteria utilized for this assessment included the following:

- **Current Impact.** Each factor was rated based on its current impact to compatibility of either the installation or a local jurisdiction. Factors posing the most extensive operational constraints or community concerns were identified as the highest priority (1). Factors resulting in a moderate operational impacts or community concerns were identified as important (2). Factors that present very little impact or do not currently impact the installation or local jurisdictions were identified as the lowest priority (3).
- **Location.** This criterion measures the proximity of each factor in relation to activities occurring on the installation. Factors occurring near the installation are often more critical than those occurring remotely or in areas more distant from operational activities. Factors that were located inside the JLUS study area and were presently occurring were considered significant (1). Factors located inside the JLUS study area with the potential to occur, or located outside the JLUS study area and presently occurring, were rated important (2). Factors located outside the JLUS study area with minimal or no potential to occur were considered very low priority (3).
- **Potential Impact.** Although a factor may not present a current threat to the installation or the community, it may possess the ability to become a factor. Should conditions change, adjacent or proximate development increase, or other factors become apparent, new conflicts with exiting or future missions and operational activities at Fairchild AFB could arise. Factors were rated based on their future potential using the same criteria as established for current impact.

The three criteria presented above were averaged to determine the overall threat level for each factor. Factors ranking "1" are considered the most critical (designated in red), "2" are moderately critical (designated in yellow), and "3" are least critical (designated in green). A critical factor was defined as one where there was potential for impacts on current missions and where existing tools are not adequate to address the factor identified. Additional compatibility factors identified by the consulting team were not scored and have an "N/R" (no rating) for each criterion.

Table 3-1 presents a summary of the factors discussed in this section. For this summary, the factors have been presented from most critical to those found to not have a high potential for impacting Fairchild AFB operations. Each factor is identified alpha-numerically in Table 3-1 and on the factors maps later in this section (i.e., 1A, 2C, etc.). The number corresponds to the compatibility factor as shown in the JLUS Compatibility Factors graphic on the previous page while the letters are used to differentiate individual factors. For example, for Factor #5, Infrastructure Extensions, there are seven items or locations noted. These are referred to as 5A, 5B, 5C, 5D, 5E, 5F and 5G.

Each factor (issue) is identified using a number (the factor number, such as 5 for Infrastructure Extensions) and a letter (A, B, C, etc.) to keep track of the individual issues identified.

Table 3-1. Compatibility Factors Summary

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Urban Growth: existing development, expansion of non-conforming uses, new development, former military housing (Geiger Heights)	1A, 1C, 1E, 1F, 1Q, 1R	🟥	🟥	🟥
Urban growth areas	1K	🟥	🟥	🟥
Noise from aircraft operations impacting existing and proposed development	7C, 7D, 7F, 7G, 7H, 7I, 1M, 4A	🟥	🟥	🟥
Coordination between entities (Fairchild AFB, communities, tribes, SIA)	17A	🟥	🟥	🟥
Geiger Spur	1B, 16A, 24B	🟩	🟥	🟥
Mining operations	1P	🟩	🟥	🟥
Potential for incompatible uses with safety zones	2A, 2B, 2D	🟩	🟥	🟥
Bird attraction hazards	2C, 1D, 1O	🟨	🟥	🟨
FAFB / SIA noise contour overlay	7A	🟩	🟥	🟥
Expanding / shrinking Fairchild AFB noise contours	7B, 7E	🟩	🟥	🟥
Light and glare from proposed development	10A, 10C	🟩	🟥	🟥
Spalding Catchfly Habitat	19A	🟨	🟥	🟨

Notes: 🟥 *Most Critical* 🟨 *Moderately Critical* 🟩 *Least Critical* *N/R = No Rating*

Table 3-1. Compatibility Factors Summary (continued)

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Development of new Airway Heights Wastewater Treatment Facility	5D	Least Critical	Most Critical	Moderately Critical
Dust from regional uses (Waste to Energy plant, agriculture, grading)	9A	Least Critical	Most Critical	Moderately Critical
Ground transportation capacity throughout region (increasing demand from new development)	24A	Least Critical	Most Critical	Moderately Critical
Existing and proposed land uses on Native American tribal land	1I, 1J, 1L	Least Critical	Least Critical	Most Critical
Spokane International Airport (conflicts between existing/proposed land uses and runway expansions)	1N	Least Critical	Moderately Critical	Moderately Critical
Area wide stormwater and groundwater factors	5A, 5B, 5C	Least Critical	Moderately Critical	Moderately Critical
Urban light sources	10B	Least Critical	Moderately Critical	Moderately Critical
Wind and solar energy development	11A	Least Critical	Moderately Critical	Moderately Critical
Safety buffers for firing ranges, areas with explosive safety arcs	2E, 1H	Least Critical	Least Critical	Least Critical
Height of current / future development creating obstructions or hazards to air navigation	3A, 3B, 3C, 3D	Least Critical	Least Critical	Least Critical
Availability of affordable housing and general quality of life	4B, 4C	Least Critical	Least Critical	Least Critical
Proposed water infrastructure extensions from City of Spokane into West Plains	5E	Least Critical	Least Critical	Least Critical

Notes: *Most Critical* *Moderately Critical* *Least Critical* *N/R = No Rating*

Table 3-1. Compatibility Factors Summary (continued)

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Vibration impacts from Fairchild AFB operations (i.e., EOD, firing ranges, aircraft operations, etc.)	8A, 8B	■	■	■
Waste to Energy Plant	12A	■	■	■
Cultural significance of West Plains	15A	■	■	■
Water supply in developing areas (water extensions needed to serve new development)	18A	■	■	■
Recreational assets (local water bodies)	21A	■	■	■
Fairchild AFB entry traffic	24C	■	■	■
Geiger Spur	5F	■	■	■
Spokane Raceway Park	1S	N/R	N/R	N/R
Airspace (joint use and air traffic coordination)	2F	N/R	N/R	N/R
US Highway 2 Enhancements	5G	N/R	N/R	N/R
Vernal Pools	19B	N/R	N/R	N/R
General habitat considerations	19C	N/R	N/R	N/R
Frequency spectrum impedance and interference throughout the region.	13A	N/R	N/R	N/R
Competition for airspace with Spokane International Airport	22A	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

3.2 Man-Made Compatibility Factors

This section details the man-made compatibility factors and identified factors associated with operations at Fairchild AFB.

Man-made factors are those that are generated by community development that conflicts with military activities. These conditions may also be generated by the military and encroach upon nearby communities. In either case, these factors may not only impact military readiness, but also a community's quality of life. For Fairchild AFB, 14 of the 17 man-made compatibility factors were identified as producing factors to be addressed by the installation and surrounding community stakeholders.

Figure 3-1 illustrates the location of the man-made compatibility factors identified by the JLUS committees, the public, and the consulting team during preparation of this JLUS. Some factors identified apply to the entire study area, and therefore, do not have a specific location on the map. These are Factors 3A, 11A, 11B, 13A and 15A.

The locations shown on Figure 3-1 (and other similar figures in this section) indicate known or existing factor locations and are shown to indicate the general distribution of this factor today. However, it is important that the JLUS consider not only where current factors were identified, but evaluate the potential for existing factors to occur in other locations sometime in the future. The strategies presented in Section 5 were designed to address the significant compatibility factors identified in this section.

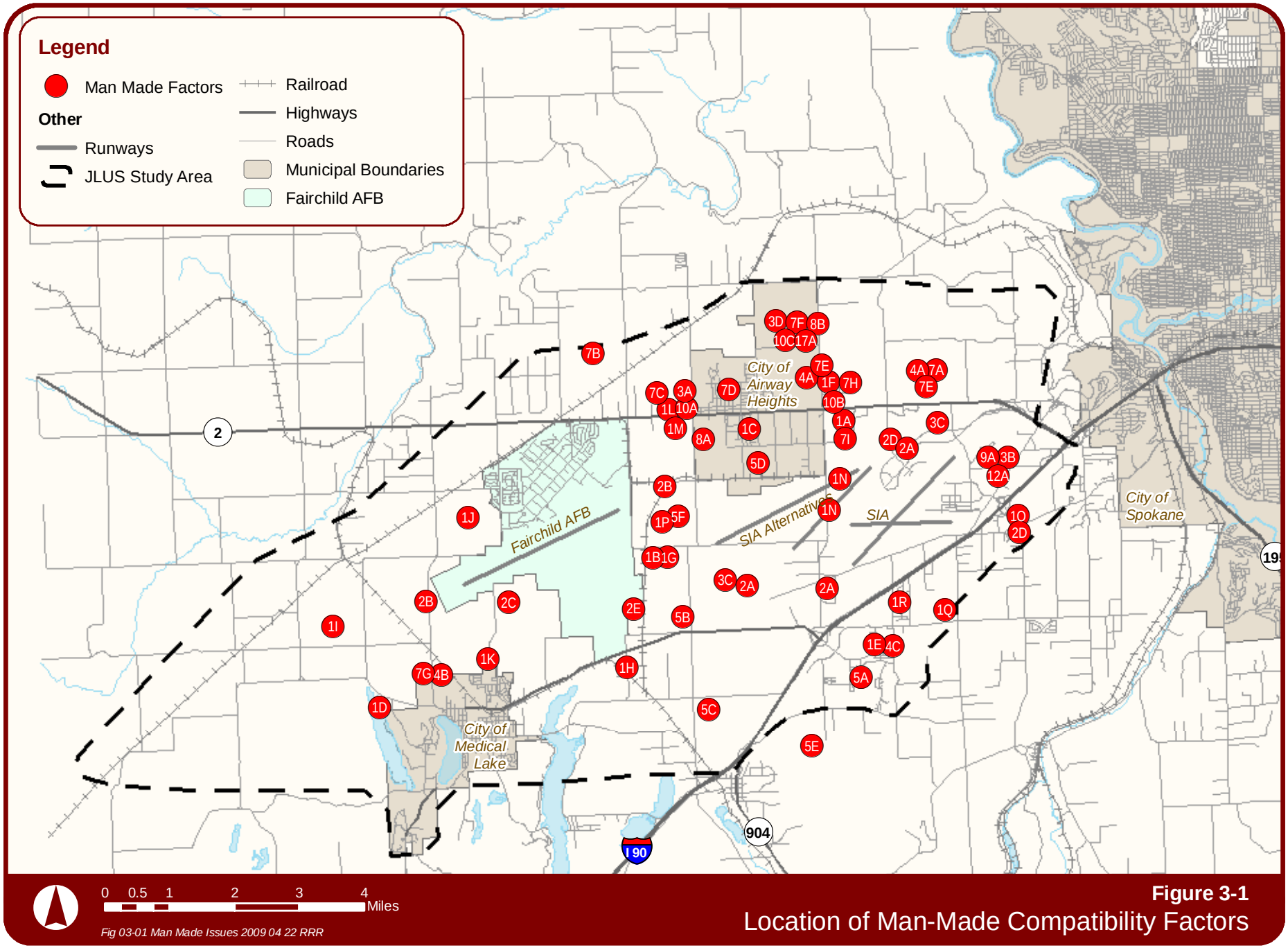


Figure 3-1
Location of Man-Made Compatibility Factors

1 Land Use Factors

Definition of Land Use:
The basis of land use planning and regulation relates to the government's role in protecting the public's health, safety, and welfare. Local jurisdictions' general plans and zoning ordinances can be the most effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. Land use separation also applies to properties where the use of one property may adversely impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, and so forth.

Land use planning around military installations is similar to the process used to evaluate other types of land uses. For instance, local jurisdictions already consider compatibility factors such as noise when locating residential developments near commercial or industrial areas. As the land between local municipalities is sold or developed, many facets of both entities are affected. New residents, tenants, or building owners are typically not fully aware of the implications of locating in close proximity to an active military installation and training area.

The factors identified for the land use compatibility factor are listed in Table 3-2 and are further described in the following discussion.

Table 3-2. Land Use Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Urban Growth: existing development, expansion of non-conforming uses and new development	1A, 1C, 1E, 1F, 1Q, 1R	🟥	🟥	🟥
Geiger Spur: relocation and associated development potential	1B, 16A, 24B	🟩	🟥	🟥
Development on Tribal Lands: existing and proposed land uses on Native American tribal land	1I, 1J, 1L	🟩	🟩	🟥
Urban growth areas (promotes high density uses)	1K	🟥	🟥	🟥
Spokane International Airport (conflicts between existing/proposed land uses and runway expansions)	1N	🟩	🟨	🟨
Mining operations (dust, lighting, bird attraction)	1P	🟩	🟥	🟥
Spokane Raceway Park	1S	N/R	N/R	N/R

Notes: 🟥 *Most Critical* 🟨 *Moderately Critical* 🟩 *Least Critical* *N/R = No Rating*
Factors 1D, 1O, and 1H are discussed within the Safety Compatibility Factor

Urban Growth (Existing and Proposed Development)

Many of the factors related to land use compatibility raised by the public, Joint Land Use Policy Steering Committee, and Technical Advisory Group were associated with existing or proposed development plans located near the installation (● Factors 1A, 1C, 1E, 1F, 1Q, 1R). The following is a list of developments specifically mentioned:

- **Blue Grouse Estates** – Southeast of the I-90 and Geiger Boulevard interchange, this single-family development is proposed to include 207 lots.
- **Aspen Park** – A 555-unit residential development located south of Spokane International Airport (SIA) and Interstate 90 and west of Spotted Road.
- **Maple Terrace** – Located east of S. Thomas Mallen Road and north of W. Hallet, this development will consist of 88 single-family residential units.
- **Deer Creek Apartments** – Apartment complex located one half mile south of SR 2 on Flight Drive.

As discussed in Section 2, a significant amount of land on the eastern side of Fairchild AFB remains undeveloped and the West Plains is seen by many as the next natural location for development due to the affordability of land and growing traffic congestion north of Spokane that makes new projects less desirable for residential development. The Liberty Lake area is becoming more expensive, and opposition to new developments occurs more frequently in the South Hill area.

The desirability and potential future development of the West Plains creates a substantial threat to compatibility if not carefully planned and coordinated.

Land uses may be considered incompatible with military installations and their operations based on many factors. Among the most common factors causing incompatibility with military airfields and operations areas are the high levels of noise created by aircraft, limits on the heights of structures near the installation, as well as off-installation light pollution that negatively impacts the use of night vision devices (NVD) for military air and ground training. The development of land uses incompatible with an installation's military mission threatens that installation's continued existence.

Complicating land use planning within the West Plains region is the number of entities responsible for land use management. Fairchild AFB is surrounded by lands administered by the City of Medical Lake, City of Airway Heights, Spokane County, and two Native American tribal groups. Additionally, the City of Spokane has co-management responsibility together with Spokane County for properties within the joint planning area (JPA) consisting of the eastern one-third of the JLUS study area. Figure 3-2 provides a generalized look at existing land uses in the area and Figure 3-3 presents the current zoning designations for land in and adjacent to the study area.

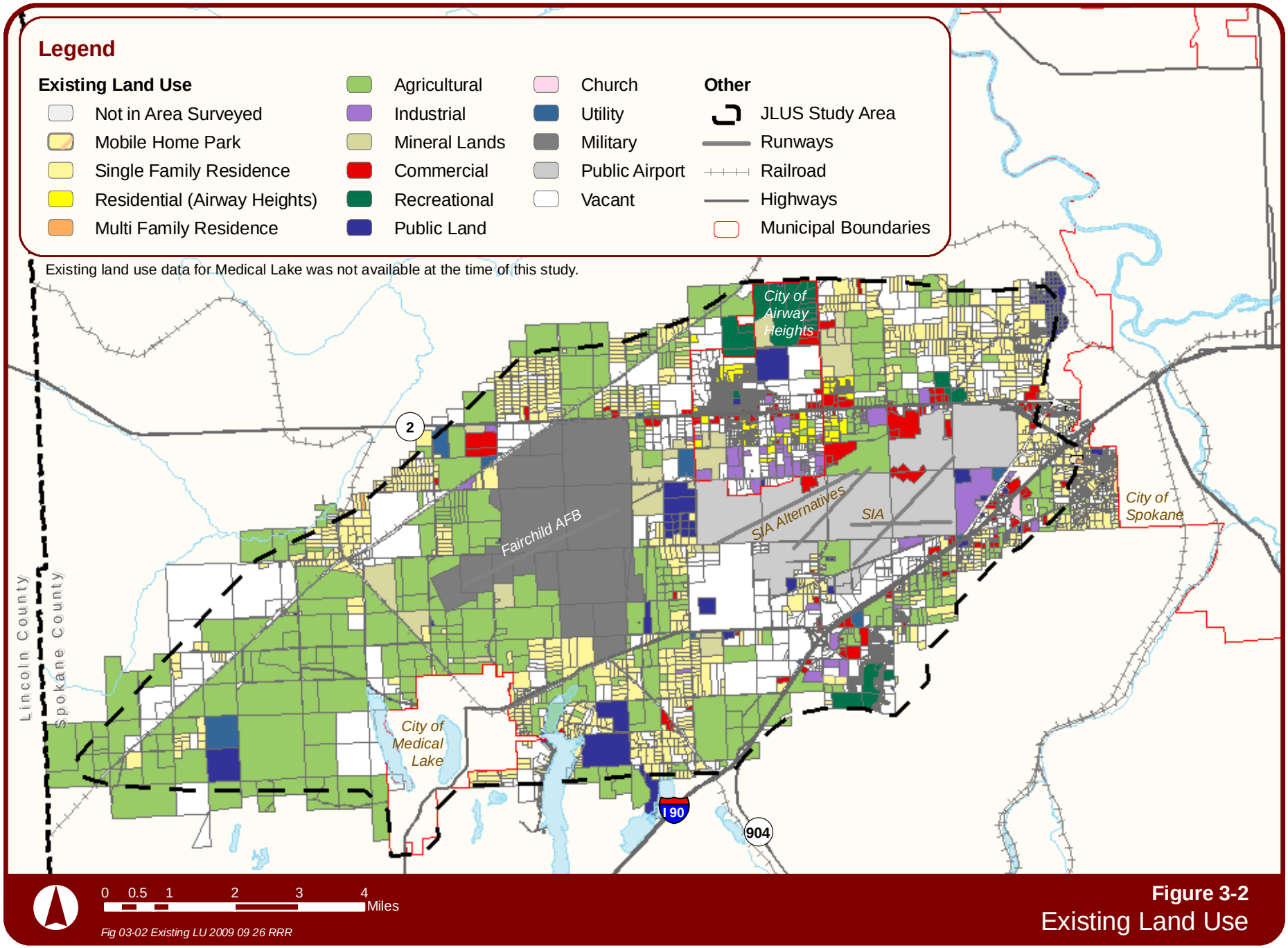


Figure 3-2
Existing Land Use

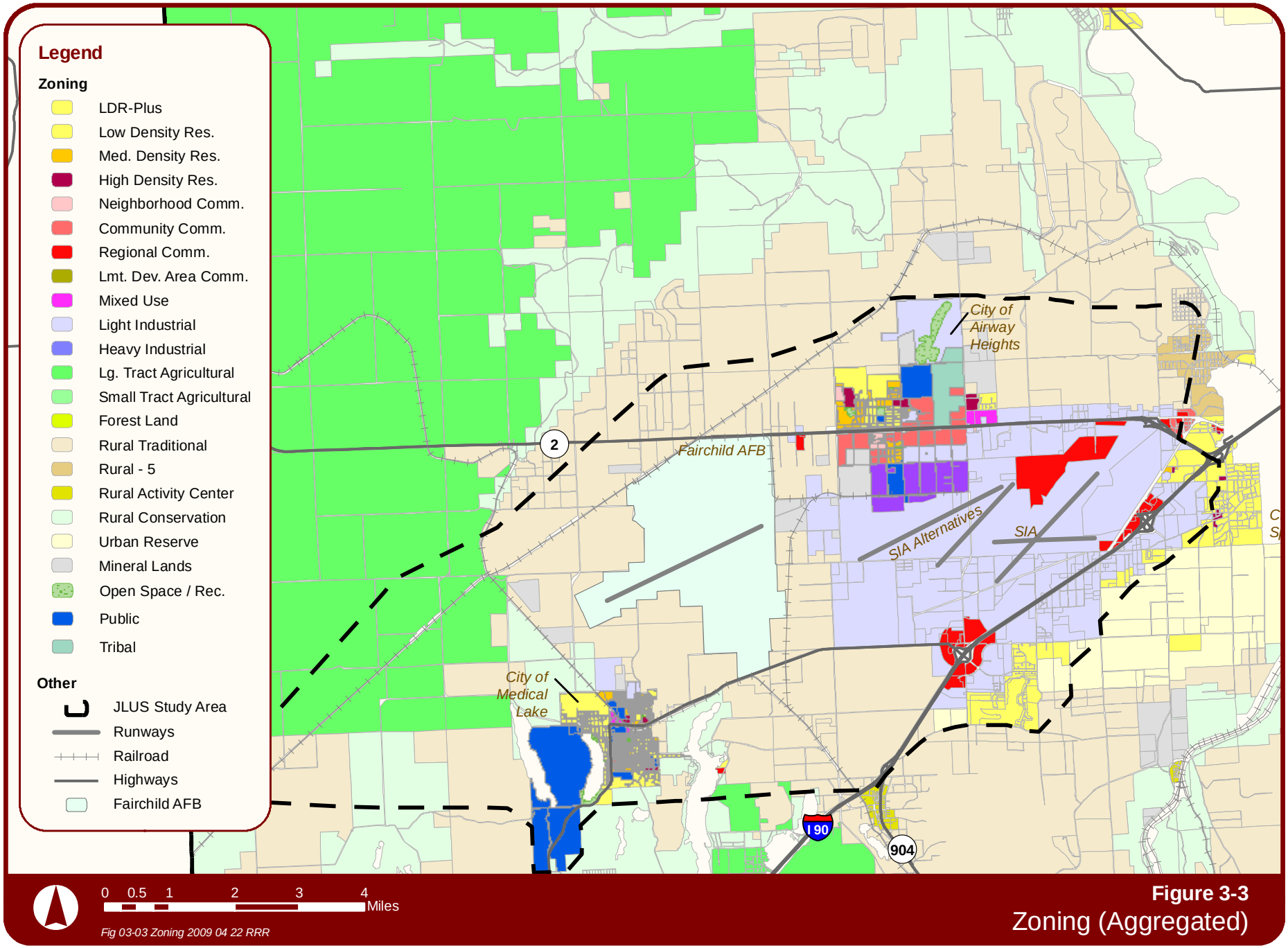


Figure 3-3
Zoning (Aggregated)

Policy Implications

One of the largest challenges to land use compatibility is the recent revision to the Spokane County Zoning Code expanding the uses permitted in the Light Industrial zone. Approved on May 25, 2005 (BoCC Resolution 2005-0579), the amendment allowed more commercial and residential development options within the light industrial zone in the West Plains geographical area. The amendment increased the number of permitted uses to include all of those uses that are currently allowed in the Regional Commercial zone, with the exception of adult retail and adult entertainment establishments. As a result, the amendment allowed a full range of commercial uses as well as single family, two-family, and multi-family residential uses.

The 2005 amendment dramatically encouraged increased residential development on land zoned Light Industrial within the West Plains area. One large subdivision (over 200 lots) was approved in a Spokane International Airport Accident Potential Zone (APZ). This generated substantial concern for the long-term protection of Fairchild AFB and SIA by the Federal Aviation Administration (FAA), the Aviation Division of the Washington State Department of Transportation (WSDOT), and numerous local persons and organizations. Although a moratorium was adopted in October 2, 2006 (BoCC Resolution 2006-0838) to limit development within these critical areas and an amendment increasing restrictions on residential uses within APZ 'B of the Airport Overlay Zone (AOZ) (Chapter 14.702) was adopted on January 22, 2008 (BoCC Resolution 2008-0065), this situation illustrates the impacts associated with zoning decisions when additional protections for the areas around Fairchild AFB are not in place.

One particular development of concern approved prior to the moratorium is the Deer Creek Apartment complex (● Factor 1A) located south of US Highway 2 to the east of Airway Heights. This high density residential development is, located in the 65-70 Ldn noise contour as identified in the 1995 Fairchild Air Installation Compatible Use Zone (AICUZ) study. Although presently located outside the 65 Ldn noise contour as identified in Fairchild's 2007 AICUZ, the changing nature of noise contours resulting from installation operations becomes apparent in the differences between the two studies. Noise contours expand and contract over time as missions and operations at the installation change. It is reasonable to expect that this property will be subjected to aircraft noise in the future. Development within Fairchild's critical operations area will limit the ability of the installation to adapt to new missions, to support new / different aircraft, and could jeopardize its long-term viability.

Although outside the current 65 Ldn noise contour, safety, noise, and light pollution considerations are still a concern for Fairchild AFB concerning this project and development of sensitive land uses in similar areas. The developer of the Deer Creek Apartments recently sought approval for the construction of a second phase of residential development as an expansion of the original approval. Occurring after the zoning code amendment limited residential uses within the Light Industrial zone, approval of the expansion of the original development would have meant expanding this use. Fairchild AFB, SIA, FAA, and WSDOT continued to cite concerns with the proposed second phase. These concerns included its location within the "area of influence" for Fairchild AFB and Spokane International Airport (an area defined in Spokane County's Comprehensive Plan as "properties near public airports which are subjected to aircraft noise of 65 decibels or higher day-night average

sound level"), cumulative noise impacts from multiple air facilities, incompatibilities with a proposed third runway at Spokane International Airport, and safety impacts including the proportionately higher percentage of accidents that occur in aircraft traffic patterns within the areas of influence. These entities advised that the permitting of high density residential uses, or concentrations of residential uses, within proximity to airports weakens the ability of the facility to protect public safety by allowing incompatible development and hazardous situations within critical phases of aircraft approach and departure operations.

Based on these considerations, the Spokane County Hearing Examiner denied the apartment expansion request. Although this additional development was denied, there continues to be considerable development interest within this portion of the study area. Other developments approved in this vicinity include a 10-screen, 33,000-square foot cinema to be located north of the Deer Creek Apartments. There is also a planned three-story, 79-unit La Quinta Inn and Suites, which would be located on the east side of Deer Creek Road south of US Highway 2. The growth occurring within the area will continue to create compatibility concerns for Fairchild AFB unless a coordinated planning approach is taken.

Recent annexation proposals for the West Plains will, if approved, increase land controlled by Airway Heights and the City of Spokane into the study area (see Figure 3-4). The City of Spokane will commence its annexation process for a 10-square mile portion of the West Plains area, including the Spokane International Airport, in 2009. The City of Airway Heights will seek to annex one square half mile, including the Wal-Mart on Hayford Road. Currently, this area is home to approximately 1,500 residents and has substantial interest among developers for commercial and residential development. Final decisions on annexation approval rest with the Washington State Boundary Review Board of Spokane County. Annexation creates changing compatibility factors as currently, each jurisdiction has a slightly different set of regulatory tools for the treatment of compatibility factors.

Geiger Spur

As discussed previously in Section 2, Spokane County, in cooperation with the Spokane Economic Development Council (EDC), conducted a study in 2005 to determine the viability of relocating the portion of the Geiger Spur rail line (● Factor 1B) from within Fairchild AFB to a location outside the base. With the transfer of the rail spur ownership from Burlington Northern-Santa Fe (BNSF) to Spokane County, the Air Force required the County to relocate the spur line outside the base by September 30, 2009.

In addition to the construction of the new spur line, the planning of the Geiger Transload and Logistics Facility is also underway. The Transload Facility will use cranes and other equipment to transfer freight between rail cars and trucks. Although the Transload Facility will be an important economic development anchor increasing Spokane's identity as a major international freight center, the presence of a facility of this nature directly to the east of Fairchild AFB presents potential compatibility factors, most notably with vertical obstructions and light pollution. Additionally, the existence of the newly constructed spur rail line running near the east boundary of Fairchild AFB will very likely attract further economic developments, specifically industrial and commercial uses.

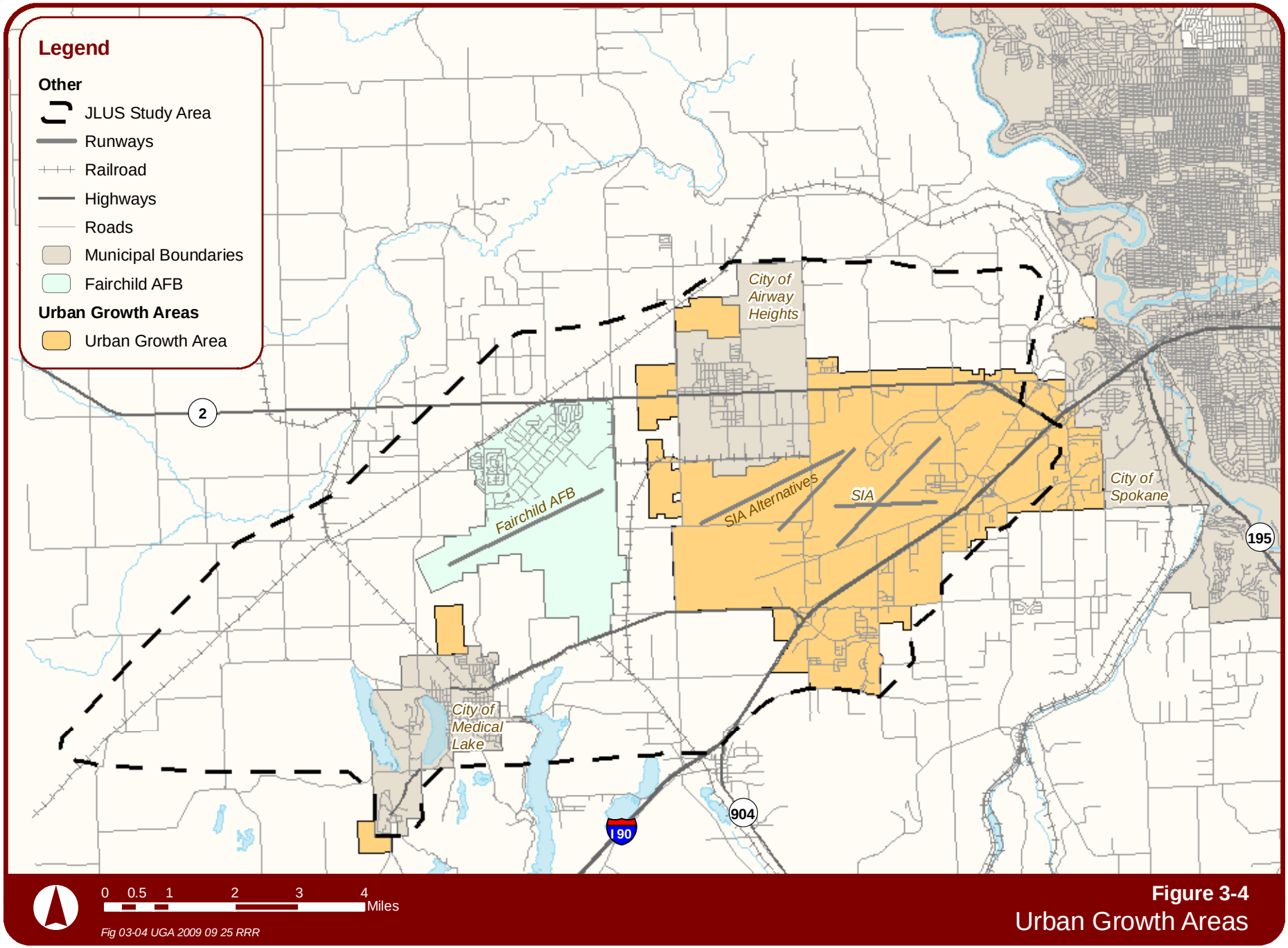


Figure 3-4
Urban Growth Areas

Development on Tribal Lands

Enterprising Native American communities are using their sovereignty to approve large development projects in the vicinity of Fairchild AFB (● Factors 1I, 1J, 1L). Indian trust lands fall under federal jurisdiction and, in most cases, are immune from state and municipal land development laws and regulations. Without cooperative land use planning, local planning boards and communities are often left with little control over what is built. In addition to existing lands, tribal governments can submit the purchase of additional holdings to the Department of the Interior to add to the nation's holdings. Once deemed part of a tribal government's holdings, land planning and development is under the jurisdiction of the tribal government.

Several large scale Native American developments exist or are proposed within the study area. These projects include the Kalispel Tribe's Northern Quest Casino situated along North Hayford Road in Airway Heights. The current resort and casino are being expanded to include a 250-room hotel, a 10,000-square foot spa, and a six-story parking garage. The ultimate plan includes a 2,300-seat special events venue and a 50,000-square foot nine-story glass atrium that connects two hotel towers. The Spokane Tribe has lands located to the west of Airway Heights. The Tribe has a 10-15 year master plan that includes a 145-acre hotel and casino resort site with supporting highway commercial uses just north of Fairchild AFB along US Highway 2. The first phase of this development, a convenience store, was completed in 2006.

Urban Growth Areas

As discussed in detail in Section 2, the State Growth Management Act (GMA) requires the designation of urban growth areas (UGA) and the development of policies for joint planning within the UGAs (● Factor 1K). Spokane County's adopted Countywide Planning Policies (CWPP) addresses the need for joint planning within the UGAs and defines joint planning areas. Most of the eastern portion of the JLUS study area is designated as being within the City of Spokane's UGA with a small portion of it designated for Airway Heights' future growth area. All of this area is identified as a JPA, which is an area within the UGA assigned to a municipality for future urban development; however, a JPA is located in unincorporated portion of the county. This situation necessitates that the county partner with a city to jointly plan that city's future UGA.

The CWPP document requires an evaluation of the UGAs at least once every 10 years to ensure adequacy of the urban land capacity based on urban growth projected within a 20-year planning horizon. In 2006, Spokane County conducted an initial assessment of 29 sub-areas for potential inclusion within the UGA. There is considerable area within the West Plains within the UGA, including SIA. Although Fairchild AFB is not included, the area of interest extends to within ½ mile of the installation's eastern boundary (see Figure 3-4).

Although regional guidance is developed, each city within the study area and the County has their own set of development regulations and design standards. As urban growth continues on the West Plains, consistency in land development regulations and standards will become more critical. For instance, using the same accident potential zone definitions and allowed land uses in these areas will help ensure appropriate protection of public safety in all jurisdictions.

The runway alignment study was recently accepted by the SIA Board and released for public review. The study is recommending the alternative runway that is parallel to SIAs main runway. A final decision on which alternative will be pursued is pending.

Spokane International Airport

Located east of Fairchild AFB, Spokane International Airport manages approximately 5,000 acres of public land dedicated to airport and airport related economic development. Jointly operated by Spokane County and the City of Spokane, through the Airport Board, the facility has an established airport layout plan and master plan that has served to provide a basis for land use and development decisions on airport lands. Although it has not determined the final layout for development of SIA's third runway, a study is underway to identify the best of two runway alternatives. Development incompatible with airport operations may conflict with the layout, length, orientation, and use of the third runway (● Factor 1N); however, the focus of this study is Fairchild AFB and its operations. It is simply noted here that land development having an impacts on Fairchild AFB could also affect SIA's current and future operations since the two facilities are in very close proximity.

Impacts to one air facility have the potential to impact the other due to their shared airspace. As "essential public facilities" under the GMA, incompatible development impacting the operation of these facilities should not be allowed. See also the discussion under Compatibility Factor 3, Vertical Obstructions.

Mining Operations

Spokane County's abundance of natural resources led to the development of numerous mining operations throughout the study area (● Factor 1P). Mining operations are primarily devoted to sand, gravel, rock, or clay production. Concerns related to these mining facilities include dust generation from mining activities, vertical obstruction potential and light impacts from any nighttime activities. Also, standing water sometimes occurs as a result of mining operations due to the high water table in the locations near Fairchild AFB. Standing water attracts birdlife, which is hazardous to aircraft operations.

The presence of a large commercial racetrack north of the City of Airway Heights was specifically mentioned as a recreational asset of concern (● Factor 1S). In 2008, Spokane County purchased the privately owned Spokane Raceway Park. Renamed the Spokane Motorsports Park, the facility is home to a drag strip, road course and paved oval, and hosts numerous drag and oval racing events throughout the year. Recreational assets of this nature can be immense economic attractors to local communities. However, with the increased attraction once rural communities can be faced with infrastructure considerations, traffic congestion, and other operational impacts such as increased noise levels. For Fairchild AFB, operation of the track during the night could present light and glare obstacles to aircraft.

2 Safety Zones Factors

Definition:
Safety zones are areas in which development should be more restrictive in terms of use and concentrations of people due to the higher risks to public safety. Issues to consider include aircraft accident potential zones, weapons firing range safety zones and explosive safety zones.

Military installations often have activities or facilities that require special consideration by local jurisdictions when evaluating compatibility due to public safety concerns. The factor locations described under this factor are listed on Table 3-3 and described on the following pages.

Table 3-3. Safety Zone Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Aircraft Safety Areas/Zones: potential for incompatible uses with safety zones	2A, 2B, 2D	■	■	■
Bird attraction hazards	2C, 1D, 1O	■	■	■
Firing Ranges and Explosive Safety Areas: safety buffers for firing ranges, areas with explosive safety arcs	2E, 1H	■	■	■
Airspace: joint use and air traffic coordination	2F	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Aircraft Safety Areas/Zones

The following discussion details the safety areas or zones associated with civilian airports and military air operations with emphasis on the unique aspects of aircraft operations safety within the study area.

Spokane International Airport

Spokane International Airport's current runways

Source: www.wsdot.wa.gov

Spokane County and the City of Airway Heights have both recognized the need to address aircraft safety related to civilian and military aircraft operations. As incorporated in the Spokane County Zoning Code (Chapter 14.702) and in the Airway Heights Zoning Code (Chapter 17.15), an Airport Overlay Zone was created that influences development in certain areas on and adjacent to SIA of Fairchild AFB.

These ordinances utilize accident potential zones (APZ) as defined by Federal Aviation Administration regulations for civilian/public airports. These APZs are trapezoidal in shape and are identified on zoning maps as APZ-A and APZ-B. These zones are defined as follows:

- **APZ-A** - all land in that portion of the approach area of the runway, which extends outward from the end of the primary surface a distance equal to one-third of the existing or planned length of the runway. For SIA's primary runway (Runway 3/21), this length equates to 3,000 feet. For Runway 7/25, SIA's secondary air carrier runway, this length is 2,730 feet.
- **APZ-B** – all land in that portion of the approach area of a runway, which extends outward from APZ-A a distance equal to two-thirds of the existing or planned length of the runway, which is 6,000 feet long for SIA's primary runway. For the secondary air carrier runway, this length is 5,466 feet.

Figure 3-5 illustrates APZ-A and APZ-B for SIA's runways. Additionally, two locations are currently under consideration for construction of a third SIA runway. Figure 3-6 shows the locations of the runway options and the associated safety zones. The runway site closest to Fairchild AFB is oriented parallel to the installation's runway. The runway option closest to SIA is oriented parallel to and west of the airport's 9,000-foot primary runway. The SIA Study referenced earlier in this section will guide the SIA Board of Directors to the selection of a preferred future third runway.

Identified under ● Factor 2A is the concern that incompatible uses will be allowed inside the APZs of the existing and preferred SIA runways. To address these concerns, the Airport Overlay Zone (AOZ) imposes height and land use restrictions within air space and accident potential areas for the protection and safety of aircraft operations. The AOZ currently provides protective APZs at both ends of the proposed SIA runway parallel to the facility's primary runway. The proposed SIA runway east of and parallel to Fairchild AFB's runway is not afforded protection the Spokane County Zoning Code (Chapter 14.702). Height factors will be discussed later in this section under Compatibility Factor 3, Vertical Obstructions.

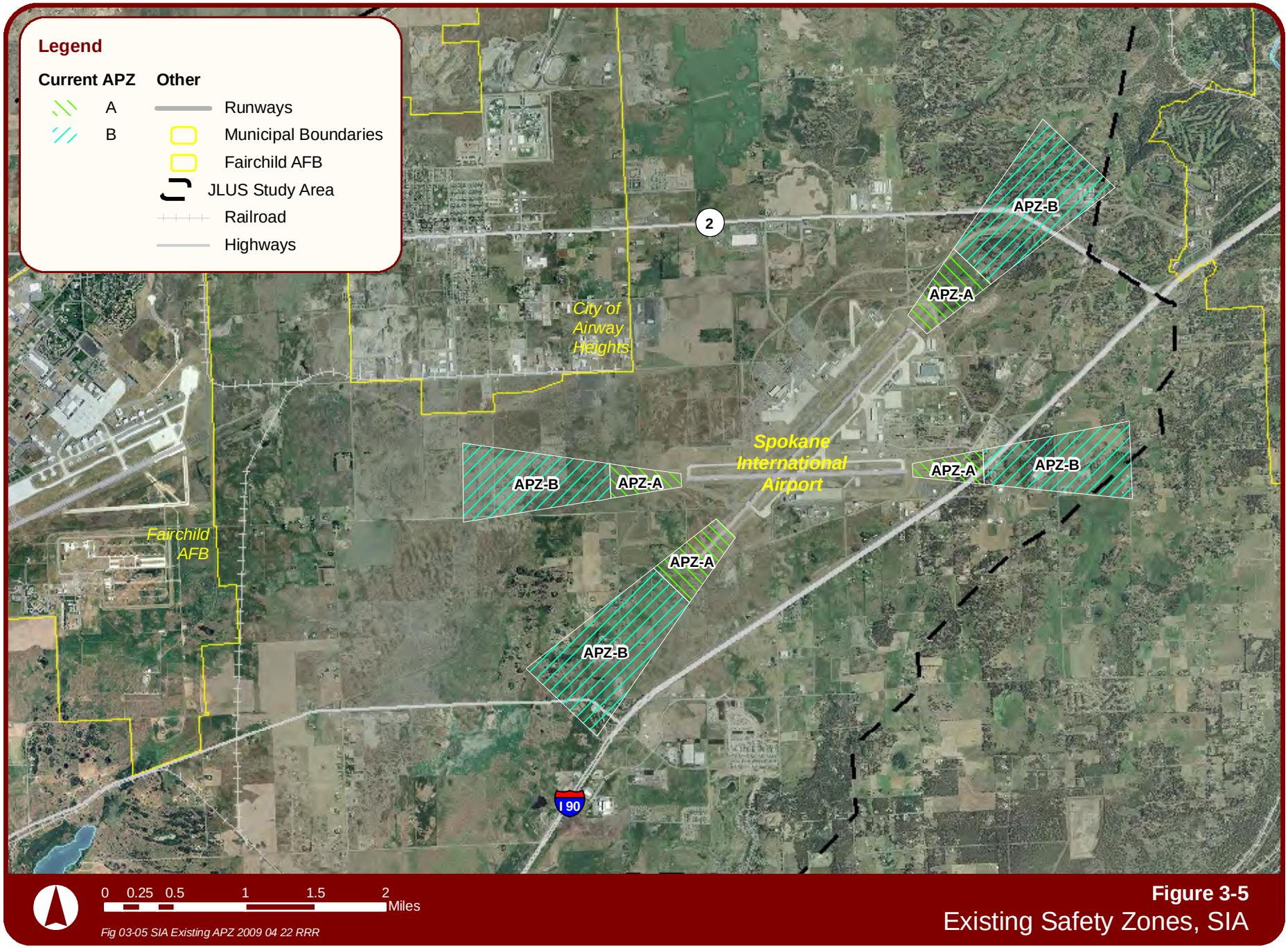


Figure 3-5
Existing Safety Zones, SIA

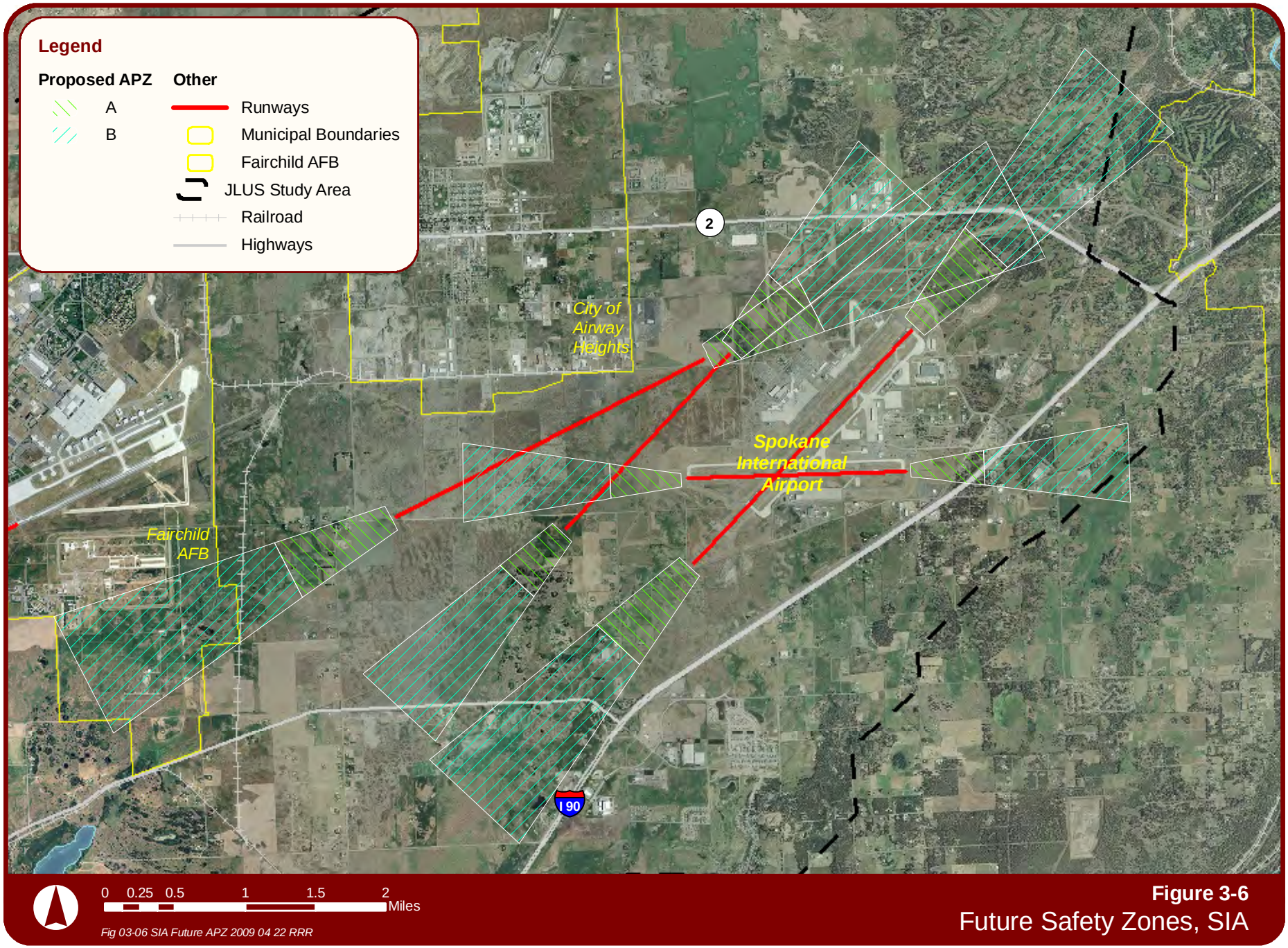


Figure 3-6
Future Safety Zones, SIA

As noted in the Spokane County and Airway Heights zoning codes, only the following specifically permitted uses are allowed in the APZ-A located at both ends of the Fairchild AFB runway:

- Warehousing/self storage facility including building(s) for commercial storage of personal property.
- Outdoor storage of equipment, automobiles, machinery, building materials, contractor's equipment storage yards
- Cemetery
- Nursery
- General agricultural use, except feed lots or other agricultural uses that attract substantial quantities of birds
- Public utility local distribution or transmission facilities necessary for public service
- Quarry, gravel pit, mining
- Maintenance and repair facility
- Open storage area for commercial storage of personal property such as boats and travel trailers.
- Auto wrecking; junk, and salvage yard
- Rail or trucking freight terminal

Within APZ-B, the uses associated with the Spokane International Airport and Fairchild AFB specifically prohibited in the Spokane County and Airway Heights zoning codes are as follows:

- Child day-care center
- Church
- Community treatment facility
- Family day-care provider
- Heliport or helipad
- Hospital
- Hotel
- Manufactured home park
- Motel
- Nursing home
- Participant sports and recreation
- Recreational vehicle park
- School
- Spectator sports facility
- Theater
- Residential subdivision as defined in Chapter 58.17 RCW, as well as residential binding site plans as defined in the Spokane County Subdivision Ordinance.

Two types of Accident Potential Zones are used in the study area today. The first was developed by the FAA for public (civilian) airports: ***APZ-A and APZ-B****.*

The second was developed by the Department of Defense for military airfields: ***APZ I and APZ II****.*

Fairchild AFB

Department of Defense (DOD) analysis has determined that the areas immediately beyond the ends of the runways and along the approach and departure flight paths have the highest potential for aircraft accidents. Based on this analysis, DOD developed three zones that have a relative potential for accidents. These zones are rectangular in shape and are defined as Clear Zones (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II) (see Figure 3-7). Similar to Factor 2A, there is concern for possible incompatible uses locating in the Fairchild AFB safety zones (● Factor 2B), which could have serious negative impacts to the installation's current and future mission.

Clear Zones are the most hazardous areas and lie closest to the ends of the runway. The Fairchild AFB runway CZ measures 3,000 feet wide by 3,000 feet long extending directly beyond the end of the runway and outward along an imaginary extension of the runway's centerline. Above ground structures are generally not permitted in these areas and land is optimally undeveloped. For this reason, acquiring sufficient real property interest in land within the CZ is critical to ensure that incompatible development does not occur.

APZ I possesses a high potential for accidents. APZ I begins at the end of the CZ and extends out 5,000 feet. APZ II is an area beyond APZ I having measurable potential for accidents. This zone extends from the end of APZ I out an additional 7,000 feet. Both APZ I and APZ II are 3,000 feet wide. While aircraft accident potential in APZs I and II does not warrant acquisition by the USAF, land use planning and controls are strongly encouraged for the protection of public safety. Within APZ I and II, a variety of land uses are compatible; however, uses sensitive to noise, such as hospitals and schools, and occupant-intensive uses such as high density residential, commercial, and industrial should be avoided due to the greater potential for safety incidents in these areas.

Each Air Installation Compatible Use Zone (AICUZ) study contains general land use guidelines related to safety and noise associated with aircraft operations. The Fairchild AICUZ Study lists the USAF-recommended land use compatibility guidelines in relation to noise zones and APZs (see Appendix D). The information presented in the table is essentially the same as the information published in the June 1980 publication by the Federal Interagency Committee on Urban Noise (FICUN) entitled *Guidelines for Considering Noise in Land Use Planning Control* (FICUN 1980) and in the *Standard Land Use Coding Manual* (USURA 1965) published by the US Urban Renewal Administration (USURA).

AOZ/AICUZ Comparison

Although the Airport Overlay Zone adopted by Spokane County and Airway Heights and the Fairchild AFB CZ / APZ I / APZ II safety zones all seek to protect public health, safety, and welfare by identifying accident potential areas and limiting incompatible uses in those areas, there are several key differences between the AOZ and AICUZ safety zones.

- AOZ has more stringent building/structure height restrictions;
- AOZ incorporates two safety zones while the AICUZ has an additional safety zone (the Clear Zone);
- AICUZ APZs are a different size, shape and length than AOZ APZs (Figure 3-8 and 3-9); and
- AICUZ is more detailed relative to APZ land use criteria than AOZ.

NOTE: The AICUZ and AOZ safety zones overlap each other and operate concurrently within the City of Airway Heights.

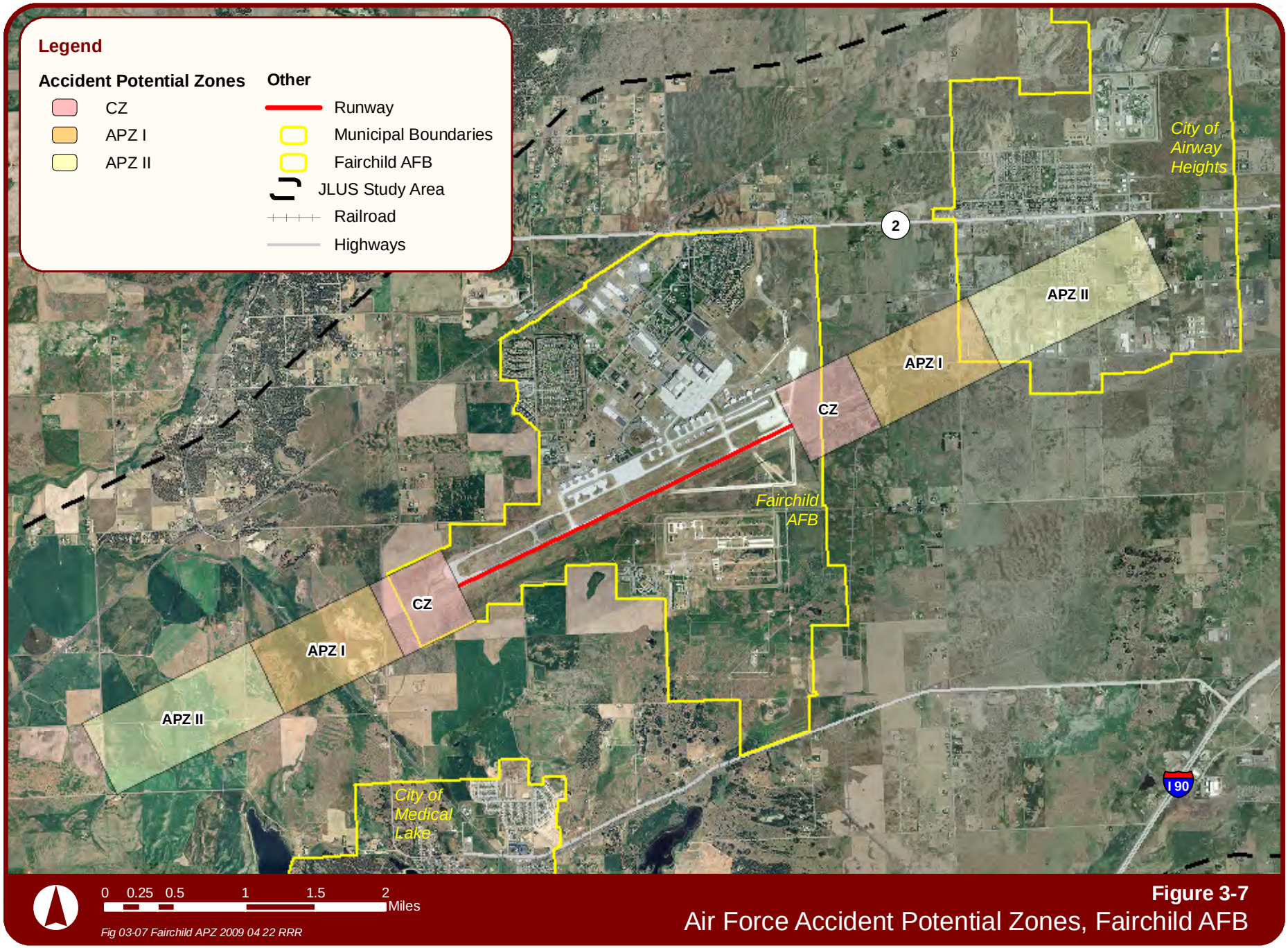
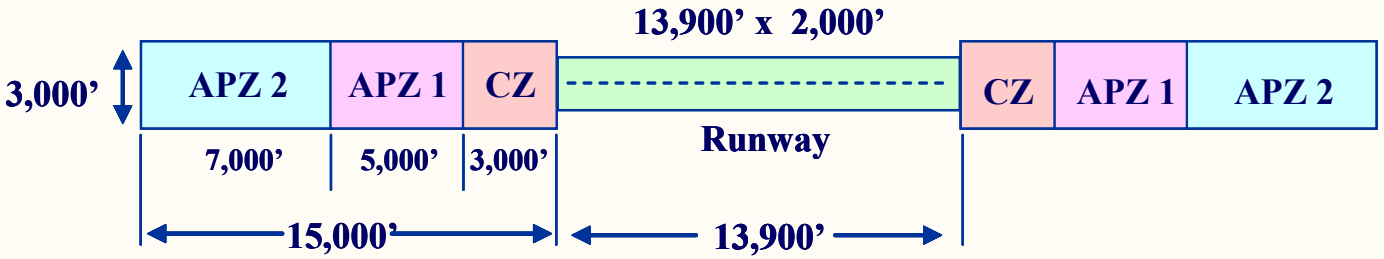
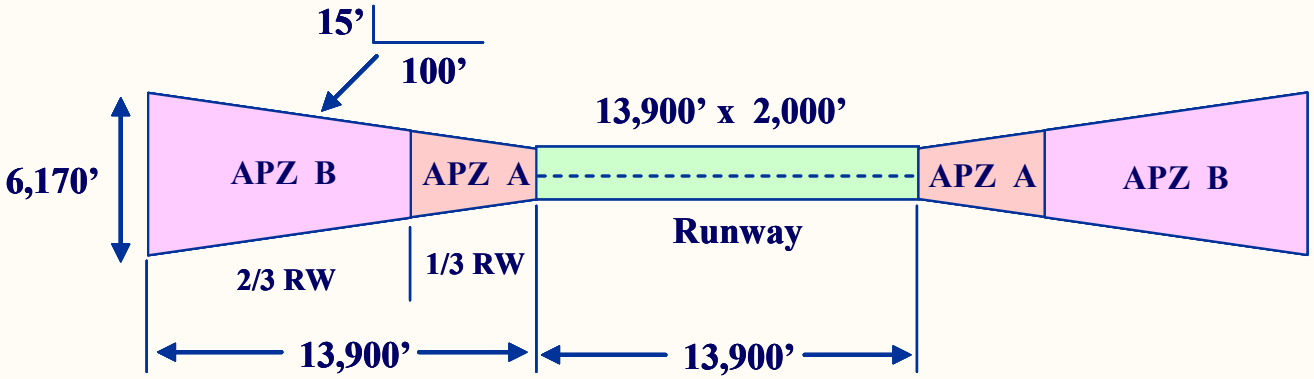


Figure 3-7
Air Force Accident Potential Zones, Fairchild AFB



AICUZ Safety Zones (Plan View)



AOZ Safety Zones - Military Airport (Plan View)

Figure 3-8
AICUZ (Air Force) and AOZ (Local Jurisdictions) Safety Zones

Fig 03-08 APZ Diagrams 2009 04 22 RRR

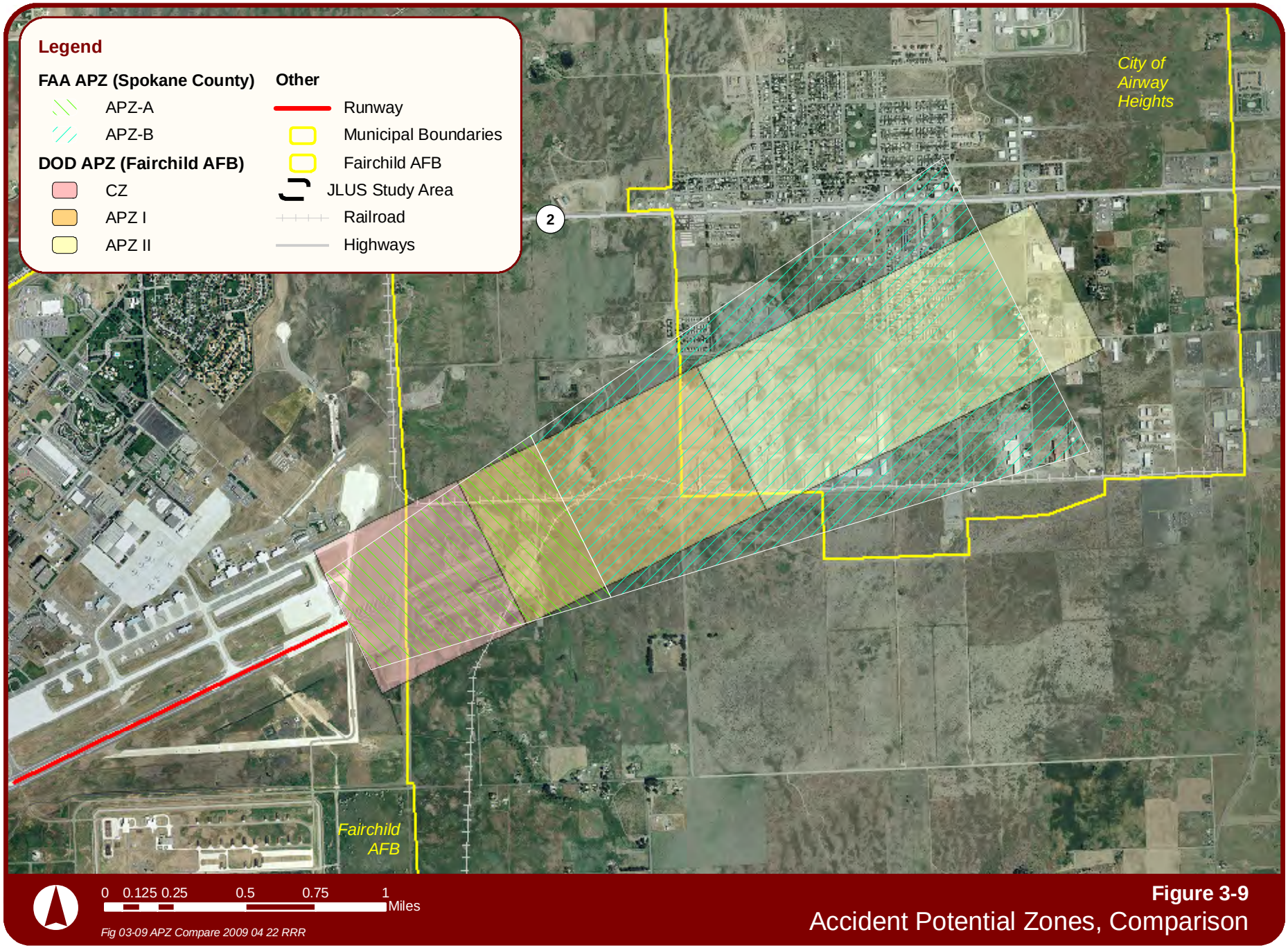


Figure 3-9
Accident Potential Zones, Comparison

Fairchild AFB is mandated to use DOD AICUZ criteria while the local jurisdictions elect to use AOZ criteria. AOZ criteria allow development that is considered incompatible under AICUZ criteria, which equates to factors regarding safety, quality of life, and mission impact for Fairchild AFB. Tables 3-4 and 3-5 identify the differences between land use criteria of the AOZ and AICUZ.

It is important to note that the AICUZ and AOZ safety zones overlap each other and operate concurrently within the City of Airway Heights. The existence of two safety zone geometry standards affecting Fairchild AFB is problematic, specifically when applied to Fairchild AFB and in the locations of overlap in the City of Airway Heights. Spokane County, City of Airway Heights, and WSDOT aviation maps all show the Fairchild AFB APZs as trapezoidal shapes in accordance with FAA guidance for civilian airports. This situation may cause confusion in the interpretation of allowable land uses within and in close proximity to the Fairchild safety zones, which could ultimately result in the siting of land uses incompatible with Fairchild aircraft operations (● Factor 2B). To ensure the highest level of safety for its citizens, Airway Heights adopted both the AOZ and AICUZ APZs and corresponding land uses in their development code, Section 17.15 and Section 17.16, respectively. This ensures the safety considerations and recommended land uses for both the SIA AOZ and Fairchild AICUZ are taken into consideration. However, it is essential that the overlap/redundancy be eliminated to ensure protection of Fairchild AFB.

Table 3-4. AICUZ Safety Zones Generalized Land Use Criteria

Generalized Land Use	Accident Potential Zones		
	Clear Zone	APZ I	APZ II
Residential	No	*No*	*Yes*[1]
Manufacturing	No	No[2]	Yes[2]
Transportation, Communications, & Utilities	No	Yes[2]	Yes2
Trade, Business, and Offices	No	*Yes*[2]	*Yes*[2]
Shopping Districts	No	*No*[2]	*Yes*[2]
Public and Quasi-Public Service	No	No	Yes[2]
Recreation	No	Yes[2]	Yes[2]
Public Assembly	No	No	No
Agriculture and Mining	No[3]	Yes[2]	Yes[2]

Notes:
1. Suggested maximum density 1-2 dwelling units per acre.
2. Only limited low-density, low-intensity uses recommended.
3. Except limited agricultural uses are permitted.
4. Chart is for general information. Refer to Fairchild AFB AICUZ Study, Volume I, Fig 4 for specific land uses/guidelines.
5. Red italic text indicates significant difference with AOZ.
Source: Fairchild AFB Off-Base Land Use Planning presentation dated 1 November 2007

Table 3-5. AOZ Safety Zones Generalized Land Use Criteria

Specific Land Use	Accident Potential Zones	
	APZ A	APZ B
Warehousing, Outdoor Storage	Yes	
Cemetery, Plant Nursery	Yes	
General Agriculture	Yes[1]	
Public Utility Transmission Facility	Yes	
Maintenance & Repair Facility	Yes	
Concrete Batch Plant	Yes	
Rail or Freight Terminal	Yes	
Recreation Vehicle & Manufactured Home Park		No
Church, Hospital, School		No
Hotel, Motel		No
Stadium, Theatre		No
Nursing Home, Day Care Facility		No
Residential, Shopping Districts, Trade, Business & Offices		*Yes*

Notes:
1. No feed lots or operations that attract birds.
2. Red italic text indicates significant difference with AICUZ.
Source: Fairchild AFB Off-Base Land Use Planning presentation dated 1 November 2007

Bird Attraction Hazards

In-flight collisions with birds are dangerous for pilots, people on the ground, and aircraft operations in general. This hazard can be increased by incompatible land uses adjacent to the installation and within approach and departure flight tracks. Within the Fairchild JLUS study area and in close proximity to the installation, bird attractants exist that could impact aircraft operating at the airfield. These attractants include wetlands and agricultural land uses (● Factor 2C). Mineral extraction activities located near Fairchild AFB also have a potential to accumulate standing water during and after operations. The standing water, temporary or permanent, can be significant bird attractants.

Most wetlands identified in the Fairchild AFB Integrated Natural Resources Management Plan (INRMP) wetland inventory were in the southern portion of the installation (see Figure 3-10). Wetlands in this area consist mostly of emergent seasonal flood wetlands. Within 1 kilometer of Fairchild AFB to the south are several large, open water wetlands. Fourteen areas on the installation exhibit characteristics indicative of vernal pools, which are small relatively shallow water areas that remain wet during the cool season. These become completely dry during most of the warm season. According the Fairchild's Asset Management Flight Manager, these seasonal wetlands are more problematic than perennial wetlands because the seasonal pools are typically located closer to the installation and aircraft operations. A total of 61 plant species have been found in Fairchild's vernal pools, which can also attract birds. *(Source: Fairchild AFB Integrated Natural Resources Management Plan, March 2005; and Gerald Johnson, Fairchild AFB Asset Management Flight Chief, March 5, 2009)*

Emergent wetland in southern portion of Fairchild AFB

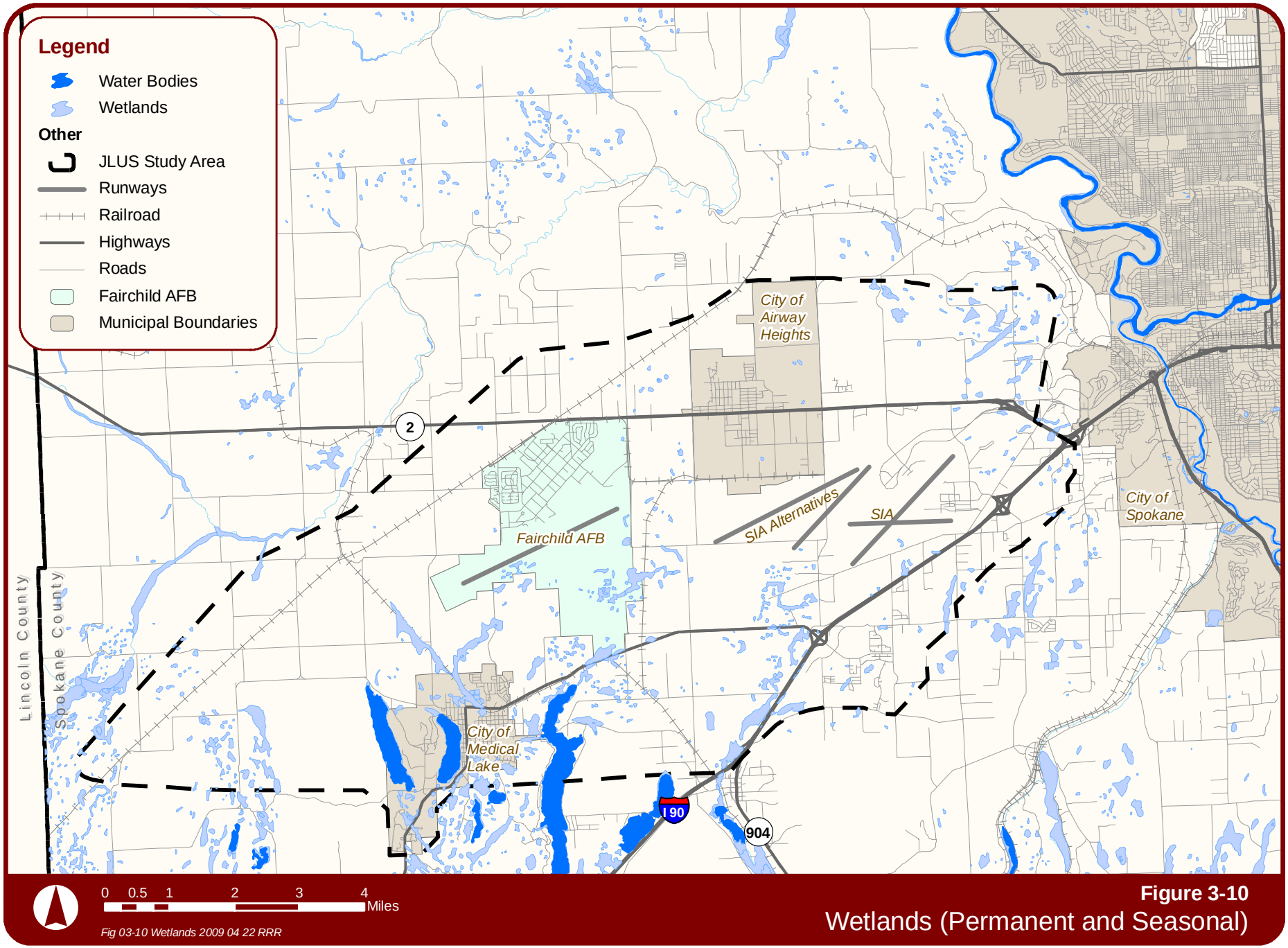


Figure 3-10
Wetlands (Permanent and Seasonal)

Another activity of particular concern is farmers who lease their land for goose hunting. Although not a regular occurrence, this activity can be very dangerous as birds cross the flightline in response to hunters' bird calls south of the runway (● Factor 2C).

The area's numerous agricultural activities can also attract birds in proximity to the installation, particularly near the runway and approach and departure tracks.

Man-made ponds located on Fairchild AFB are not considered to pose hazards to aircraft operations. These have been fitted with netting to reduce the potential for BASH incidents. The installation's two stormwater ponds have 4-inch square netting across them so that birds cannot take off in a flock – a major hazard to aircraft operations. Likewise, the Fairchild fire training area has one pond fitted with 2-inch square netting. *(Gerald Johnson, Fairchild AFB Asset Management Flight Chief, March 5, 2009)*

Active and inert landfills can pose compatibility factors to aircraft operations since these operations have the potential to attract wildlife, specifically birds, can be significant. The Graham Road inert landfill is located approximately one-quarter mile northwest of the installation; however, it is not currently seen as a factor for Fairchild AFB.

Lastly, as described in Compatibility Factor 1, Land Use, the study area's numerous mining operations can create areas of standing water attractive to birds and waterfowl.

Residential

As mentioned in Compatibility Factor 1, Land Use, several existing or proposed developments in the JLUS study area pose factors for compatible land uses. One development was identified by the JLUS committees as posing a compatibility factor related to aircraft operations safety zones at SIA. The Blue Grouse Estates proposed development is located on 46.5 acres of land approximately one mile east of SIA's secondary runway (Runway 7/25). This location is at the northeast comer of Thorpe Road and Grove Road, just southeast of the Interstate 90-Geiger Boulevard interchange, which is within the runway's APZ-B (● Factor 2D). The development includes lot sizes ranging from 5,600 square feet to 13,100 square feet, with the majority of the lots at the smaller end of that range. This factor was not identified as a compatibility factor associated with Fairchild AFB.

Another residential use that was identified as posing a compatibility factor for Fairchild AFB is the Deer Creek apartment complex located less than 4 miles from northeast end of Fairchild's runway (● Factor 2D). This complex is situated just outside of Fairchild's APZ II; however, it is extremely close to the extension of the runway's centerline (less than 0.4 miles). This places the high-occupancy complex almost directly beneath departing or approaching Fairchild AFB aircraft, which is a concern. Since this site is outside of both the AICUZ recommended APZ and the AOZ APZ, it would not be considered a safety zone factor; however, it would be considered a land use and noise compatibility factor. Refer to the discussion of this project under Compatibility Factor 1, Land Use and Compatibility Factor 7, Noise.

Firing Ranges and Explosives Safety Areas

Fairchild AFB has one small arms firing range, a grenade launcher range, and an Explosives Ordinance training range. Figure 3-11 shows the safety arcs for each range. The safety arcs shown represent the areas that may be impacted by ordnance fired at the range. The small arms range safety arcs do not extend off-base.

The explosives ordinance training range at the far south of the base is used by Explosives Ordinance Detachment (EOD) personnel for proficiency training, which occurs once per month. This training may include up to two detonations; however, the training may not include explosives detonation at all. The range has specially constructed barricades of 6-foot walls that minimize vibration and over pressurization. The explosive limit of the explosives ordinance range is 5 pounds. Prior to 2006, the limit was 60 pounds. To conduct a detonation using over 5 pounds of explosives is considered an emergency condition and requires approval from a Major Command (MAJCOM).

The grenade launcher range located at the base's southeast boundary supports the M-203 single-shot 40mm grenade launcher firing paint marking rounds, rather than high explosive (HE) ammunition. The paint marking round has an extremely limited noise signature and safety area. One of the safety arcs (called a "QD" arcs) shown on Figure 3-11 extends slightly off of the installation (● Factor 2E). The QD arcs (the acronym stands for quantity distance) shown on Figure 3-11 are determined based on a number of factors, including the quantity and type of material stored. Using federal regulations, the standoff distance from these storage and use areas are calculated to ensure safety.

Fairchild AFB has another safety area at the far east end of the runway (● Factor 2E). This is the only parking spot for hot cargo. This explosive arc extends off of the base approximately 118 feet along the fenceline a length of almost 990 feet. Fairchild AFB purchased easements on these parcels of land between 1956 and 1959 to ensure the safety of civilians (see Figure 3-12). The land owner still retains the right to farm the land but cannot build structures or hold assemblies of more than 25 people. As of March 16, 2009, Fairchild AFB is in the final preparation phases of a waiver package for submittal to Air Mobility Command (AMC) to move the hot cargo point west approximately 580 feet from its current location. Final approval is expected to be in the Summer of 2009. *(Source: MSgt Bill Kowalski, Fairchild AFB Weapons Safety Officer, March 16, 2009)*

Airspace

Controlled and Uncontrolled Airspace Descriptions

To help controllers and pilots deal with varying traffic conditions in the sky, United States airspace has been divided into six different classes (A, B, C, D, E, and G). These different classes have different requirements for entry into the airspace, pilot qualifications, radio and transponder equipment, and Visual Flight Rules (VFR) weather minimums.

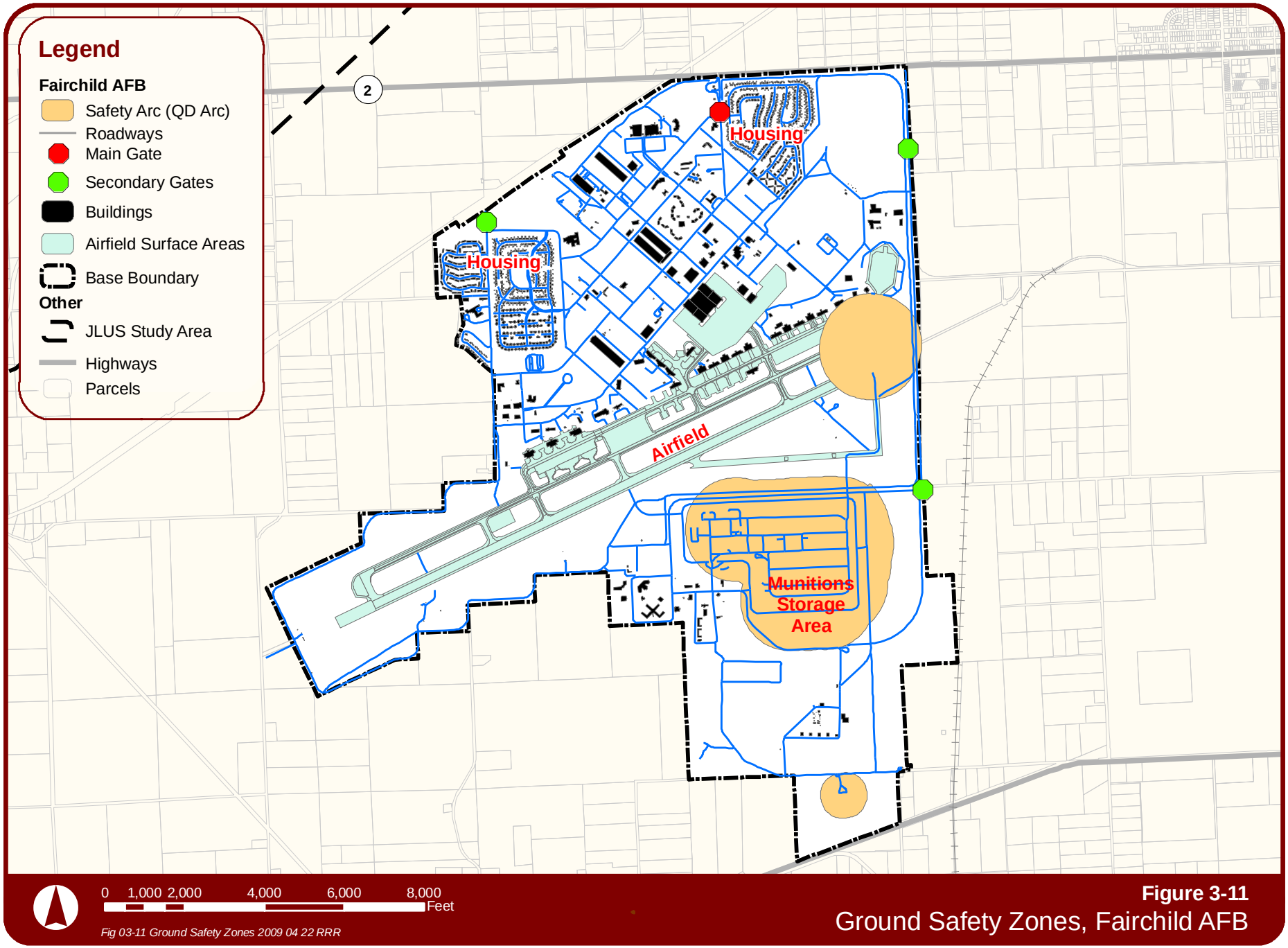


Figure 3-11
Ground Safety Zones, Fairchild AFB

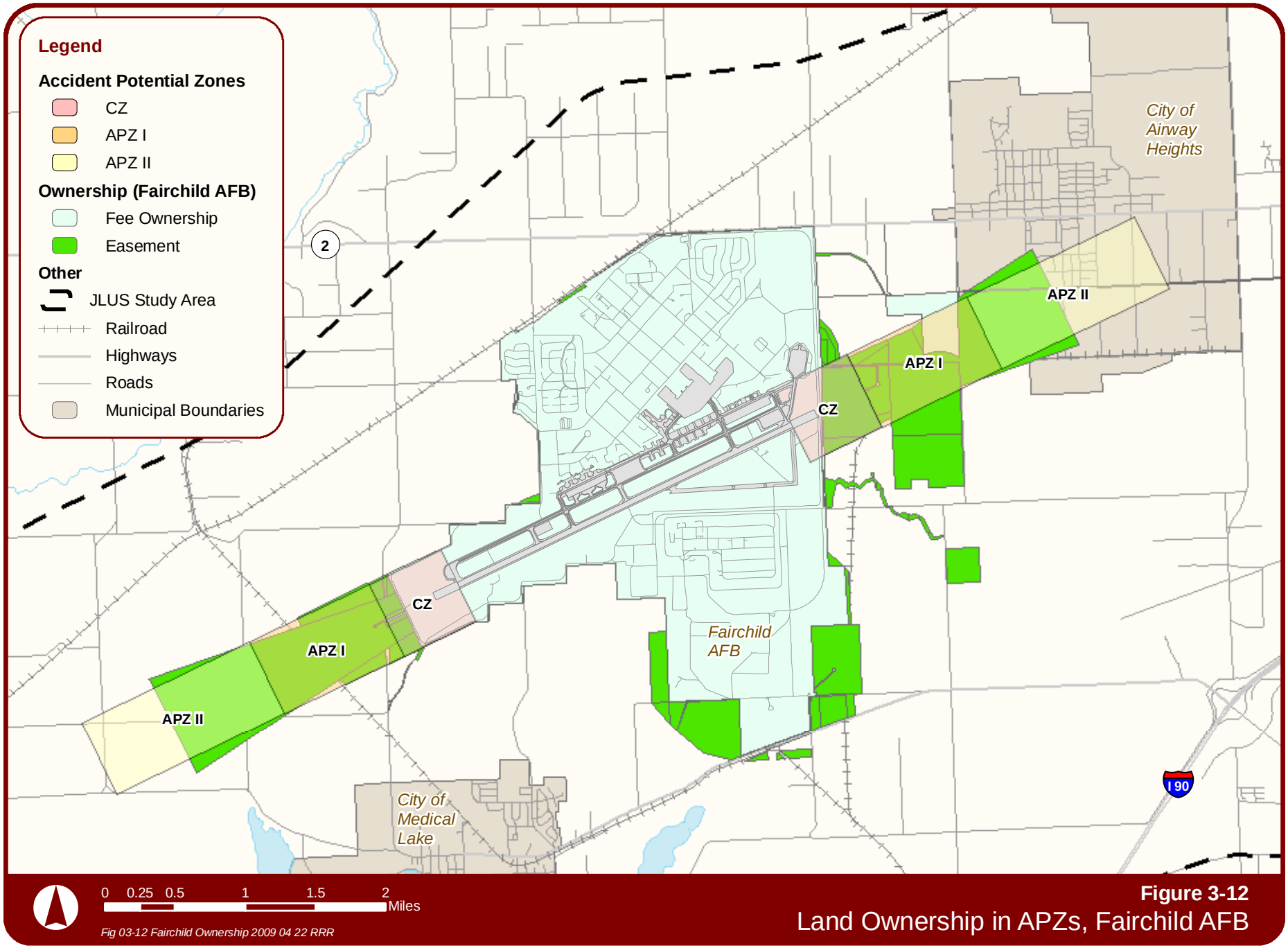


Figure 3-12
Land Ownership in APZs, Fairchild AFB

Spokane International Airport airspace is classified as Class C. This airspace has a mandatory communication requirement. Controlled airspace weather minimums are the same for Class C and Class D airspace (see Table 3-6).

Table 3-6. Airspace Classes and VFR Minimums

Class C	Generally extends around busy airports with operational control towers, radar approach control, and a significant amount of IFR and/or passenger traffic. It is outlined on sectional charts with a solid magenta line. Generally this airspace is from the surface to 4,000 feet above the airport elevation (charted in MSQ surrounding those airports that have an operational control tower), are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Two-way radio contact with approach control is required before entry into Class C airspace, and all aircraft entering this airspace must be equipped with two-way radios and an altitude-encoding transponder. VFR weather minimums in Class B airspace require three-mile visibility. VFR flights must maintain at least 2,000 feet horizontal clearance from clouds, and must remain at least 500 feet below and 1,000 feet above any clouds.

To operate inside or above Class C airspace, all aircraft are required to have a Mode C transponder (up to 10,000 feet mean sea level (MSL)). In addition, two-way radio communication must be established when operating within Class C. Any aircraft wishing to depart or return to a satellite airport located within Class C airspace must contact ATC approach control prior to entering Class C.

Fairchild AFB and SIA Airspace Operations

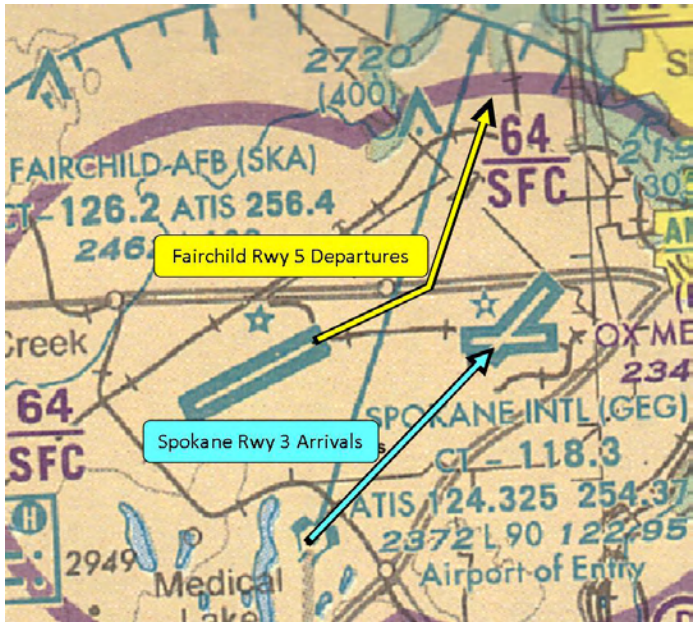
Fairchild AFB is located west of and adjacent to the second largest commercial service airport in the State of Washington, the Spokane International Airport. SIA shares a unique relationship with Fairchild's immediate airspace operations area. A significant part of Fairchild's immediate airspace is shared with SIA, and in fact, Fairchild has no controlled airspace. This shared airspace could have far reaching impacts on how compatible land uses should be addressed in the study area. No other facilities in the US share this unique relationship. To ensure safe aircraft operations in this joint use airspace, there is close coordination of Fairchild's air operations between Fairchild ATC and the FAA's Air Traffic Control Tower (ATCT) at SIA.

The airspace surrounding SIA and Fairchild AFB is classified Class C, which is controlled by the FAA ATCT. Therefore, within SIA's Class C airspace, Fairchild aircraft are under the control of the FAA ATCT. Upon final approach into Fairchild AFB, control of the inbound aircraft is handed off to the Fairchild ATC. Conversely, when departing the installation's runway, Fairchild ATC provides departure clearance to outbound military aircraft taking off. Immediately after take-off, the aircraft contact the FAA ATCT and fall under the ATCT control once again. Figure 3-13 depicts the different classes of airspace. The coordination between Fairchild ATC and FAA ATCT at SIA reportedly works

smoothly and efficiently. *(Source: Ryan Sheehan, Air Operations Manager, Spokane International Airport, March 24, 2009)*

To assist in the safe aircraft operations at both SIA and Fairchild AFB, the FAA developed a notice to inform pilots landing/departing from either Spokane International Airport or Fairchild AFB IFR concerning the special use of visual separation to maintain efficiency at both airports. Sequencing aircraft simultaneously to GEG and SKA under Instrument Flight Rules requires lateral and or vertical separation between aircraft while ensuring protected airspace for potential missed approaches. These requirements directly affect the capacity of both airports.

In a north flow, the ILS approach to SIA Runway 3 converges with the departure path of Fairchild Runway 5. The convergence and divergence of flight paths and distance between airports has made it possible to use visual separation under certain weather conditions to reduce the spacing normally provided to aircraft landing and departing both air facilities. According to the FAA, these procedures have proven to provide an equivalent level of safety compared to standard visual separation rules. This special use of visual separation procedures enables both airports to operate at or near capacity during periods of heavy demand.



SIA Runway 3 Arrivals and Fairchild Runway 5 Departures
Source: www.faa.gov

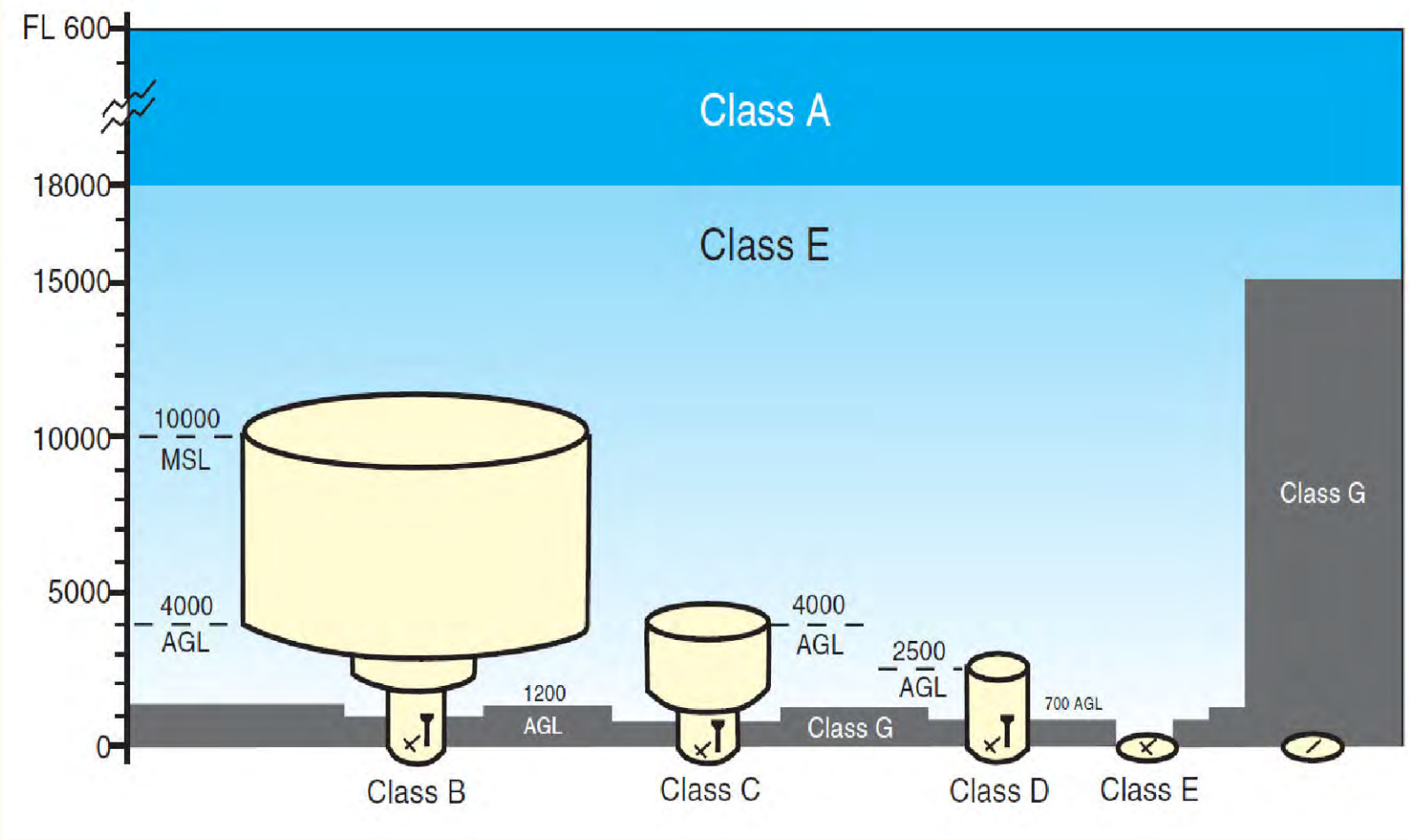


Fig 03-13 Airspace Classes 2009 04 22 RRR

Figure 3-13
Airspace Classes

3 Vertical Obstructions Factors

Definition:
Vertical obstructions are created by buildings, structures or other features that may encroach into the navigable airspace used by military operations (aircraft approach, transitional, inner horizontal, outer horizontal and conical areas, as well as military training routes), presenting a safety hazard to both the public and military personnel and potentially impacting military readiness.

The factors identified for this compatibility factor are listed on Table 3-7 and further described in the following discussion.

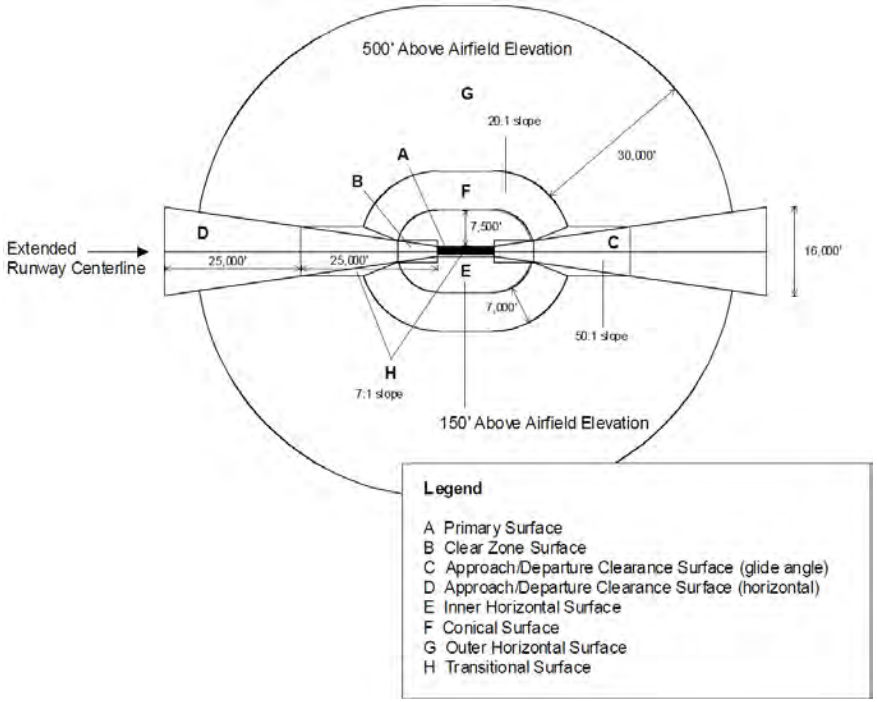
Table 3-7. Vertical Obstruction Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Height of current / future development creating obstructions or hazards to air navigation	3A, 3B, 3C, 3D	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Evaluating Vertical Obstruction

Vertical obstruction in relation to flight operations from an airport (military or civilian) are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details on how to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question. Figure 3-14 illustrates common terms used in the Part 77 regulation, and Figure 3-15 provides a graphic representation of the airspace controls of imaginary surfaces. These are how structures and facilities are evaluated to determine if they pose a vertical obstruction in relation to the airspace around Fairchild AFB. The various imaginary surfaces build upon one another and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. The key terms related to imaginary surfaces and as illustrated in Figures 3-14 and 3-15 are described below.



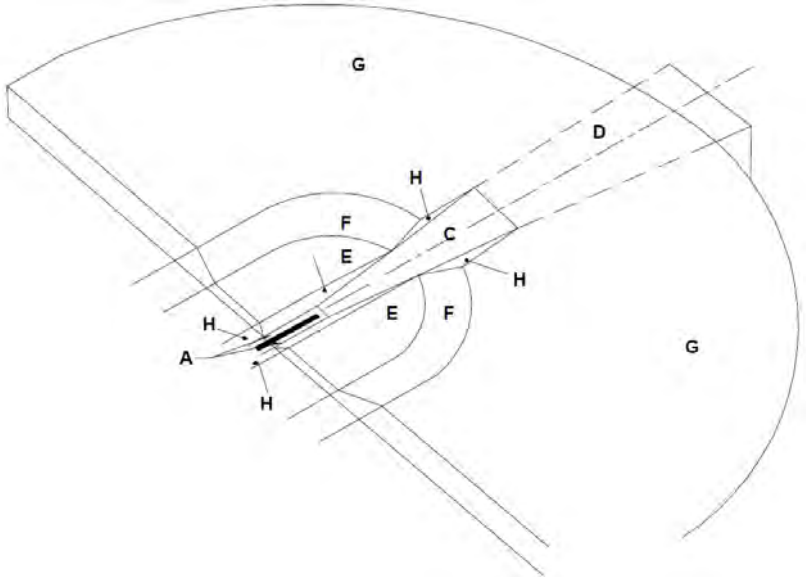


Figure 3-14. Part 77 Terminology, Imaginary Surfaces

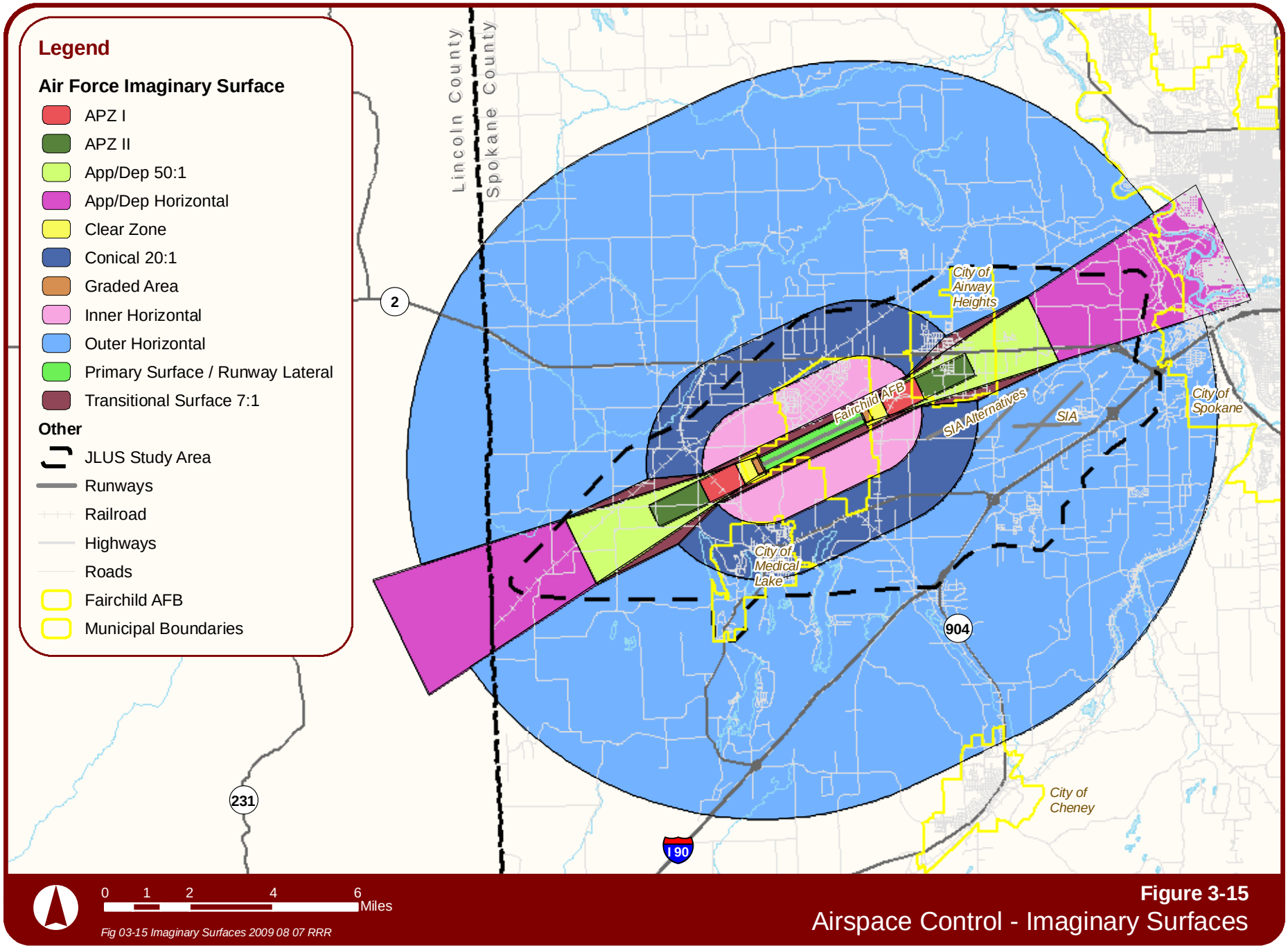


Figure 3-15
Airspace Control - Imaginary Surfaces

Primary Surface – This surface defines the limits of the obstruction clearance requirements in the immediate vicinity of the landing area. It comprises surfaces of the runway, runway shoulders, and lateral safety zones and extends 200 feet beyond the runway end. For a single class "B" runway, this surface is 2,000 feet wide, or 1,000 feet on each side of the runway centerline.

Clear Zone – This surface defines the limits of the obstruction clearance requirements in the vicinity contiguous to the end of the primary surface. For a single runway end, it measures 3,000 feet by 3,000 feet. This area has the highest accident potential of all zones.

Approach-Departure Clearance Surface – This surface is symmetrical from the extended runway centerline. It begins as an inclined plane (glide angle) 200 feet beyond each runway end, and extends for 50,000 feet; it begins with the centerline elevation of the runway end. The slope of the approach-departure clearance surface is 50:1 along the extended runway (glide angle) centerline until it reaches an elevation of 500 feet above the established airfield elevation. It then continues horizontally at this elevation to a point 50,000 feet from the start of the glide angle. The width of this surface at the runway end is 2,000 feet; it flares uniformly, and the width at 50,000 feet is 16,000 feet. This surface extends into a significant portion of north Airway Heights to include the city's commercial corridor along US Highway 2.

Inner Horizontal Surface – This surface is a plane, oval in shape at a height of 150 feet above the established airfield elevation. This surface is constructed by scribing an arc with a radius of 7,500 feet above the centerline at the end of the runway and interconnecting these arcs with tangents. This surface includes a small portion of western Airway Heights and a small portion of northern Medical Lake.

Conical Surface – This is an inclined surface extending outward and upward 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. The slope of the conical surface is 20:1. This surface encompasses the western half of Airway Heights and the majority of Medical Lake.

Outer Horizontal Surface – This surface is a plane 500 feet above the established airfield elevation. It extends for a horizontal distance of 30,000 feet from the outer periphery of the conical surface. For areas not already covered by another imaginary surface, this surface encompasses the remainder of Airway Heights, Medical Lake, a small portion of western Spokane, unincorporated land in the West Plains, and the northern tip of Cheney.

Transitional Surfaces – These surfaces connect the primary surfaces, Clear Zone surfaces, and approach-departure clearance surfaces to the outer horizontal surface, conical surface, other horizontal surface, or other transitional surfaces. The slope of the transitional surface is 7:1 outward and upward at right angles to the runway centerline. To determine the elevation for the beginning of the transitional surface slope at any point along the lateral boundary of the primary surface, including the Clear Zone, draw a line from this point to the runway centerline. This line will be at right angles to the runway axis. The elevation at the runway centerline is the elevation for the beginning of the 7:1 slope. The land areas outlined by these criteria should be regulated to prevent uses that might otherwise be hazardous to aircraft operations. *Source: Fairchild AFB AICUZ Study, October 2007*

To determine when proposed structures or facilities require notification to the FAA, Part 77 (§ 77.13) states the following requirements.

§ 77.13 - Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA (paraphrased):

(1) Any construction or alteration of more than 200 feet in height above the ground level at its site.

(2) Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes:

- within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
- within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
- within 5,000 ft of a public use heliport which exceeds a 25:1 surface

- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location

Further, Part 77 identifies the height at which an object may be considered an obstruction at a designated distance. An excerpt from Section 77.23 follows:

§ 77.23 – Standards for determining obstructions

(a) An existing object, including a mobile object, is, and a future object would be, an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:

(1) A height of 500 feet above ground level at the site of the object.

(2) A height that is 200 feet above ground level or above the established airport elevation, whichever is higher, within three nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile of distance from the airport up to a maximum of 500 feet.

Figure 3-16 depicts how Part 77 requirements impact allowable vertical structures over distance.

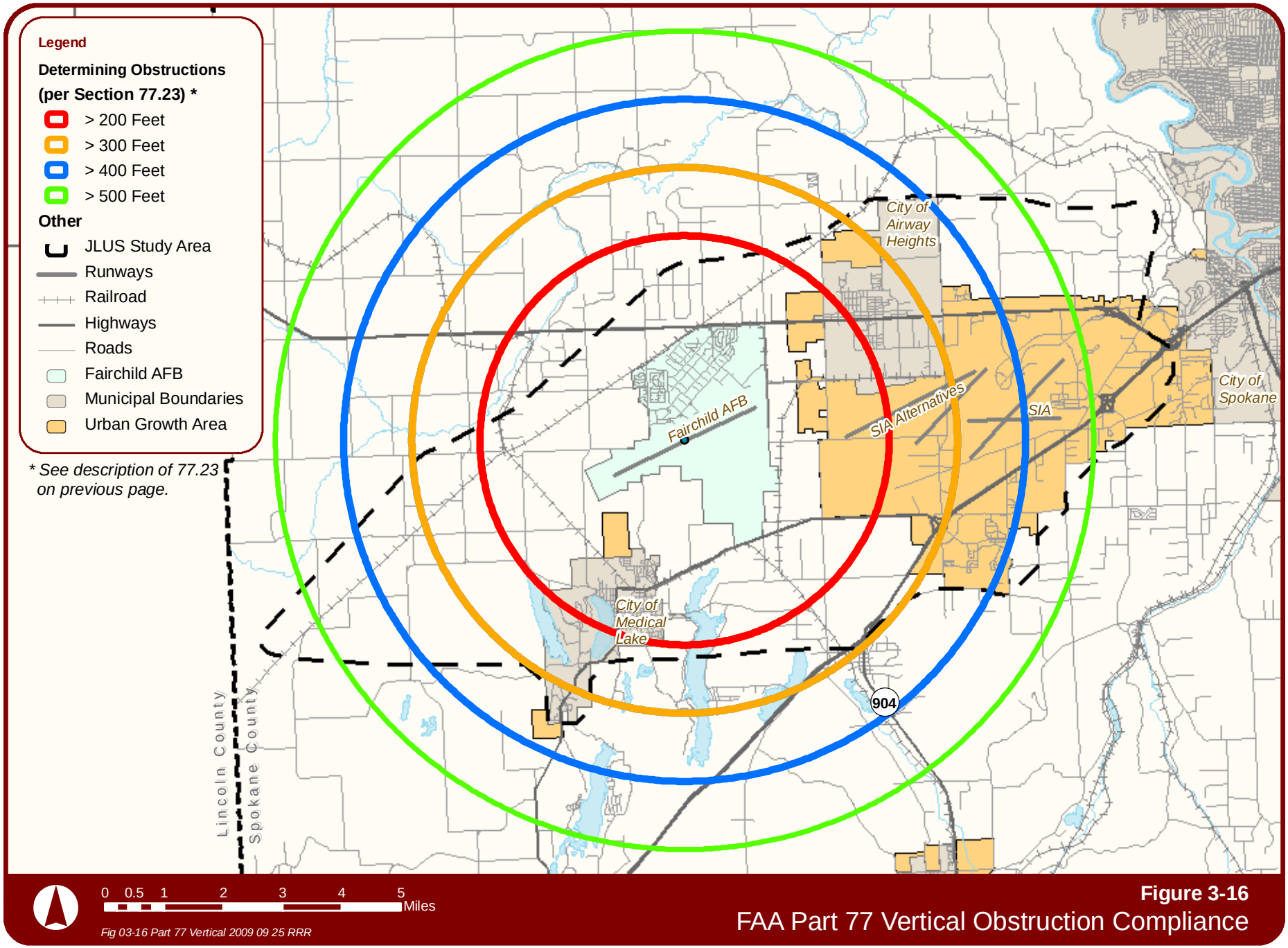


Figure 3-16
FAA Part 77 Vertical Obstruction Compliance

As described in Compatibility Factor 2, Safety, Spokane County incorporated an Airport Overlay Zone into their zoning code to reduce the potential for airport hazards at SIA, Fairchild AFB, Felts Field, and Deer Park Airport. The regulation references FAA Part 77 height guidelines detailed above. Chapter 14.702 of the County's Zoning Code establishes height guidelines and restrictions for the area's four airports and seeks to engage Fairchild AFB in the development review process for buildings that could potentially impact installation operations. The regulations require that prior to development or issuance of a building permit within Fairchild AFB's APZ-A, APZ-B, or a permit which will result in a facility greater than 35 feet in height within the conical surface as defined in the AOZ chapter; the proponent shall provide a copy of the proposal to the Fairchild AFB Base Civil Engineer. Fairchild AFB shall be given 15 working days to review and comment on the proposal.

The factor of lack of a single safety zone geometry standard still remains as Spokane County applies the FAA trapezoidal shapes to Fairchild AFB APZs, while the DOD adheres to rectangular shapes for its safety zones (see Compatibility Factor 2, Safety).

The County Zoning Code details height restrictions applicable to structures or vegetation within the AOZ. Structures or vegetation may not be constructed, altered, maintained, or allowed to grow in any airspace area as described hereinabove so as to project above the conical surface. There are several exemptions to this provision.

Airway Heights incorporated guidelines for both the AOZ (for SIA) and AICUZ (for Fairchild AFB). As with Spokane County, Airway Heights AOZ chapter defines imaginary airspace surfaces and provides general use and height restrictions in accordance with FAA Part 77. For the Fairchild AFB AICUZ chapter, airspace definitions and height requirements are provided consistent with the 1995 AICUZ Study recommendations.

Within the Fairchild JLUS study area, several factors were noted relating to vertical obstructions. Multi-story hotels in close proximity to the Fairchild AFB runway, specifically along designated flight tracks are a concern for safe aircraft operations (☐ Factor 3A). Even if these hotels are outside of the established safety zones at either end of the runway (CZs and APZs), consideration should be given to safety aspects of aircraft low-level flight operations prior to development approval. Arrival and departure flight tracks for Fairchild's aircraft generally follow one or two relatively straight ingress or egress paths over Airway Heights. Multi-story hotels can conflict with Fairchild's closed flight patterns, however, which take circuitous routes over Airway Heights and Medical Lake (see Figure 3-17). The Northern Quest Resort and Casino's proposed nine-story hotel and atrium expansion would be located in close proximity to established closed pattern flight tracks to the northeast of Fairchild AFB (● Factor 3D). Compliance with Part 77 (described earlier in section) and coordination with Fairchild AFB and SIA will be needed.

As mentioned in Compatibility Factor 1, Land Use, a Waste to Energy Facility is sited approximately 0.6 miles southeast of the north end of SIA's primary runway. This location is outside of SIA's established APZs and is on the border of the airport's 3,500-foot conical boundary. The facility's 175-foot tall concrete stack was noted as a potential vertical obstruction to aircraft operations at SIA (● Factor 3B). Along with civilian aircraft traffic, SIA supports Fairchild's aircraft when weather conditions restrict landing at the installation, which according to SIA, equates to approximately 18 operations per year.

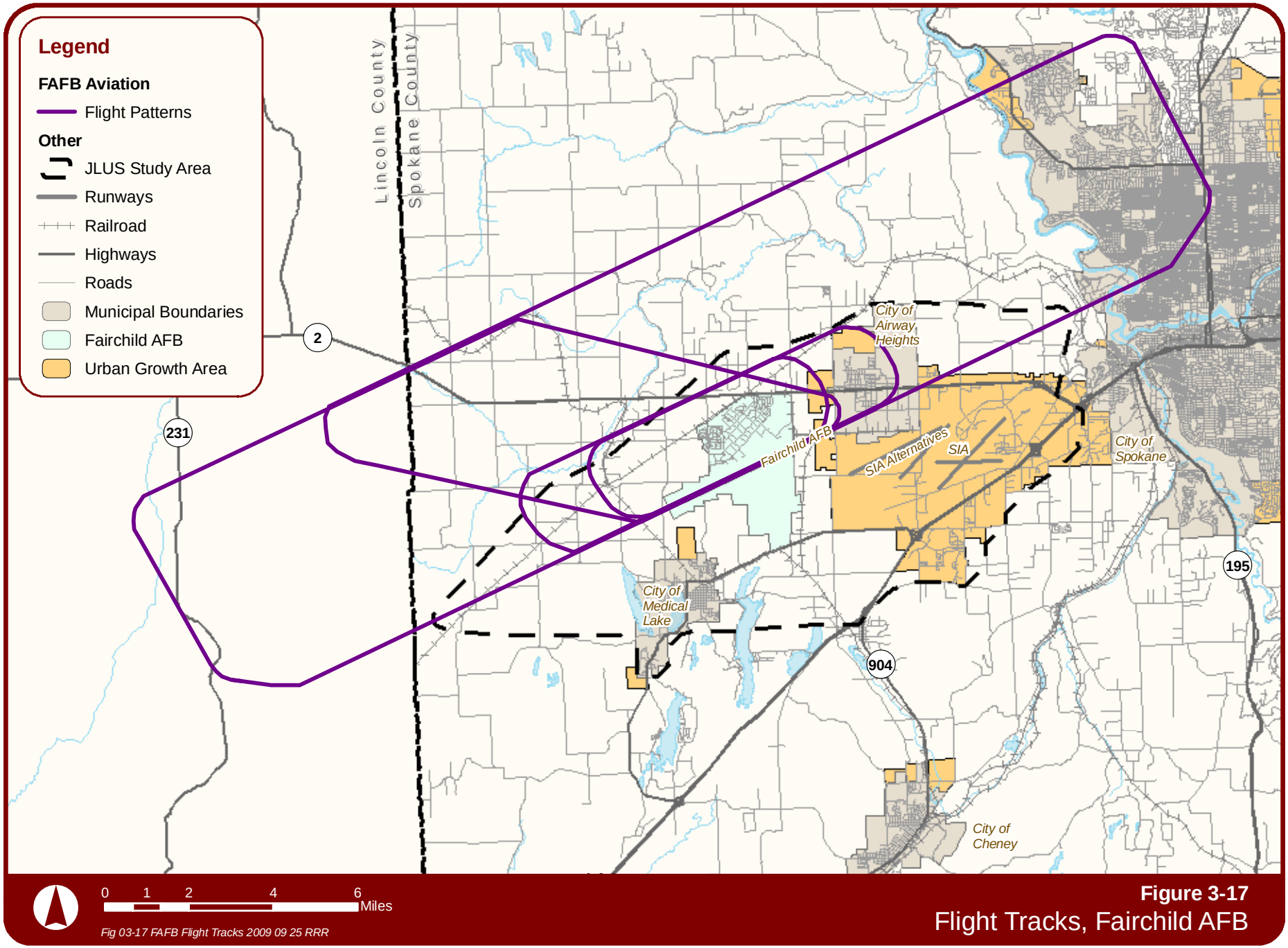


Figure 3-17
Flight Tracks, Fairchild AFB

In addition to the vertical obstructions detailed above, vertical obstructions to low level aircraft flight throughout the region were identified by the JLUS committee members. Of note were tall structures off of either end of the preferred new SIA runway (● Factor 3C), including amateur radio operator towers throughout the study area.

Spokane's Waste to Energy Plant

4 Local Housing Availability Factors

Definition:
Local housing availability addresses the supply and demand for housing in the region, the competition for housing that may result from changes in the number of military personnel and the supply of military families housing provided by the base.

Given personal choice and the limited availability of installation housing, military personnel assigned to Fairchild AFB often seek housing in nearby communities. Factors identified for compatibility are identified in Table 3-8.

Table 3-8. Local Housing Availability Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Availability of affordable housing and general quality of life	4B, 4C	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

In reviewing local housing availability, no specific areas or concerns were identified other than need to ensure quality housing is available both on and off the installation (● Factors 4B and 4C). Similar to many installations across the nation, Fairchild AFB recently underwent privatization of its military housing areas. Congressionally authorized since 1996, the Military Housing Privatization Initiative allows the military to work with the private sector to design, construct and/or renovate, operate, manage, and maintain family housing assets located on installation property, both on and off of the primary installation (i.e., remote housing locations).

Fairchild AFB's privatization project is a public-private venture with the firm Balfour Beatty designed to revitalize the installation's existing housing stock. Under this partnership agreement, Balfour Beatty will provide 641 units on the installation in one of four neighborhoods (Command Circle, Galena Station, NCO Capehart and Fort Wright Village). The 798 total family housing units on base is a significant decrease in units compared to installation housing available in the past (see Section 2). The decrease in units leaves more military households looking for housing off base within the region.

Military families are not required to live in military family housing and can obtain housing anywhere within the local communities. Changes in missions at the installation could increase or decrease the number of Fairchild AFB personnel and students, which translates to a requirement for more or less housing. In the case of an increase in personnel, the increased demand would likely be handled by the local communities, at least in a short-term situation. Depending on the size of the increase, this could impact housing supply in the local region.

5 Infrastructure Extensions Factors

Definition:
This factor covers the extension or provision of infrastructure (roads, sewer, water, etc.). Infrastructure plays an interesting role in compatibility. On the positive side, infrastructure can enhance the operations of the installation by providing needed services, such as sanitary sewer treatment capacity and transportation systems. Infrastructure can also be an encroachment issue if enhanced or expanded infrastructure encourages urban density growth into areas near the installation that would not be compatible with current or future missions.

Infrastructure plays an interesting role in compatibility planning. Historical development has shown that the old adage "if you build it, they will come" is particularly true when it comes to infrastructure extensions. On the positive side, infrastructure can enhance the operations of the installation by providing needed services, such as transportation systems. It can also be a compatibility concern if enhanced infrastructure encourages growth into areas near the installation where it would not be compatible with current or future missions. Factors identified for this compatibility factor are listed in Table 3-9 below and described in the following discussion.

Utility extensions or expansion of infrastructure in proximity to military installations, promotes the desirability of the area for growth increasing the potential for incompatible development. Through careful planning, the extension of infrastructure can serve as a means to guide development into appropriate areas while providing the community opportunities for new development potential.

Table 3-9. Infrastructure Extensions Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Stormwater: Areawide stormwater and groundwater factors	5A, 5B, 5C	🟩	🟨	🟨
Development of new Airway Heights Wastewater Treatment Facility	5D	🟩	🟥	🟨
Water Extension: Proposed water infrastructure extensions from City of Spokane into West Plains	5E	🟩	🟩	🟩
Geiger Spur	5F	🟩	🟥	🟥
US Highway 2 Enhancements	5G	N/R	N/R	N/R

Notes: 🟥 *Most Critical* 🟨 *Moderately Critical* 🟩 *Least Critical* *N/R = No Rating*

Stormwater

Stormwater impacts to the West Plains are resulting in potential flooding problems and aquifer contamination (● Factor 5A). As the West Plains area continues to grow, the urbanization of once rural lands creates more rooftops, driveways, streets and other impermeable surfaces. Development is occurring in areas needed for water absorption and stormwater conveyance. Poorly draining soils, poor natural infiltration rates, bedrock, and perched water tables close to the ground surface further complicate the ability of the remaining natural surface to accommodate runoff. Seasonal flooding has become a common occurrence in the West Plains as surface water runoff resulting from significant rainfall events or rapid snow melt pond in ditches and shallow depressions until evaporation or infiltration occurs. Each new development increases the impacts of stormwater leaving many to rely on large evaporation ponds. These ponds are often viewed as expensive, aesthetically undesirable, a temporary solution with questionable long-term viability, and a potential safety concern relative to attracting birds and wildlife into flight corridors.

Techniques employed by Spokane County to control stormwater include grass lined ditches, ponds, and pipes to convey, cleanse, and dispose of stormwater runoff. To support the development of this regional stormwater "backbone", annual stormwater rates are assessed to residential, businesses, industries, farms, and other non-residential uses based on standard calculation rates and drainage service area. The West Plains area currently has the second highest annual rate assessed. New development is also assessed a one-time system development charge (SDC) to access the regional stormwater system. This "growth pays

for growth" concept assesses SDCs based on the amount of impervious surface anticipated as a result of development.

Stormwater infrastructure projects recommended as part of Spokane County's Stormwater 6-year Capital Improvement Plan for the West Plains include:

- **Additional Water Quality Studies.** This project recommends geotechnical studies and monitoring to determine the suitability of specific parcels or locations for siting regional infiltration facilities and to assess potential water quality impacts associated with such facilities.
- **Additional Groundwater/Environmental Studies.** This project includes geotechnical and scientific studies of the potential water quality and quantity impacts to the Wanapum Aquifer and downgradient impacts related to localizing infiltration of larger volumes of surface water.
- **Regional Infiltration Facility.** This project involved the construction of a regional infiltration facility north of Spokane International Airport.
- **Regional Conveyance Improvements.** This project involves the construction of necessary improvements to the stormwater conveyance system to improve flow capacity throughout the West Plains.

Airway Heights Wastewater Treatment Facility

Planned infrastructure enhancements, such as the development of a projected $28 million, one million gallon wastewater treatment plant serving the City of Airway Heights (● Factor 5B), raise factors of potential growth inducement within close proximity to the installation. As discussed earlier under the land use compatibility factor, developers cite the relatively low price of land in these largely undeveloped areas as an attractive component to the potential development. Until recently, the lack of infrastructure in these areas served as a major deterrent to development. However, Airway Heights recent installation of water and sewer improvements have allowed developers to take on other infrastructure improvements, such as road projects, themselves in order to develop in less costly areas.

Water Extension

South of Fairchild AFB, the City of Spokane recently extended a 36-inch transmission line along SR-902 to Craig Road (● Factor 5C) (see Figure 3-18). The line was extended in response to the need to provide water to acreage within the City's service area spanning from south of Interstate 90 to McFarlane Road, which previously received no water transmission or distribution. This area has long been an interest for future growth. Furthermore, the City of Spokane is extending an offer of service to the City of Medical Lake provided certain conditions are met. Although the City of Medical Lake has concerns with the conditions as presented, the ability to provide additional water to the area, especially during peak use months in the summer will stimulate growth within the area.

Other water infrastructure enhancements providing increased service to the West Plains accommodating additional growth include:

- **Spotted Road Sewer Pump Capacity Improvements.** This project will add a forth pump to the booster station to accommodate growth near Spokane International Airport and the West Plains *(Source: Spokane Capital Improvements Program 2007-2012)*

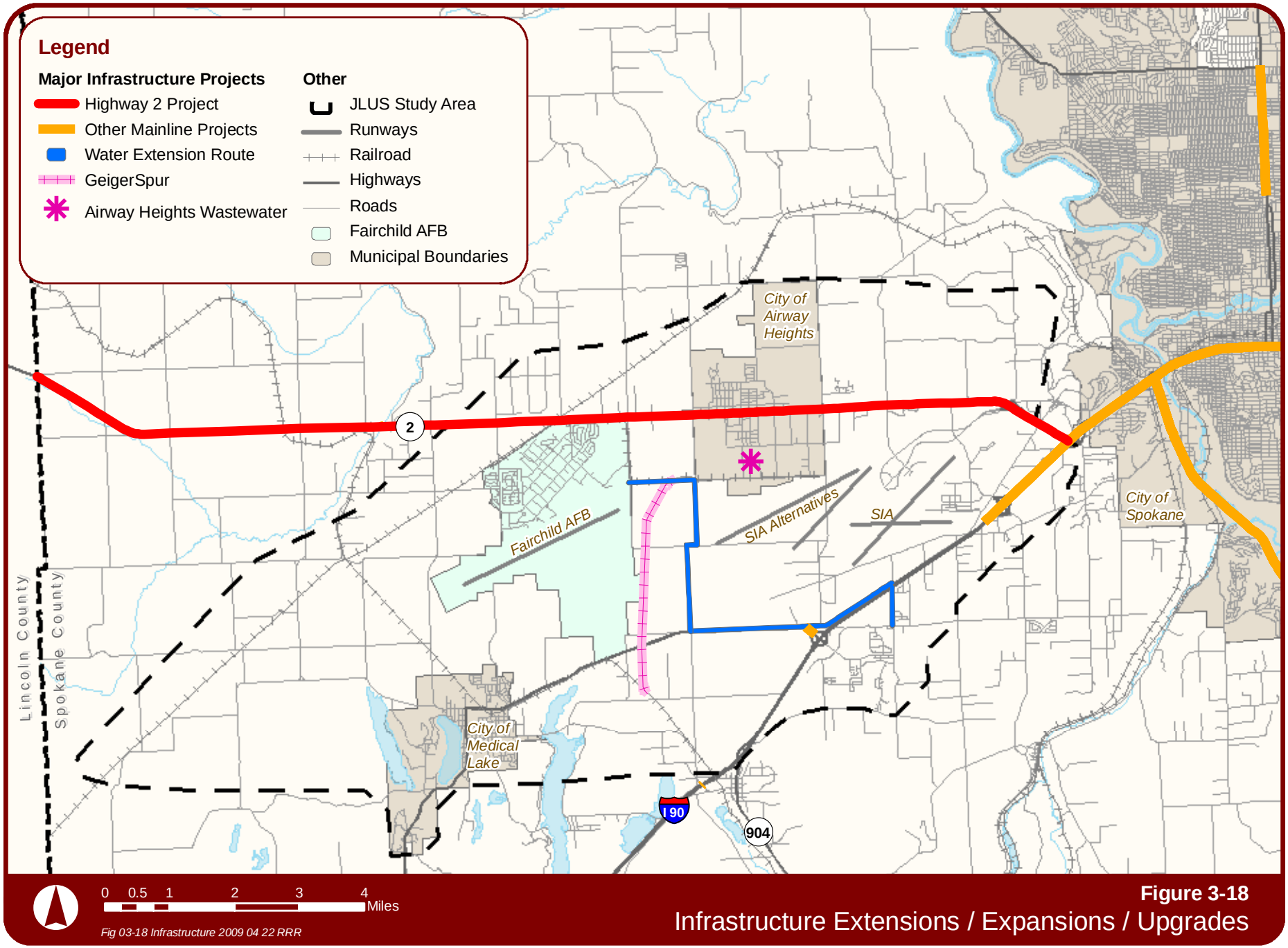


Figure 3-18
Infrastructure Extensions / Expansions / Upgrades

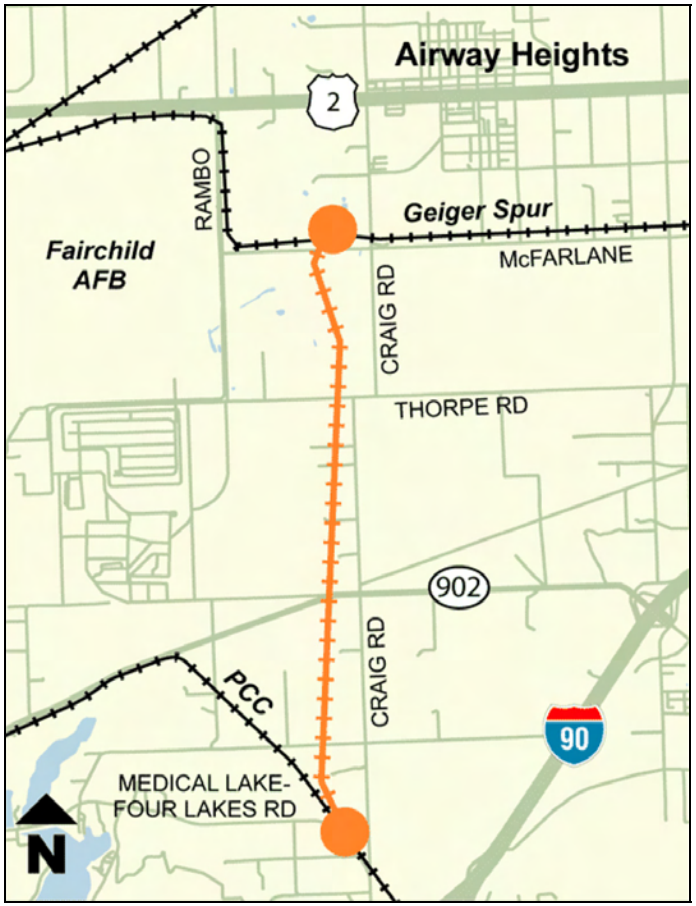
- **Thorpe Road Water Reservoir No. 2.** This project will construct a second reservoir next to the existing one on Thorpe Road to provide redundancy and additional capacity for growth near Spokane International Airport and the West Plains *(Source: Spokane Capital Improvements Program 2007-2012)*
- **Westside Transmission Line.** This project will construct a 36-inch transmission main from the West Drive Booster Station to Spotted Road for system reliability and completion of the Westside main project providing additional for growth west of the city *(Source: Spokane Capital Improvements Program 2007-2012)*
- **Fairchild AFB Transmission Extension.** This is a joint project with Fairchild AFB to extend the 30-inch transmission line from Thomas Mallon and 57th to serve the installation. Possible routes include Rambo Road Road via Geiger Boulevard, Hayford, Thorpe and McFarlane Roads, but the exact route has not yet been determined. Fairchild AFB and the State will participate in funding *(Source: Spokane Capital Improvements Program 2007-2012)*

Water Supply

As detailed in Section 2, a multi-phase project is underway by the City of Spokane to extend a 36-inch water transmission line towards Fairchild AFB and the West Plains area. This line will provide the installation with an option to obtain its water from sources other than on base wells and pumps on the Spokane River. Future compatibility factors, however, may result from the line extension as this will encourage urban growth in the area south of Fairchild AFB (● Factor 5E).

Geiger Spur

The 5-mile Geiger Spur track is located on the West Plains of Spokane County and connects the Geiger Spur with the Palouse and Coulee City Railroad (PCC) near Medical Lake. As discussed under Compatibility Factor 1, Land Use, a portion of the spur is currently located inside the secure area of Fairchild AFB along the installation's eastern boundary. The



Geiger Spur realignment

Source: www.wsdot.wa.gov

rail line will be relocated off of the installation in response to security concerns about trains traveling through the secured area of the base. This relocation project will allow freight service to continue to existing customers currently located on the line; however, the newly constructed spur rail line east of Fairchild AFB is expected to attract new industrial and commercial uses that have the potential to negatively impact installation operations.

Ground Transportation

One notable future project impacting the JLUS study area is the development of a Route Development Plan (RDP) along US Highway 2 from the Lincoln County line to I-90. Initiated in January 2007, this RDP will include an analysis of operating conditions, environmental factors, population and land use changes, and other factors impacting the facility and neighboring jurisdictions. Final recommendations and selected improvements are being determined with public presentation scheduled for the spring of 2010.

With the potential widening of US Highway 2 and continued development in the corridor along the Fairchild AFB northern boundary, there will be an increase in vehicular traffic as the region becomes more accessible due to the improved roadway (● Factor 5G). As the region grows, demand for existing transportation facilities will increase, creating potential congestion and maintenance factors on the supporting transportation system (● Factor 24A).

In regards to military sustainability, additional capacity on US Highway 2 will continue to feed desires to locate urban uses west of the City of Spokane towards Fairchild AFB. If incompatible uses are approved within this area, the magnitude of such growth may restrict operations on the installation, curtail future missions, and create avoidance areas on the installation which limits the ability of the installation to utilize on-station. Local jurisdictions and Fairchild AFB will need to collaborate to ensure traffic flows smoothly and emergency transportation routes to and from the installation are not congested.

Factors associated with state and county road systems are addressed under Compatibility Factor 24, Ground Transportation Capacity.

6 Antiterrorism/Force Protection Factors

Definition:
Antiterrorism/Force Protection (AT/FP) relates to the safety of personnel, facilities, and information on an installation from outside threats.

The factors identified for this compatibility factor are listed on Table 3-10 and further described in the following discussion.

Table 3-10. Antiterrorism/Force Protection Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
No factors were noted for this Compatibility Factor.	N/A	N/A	N/A	N/A

7 Noise Factors

Definition:
Defining noise from a technical perspective, sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. More simply stated, sound is what we hear. As sounds reach unwanted levels, this is referred to as noise.

The factors identified for this compatibility factor are listed on Table 3-11 and further described in the following discussion.

Table 3-11. Noise Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Aircraft Noise: noise from aircraft operations impacting existing and proposed development	7A, 7C, 7D, 7F, 7G, 7H, 7I, 1M, 4A	■	■	■
Expanding / shrinking Fairchild AFB noise contours	7B, 7E	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Understanding Noise

Due to the technical nature of this resource topic and its importance to the JLUS process, this section provides a discussion of the characteristics of sound and the modeling process used to evaluate noise impacts.

The following key terms are used to describe noise.

- **Ambient Noise.** The total noise associated with an existing environment and usually comprising sounds from many sources, both near and far.
- **Attenuation.** Reduction in the level of sound resulting from absorption by the surrounding topography, the atmosphere, distance from the source, barriers, construction techniques and materials, and other factors.
- **A-weighted decibel (dBA).** A unit of measurement for noise having a logarithmic scale and measured using the A-weighted sensory network on a noise-measuring device. An increase or decrease of 10 decibels corresponds to a tenfold increase or decrease in sound energy. A doubling or halving of sound energy corresponds to a 3-dBA increase or decrease.

- **Noise Contours.** Connecting points of equal noise exposure. Typically expressed in 5 dBA increments (60, 65, 70, 75, etc.).
- **Sensitive Receptors.** Sensitive receptors are defined as locations and uses typically more sensitive to noise, including residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses.

Characteristics of Sound

Sound is characterized by oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale (i.e., dB scale) is used to present sound intensity levels in a convenient format.

Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting" written as dBA. The human ear can detect changes in sound levels of approximately 3 dBA under normal conditions. Changes of 1 to 3 dBA are typically noticeable under controlled conditions, while changes of less than 1 dBA are only discernable under controlled, extremely quiet conditions. A change of 5 dBA is typically noticeable to the general public in an outdoor environment. Figure 3-19 summarizes typical A-weighted sound levels for a range of indoor and outdoor activities.

Environmental noise fluctuates over time. While some noise fluctuations are minor, others can be substantial. These fluctuations include regular and random patterns, how fast the noise fluctuates, and the amount of variation. When describing noise impacts, it is common to look at the average noise over an average day.

Characteristics of Noise Modeling

The Air Force adopted the NOISEMAP computer model to analyze and describe noise impacts created by aircraft operations. NOISEMAP is one of two Environmental Protection Agency (EPA) approved models. The other is the Integrated Noise Model (INM), which is used by the FAA for civilian airports.

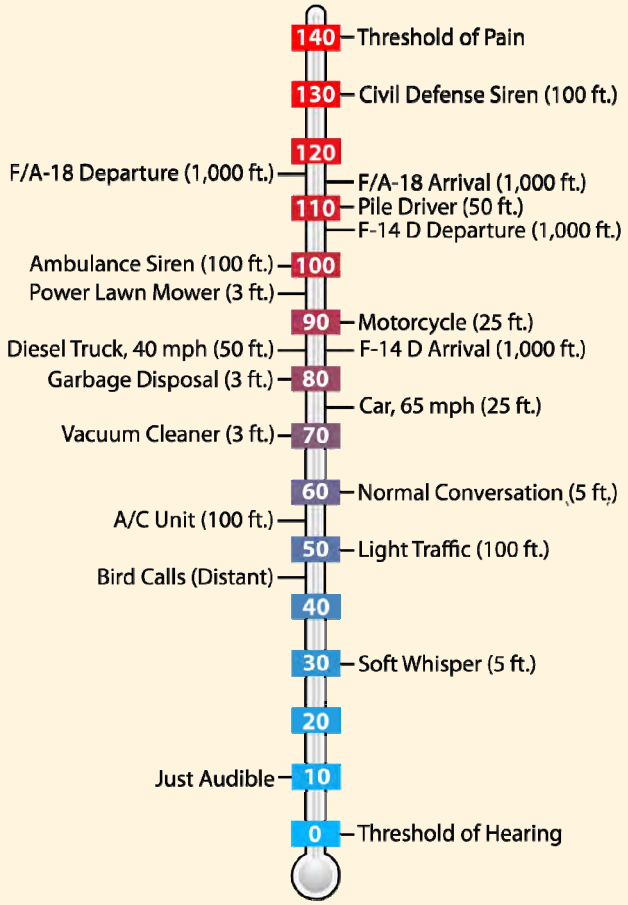


Figure 3-19. Sound Levels Comparison (in dB)

In 1974, EPA designated the noise descriptor Ldn, or Day-Night Average Sound Level (DNL), as the standard measurement for noise impacts. Ldn is an average sound level exposure, measured in decibels, over a 24-hour period (see the definition earlier in this section for details). On a national level, Ldn measurements are projected down to 65 decibels.

Aircraft Noise

For noise sources attributable to Fairchild AFB, aircraft noise is the primary concern relative to compatibility planning. Over the years, several studies have been developed regarding noise levels associated with aircraft operations at Fairchild AFB. The analysis of airborne noise varies based on the type of aircraft modeled, flight operations, training activities, flight frequency, and other aircraft using the airspace.

As described in Section 4, Fairchild AFB published an updated AICUZ study in October 2007, which revised the previous AICUZ study from 1995. One major difference between the 1995 and 2007 AICUZ studies is the identified noise zones. The 2007 update and subsequent noise zone changes were the result of:

- Changes in flight operations and the addition, elimination, or alteration of flight tracks for mission and training purposes;
- Post September 11, 2001, aircraft operations tempo supporting wartime mission and homeland security requirements;
- Technical improvements to NOISEMAP, a computer program for modeling noise levels that determines noise zones (NZs) based on aircraft activity; and
- Changes in aircraft type, such as the replacement by the Washington Air National Guard of the KC-135E aircraft with the KC-135R, and based aircraft composition.

The 2007 Fairchild AICUZ provided detailed noise modeling of current aircraft operations at the installation. Aircraft operations at Fairchild AFB have the most noticable noise effect in the surrounding area to residential and commercial uses. Additionally, noise generated at the Fairchild explosives ordinance range can have limited impacts to uses off of the installation.

The Fairchild AICUZ looks at noise for a typical or average day over a given year. On any given day, noise levels on a specific property will be higher or lower depending on a number of factors, including the number of flights, aircraft mix, the actual flight tracks taken, flight elevations, and so forth. Other changes at the base could result in changes to the noise contours. As such, the noise contours should be used as guidance in making future land use decisions, not absolute constraints.

The AICUZ noise contours show areas where noise compatibility factors are likely to occur with more sensitive land uses. Outside of these contours are additional areas where overflight will occur and new development will notice noise from flight operation. The overall shape and size of the study area reflects locations that experience periodic low level overflight, and therefore, may be exposed to occasional noise.

Many of the compatibility factors related to aircraft noise stem from existing or proposed residential developments within the study area. According to the 2007 AICUZ, residential uses are not allowed within areas 65 dB or higher.

Expanding/Shrinking Noise Contours

Due to changes discussed earlier, the 2007 AICUZ noise contours are significantly smaller than those presented in the 1995 AICUZ (see Figure 3-20). Differences in assumptions based on current mission factors, changes in aircraft type, and technical characteristics of the model have profound implications to the resulting noise contours. Much emphasis is placed on the delineation of these contours and land use policies or decisions are often based on the assumptions presented by these contours. AICUZ studies represent current conditions, should conditions change, a new AICUZ would have to be prepared. As a result, specific land use decisions should not be based solely on AICUZ boundaries.

As a component of this JLUS, a study was conducted to assess potential noise related to four future mission scenarios. These scenarios assume the replacement of Fairchild's KC-135 tanker aircraft with next generation tanker aircraft based on civilian passenger airframes. In all scenarios the new aircraft are larger than the KC-135 aircraft currently operated. Transient operations for each scenario remained the same as in the AICUZ study.

For each scenario, the operations at Fairchild AFB were combined with the 20-year operations forecast for SIA to provide an overall perspective on the effect of all aircraft operations within the region. For the purposes of this analysis, the scenarios assumed operations at a new third runway at SIA. For modeling purposes, the SIA alternative runway assumed was the runway closest to Fairchild AFB, thus yielding a worst-case assessment for noise.

Characteristics of the four scenarios are as follows:

- **Scenario 1** – 48 based KC-767A Aircraft
- **Scenario 2** – 48 based A330 aircraft
- **Scenario 3** – 32 based KC-767A aircraft and 16 B-52 aircraft
- **Scenario 4** – 32 based A330 aircraft and 16 B-52 aircraft

The results of each of the scenarios were combined with the 20-year forecast for SIA to provide an overall perspective on the effect of all aircraft operations within the region. For the purposes of this analysis, the scenarios assumed operations at a new third runway at SIA. For modeling purposes, the SIA alternative runway assumed was the runway closest to Fairchild AFB, thus yielding a worst-case assessment for noise.

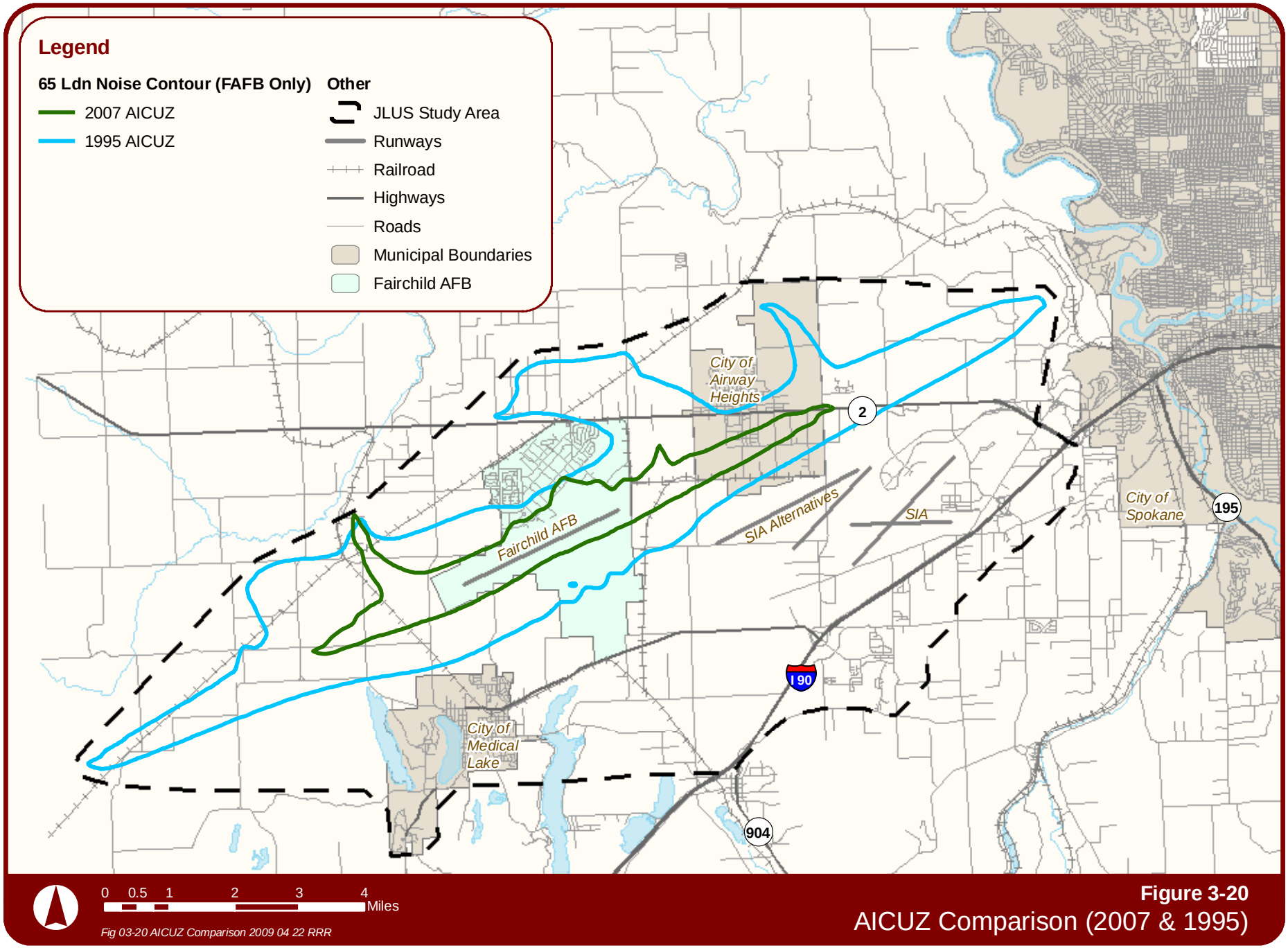


Figure 3-20
AICUZ Comparison (2007 & 1995)

The noise modeling indicated that the scenarios including the KC-767 (Scenarios 1 and 3) would have a slightly larger noise signature than those including the A330 aircraft. To ensure Fairchild's ability potential future aircraft and missions were properly reflected in this study, the JPSC decided to use Scenario 3 as the basis for JLUS strategies development.

The results of this analysis, presented in Figure 3-21, portray the area covered within the 65 dB noise contour or higher from each of the four scenarios. The close proximity of Fairchild AFB and SIA presents unique challenges to noise management within the region. As a shared airspace, the impact of one facility compounds the noise exhibited by the other. As previously discussed, the area potentially included within a 65 dB noise from one or both installations is significant and covers much of the West Plains area within the JLUS study area. Only the central part of the City of Airway Heights is outside of the 65 dB noise contour. Almost the entire extent of US Highway 2 from I-90 to the Fairchild main entry gate lies within an area of noise concern.

Schools are sensitive noise receptors, and as such, siting of schools outside of high noise areas is important. Figure 3-22 depicts school locations within the JLUS study area.

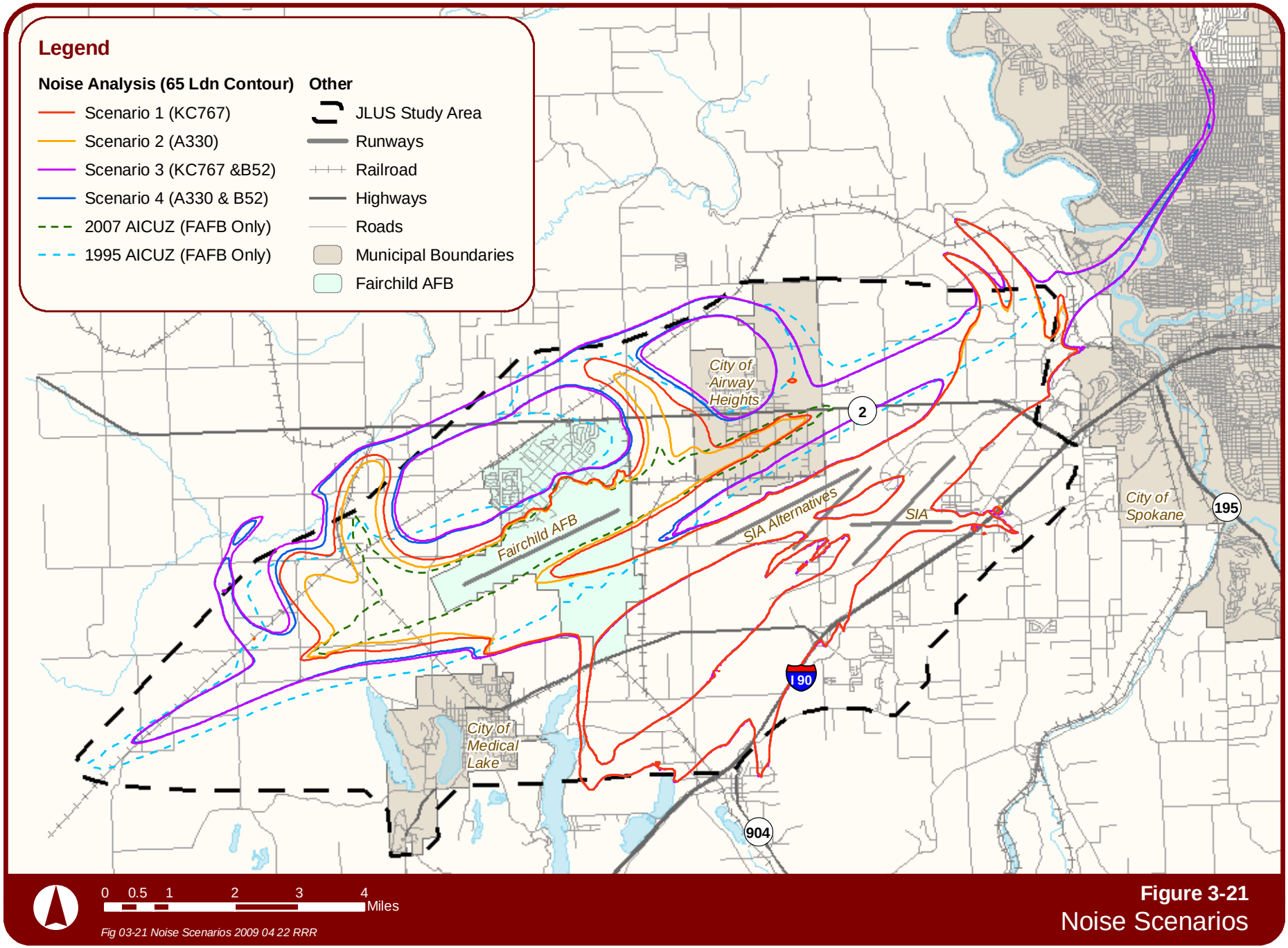


Fig 03-21 Noise Scenarios 2009 04 22 RRR

Figure 3-21
Noise Scenarios

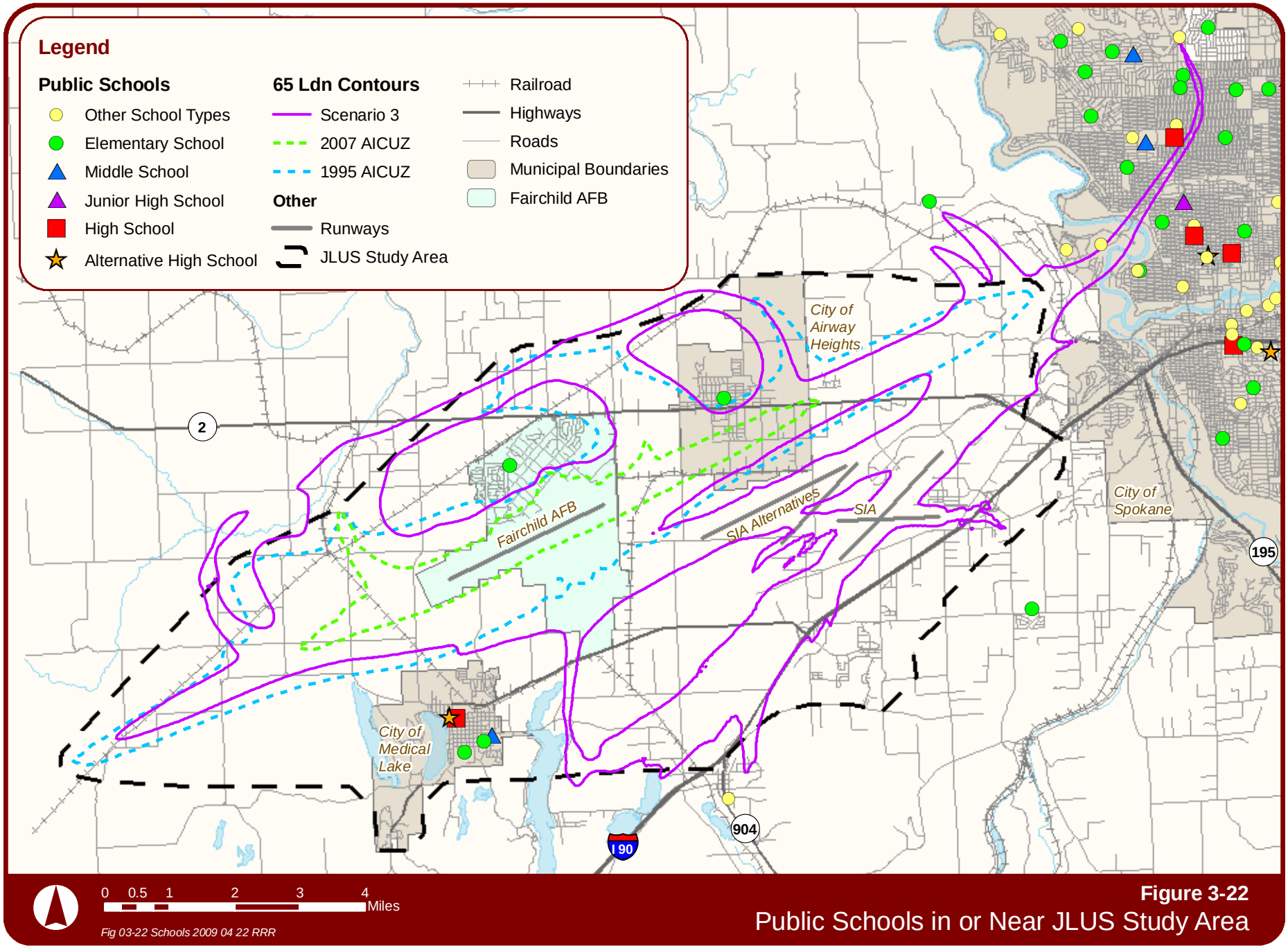


Figure 3-22
Public Schools in or Near JLUS Study Area

8 Vibration Factors

Definition:
Vibration is an oscillation or motion that alternates in opposite directions and may occur as a result of an impact, explosion, noise, mechanical operation or other change in the environment.

The factors identified for this compatibility factor are listed on Table 3-12 and further described in the following discussion.

Table 3-12. Vibration Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Vibration impacts from Fairchild AFB operations (i.e., EOD, firing ranges, aircraft operations, etc.)	8A, 8B	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Fairchild AFB operations can produce vibration related to aircraft operations and explosions associated with ordnance training and disposal (● Factors 8A and 8B). Noise from aircraft operations are the primary sources of vibration and include Fairchild's jet tanker fleet, as well as transient aircraft and Army helicopters. Noise from Fairchild AFB aircraft does not produce sound at the decibel and frequency levels typically connected with significant vibration.

Explosions from ordnance training and munitions disposal are infrequent. As described in Compatibility Factor 2, Safety, the detonation area of the Fairchild AFB explosives ordinance range is enclosed by barricades of 6-foot walls. This minimizes the vibration and over pressurization from explosives detonations.

Consequently, vibration is not considered to be a major compatibility factor; however, it is something that should be disclosed to property owners in the area.

9 Dust, Smoke, and Steam Factors

Definition:
Dust is the common term used to describe the suspension of particulate matter in the air. Dust, smoke, and steam can be created by fire (controlled burns, agricultural burning), ground disturbance (agricultural operations, grading), industrial activities, or other similar processes. Dust, smoke, and steam become a compatibility issue if sufficient in quantity to impact flight operations (such as reduced visibility or equipment damage).

Civilian and military activities can produce dust, smoke, and steam from grading, agriculture, industrial practices, vehicle movement, or weapons training. Suspended particulate matter becomes a compatibility factor if sufficient in quantity to impact flight operations (such as reduced visibility or equipment damage) or substantially impacting the quality of life of local residents. Sources of dust, smoke, and steam in the airfield vicinity could obstruct the pilot's vision during takeoff, landing, or other periods of low altitude flight. Factors identified for this compatibility factor are presented in Table 3-13 and further described in the following discussion.

Table 3-13. Dust, Smoke, and Steam Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Dust from regional uses (Waste to Energy plant, agriculture, grading)	9A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

To reduce the impacts associated with prescribed outdoor burns, the state legislature called for the gradual reduction and elimination of outdoor burns in 1991. Outdoor burning is currently limited to natural vegetation, less populated areas, and areas with fewer commercially available alternatives to burning. Outdoor burns are not permitted within any incorporated city or their Urban Growth Areas within Spokane County. In other areas of the county, the five types of permitted outdoor burning or natural vegetation include: yard and garden debris, recreational burning (camp/cook fires), silvicultural debris, land clearing debris, and agricultural debris. Regulated through the Spokane Regional Clean Air Agency, permits must be obtained before burning can commence. Individuals engaging in illegal burns are subject to civil penalties up to $10,000 per day, per violation.

Although there can be benefits to controlled agricultural burning, such as the control of weeds and easy removal to clear debris, smoke and dust caused by agricultural burning can result in visibility reductions for Fairchild AFB aircraft operations. A continued coordinated approach for the timing of burning will ensure the factor is controlled.

Particulate concerns from the Waste to Energy Facility will be discussed under Compatibility Factor 12, Air Quality; however, it is important to note that compliance with federal and state air quality laws will help keep smoke and dust factors to a minimum, especially those generated by industrial uses.

10 Light and Glare Factors

Definition:
This compatibility factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare (direct or reflected light that is harsh and disrupts normal vision). Light sources from commercial, industrial and residential uses at night can cause excessive glare and illumination, which impacts the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community

The factors identified for this compatibility factor are listed on Table 3-14 and further described in the following discussion.

Table 3-14. Light and Glare Factors

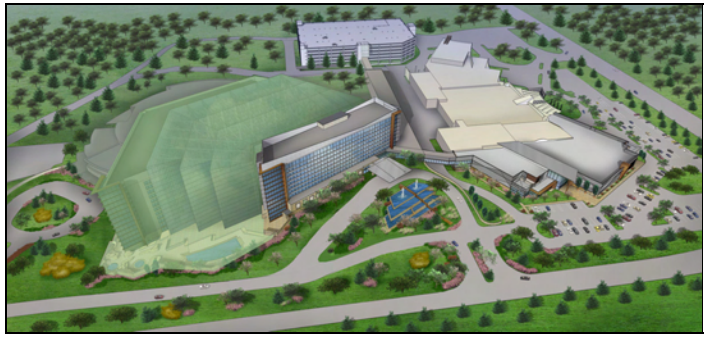
Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Light and glare from proposed development	10A, 10C	■	■	■
Urban light sources	10B	■	■	■
Racetrack: Spokane Raceway Park	10D	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

As discussed under Compatibility Factor 1, Land Use, intense development proposed on lands managed by the Spokane Tribe has the potential to present light and glare factors for the installation (● Factor 10A). Located north of the installation along US Highway 2, the proposed 145-acre resort and casino will include a mix of hotel, commercial, and casino facilities.

The Kalispel Tribe's proposed expansion of the current Northern Quest Resort and Casino includes a 50,000-square foot nine-story glass atrium that connects two hotel towers. The glass atrium poses a potentially significant glare factor for aircraft in the area, including military aircraft from Fairchild AFB and civilian aircraft using SIA or other local airports (● Factor 10C).

At both casino locations, parking lot lighting (similar to other commercial uses) and specialty lighting (changeable-face signage, building accents, use of spotlights, building lighting, etc.) are a concern relative to light and glare. The design of light-emitting sources at both facilities is particularly critical due to their proximity to Fairchild AFB and approach / departure routes typically used.



Northern Quest Resort and Casino expansion concept shown at left edge of image

The City of Airway Heights Zoning Map indicates that the US Highway 2 corridor is and will be the community's commercial center (see Figure 3-23). A common characteristic of commercial centers is typically the heavy use of exterior lighting on buildings and in parking or logistical areas (● Factor 10B). Care must be taken to ensure lighting associated with Airway Heights commercial development does not create excessive light pollution, which can interfere with aircraft departing from or landing at Fairchild AFB. A key focus area for light pollution control or mitigation is in the vicinity of US Highway 2 and Garfield Street intersection. This area falls in line with the Fairchild AFB runway centerline and is therefore highly visible to all inbound or outbound Fairchild aircraft.

In addition to the lighting concerns associated with commercial uses in Airway Heights, existing and expanded commercial facilities have the potential to pose light and glare factors for Fairchild aircraft, specifically in the vicinity of US Highway 2 and Hayford Road intersection (● Factor 10A). This location has experienced extensive new commercial land multifamily development and is between Fairchild AFB and SIA along the approximate centerline of Fairchild's runway.

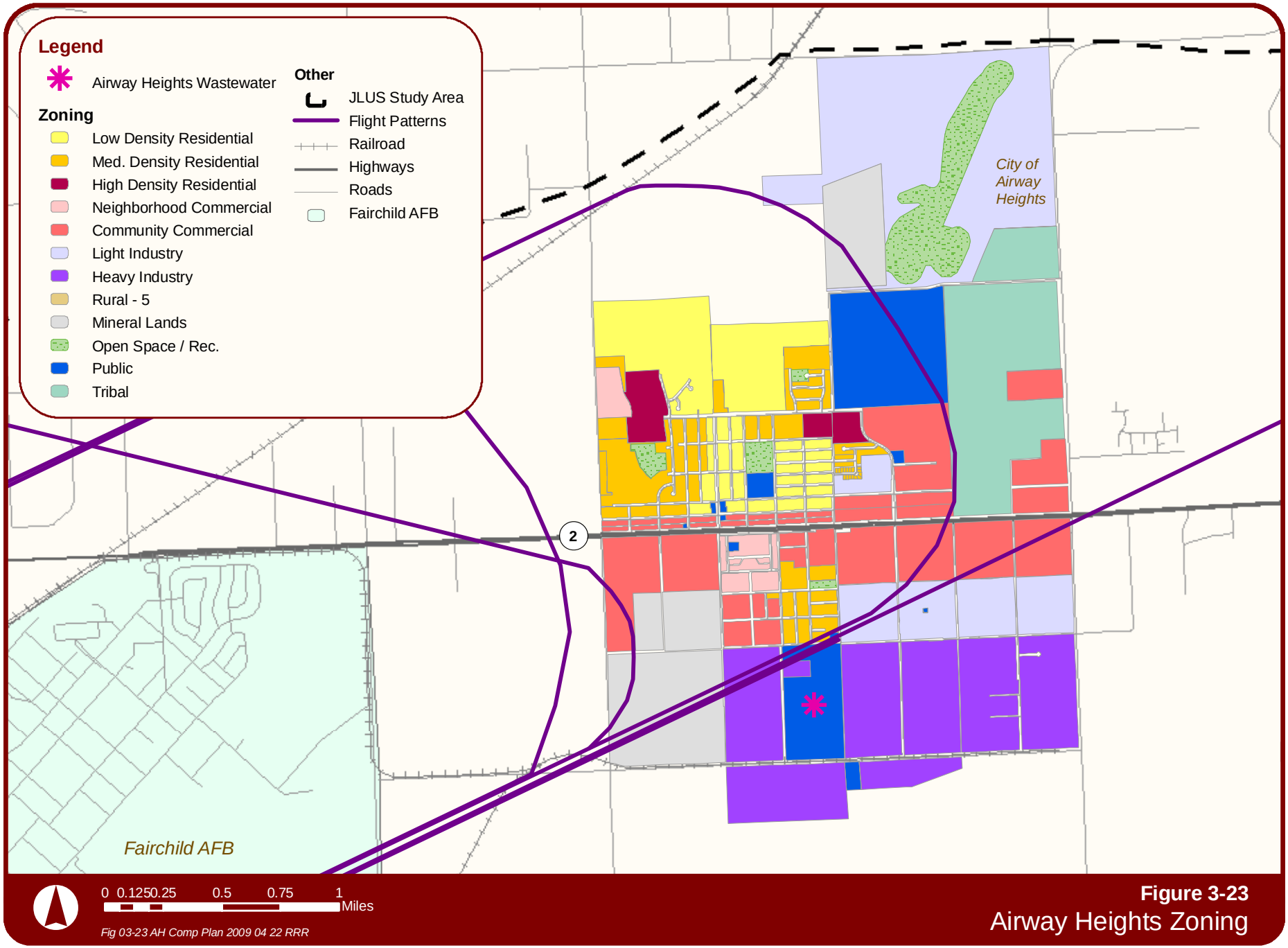


Figure 3-23
Airway Heights Zoning

11 Alternative Energy Development Factors

Definition:
Alternative energy refers to sources such as solar, wind or biofuels that can be used to replace or supplement traditional fossil-fuel sources, as coal, oil and natural gas. Alternative energy development could pose compatibility issues related to glare (solar energy) or vertical obstruction (wind generation). Other alternative energy developments, such as biofuels, have no typical compatibility issues and would be judged for compatibility on a case-by-case basis.

The factors identified for this compatibility factor are listed on Table 3-15 and further described in the following discussion.

Table 3-15. Alternative Energy Development Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Wind and solar energy development	11A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Wind turbines near Ellensburg and Walla Walla, WA

Solar facilities in the region could cause substantial amounts of glare depending on the time of year, the facility type, location, angle, and direction, resulting in a reduction of the pilot's view, even at a very high altitude (☐ Factor 11A).

Wind turbines have two potential compatibility factors (☐ Factor 11B). The most prominent is the vertical obstruction aspect of the systems, which can be several hundred feet in height for modern commercial structures. Currently, in Washington, these commercial wind turbines are primarily located in the central and south central parts of the state in areas such as Ellensburg, Pasco, and Walla Walla. In the Fairchild area, wind is not considered strong enough or constant enough to support large scale wind development, but smaller, localized applications may be possible. Future placement of wind turbines, commercial and private, would need to be coordinated with Fairchild AFB to avoid height factors (i.e., vertical obstruction).

12 Air Quality Factors

Definition:
Air quality is defined by a number of components that are regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility, such as particulates, ozone and potential non-attainment of air quality standards that may limit future changes in operations at the installation.

In 2005, Spokane achieved attainment of all federal, health-based air pollution standards (particulate matter, carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, and lead) after a decades-long battle to improve regional air quality. Of the six criteria pollutants, three are of particular concern to the Spokane region: carbon monoxide, particulate matter, and ozone. Motor vehicle emissions are largely responsible for increased levels of carbon monoxide and ozone. In regards to air quality concerns, factors pertaining to compatibility identified are presented in Table 3-16 and described in the following discussion.

Table 3-16. Air Quality Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Waste to Energy Plant	12A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Environmental concerns associated with the capacity of regional landfills coupled with new state solid waste regulations, led to the development of a regional program for solid waste reduction, recycling, energy recovery, and residue disposal – the Spokane Regional Solid Waste System. As a component of this system, the Waste to Energy Facility located off Geiger Road east of Spokane International Airport turns refuse into electric power (● Factor 12A). The processes of combustion used to turn refuse into energy results in several potential air quality concerns including particulate matter/dust and acid gases. These concerns are mitigated through the use of air quality emission controls at the plant. The negative pressure used by the facility prevents dust and ash from escaping the building. Ash produced at the facility is sent to an ash mono fill at Rabanco's Roosevelt Regional Landfill in Klickitat County, Washington. Good combustion minimizes the formation of carbon monoxide and other products associated with incomplete combustion.

"Dry scrubbers" use lime to neutralize acid gases and ammonia is used to convert nitrogen oxide into harmless nitrogen and oxygen prior to emitting exhaust.

Although documented as a concern, when functioning properly, this facility should not create adverse impacts for the installation or its operations.

A variety of air pollution control strategies are used within Spokane County to control dust, other particulate matter, and other emissions. These strategies include auto emission inspections, restrictions on open burning, wood stove certification, restrictions on wood stove use, oxygenated fuels for vehicles, road paving using low volatile organic compound asphalt, and use of chemical deicers instead of road sanding. These strategies have improved air quality within the region; however, the substantial growth projected with the region could lead to added degradation of air quality in the future. Provided the region maintains its focus on achieving and maintaining compliance with federal air quality standards, this compatibility factor should not impact Fairchild AFB operations.

13 Frequency Spectrum Impedance and Interference Factors

Definition:
Frequency spectrum impedance and interference refers to the interruption of aircraft related electronic signals by a structure (impedance) or the inability to distribute / receive a particular frequency because of similar frequency competition (interference).

Factors pertaining to this compatibility factor are presented in Table 3-17 and described in the following discussion.

Table 3-17. Frequency Spectrum Impedance and Interference Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Frequency spectrum impedance and interference throughout the region. (☐ not shown on Figure 3-1)	13A	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

In the performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public and private uses rely on a range of frequencies to support daily life. The potential for increased background radio frequency interference / electromagnetic interference is developing as a mission impact to the US military's high-tech combat forces. Frequency interference can result from a number of factors, including:

- New transmissions using a frequency that is near an existing frequency used by the military
- Reducing the distance between two antennae transmitting similar frequencies
- Increasing the power of a similar transmission signal
- Using poorly adjusted transmission devices that transmit outside their assigned frequency
- Production of an electromagnetic signal that interferes with a signal transmission
- Explosion of consumer electronic sources and uses from portable systems to whole communities utilizing Wi-Fi broadband systems and industrial sources that produce an electronic noise by-products

As the use of the frequency spectrum increases (such as the rapid increase in cellular phone technology over the last decade) and as development expands near military installations and operations, the factor of frequency spectrum interference and competition increases.

The final factor of concern is frequency impedance. Key factors to consider relative to frequency spectrum impedance include the construction of buildings or other facilities that block or impede the transmission of signals from antennas, satellite dishes, or other transmission/reception devices affected by line-of-sight requirements. As development continues in and around Fairchild AFB and the West Plains area, care must be taken to avoid impendence by construction outside the installation (☐ Factor 13A).

14 Public Trespassing Factors

Definition:
This factor addresses public trespassing, either purposeful or unintentional, onto Fairchild AFB. This issue is related to Compatibility Factor 6, AT/FP.

The factors identified for this compatibility factor are listed on Table 3-18 and further described in the following discussion.

Table 3-18. Public Trespassing Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
No factors were noted for this Compatibility Factor.	N/A	N/A	N/A	N/A

15 Cultural Resources Factors

Definition:
Cultural resources may prevent development on the base, apply development constraints or require special access by Native American tribal governments or other authorities.

Special considerations must be made for any development or expansion of military missions considered for areas with cultural significance. The factor identified for this compatibility factor is listed in Table 3-19 and described further in the following discussion.

Table 3-19. Cultural Resources Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Cultural significance of West Plains (☐ not shown on Figure 3-1)	15A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Evidence of habitation within Spokane County dates back at least 13,000 years, and county lands were home to the early ancestors of the Spokane and Kalispel tribes. According to the Spokane County Comprehensive Plan, Cultural Resources are those buildings, structures, sites or associations left behind by a group of people and are generally over 50 years old.

Although the area exhibits historic and archaeological significance, most cultural resource sites are located outside of potential development areas, and the presence of these resources does not constrain development or mission operations at Fairchild AFB. Similarly, there are several historic sites and districts in the City of Spokane; however, none of these are listed in the JLUS study area. *(Source: Washington Information System for Architectural and Archaeological Records Data (WISAARD))*

Prescribed methods for identifying and evaluating potential impacts to the environment, including cultural resources, are described under the National Environmental Policy Act (NEPA) and the State Environmental Policy Act of Washington (SEPA). Modeled after the NEPA legislation, the SEPA policies and the intent are similar to NEPA's.

16 Legislative Initiatives Factors

Definition:
Legislative initiatives are federal, state or local laws and regulations that may have a direct or indirect effect on a military installation to conduct its current or future mission or a community's ability to direct growth.

The factors identified for this compatibility factor are listed on Table 3-20 and further described in the following discussion.

Table 3-20. Legislative Initiatives Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
No factors were noted for this Compatibility Factor.	N/A	N/A	N/A	N/A

17 Interagency Coordination Factors

Definition:
Interagency coordination relates to the level of interaction on compatibility issues between military installations, jurisdictions, land and resource management agencies, and conservation authorities.

The development of proactive partnerships between the Air Force, other governmental agencies, and local jurisdictions is required to ensure continued sustainability for Fairchild AFB and local economies. The factors for this compatibility factor are listed in Table 3-21 and described further in the following discussion.

Table 3-21. Interagency Coordination Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Coordination between entities (Fairchild AFB, communities, tribes, SIA) (☐ not shown on Figure 3-1)	17A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Many of the complications associated with urban development near military installations rise from a general lack of knowledge concerning operations at the installation and a lack of understanding about the needs and desires of local communities on behalf of the military (☐ Factor 17A). Although the installation and the region collaborate routinely on factors, solidifying this relationship through inclusive development review processes would be beneficial.

One of the factors requiring attention is the inclusion of the military in the early phases of the development review process or the drafting of legislation affecting the installation.

Active participation by all entities is essential to addressing this factor as the development of incompatible land uses could create safety concerns, cause pressure to modify operations and increase disturbance to new residents.

Given the unique relationship of the jurisdictions and stakeholders involved in the direction of the West Plains, the strategies in Section 5 will need to provide direction on a coordinated planning process that ensures all stakeholders are informed and involved.

3.3 Natural Resource Compatibility Factors

In addition to man-made compatibility factors, natural compatibility factors are also potential sources of conflict with military readiness activities. Two of the three natural resource compatibility factors were identified during the JLUS process that currently present compatibility factors for Fairchild AFB.

Figure 3-24 illustrates the location of the natural resource compatibility factors identified by the JLUS committees, the public, and the consulting team during preparation of this JLUS. Some factors identified apply to the entire study area, and therefore, do not have a specific location on the map. The strategies presented in Section 5 were designed to address the significant compatibility factors identified in this section.

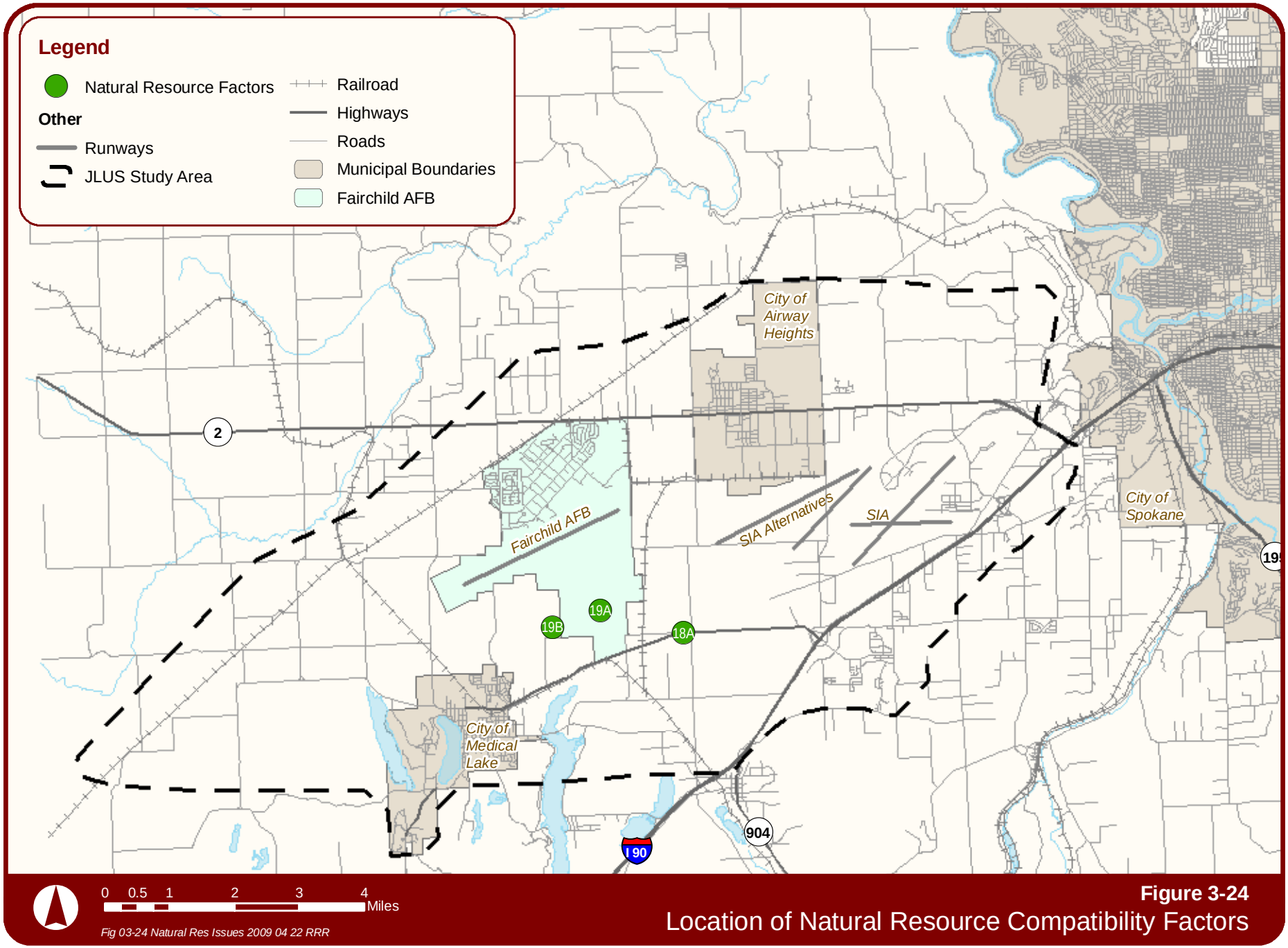


Figure 3-24
Location of Natural Resource Compatibility Factors

18 Water Quality / Quantity Factors

Definition:
Water quality / quantity concerns include ensuring adequate water supplies of good quality for use by installations and surrounding communities as the area develops.

The long term availability of water at sufficient quality and quantity within the study area is vital to sustaining local communities and Fairchild AFB. The factor identified for this compatibility factor is listed in Table 3-22 and further described in the following discussion.

Table 3-22. Water Quality/Quantity Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Water supply in developing areas (water extensions needed to serve new development)	18A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Communities within the study area obtain potable water from three major water purveyors: the City of Spokane, the City of Airway Heights and the City of Medical Lake. Each purveyor is responsible for providing water service within their respective service area. The City of Spokane relies almost entirely on groundwater from the Spokane Valley-Rathdrum Prairie Aquifer, also commonly known as the "Rathdrum-Spokane Aquifer". The City of Airway Heights draws water from the Wanapum Basalt Aquifer. It also relies on the City of Spokane's water supply during dry times of the year. The City of Medical Lake's water is drawn from four deep wells. *(Source: City of Medical Lake, 2007 Annual Drinking Water Report, May 30, 2008.)*

As the communities surrounding Fairchild AFB continue to grow and expand, additional pressures will be placed on existing water supplies (● Factor 18A). Many measures have been taken to conserve existing water supplies within regional aquifers such that they can continue to produce a continuous water supply to accommodate the growth of communities and potential mission expansions of Fairchild AFB. Airway Heights set a goal to reduce water consumption by five percent, and is providing public education on water conservation methods to customers. Although the city is promoting conservation, it has not established any incentives to encourage water conservation.

As mentioned under the Infrastructure compatibility factor, the city recently completed planning studies and construction documents for a new water reclamation facility.

As described in Section 2, Fairchild AFB receives its water from dedicated wells on base and pumps on the Spokane River. The installation is working under a directive to implement public education and information programs, audit distribution systems to identify leaks and repair needs, upgrade boiler/steam systems, and identify processes using high volumes of water. Most of these measures were completed in 2002, with education performed on an on-going basis.

Medical Lake is metering all facilities and reviewing meters to identify problems with the system. In addition, the City discharges reclaimed water into West Medical Lake to maintain lake levels and to Deep Creek for water quality purposes.

Almost all of the City of Spokane's customer's are metered and the City installed a leak detection system in the 1970s. Other measures enacted with the City include the establishment of a pilot program for water reuse on golf courses and the completion of a feasibility study to form an irrigation district using reclaimed water. Spokane County is also planning and conducting studies for the development of a regional water reclamation facility.

As with many areas in the western United States, water availability within the West Plains is largely a function of water rights administration. Water rights within the State of Washington are administered by the Washington Department of Ecology. Uncertainties with water rights contribute to the challenges associated with managing water within the region. These uncertainties are to such as extent that the Department of Ecology is requesting funding of over $1 million in fiscal year 2010-2011 for water rights adjudication within the region.

One of the major factors associated with water rights administration within the West Plains is the existence of inchoate water rights. Inchoate water rights are portions of municipal rights that are not currently used but are available for future use as water demand increases. They are usually known as conditional or permit rights. They represent a right to begin withdrawing water and placing it to beneficial use. These are not vested property rights; therefore, these rights may need to be assigned rather than conveyed by deed. Additionally, they will generally need to be "perfected" through beneficial use within a certain amount of time.

Currently, the City of Airway Heights does not hold sufficient water rights to serve their anticipated growth. Using inchoate rights could place additional burdens on water resources as purveyors use water presently held in reserve but not being used. Once a purveyor extinguishes their inchoate rights, additional water rights must be sought through other means. The inability to acquire rights or service additional users has led Fairchild AFB and the City of Airway Heights to purchase additional water from the City of Spokane through interties. Reliance on interties places a community at risk as these agreements can be withdrawn should the provider of the intertie require the rights to provide for their own users. As mentioned previously, the extension of infrastructure to Craig Road and Highway 902 may provide intertie opportunities for Medical Lake with the City of Spokane water system.

Similar to inchoate rights, federal and Native American reserved water rights are not subject to continuous use provisions and can be accessed at any time. Native American nations within the study area could assert reserved rights and draw water from within the region.

Another factor that affects the study area is the lack of a coordinated approach to water supply planning and infrastructure development. Water purveyors in the West Plains are experiencing difficulties with meeting demands with existing wells, straining the aquifers. The rural nature of the West Plains is also characterized by the proliferation of individual permit-exempt wells, further impacting groundwater aquifers.

19 Threatened & Endangered Species Factors

Definition:
A ***threatened*** species is one that may become extinct if measures are not taken to protect it. An ***endangered*** species is one that has a very small population and is at greater risk of becoming extinct. Many species that become extinct never make it to the endangered species list. The presence of threatened and endangered species may require special development considerations, could halt development and could impact performance of military missions.

The maintenance and enhancement of biodiversity is an important component to Fairchild AFB's land management stewardship responsibilities. Natural resource management on Fairchild AFB is influenced by federal legislation and Department of Defense policies, including the Federal Endangered Species Act of 1973, Department of Defense Directive number 4700.4, United States Air Force Instruction 32-7064, and the Department of Defense Ecosystem Management Principles. Based on the need to adhere to the aforementioned policies, habitat management for the installation is guided by its 2005 Integrated Natural Resources Management Plan (INRMP). The factor identified for this compatibility factor is listed in Table 3-23 and further described in the following discussion.

Table 3-23. Threatened and Endangered Species Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Spalding Catchfly Habitat	19A	■	■	■
Vernal Pools	19B	N/R	N/R	N/R
General habitat considerations (☐ not shown on Figure 3-24)	19C	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

The installation supports numerous native species and habitats, as well as Federal and state-listed threatened and endangered species. One of the species of principal concern is Spalding's catchfly (*Silene spaldingii*) (● Factor 19A). Listed as a threatened species pursuant to the Endangered Species Act in 2001, the species was first discovered at Fairchild AFB in 1994. Installation activities occurring in the vicinity of Spalding catchfly habitat include survival training exercises, military storage, grenade training range, and recreational uses. Factors contributing to species decline include grazing by domestic livestock, competition from non-native plant species, herbicide/pesticide application, fire suppression, agricultural conversion, urban development, insect predation, reduced pollinator activity, and demographic and genetic efforts of small populations.

Unique topographical features in the southern portion of the installation (and other areas in the West Plains) contribute to the development of vernal pools (● Factor 19B). The impervious basalt substrate creates pools of water resulting from wet winters that slowly evaporate. These pools provide a habitat for numerous rare species. A study of vernal pools on the installation identified 14 vernal pools and 84 associated plant species; however, annual fluctuations in winter and spring precipitation lead to a highly variable suite of species each year.

Additional concerns identified within the Fairchild INRMP with impacts to the JLUS include (□ Factor 19C):

- Natural resources in the area provide ample habitat for species that present potential factors with flying operations (i.e., BASH hazards)
- Deer populations could increase to the point of becoming an airfield flight hazard
- Habitat enhancement (i.e., controlled burns or fire regime activities) could increase BASH-threat species
- Ground maintenance and construction activities might adversely affect sensitive species
- Other species of importance include Russian olive shrub, Burrowing owls, and White-tailed jackrabbit.
- Wetlands on the installation potentially serve as habitat for sensitive species; management of this resource will rise as military training and civilian activities increase

Protecting natural resources while maintaining operational mission capabilities will be paramount to continued sustainability for Fairchild AFB. The installation, as with many military installations, can act as a refuge for threatened and endangered species. As the areas around the installation are developed, the base becomes the last place with habitat to support the displaced species. Given that Fairchild AFB is a relatively small base, this situation could significantly impact the installation's mission. To ensure this does not occur, future habitat enhancements on or off the installation need to be evaluated to determine impacts on Fairchild AFB operational missions. Open communication with adjoining landowners will be critical to developing sustainable regional ecosystem management activities.

20 Marine Environments Factors

Definition:
Regulatory or permit requirements protecting marine and ocean resources can cumulatively affect the military's ability to conduct operations, training exercises, or testing in the marine environment.

The factors identified for this compatibility factor are listed on Table 3-24 and further described in the following discussion.

Table 3-24. Marine Environments Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
No factors were noted for this Compatibility Factor.	N/A	N/A	N/A	N/A

3.4 Competition for Scarce Resources

Competition for scarce resources can cause compatibility factors due to competition between local and federal government agencies, other agencies, private development concerns, and the military when demand exceeds the supply of the desired attribute. The following is a description of the key resources that could be in high demand. Two of the four competition factors on the overall list of 24 compatibility factors were identified as applying to Fairchild AFB.

Figure 3-25 illustrates the location of the compatibility factors related to competition for scarce resources as identified by the JLUS committees, the public, and the consulting team during preparation of this JLUS. In general, these factors were not determined to be a major concern in the JLUS study area. There were only a few factors identified related to Compatibility Factor 21, Scarce Natural Resources, and Compatibility Factor 24, Ground Transportation Capacity.

The strategies presented in Section 5 were designed to address the significant compatibility factors identified in this section.

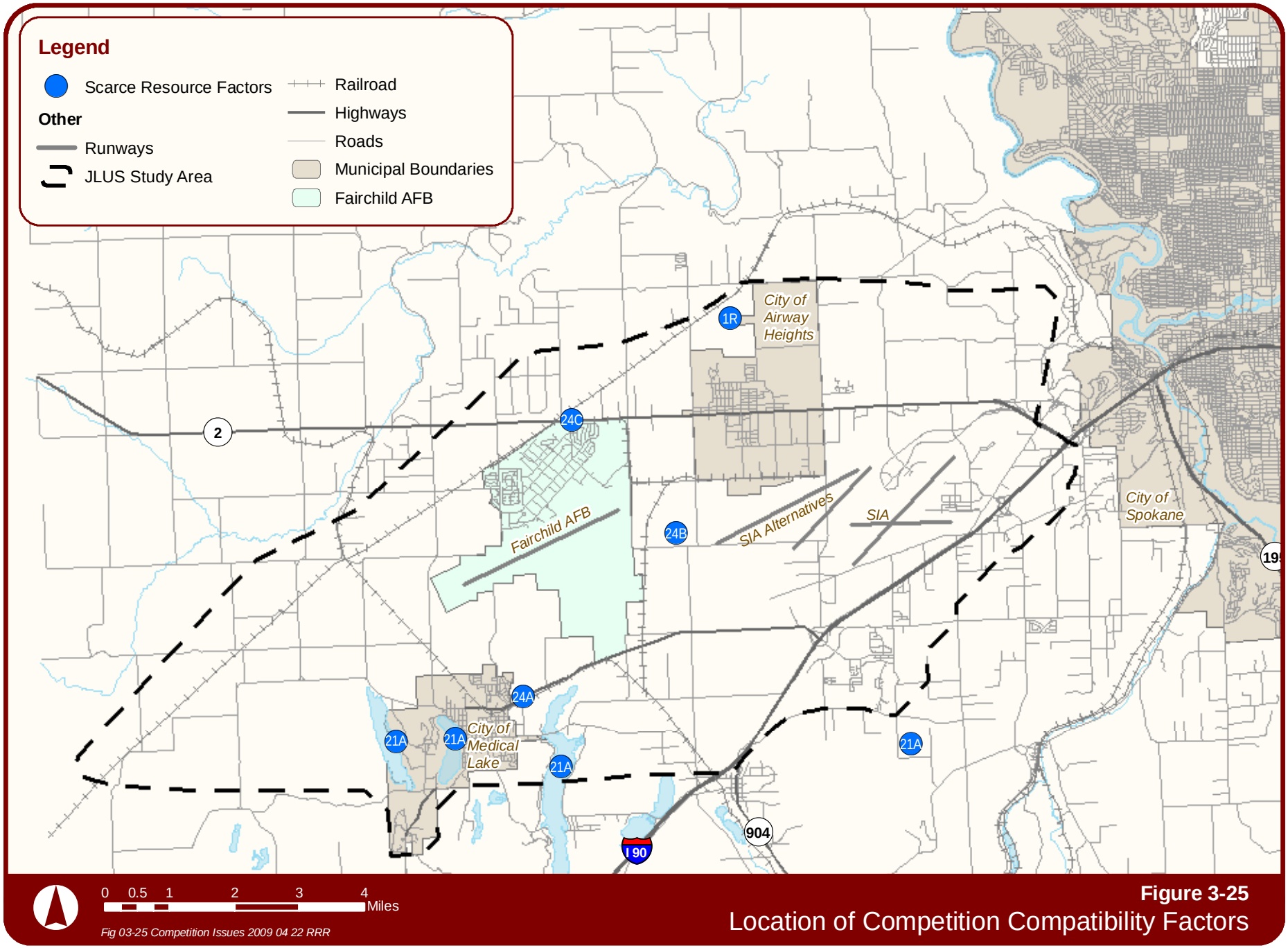


Figure 3-25
Location of Competition Compatibility Factors

21 Scarce Natural Resources Factors

Definition:
Pressure to gain access to valuable natural resources (such as oil, gas, minerals, and water resources) located on military installations, within military training areas, or on public lands historically used for military operations can impact resource utilization and military operations.

Pressures to gain access to valuable natural resources located on military installations, within military training areas, or on public lands historically used for military testing and training can affect the ability to use these areas for operational activities. Furthermore, pressure to use natural resources outside of military installations for recreational purposes can increase the number of people in critical operational areas. The factor identified for this compatibility factor is listed in Table 3-25.

Table 3-25. Scarce Natural Resources Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Recreational assets (local water bodies)	21A	■	■	■

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Natural resources within the West Plain offer numerous opportunities for recreation, most notably boating and fishing in area lakes and water bodies southwest of Fairchild AFB near the City of Medical Lake (● Factor 21A). Development history within this area is closely tied to the presence of these lakes. Medical Lake is one of the most popular recreational assets within Spokane County.

Many of the West Plains' unique natural resources are the result of the region's unique soils, climatic conditions and geologic structure. As finite resources, they cannot be recreated if depleted or destroyed. Protecting these resources ensures the continued viability of local economies dependent on the quality of life prevalent within the region. A variety of techniques are available to conserve and protect the region's natural resources. Spokane County requires notification to development permit applicants planning to develop in natural resource areas. Property tax policies also encourage the continuation of existing resource activities. Other conservation techniques that should be considered include appropriate use of conservation easements.

22 Land, Air, and Sea Spaces Factors

Definition:
Land, Air, and Sea Spaces with regard to other airports in the proximity of the military installations.

The factors identified for this compatibility factor are listed on Table 3-26 and further described in the following discussion.

Table 3-26. Land, Air, and Sea Spaces Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Competition for airspace with Spokane International Airport	22A	N/R	N/R	N/R

Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Competition for land space refers to a situation where Fairchild AFB would be in competition for the use of one or more parcels of land. For Fairchild AFB, the DOD owns the installation, and long-term easements are held for areas within the Clear Zone and Accident Potential Zones and other off-installation safety zones (see discussion under Factor 2, Safety Zones). There is no land area that is needed for operations at Fairchild AFB that is not currently controlled by the military. Therefore, this was not a factor to be addressed further in this JLUS.

Fairchild AFB uses various airspaces to accomplish its training and operational missions. These resources must be available and of sufficient size, cohesiveness, and quality to accommodate effective training for existing and future missions. Airspace near Fairchild AFB is a high-demand resource. Increases in demand for flights from SIA or local airports may impact existing and future aircraft operations at Fairchild AFB (i.e., approach and departure tracks, closed pattern flight tracks, etc.). Current facilities at SIA include two runways, with a third runway currently in the planning stages. Growth at SIA, and the inclusion of a third runway, could add additional constraints on military operations. Based on the study of the new runway and coordination with Fairchild AFB, this is not considered a critical issue at this time, but if new missions were brought to Fairchild AFB or if the flight parameters at SIA were to change significantly, this issue may become a high priority.

23 Frequency Spectrum Capacity Factors

Definition:
Frequency spectrum capacity is critical for maintaining existing and future missions at Fairchild AFB. This also needs to be addressed from the standpoint of consumer electronics.

The factors identified for this compatibility factor are listed on Table 3-27 and further described in the following discussion.

Table 3-27. Frequency Spectrum Capacity Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
No factors were noted for this Compatibility Factor.	N/A	N/A	N/A	N/A

24 Ground Transportation Capacity Factors

Definition:
This factor addresses ground transportation capacity on highways and other local roads.

As urban development expands into rural areas, roads once used primarily to provide access to rural areas or transport a limited number of vehicles per day begin to function more as urban major arterial roadways. These once rural roads are often the main transportation corridors for access to military installations. In addition, these facilities also induce growth as rural areas become more accessible. The factors identified for this compatibility factor are listed in Table 3-28 and described further in the following discussion.

Table 3-28. Ground Transportation Capacity Factors

Compatibility Factor	Map ID	Current Impact	Location	Potential Impact
Ground transportation capacity throughout region (increasing demand from new development)	24A	■	■	■
Fairchild AFB entry traffic	24C	■	■	■

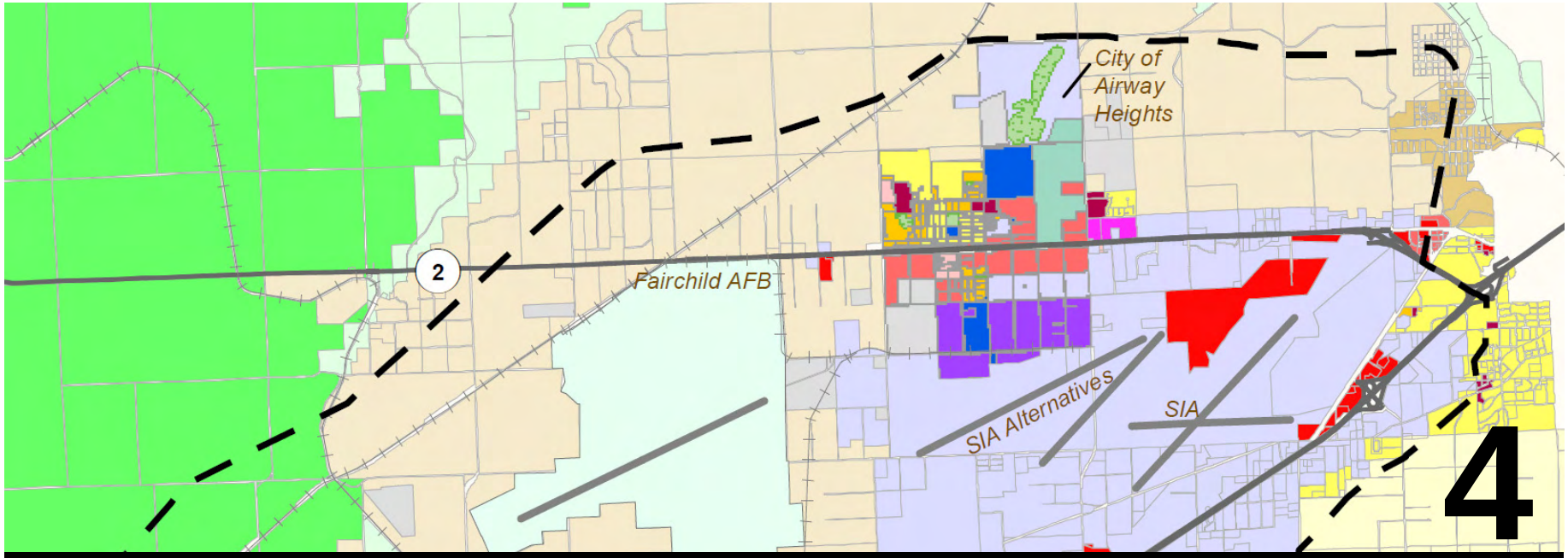
Notes: ■ *Most Critical* ■ *Moderately Critical* ■ *Least Critical* *N/R = No Rating*

Historically, growth and development tends to follow major roads. The case is the same for areas around Fairchild AFB. Development along the US Highway 2 and Interstate 90 (I-90) corridors has greatly increased in the past several decades. As describe in Section 2, there are several road improvements taking place within the JLUS study area that have the potential to impact regional mobility and access to the installation (● Factor 24A).

The Spokane Regional Transportation Council (SRTC), the local Metropolitan Planning Organization (MPO), is currently working with stakeholders (including Fairchild AFB) on a West Plains-Spokane International Airport study in response to continued development of the airport business park, land use changes in the area, and the impact of these changes on the Geiger interchange and the surrounding transportation network. This study is expected to be complete in late 2009 or early 2010.

In addition to these studies, peak hour traffic congestion at the main entry gate to Fairchild AFB was identified as a potential factor (● Factor 24C). This factor could be factored into discussions for both the US Highway 2 RDP and the West Plains-Spokane International Airport studies. Development proposals along US Highway 2, such as the development of a casino-resort by the Spokane tribe, could dramatically increase congestion associated with accessing the installation.

Please see the next page.



4 Existing Plans and Programs

This section provides an overview of the primary plans and programs that are currently used or applied in evaluating and addressing compatibility issues in the study area. Section 4.1 provides an overview of Fairchild Air Force Base (AFB) and the plans and programs used by the base to direct their planning efforts.

Section 4.2 highlights plans and programs currently used by local jurisdictions and agencies to address compatibility issues, including an overview of each jurisdiction's general plan and regulatory tools (i.e., tools codified through a formal action such as a zoning ordinance, subdivision ordinance, building code).

Section 4.3, describes legislation and other regulations that directly apply to compatibility planning.

In addition to individual plans and programs, the jurisdictions in the West Plans area also work together on collaborative planning efforts. Section 4.4 describes these efforts.

The final section, Section 4.5, provides an overview of other resources that can be consulted concerning compatibility planning.

4.1 Fairchild AFB Plans

Air Installation Compatible Use Zone Study (AICUZ)

The Noise Control Act of 1972 found that noise not adequately controlled has the potential of endangering the health and welfare of people. It states that all Americans are entitled to an environment free from noise that can jeopardize their general health and quality of life. Along with state and local governments, actions from the Federal government were needed to ensure that the objectives of the Act were met. Concurrently, military installations were experiencing the impacts related to urban development moving closer to the installation and commenting on noise from flight operations. In 1973, the Department of Defense (DOD) responded by establishing the AICUZ program.

The AICUZ program seeks to develop a cooperative relationship between communities and military installations and provides land use compatibility guidelines designed to protect public health and safety, as well as maintain military readiness. As designed, the AICUZ study evaluates three components: noise, vertical obstructions, and accident potential zones.

The 2007 Fairchild AFB AICUZ study served to update and revise the noise and accident potential information from 1995. Differences between the 1995 AICUZ Study and the 2007 AICUZ Study are attributed to the following:

- Changes in flight operations and the addition, elimination, or alteration of flight tracks for mission and training purposes;
- Post September 11, 2001, aircraft operations tempo supporting wartime mission and homeland security requirements;
- Technical improvements to NOISEMAP, a computer program for modeling noise levels that determines noise zones (NZs) based on aircraft activity; and
- Changes in aircraft type, such as the replacement by the Washington Air National Guard (WAANG) of the KC-135E aircraft with the KC-135R, and based aircraft composition.

Mitigating noise and potential accident injury is a major component of compatibility planning. These two issues will be addressed in length in this Joint Land Use Study (JLUS), as well as other issues pertaining to compatibility.

Noise Zone Profile

Noise is the cornerstone of the AICUZ study. The noise generated by military aircraft operations and the effects of that noise on local communities are presented numerous ways in the study (i.e., written text, graphically, etc.). To fully appreciate the findings and recommendations presented in the AICUZ study, it is beneficial for the reader to have an understanding of how military aircraft noise is measured, evaluated, and graphically illustrated. Information on these characteristics can be found in Section 3 under Compatibility Factor #7, Noise. The noise zone profile will serve as a technical tool to address noise as a compatibility factor.

Vertical Obstructions

Vertical obstructions are evaluated based on Federal Aviation Administration (FAA) Regulation Part 77, Subpart C. This regulation looks at the height of vertical structures or natural features in relation to their distance from the ends of the runway. Using a distance formula from this regulation, local jurisdictions can easily assess the height restrictions near airfields. Additional information on Part 77 can be found in Section 3 under Compatibility Factor 3, Vertical Obstruction, or on the Federal Aviation Administration Internet site at http://www.faa.gov/.

Accident Potential Zones

As part of the AICUZ program and to aid in land use planning surrounding military bases, the DOD established Accident Potential Zones or APZs. These are defined as Clear Zones (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). These are determined based on a statistical analysis of all DOD aircraft accidents. APZs follow departure, arrival, and pattern flight tracks and are based upon analysis of historical data. The Clear Zone is a square area that extends directly beyond the end of the runway and outward along the extended runway center line for a distance of 3,000 feet. The CZ for the Fairchild AFB runway is 3,000 feet wide by 3,000 feet long. Required for all active runways, above ground structures are generally not permitted in these areas and are optimally undeveloped. For this reason, acquiring sufficient real property interest in land within the CZ is critical to ensure incompatible development does not occur.

At Fairchild AFB, APZ I onset begins at the end of the CZ and extends out 5,000 feet. APZ II extends form the end of APZ I and stretches out an additional 7,000 feet. Both APZ I and APZ II are 3,000 feet wide. While aircraft accident potential in APZs I and II does not warrant acquisition by the USAF, land use planning and controls are strongly encouraged for the protection of the public. Within APZ I and II a variety of land uses are compatible; however uses sensitive to noise, such as hospitals and schools, and people intensive uses such as high density residential should be restricted due to the greater potential for safety incidents in these areas. The current AICUZ safety zones and noise contours for Fairchild AFB are depicted on Figure 4-1.

Each AICUZ Study contains general land use guidelines related to safety and noise associated with aircraft operations. The Fairchild AICUZ Study lists the USAF-recommended land use compatibility guidelines in relation to noise zones and APZs. The information presented in the table is essentially the same as the information published in the June 1980 publication by the Federal Interagency Committee on Urban Noise (FICUN) entitled *Guidelines for Considering Noise in Land Use Planning Control* (FICUN 1980) and in the *Standard Land Use Coding Manual* (USURA 1965) published by the US Urban Renewal Administration (USURA).

Bird/Wildlife Aircraft Strike Hazard Plan

A Bird/Wildlife Aircraft Strike Hazard (BASH) plan is designed to control birds, alert aircrew and operations personnel, and provide increased levels of flight safety, especially during the critical phases of flight, take-off, and landing operations. Specifically the plan is designed to:

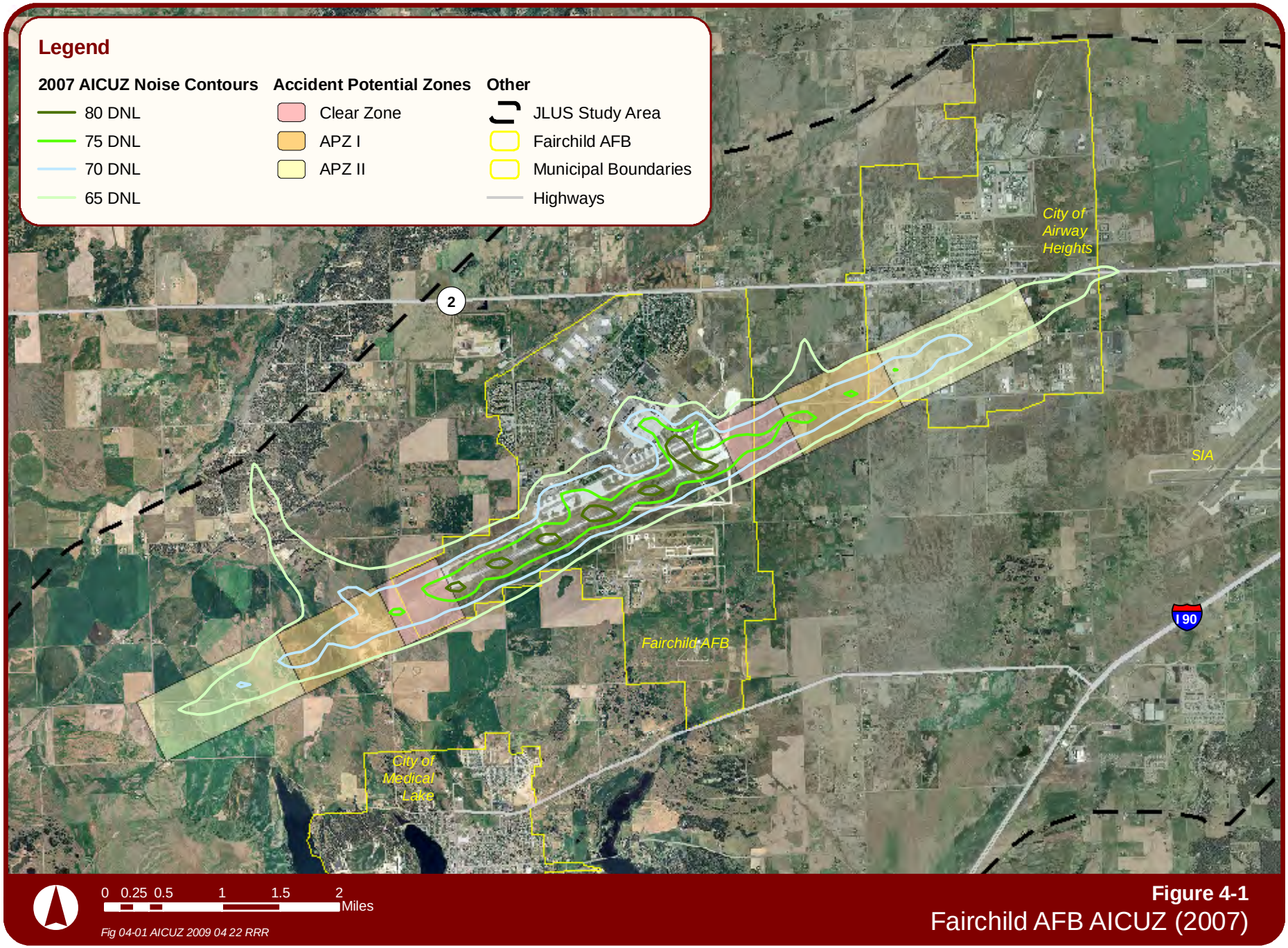


Figure 4-1
Fairchild AFB AICUZ (2007)

- Designate a Bird Hazard Working Group (BHWG) and outline the members' responsibilities.
- Establish procedures to identify high hazard situations and establish aircraft and airfield operating procedures to avoid these situations.
- Ensure that all permanent and transient aircrews are aware of bird hazards and the procedures for avoidance.
- Develop guidelines to decrease the attractiveness of the airfield to birds and disperse the number of birds on the airfield.

Fairchild AFB General Plan

As a "city within a city", Air Force installation's possess an internal land use mixture similar to local municipalities that requires comprehensive and coordinated planning to ensure its physical layout will sustain the installation's vision for long-term growth and development. The installation's general plan identifies base constraints and opportunities, develops recommendations for improvements to infrastructure, and identifies potential land use changes and capital improvements.

Although this document focuses on development within the installation boundaries, it is an important reference for all study area jurisdictions when planning for future growth. Information and plans detailed in the general plan can have both direct and indirect impacts on study area jurisdictions. The general plan will aid in the creation of policies in this study through providing information on the land use, capital improvements, and future development plans on the base. These developments will be critical in assessing compatibility between the installation and the community.

The Fairchild AFB General Plan is designed to assist base personnel understand existing conditions, document existing needs and future expectations, and provide programs and projects that can help the base react to an ever-changing world. Last updated in 2004, the General Plan provides Air Force decision makers with essential information on the vision for the future of Fairchild AFB. The General Plan summarizes and updates many of the installation's disparate, detailed, and diverse planning documents. The document draws on existing information to create a cohesive plan for the physical development of the installation.

Fairchild AFB Integrated Natural Resource Management Plan

In March of 2005, Fairchild AFB adopted an Integrated Natural Resource Management Plan (INRMP), which supports the management of natural resources on the installation. The purpose of the plan is to enable Fairchild AFB to effectively manage the use and condition of natural resources on the installation and to protect the natural setting of the base for training purposes. Additionally the plan will support the continuing need to ensure the safety and efficiency of the flying mission while practicing sound resource stewardship and complying with environmental policies and regulations.

This INRMP provides Fairchild AFB with a description of the installation and their surrounding environments, and presents various management practices designed to mitigate negative impacts and enhance the positive effects of the installation's mission on regional ecosystems. These recommendations are balanced against the requirements of Fairchild AFB to accomplish their mission at the highest

possible level of efficiency. The overriding goals outlined in the INRMP are:

- No net loss in the capability of Fairchild AFB lands to support the military mission
- Minimize habitat fragmentation and promote the natural pattern and connectivity of habitats
- Protect native species and discourage nonnative, exotic species
- Protect rare and ecologically important species and unique or sensitive environments
- Maintain or mimic natural processes
- Protect genetic diversity
- Rehabilitate damaged ecosystems, communities, and species
- Monitor biodiversity impacts

The INRMP was a joint effort between the Air Mobility Command (AMC), the US Fish and Wildlife Service, and the Washington State Department of Fish and Wildlife, and was conducted pursuant to the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508) for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] 4321 et seq.), the Air Force Environmental Impact Analysis Process (EIAP) (32 CFR Part 989) and Air Force Instruction (AFI) 32-7061 (*Environmental Impact Analysis Process*). The INRMP was prepared in accordance with the provisions of the Sikes Act (16 USC. 670a et seq.) and AFI 32-7064 *Integrated Natural Resources Management*), and will be a useful tool in preparing the joint land use study.

The INRMP will be a useful tool in implementing the strategies recommended within the JLUS. Compatibility between the installation and the community includes impacts to the natural resources which are not bound by jurisdictional lines. Information obtained and measures taken during the creation of the INRMP may also pertain to the surrounding region and can be adopted by local communities to continue the practice of resource stewardship seamlessly across the installation boundary.

Fairchild AFB Integrated Cultural Resources Management Plan

The Integrated Cultural Resources Management Plan (ICRMP) establishes the authority, responsibility, and procedures for Fairchild AFB's compliance with federal laws and Air Force Instruction (AFI) 32-7065, Cultural Resources Management Program. The ICRMP is designed to:

- Provide an inventory and evaluation of all known cultural resources
- Identify the likely presence of other significant cultural resources
- Describe Fairchild AFB strategies for maintaining cultural resources and complying with Air Force regulations and related statutes, regulations, policies and procedures

- Coordinate with the installation mission
- Conform to local, state, and Federal preservation programs

Goals of the 2005 Fairchild AFB ICRMP include:

- Assure compliance with the NHPA
- Inventory, nominate and protect historical resources
- Integrate historic preservation requirements with base decision making
- Maintain historic properties in accordance with the Secretary of Interior's standards
- Cooperate with other agencies, Indian Tribes, and the public
- Promote cultural resources awareness
- Promote conservation education

Significant findings from the ICRMP include six archaeological sites, one of which may be eligible for inclusion on the National Register. There were no documented sites or areas of known importance for Native American tribes on the installation and the potential for future discoveries was considered low.

4.2 Local Jurisdiction Planning Tools

In this section, planning tools used by the jurisdictions in the JLUS study area are discussed, first by county and then by city.

Comprehensive Plans

A comprehensive plan is designed to serve as the jurisdiction's "construction" or "blueprint" for future decisions concerning land use, infrastructure, public services, and resource conservation. Typically, there are three defining features of a comprehensive plan:

1. **General.** A comprehensive plan provides the general guidance that will be used to direct future land use and resource decisions.
2. **Comprehensive.** A comprehensive plan covers a wide range of social, economic, infrastructure, and natural resource factors. These include topics such as land use, housing, circulation, utilities, public services, recreation, agriculture, economic development and many other topics.
3. **Long-range.** Comprehensive plans provide guidance on reaching a future envisioned 20 or more years in the future.

Within the State of Washington, the Growth Management Act (GMA) establishes the primacy of the comprehensive plan. The comprehensive plan is the cornerstone for any planning process and serves as the foundation of the local land use planning. Development regulations (zoning, subdivision, and other controls) must be consistent with comprehensive plans. In addition, state agencies are required to comply with comprehensive plans and development regulations of jurisdictions planning under the GMA.

According to the GMA, local comprehensive plans are to include chapters on the following topics: land use, utilities, housing, transportation, capital facilities, and shorelines. Counties must also include a chapter on rural planning.

Cities and counties fully planning under the GMA are to renew their comprehensive plans and ordinances at least every seven years and ensure compliance with state legislation.

Land Use Designations

To provide an understanding of the future of the study area, a compilation of the zoning designations for the study area is provided on Figure 4-2. Given the number of jurisdictions represented in the study area, the land use designations were simplified into a common set of categories, which provides an overview of future plans for the area.

Countywide Planning Policies

The development of countywide planning policies (CWPPs) is required by the GMA to ensure a coordinated and regional approach to planning. CWPPs provide the overall framework for planning as local jurisdictions use these policies to craft their own comprehensive plans. The major themes within Spokane County's CWPPs include the protection of neighborhood characteristics, the protection of local aquifers, preservation of ethnic diversity, preservation of urban and rural character, sustaining economic vitality, and preservation of private property rights.

Specifically, the following policies were identified within the CWPPs related to Fairchild AFB:

- **Policy 11, Policy Topic 2, Joint Planning within Urban Growth Areas UGAs).** Where applicable, comprehensive plans should contain land use policies which provide protection for the continued viability of Fairchild Air Force Base, Spokane International Airport, Felts Field, Deer Park Airport and other publicly owned airports within Spokane County.
- **Policy 11, Policy Topic 3, Promotion of Contiguous and Orderly Development and Provision of Urban Services.** Recognize Fairchild Air Force Base as an urban center with a major influence on the regional economy.

SPOKANE COUNTY

The Spokane County Comprehensive includes planning elements addressing urban and rural land use, transportation, housing, capital facilities, and economic development (elements required by the GMA); as well as elements addressing parks, the natural environment, natural resource lands, cultural resources, and sub-area planning. Each element contains goals and policies outlined to meet the CWPPs.

As previously mentioned, one of the primary tools available within the GMA to regulate growth and promote compatibility planning is the establishment of Urban Growth Areas (UGAs). UGAs identify areas where urban growth should occur and establishes a clear separation between urban and rural development. The primary intent of UGAs is to encourage growth first in areas with existing public services and facilities. Spokane County's comprehensive plan includes goals and policies aimed at providing an economic and efficient provision of public services using UGAs, including the following:

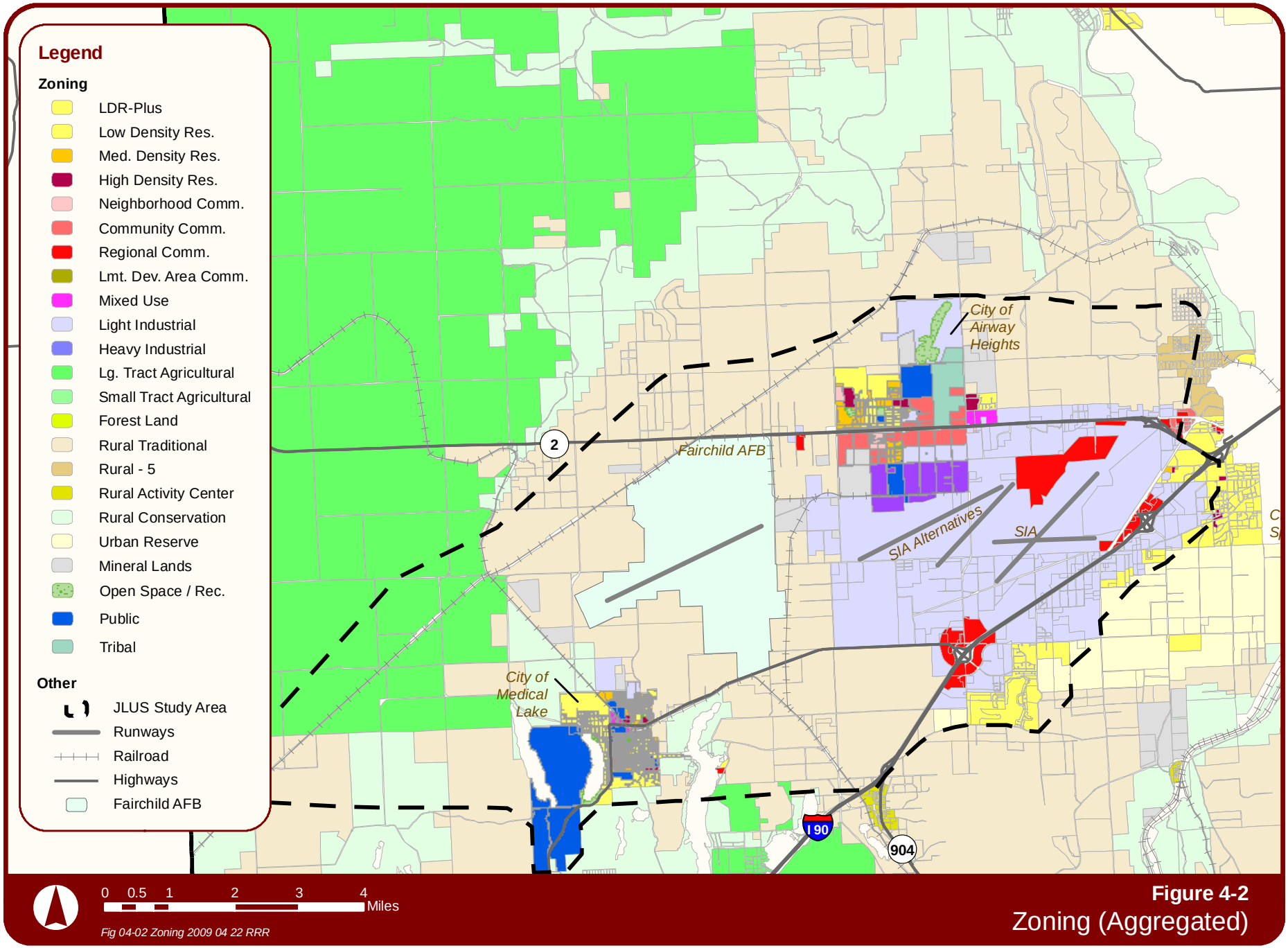


Figure 4-2
Zoning (Aggregated)

- **Goal UL.18: Maintain an Urban Growth Area** that provides a distinct boundary between urban and rural land uses and provides adequate land to accommodate anticipated growth.
- **Policy UL.18.1:** Review and evaluate Urban Growth boundaries, at a minimum every five years, as required by the CWPP (Topic 1, Policy 18) and the Revised Code of Washington.

  NOTE: After publication of the Comprehensive Plan, CWPPs were amended to provide a review and evaluation of the UGA boundary every 10 years rather than every 5 years.

- **Policy UL.18.2:** The determination of UGA boundaries shall include consideration of environmental features, topography, jurisdictional boundaries, and special purpose districts. When the boundary follows a utility line, consideration should be given to including adjacent parcels on both sides of the line to allow efficient use of the utility and provide fairness to property owners.
- **Policy UL.18.3:** Urban Growth Area boundaries shall follow parcel boundaries to avoid splitting an existing parcel of record.

  Consistent availability of facilities and services, development to urban densities will be encouraged in and up to the Urban Growth Area boundaries.

The following goal and supporting policies specifically address airport facilities and their environs.

- **Goal T.3g:** Protect airports in Spokane County from encroachment by incompatible land uses.
- **Policy T.3g.1**: Prohibit uses in airport areas which attract birds, create visual hazards, discharge particulate matter into the air which could alter atmospheric conditions, emit transmissions which would interfere with aviation communications and instrument landing systems, otherwise obstruct or conflict with airport operations or aircraft traffic patterns or result in potential hazard for off-airport land use.
- **Policy T.3g.2**: Commercial and industrial uses that benefit from and do not conflict with aircraft operations should be encouraged.
- **Policy T.3g.3**: Decisions on zone reclassifications and land use development shall consider noise hazards of aircraft operations and accident potentials.
- **Policy T.3g.4**: Coordinate airport development on a regional basis.
- **Policy T.3g.5:** Discourage new residential development near airports where significant noise impacts and safety hazards exist or are likely in the future.
- **Policy T.3g.6:** Encourage noise abatement procedures per FAA regulations at airports in Spokane County.
- **Policy T.3g.7:** Encourage the protection of airports from adjacent incompatible land uses and/or activities that could adversely impact present and/or future use of the airport as an Essential Public Facility (EPF). Examples of incompatible land uses may include but not be limited to urban density residential, multi-family residential, uses that attract large concentrations

of people, wildlife hazards, and special uses such as schools, hospitals and nursing homes, and explosive/hazardous materials.

- **Policy T.3g.8:** Promote the safe operation of airports by discouraging uses or activities that will impede safe flight operations or endanger the lives of people on the ground.
- **Policy T.3g.9:** Encourage open space/clear areas and utilize zoning and land subdivision criteria within key safety areas adjacent to the airport to facilitate protection of the airport as an essential public facility. When possible promote contiguous open space parcels, especially in areas with smaller parcel size configurations.
- **Policy T.3g.10:** Evaluate all proposed amendments to the comprehensive plan, capital facilities plan and Urban Growth Area (UGA) that will increase incompatible land uses or potential of incompatible development adjacent to airports.
- **Policy T.3g.11:** Develop criteria, standards and land use designations that will protect the airport and aviation uses from incompatible development by adopting a combination of zoning techniques including but not limited to special airport overlay zoning, height restrictions, building restrictions in high noise areas and development siting criteria for evaluating uses or activities in key areas adjacent to the airport.
- **Policy T.3g.12:** Protect airspace by prohibiting structural penetration of Imaginary Surfaces adjacent to airports as described in 14 CFR (Federal Aviation Regulations) Part 77 for public airports and Department of Defense Air Installation Compatible Use Zone (AICUZ) criteria for areas around military airports.
- **Policy T.3g.13:** Within Airport Influence areas (properties near public airports which are subjected to aircraft noise of 65 decibels or higher day-night average sound level) a notice to title should be required for new or substantial redevelopment of lots, buildings, structures, and activities. The notice should specify that the property is near an airport and may experience low overhead flights, odor, vibrations, noise and other similar aviation impacts.

Fairchild AFB is recognized in chapter 5, Transportation as a critical element in the economic base for the county. Goals and policies specifically related to Fairchild AFB include the following:

- **Goal T.3i:** Recognize major airports and military facilities as key element of a strong economic base for Spokane County.
- **Policy T.3i.1***:* Protect public and private investment in facilities for which there may be no feasible future replacement.
- **Policy T.3i.2:** Land use decisions on land in airport areas shall consider regional and national needs as well as localized concerns.
- **Policy T.3i.3:** Protect the viability of these airports as significant economic resources to the Spokane County community by encouraging compatible land uses, densities, and reducing hazards that may endanger the lives and property of the public and aviation users.

- **Policy T.3i.4:** Coordinate the protection of Spokane International, Felts Field and Deer Park Airports with the City of Spokane and the Towns of Airway Heights and Deer Park by developing consistent development regulations that utilize Washington State Department of Transportation (WSDOT) Aviation Airport Land Use Compatibility guidelines and other best management practices for encouraging compatible land uses adjacent to these airports. Coordinate the protection of Fairchild AFB by developing regulations that utilize Department of Defense AICUZ land use criteria for encouraging compatible land uses adjacent to military airports.
- **Policy T.3i.5:** Identify, preserve, and enhance, through interjurisdictional planning, goals, policies and development regulations that promote significant regional transportation linkages and multimodal connections to and from aviation facilities.

CITY OF SPOKANE

Revised in 2006, the City of Spokane's comprehensive plan addresses the following planning elements: land use, transportation, capital facilities and utilities, economic development, urban design and historic preservation, natural environment, social health, neighborhoods, parks/recreation and open space, leadership/governance and citizenship. Although not directly contiguous to Fairchild AFB, the city has a history of growth and is an important influence on the region as a whole. The following goals and policies were found to be important in regards to compatibility planning:

- **Goal LU 10, Joint Planning:** Support joint growth management planning and annexation requests, which best meet the Comprehensive Plan's development goals and policies.
- **Policy LU 10.1, Land Use Plans:** Prepare land use plans in cooperation with Spokane County for the urban growth area to ensure that planned land uses are compatible with adopted city policies and development standards at the time of annexation.
- **Policy LU 10.5, UGA Expansion:** Establish a forty-year planning horizon to address eventual expansion of UGAs beyond the 20-year boundary required by the Growth Management Act.
- **Goal TR 8, Regional Planning:** Plan for transportation on a regional basis.
- **Policy TR 8.4, Airports:** Protect the operations of Spokane International Airport and Felts Field with compatible land use regulations and ensure planning is coordinated and consistent with the airports' respective Master Plans.
- **Policy TR 8.5, Sharing Information:** Share information between all transportation entities on a regular basis; planning information shall be shared during all phases of projects.

CITY OF AIRWAY HEIGHTS

The current comprehensive plan for the City of Airway Heights was adopted in 2006. In accordance with the GMA, the comprehensive plan uses a similar format to that of the other study area jurisdictions, and is strongly based on the CWPPs. The comprehensive plan provides a framework for development including major land uses, transportation

systems, parks, recreation, and open spaces, and is the basis for all other planning activities.

The comprehensive plan recognizes the city's strategic location near Fairchild AFB and the impacts of the AICUZ on the southern half of the city. Airway Heights uses the AICUZ during the project review process to ensure consistency with flight operations. Additionally, the plan outlines goals and policies pertaining to the instillation such as:

- **Goal:** Explore land use compatibility with Fairchild Air Force Base (FAFB) and Spokane International Airport where practicable.
- **Policy:** Encourage blending existing residential uses, commercial and industrially zoned land that allows each designation to flourish.
- **Implementing Program:** Encourage noise damping mitigation measures to all remodeled or new dwelling units within the 65 or greater DNL contour.
- **Implementing Program:** Pursue grant funding through Community Development Block Grants, Fairchild Air Force Base and others.
- **Implementing Program:** Find opportunities for continued discussions with FAFB regarding health, safety and welfare of the residents of Airway Heights.
- **Implementing Program:** Amend zoning to encourage taller buildings in the central area.

CITY OF MEDICAL LAKE

The latest adoption of a comprehensive plan for the City of Medical Lake was in 2007. Similarly to the comprehensive plans for Spokane County and the City of Spokane, Medical Lake's comprehensive plan strives for consistency between the plan the and planning goals identified in the Revised Code of Washington, other municipal and county comprehensive plans, internal plan consistency, consistency with development regulations and capital facility plans, and consistency with actions of the state. Additionally, in accordance with the GMA, a strong relationship between urban growth and public facilities and services is outlined.

The City of Medical Lake's comprehensive plan recognizes the city's strong link with Fairchild AFB, specifically noting proper land uses in areas in proximity to the base. The plan creates an Air Base Noise Overlay (ABN) that identifies areas with the potential to encroach into areas within the 65 (dB) Day-Night Average Sound Level (DNL). The plan recommends the creation of a zoning overlay to implement design standards to mitigate noise impacts. Medical Lake also identifies Fairchild AFB as a major commercial center, complimenting the city's central business district.

Zoning Ordinances

The zoning ordinance (also referred to as a development code), is the primary mechanism whereby local governments can influence the direction, type, use, density, and location of development. The primary purpose of zoning is to:

- Protect public health, safety, and welfare;
- Protect against physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas;
- Protect against common law nuisances – noise, vibration, air pollution, etc. – associated with military operations;
- Protect against aesthetic nuisances impacting military installations;
- Protect against "psychological nuisances," such as perceived and actual dangers associated with military operations;
- Protect against negative impacts of light, glare, air, and privacy; and
- Provide open space and agricultural preservation.

Zoning ordinances enumerate uses permitted by right or by special exception within each category of land use. Most ordinances also possess a means to grant special exceptions, provided certain conditions are met. These exceptions are often referred to as conditional use permits (CUP) or special use permits (SUP). In addition to land uses, zoning ordinances also set the standards for permitted densities, location of structures, building heights, setbacks, acreage requirements, and other standards.

Zoning Authority for counties in Washington is derived from chapters 36.70 and 36.70A of the Revised Code of Washington (RCW). RCW 36.70A.510 and RCW 36.70.547 require towns, cities, and counties to adopt comprehensive plan policies and consistent zoning regulations to discourage incompatible development adjacent to public use general aviation airports. Public use general aviation airports within Spokane County include Spokane International Airport (SIA), Felts Field, Mead Airport, Cross Winds Airport, and Deer Park. All of these facilities have general aviation operations that exceed 60 percent of the total operations.

This section requires jurisdictions to consult with aviation interests and WSDOT Aviation when developing or amending comprehensive plan and zoning regulations. This section also requires WSDOT Aviation to provide a technical assistance program to assist local jurisdictions develop comprehensive plan policies and regulations consistent with this section. WSDOT Aviation's technical assistance program addresses safety, land use, and airspace. The program proactively addresses incompatible land uses through comprehensive plan policies and consistent zoning regulations to control land uses within the airport traffic pattern. *(Source: Jim Sibold, WSDOT Aviation, February 19, 2009)*.

The revised code of Washington further provides for Airport Zoning in Chapter 14.12, which regulates air space hazards, specifically structures or trees. Airport zones are considered an extension of a jurisdiction's police power, similar to that of the zoning ordinance.

Spokane County

The zoning ordinance for Spokane County outlines standards for 20 land uses ranging from very low density residential uses, to higher density uses such as regional commercial and heavy industrial land uses. In addition, the county's zoning ordinance includes three overlay zones, the Airport Overlay Zone, the Planned Unit Development Overlay zone, and the Aesthetic Corridor Overlay zone. Overlay zones consist of regulations that address specific subject in particular areas of the county. Overlay zone regulations are in additional to those applied in the base zone and can modify requirements of the base zone.

Pertinent to compatibility planning, the purpose and intent of the Airport Overlay (AO) Zone is to reduce the potential for airport hazards, based on the following findings (Section 14.702.100):

1. An airport hazard endangers the lives and property of users of landing fields and property or occupants in the vicinity of landing fields within Spokane County.

2. An airport hazard of the obstructive nature in effect reduces the size of the area available for the landing, takeoff, and maneuvering of aircraft, thus tending to destroy or impair the utility of an airport and the public investment therein.

3. The creation or establishment of an airport hazard is a public nuisance and detrimental to the region served by the airport affected.

4. It is necessary to prevent the creation or establishment of airport hazards in order to protect the public health, safety, and general welfare, and to promote the most appropriate use of land.

The AO Zone is applicable to the Spokane International Airport, Felts Field, Deer Park Airport, and Fairchild AFB. To carry out the purpose and intent of the overlay zone, the regulations establish specific development standards based on several defined air space and land use safety areas: the Conical Area, Approach Area, Accident Potential Zone A, and Accident Potential Zone B. The AO Zone is a Spokane County regulation established in Chapter 14.702 of the Spokane County Zoning Code. The County's AO Zone was patterned after the Fairchild AFB Air Installation Compatible Use Zone (AICUZ) study generated during the 1970s *(Source: Jim Sibold, WSDOT Aviation, February 19, 2009)*.

Although a critical planning tool for the prevention of encroachment concerns, the differences between these regulations and the AICUZ adopted by the installation create concerns for the implementation of compatible land use policies in regards to Fairchild AFB. As described in Section 3, Compatibility, and as shown in Figure 3-6, there are distinct differences in the geographical areas designated as land use safety areas.

In addition to the zoning concern presented above, other compatibility related zoning decisions include the County's recent amendment to allow all uses permitted in the Regional Commercial zone, with the exception of residential uses and adult businesses in the Light Industrial Zone. This change is significant as much of the land to the east of Fairchild AFB is designated for Light Industrial uses.

Other potential compatibility tools within the Spokane County Zoning Ordinance include

CITY OF SPOKANE

Though the City of Spokane's Unified Development Code will not directly affect uses adjacent to the installation, it can be used as a tool to help ensure region-wide compatibility. The ordinance will become a more critical tool as the City of Spokane grows, especially to growth in proximity to Fairchild AFB. There are currently no regulations within this code that relate to Fairchild AFB.

CITY OF AIRWAY HEIGHTS

Similar to Spokane County, Airway Heights adopted an Airport Overlay Zone (Chapter 17.15) to reduce the potential for airport hazards. The Airport Overlay Zone provides additional development standards to the base zone pertaining to use and height restrictions, establishment of airspace and accident potential areas, and the mitigation of noise impacts. The City of Airway Heights adopted the same land use safety areas as Spokane County, resulting in the same inconsistencies with the Fairchild AFB AICUZ.

CITY OF MEDICAL LAKE

There are no specific regulations within the City of Medical Zoning Ordinance specifically related to Fairchild AFB. However, potential compatibility planning tools include provisions for planned unit developments and clustering of uses.

School District Master Plans

CHENEY SCHOOL DISTRICT #360

The Cheney School District (CSD) #360 serves the City of Cheney and its outlying areas including the City of Airway Heights. The District offices are located in the City of Cheney which lies approximately 20 miles southwest of Spokane and 10 miles south/southeast of Fairchild Air Force Base. There are nine schools in the District: Betz Elementary; Reid Elementary; Salnave Elementary; Sunset Elementary; Windsor Elementary; Cheney Middle School; Cheney High School; Three Springs High School; and, HomeWorks. *(Source:* www.cheneysd.org; *and* www.education.com/schoolfinder*)*

For planning purposes, a Long Range Facilities Plan (LRFP) was developed for CSD, which identifies three main needs-driven drivers that influence the plan – growth, building condition, and obsolescence / upgraded standards. According to the District's December 2008 First Draft LRFP, Cheney School District has been experienced steady growth over the past five years. The growth trend from 2004 to 2008 shows an increase from 3,390 students to 3,811 students in the K-12 grade span (a 421 student increase). These growth pressures are currently applying serious housing pressures to CSD. The Washington Office of the Superintendant of Public Instruction (OSPI) projects the majority of growth to be at the elementary level, followed by high school growth, and finally middle school.

The District's acute growth pressures and building condition combine to form the following key elements of a building program:

- **Elementary Growth.** Plan for two new 400/450-student elementary schools, one near-term (online in 2013, $18.6M) in the northeast sector of CSD, and one long-term (on line in 2016-17, $22.2M) in Airway Heights. With the first added elementary school, CSD elementary building capacity would be approximately 2,342 students (vs. 2,312 forecast in 2013 by OSPI).

- **Middle School Growth.** Plan for two new 650/750-student Middle Schools to replace the existing Middle School. Housing all middle school students in one 1,100-student mega-middle-school would be unmanageable. It is therefore time to split the enrollment into two middle schools. One would be on land adjacent to the existing Middle School site (on line in 2012, $37.8M), and the other would be on a 20-acre sector adjacent to Windsor Elementary (on line in 2012, $37.8M). These would likely be prototype middle schools. Short term, the Middle School at Windsor would take spill-over 5th grade students to relieve pressure at Windsor Elementary. With these added middle schools, CSD middle school capacity would be approximately 1,300 students (vs. 1,126 forecast in 2013 by OSPI).

- **High School Growth.** Plan for a major addition to the High School to increase its enrollment capacity to a range of 1,500 (ideal) to 1700 (maximum). This would be a 63,000 SF addition (on line in 2014, $29.7M). With this added space, the High School would have a capacity of approximately 1,500 (vs. 1,364 forecast in 2013 by OSPI).

MEDICAL LAKE SCHOOL DISTRICT

Medical Lake School District #326 encompasses approximately 80 square miles and serves the community of Medical Lake, its outlying areas, and Fairchild Air Force Base. The City of Medical Lake is positioned in the center of the district and located 16 miles southwest of Spokane and 3 miles south/southeast of Fairchild AFB. There are six schools operated by the district: Michael Anderson Elementary; Medical Lake Elementary (K-3); Hallet Elementary (Grades 4-6); Medical Lake Middle School (Grades 7-8); Alternative High School; and, Medical Lake High School (Grades 9-12). As of 2007, the total enrollment for all schools in the District was 2,160 students. *(Source:* www.mlsd.org)

According to the Medical Lake School District's Maintenance Supervisor, the district does not have a long-range plan for its schools. Facilities planning is short-term in nature and done on an as-needed basis. This has been attributed to the uncertainty of future student populations, which is linked in large part to the children of Air Force personnel stationed at Fairchild AFB. It was noted that many times when military service members deploy for long periods of time, family members relocate away from the base to be with extended family. This means those students would not attend a Medical Lake School District school for long periods, possibly even the entire school year. Currently, existing district schools are renovated and improved as part of the district's capital improvements plan. The district does have a desire to replace the Medical Lake Elementary School; however, this is currently remains only a vision. *(Source: Gary Hartman, Medical Lake School District Maintenance Supervisor, March 26, 2009)*

Other Plans, Policies, and Programs

In addition to comprehensive plans and zoning ordinances, local jurisdictions have other tools available with the ability to impact compatibility planning. These include subdivision ordinances and regulations, local building codes, capital improvement plans, and joint agreements (such as a Memorandum of Understanding).

Local subdivision regulation is accomplished through the plat approval process (as prescribe in RCW 58.17). Although the primary purpose of subdivision regulation is to promote the health, safety, and general welfare of a community, these ordinances generally may not regulate the use of any building or property; the bulk, height or number of buildings constructed on a lot; the size of a building; or the number of residential units that can be built per acre. Although these characteristics are generally regulated by zoning ordinances, subdivision regulations can still be effectively used for compatibility planning purposes. For example, in areas without existing wastewater infrastructure, subdivision regulations might prohibit or limit the development of land that would be detrimental to the health, safety, and welfare due to lack of water supplies, sanitary sewage systems, drainage, transportation, or other public services and for the protection of environmentally sensitive areas.

Local buildings codes can also be utilized for compatibility planning purposes. Building codes prescribe the basic requirements that regulate the design, construction process, materials, alteration, and occupancy of any structure to insure human safety and welfare. These regulations generally address matters such as fire protection, structural safety, health requirements, accessibility, and other related activities. Although building

codes do not prevent development, they can be used to insure development occurs in a compatible manner with nearby military installations. For example, these codes could require sound attenuation measures for residences and other sensitive receptors located within certain noise levels.

A Capital Improvement Plan (CIP) is a fiscal and detailed planning document used to plan and direct a jurisdiction's or agency's investment in public facilities. The CIP provides details on expenditures that can be incorporated into the jurisdiction's annual budgeting process. Most CIPs cover multiple years in order to plan for major expenditures and projects that may occur in the future. As a compatibility tool, CIPs can be used to effectively plan for and coordinate growth with the local jurisdiction's ability to absorb the growth in a manner consistent with military operations. Furthermore, local jurisdictions can analyze impacts associated with the development of infrastructure in areas that may cause significant encroachment concerns and choose to fund or not fund such projects.

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The purpose of an MOU is to establish a formal framework for coordination and cooperation. Airway Heights and Fairchild AFB are currently participating in an MOU that states that the City will coordinate planning, zoning and development activities with the installation.

4.3 Collaborative Planning

Spokane County and the metro cities of Spokane, Spokane Valley, Airway Heights, and Liberty Lake, and Millwood are now engaged in a collaborative planning process that focuses on the Metro Urban Growth Area which includes the West Plains area. The goal of the collaborative planning effort is to set up all jurisdictions for long-term success: Cities will have mechanisms to influence issues of land use, permitting, and infrastructure impacts associated with development in the urban growth area and the County will have a clear service delivery/revenue structure that allows fiscal sustainability.

The work is funded by several grants from the Washington State Department of Community, Trade and Economic Development. The first phase analyzed the differences and similarities in development regulations. This effort concentrated on the "edges" of the urban area where unincorporated land exists between the city limits and the outer boundary of the UGA. Generally, this study determined that the standards employed by the participating incorporated entities were generally consistent with each other. Densities, lot sizes, permitted land uses, and other requirements were typically similar, although some differences were noted.

The second phase of the collaborative planning process focused on these differences and included removing private roads, establishing connectivity standards, using urban design guidelines, and adopting a Metro Urban Growth Area overlay zone for implementation. In addition to preparing development regulations consistent between the metro cities and Spokane County, a coordinated review process for proposals within the Metro Urban Growth Area was established.

To facilitate the second goal, a revenue and service delivery analysis of Spokane County was prepared. The outcome is an alignment of Spokane County's three lines of business (local services to the unincorporated area; regional services to the entire county; and contracted services as contracted) with the respective revenue sources: regional (i.e. property tax), local (i.e. sales tax), and contract revenues. This alignment will allow Spokane County to be fiscally sustainable in light of pending annexations of the Metro Urban Growth Area by the adjacent cities.

As a part of the collaborative planning process, public officials including elected and appointed officials from each jurisdiction, each Tribe, and the Air Force Base were invited to luncheon presentations of the various findings. Feedback from these events was used to direct the study. On-going collaboration of the public officials and agency staff will be continued through the growth management planning update process.

Strategies recommended for improved coordination among these entities included:

- **Enhanced Communication and Process Clarity**. This strategy recommends each jurisdiction maintain its existing process, but incorporate inter-jurisdictional pre-application/pre-development meetings; permit status reporting; notice to adjacent agencies; improved inter-jurisdictional data access; revised notification procedures; and acknowledgement of receipt of development applications by adjoining entities.
- **SEPA Notification Improvement**. This strategy seek to improve SEPA review and notification procedures. Elements of this strategy include audits of jurisdictional notification review processes and development of a staff coordination group.
- **Consideration of City Regulations in County Review**. This strategy focuses on ensures the County considers zoning and street design standards from adjoining municipalities.
- **Adoption of Area-Specific Regulations.** This strategy is intended to build upon the concept of joint planning areas by creating development regulations unique to subareas or neighborhoods.
- **Adoption of UGA-wide Development Regulations.** This strategy proposes the creation and adoption of new UGA development regulations. The intent of these new regulations would be to create a zoning environment tailored to the adjoining community to manage the transition to urban intensity appropriately.
- **Adoption of City Development Regulations with County Review.** This strategy would apply the zoning and street design standards from the adjoining municipality to development projects within the UGA.
- **Adoption of City Development Regulations with City Review.** This strategy would ask the adjoining municipality to assume project review responsibility for all development projects within the UGA. City development standards would be applied to these projects ensuring compatibility with surrounding land uses.

4.4 State / Regional Tools and Legislation

State Legislation

Growth Management Act of 1990

In 1990, the Washington legislature passed the Growth Management Act (GMA) in response to rapid population growth and concerns with suburban sprawl, environmental protection, quality of life, and other related issues (codified in Chapter 36.70A of the Revised Code of Washington (RCW)). Under this legislation, all cities and counties within the state are required to:

- Designate and protect wetlands, frequently flooded areas and other critical areas
- Designate farm lands, forest lands, and other natural resource areas
- Determine that new residential subdivisions have appropriate provisions for public services and facilities (Washington State Department of Community, Trade and Economic Development)

One of the key requirements of the GMA is the preparation of county-wide planning policies. Under this legislation, counties are to work with their cities to prepare countywide policies that provide a common framework for local planning efforts. At a minimum, these policies must address:

- Designation of urban growth areas
- Contiguous and orderly development and provision of urban services
- Siting of major capital facilities
- Transportation strategies and facilities
- Affordable housing needs and distribution
- Facilitation of joint planning
- Economic development and employment

The development of the county-wide planning processes must also include an analysis of fiscal impacts and establish a review and evaluation program. As a component of this program, jurisdictions are asked to calculate the amount of "buildable land" and evaluate future land use needs.

The GMA establishes the primacy of the comprehensive plan. The comprehensive plan is the starting point for any planning process and the centerpiece of local planning. Development regulations (zoning, subdivision, and other controls) must be consistent with comprehensive plans. State agencies are required to comply with comprehensive plans and development regulations of jurisdictions planning under the GMA.

The GMA adopted the following goals to guide local development plans and regulations:

1. **Urban Growth.** Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
2. **Reduce Sprawl.** Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.
3. **Transportation.** Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.

4. **Housing.** Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.

5. **Economic Development.** Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.

6. **Property Rights.** Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.

7. **Permits.** Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.

8. **Natural Resource Industries.** Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.

9. **Open Space and Recreation.** Retain open space, enhance recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities.

10. **Environment.** Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.

11. **Citizen Participation and Coordination.** Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.

12. **Public Facilities and Services**. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

13. **Historic Preservation.** Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.

RCW 36.70A.530

In 2004, the Washington State Legislature enacted RCW 36.70A.530, which outlines provisions specific to military installation compatibility and the need for jurisdictions to work together with the installation to protect the vitality of the region. This legislation states that military installations are of particular importance to the economic health of the state of Washington and it is a priority of the state to protect the land surrounding military installations from incompatible development. Thus, cities and counties that have federal military installations, other

than reserve centers, that employ 100 or more personnel and are operated by the DOD within or adjacent to its border, must notify the commander of the military installation of the jurisdiction's intent to amend its comprehensive plan and development regulations to address lands adjacent to military installations to ensure those lands are protected form incompatible development. To ensure proposed plan or development regulation amendments will not have adverse effect on the operations of the installations, local governments are to request written recommendations and supporting facts related to the use of land being considered from the commanders of the military installations during the 60-day public comment period.

The GMA provides the framework for the regional coordination of growth and the subsequent development of compatibility measures.

RCW 36.70A.530 is part of a state strategy to retain and enhance the military presence in the state. Complementary efforts by the Washington State Department of Community, Trade and Economic Development (CTED) include:

- Providing pass-through grants (through a new appropriation to the Economic Development Division) to affected local communities so that they may identify and present the competitive advantages each base offers.
- Participating in an intergovernmental base realignment response team headed by the Governor's Office.
- Providing financial assistance from existing resources to communities addressing specific infrastructure and land use encroachment issues, when appropriate.

Noise Control Act of 1974

The Noise Control Act of 1974 designated the Washington Department of Ecology as the authority on noise level regulations within the state. Inadequately controlled noise adversely affects the health, safety and welfare of people, the value of property, and the quality of the environment. The act charges the Department of Ecology with establishing maximum noise levels and implementing rules pertaining to:

- Performance standards setting allowable noise limits for the operation of products which produce noise;
- Use standards regulating, as to time and place, the operation of individual products which produce noise above specified levels considering frequency spectrum and duration: PROVIDED, The rules shall provide for temporarily exceeding those standards for stated purposes; and
- Public information requirements dealing with disclosure of levels and characteristics of noise produced by products.

As an important compatibility factor, this act draws attention to the need for coordination between installations, the community, and the state in regards to noise planning. The Department of Ecology may be a useful resource and participant in the implementation of actions recommended in this study.

State Environmental Policy Act

Similar to the National Environmental Policy Act (NEPA – described in the next section), the State Environmental Policy Act of Washington (SEPA) provides a mechanism to identify environmental impacts resulting from state and local governmental decisions. Modeled after the NEPA legislation, the policies as well as the intent of the two laws are very similar:

- Integrate environmental review with other agency review processes;
- Integrate environmental review into early planning and use these reviews as the basis for analysis of future projects;
- Combine environmental documents with other documents;
- Use existing environmental information through incorporation by reference or adoption;
- Use categorical exclusions (exemptions) for actions that do not have a significant effect on the environment and, therefore, do not require environmental review;
- Involve the public and other agencies in the review process;
- Write environmental impact statements in plain language that focus on significant issues and only briefly discuss non-significant issues; etc. (40 CFR Part 1500.4 and 1500.5) (SEPA Handbook)

Federal

Conservation Partnering Initiative (Department of Defense)

In 2003, Congress amended Title 10 U.S.C. §2684a and § 2692a (P.L. 107- 314), the National Defense Authorization Act, to add authority to the DOD to partner with other federal agencies, states, local governments, and conservation based Non-Governmental Organizations (NGO) to set aside lands near military bases for conservation purposes and to prevent incompatible development from encroaching on, and interfering with, military missions. This law provides an additional tool to support smart planning, conservation, and environmental stewardship on and off military installations.

Federal Aviation Act

The Federal Aviation Act requires the Secretary of Transportation to make long-range plans to formulate policy for the orderly development and use of "navigable air space" to serve the needs of civilian aeronautics and national defense except for the specific needs of military agencies. Military planning strives to work alongside local, state, and federal aviation law and policies but sometimes must supersede other levels of government due to national security interests. The '500-foot rule' is discussed in the Federal Aviation Act. It states that flights 500 feet or more above ground level (AGL) do not represent a compensable taking because flights 500 feet AGL enjoy a right of free passage without liability to the owners below. This is important to Fairchild AFB and the surrounding communities when considering land acquisition and development rights.

Federal Aviation Administration (FAA) Regulation Part 77, Subpart C.

As described earlier in the discussion of the Fairchild AFB AICUZ, vertical obstruction in relation to flight operations from an airport (military or civilian) are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details on how to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question.

Further information on this can be found in Section 3 under Issue 3. Vertical Obstructions. A copy of Part 77 is also included in the Appendices.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires Federal agencies to file an environmental assessment (EA) and sometimes an environmental impact statement (EIS) for major Federal actions that have an environmental impact. NEPA is applicable to all Federal projects, including those performed by the military, any project requiring a federal permit, and any project receiving federal funding. As such, NEPA mandates that the military analyze the impact of its actions and operations on the environment, including that of the surrounding communities. Inherent in this analysis is an exploration of methods to lessen any adverse environmental impact. The EIS is a public process that allows participation by the community.

For local planning officials, an EIS or EA is a valuable planning document in determining the extent of impacts of changing military actions or operations on their policies, plans, and programs, if any, and on the surrounding community. Public hearings are required for all EIS and EA documents released by the military under NEPA. A Finding of No Significant Impact (FONSI) under an EA or a full EIS that considers alternatives to the proposed military actions or operations also is required and is subject to public scrutiny. The information obtained by the EIS / EA is valuable in planning coordination and policy formulation at the local government level.

Readiness and Environmental Protection Initiative (REPI) (Department of Defense)

To implement the authority provided by Department of Defense Conservation Partnering Initiative, the DOD established the Readiness and Environmental Protection Initiative (REPI). This initiative enables DOD to work with state and local governments, non-governmental organizations, and willing landowners to limit encroachment and incompatible land use. REPI funds are used to support a variety of DOD partnerships that promote compatible land use. By relieving encroachment pressures, the military is able to test and train in a more effective and efficient manner. In addition to preserving the land surrounding military installations from development encroachment, the REPI program also provides for the conservation land for plant and animal habitat.

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established the National Register of Historic Places (National Register), the Advisory Council on Historic Preservation, and the State Historic Preservation Officers.

For federal agencies, this legislation authorizes the inclusion of historic preservation costs in project planning, authorizes agencies to withhold sensitive data on historic properties when necessary, requires an agency to determine effects of undertakings on eligible or listed properties, requires consultation with interested parties (state and local governments, Native American tribes, and others) to resolve adverse effects on eligible or listed properties, and requires agencies to locate, inventory and nominate properties that may quality for the National Register on lands under their management authority.

Archaeological and Historic Preservation Act

This act requires federal agencies to notify the Secretary of the Interior when any undertaking may cause irreparable loss of significant scientific, prehistoric, historic, or archaeological data.

Public Buildings Cooperative Use Act

This legislation requires adaptive reuse of historic buildings as administrative facilities for federal agencies or activities.

American Indian Religious Freedom Act

This act established the policies to protect the rights of Native American tribes to exercise their constitutionally guaranteed right to exercise their traditional religions. Protected rights include access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites. The legislation directs federal agencies to take into consideration the impact of actions on the ability of Native American tribes to engage in these rights.

Archaeological Resources Protection Act

This legislation prohibits the unauthorized removal, sale, receipt, interstate transportation, and purposeful destruction of archaeological sites and objects on federal lands. The act directs federal agencies to undertake archaeological site protection measures and to keep archaeological site information confidential, and establishes the permitting process for the conduct of archaeological investigations. Prior to issuance of a permit, federal agencies are directed to consult with impacted Native American tribes.

Native American Grave Protection and Repatriation Act

This legislation established the process for the identification and appropriate disposition of Native American human remains, funerary objects, sacred objects, or other cultural objects that are excavated or inadvertently discovered on federal lands.

4.5 Other Resources

In hopes of preventing land use compatibility issues between the military and the local community, the DOD Office of Economic Adjustment (OEA) and other public interest groups, such as the National Association of Counties (NACO), have taken steps to inform the public on encroachment issues and methods that can be used to address or completely avoid compatibility issues. Below are five resources that have been published to inform the public on those issues.

Documents

The Practical Guide to Compatible Civilian Development near Military Installations (July 2007), OEA. This guide offers general information on community development and civilian encroachment issues. The guide can be found at: http://www.oea.gov/.

Joint Land Use Study Program Guidance Manual (November 2006). This manual provides guidance on the JLUS program, process, and efforts to support compatible development. This manual can be obtained on the OEA internet site at the following address: http://www.oea.gov/.

Encouraging Compatible Land Use between Local Governments and Military Installations: A Best Practices Guide (April 2007), NACO. This guidebook presents case studies of best practices between the military and communities through communication, regulatory approaches, and Joint Land Use Studies. The guide can be accessed on the NACO internet site at the following address: http://www.naco.org/.

Videos

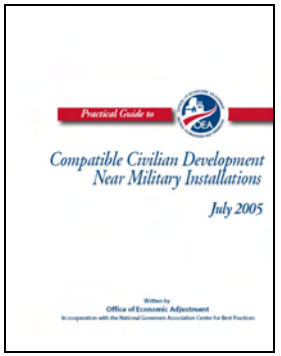
The Base Next Door: Community Planning and the Joint Land Use Study Program, OEA. This informative video discusses the issue of encroachment on military installations as urban development occurs in the vicinity of installations.

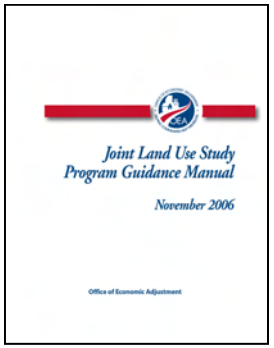
Managing Growth, Communities Respond, OEA. This video highlights the lessons learned from three successful communities managing growth near military installations.

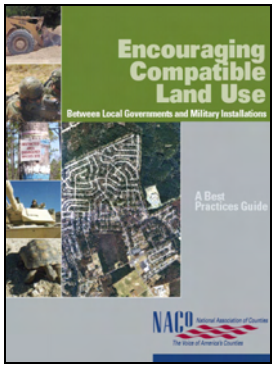
WSDOT Assistance

The Washington State Department of Transportation (WSDOT) provides a number of resources to assist in compatibility planning near airports (http://www.wsdot.wa.gov/aviation/Planning/LandUseCompProg.htm). See Appendix I.

WSDOT also prepared an Airport Land Use Compatibility Program Evaluation guide in 2005. This resource is included as Appendix J.







Please see the next page.

5 Recommendations

This section lays out a specific course of action that has been developed cooperatively with representatives from local jurisdictions, Fairchild AFB, state and federal agencies, local organizations, Native American tribal governments, and other interested entities. The result of a collaborative planning process, the recommendations in this section represent a true consensus plan; a realistic and coordinated approach to compatibility planning developed with the support of the stakeholders involved.

There are several measures of a successful planning process. The questions ("Q") and answers ("A") provided on the next page highlight how the Joint Land Use Study (JLUS) process has met these requirements.

Q *Did the process provide for substantial involvement of those responsible for implementation?*

A *The Fairchild JLUS Policy Steering Committee (JPC) and Technical Advisory Group (TAG) met throughout the development of the JLUS and provided input on each step of the study's development. The committees assisted in the identification of compatibility issues (both current and future) and the development and refinement of the strategies presented in this section. The committee members' insight also helped to develop a set of strategies that not only resolved the compatibility issues identified, but could be implemented by the stakeholders involved.*

The recommendations presented in this section represent a consensus supported by the members of the JPSC and TAG.

Q *Does the plan cover the geographic area necessary to ensure appropriate compatibility planning?*

A *At the beginning of the JLUS process, the project team invited agencies, organizations, and the public to be a part of the planning process and to assist in identifying any area that may be important to the development and implementation of the JLUS. During the process, the committees refined the study area from what was originally identified to a larger area that reflected the issues identified.*

Q *Are the proposed strategies realistic?*

A *The design of the committees helped ensure that the plan would be realistic in approach. The JPSC represented decision makers from each of the jurisdictions, agencies and organizations involved. They helped develop approaches that could be implemented. The TAG represented the staff functions of these agencies and organizations. They helped refine the strategies and provided input on the processes, staffing, and funding necessary for implementation.*

Q *Do the strategies strike a balance between sustaining military operations and providing opportunities for local economic development?*

A *The JLUS process brought together all of the stakeholders in the study area to discuss compatibility issues and potential solutions. The role of the JPSC and TAG was to ensure the strategies: could be accomplished with the resources available, were applied only to the geographic areas where compatibility was a concern, provided the appropriate protections without being overly restrictive.*

Q *Does the plan include a mechanism to oversee the implementation of the JLUS recommendations?*

A *Strategy 29 establishes a JLUS Coordinating Committee, made up of representatives from Fairchild AFB, local jurisdictions, and other stakeholders in the study area. They will monitor, assess, and refine the recommendations in this JLUS to address changing conditions and ensure the JLUS provides a long-term vision for meeting encroachment challenges.*

5.1 Developing Recommendations

JLUS strategies constitute a variety of actions local governments, military installations, agencies and other stakeholders can take to promote compatible land use planning. When these strategies are implemented, existing and potential compatibility issues arising from the civilian / military interface can be removed or significantly reduced in adversity. As such, the recommended strategies function as the heart of the JLUS document and are the culmination of the planning process.

The compatibility strategies recommended in this JLUS are consistent with the Washington State Growth Management Act, including provisions in the Revised Code of Washington (RCW) 36.70A.530 pertaining to the protection of military installations from incompatible land uses.

Strategy Foundation

As designed, this section was developed based on the inputs provided in the previous sections.

- **Section 2** provided an overview of existing conditions in the study area as well as a description of the operations conducted at Fairchild AFB.
- The foundation for **Section 3** was input from the JPSC, TAG, and the public. Starting from their insights into existing or potential compatibility issues or opportunities, additional items were added by the consulting team based on a review of conditions in the area. For each compatibility factor identified, background information was added to provide a good foundation on each factor to be address in this JLUS.
- Before establishing new strategies, it is critical to understand the existing strategies available and currently in use. **Section 4** provides a high level overview of the current planning strategies and tools used in the study area. The purpose of this evaluation is to determine:
  - Is the issue already covered in part or all of the study area? If adequately covered throughout the study area, no further action is needed. If a strategy is found to currently address the issue but only in a portion of the study area, can it be modified to be adopted by other stakeholders?
  - Is a strategy currently in place that only partially addresses an issue identified in Section 3? If so, how can that strategy be

modified? As an alternate approach, does the strategy need to be replaced with a more effective approach?

- Is an appropriate strategy missing currently? In this case, what new strategies will fit in with the capabilities of the stakeholders in the study area?

Strategy "Toolbox"

To help organize the presentation of the JLUS recommendations, the strategies and tools proposed are grouped under one of 23 strategy types. These types represent the complete range of strategies that can be applied to compatibility issues. For the Fairchild JLUS, only 17 of the 23 strategy types are proposed, but like the 24 compatibility factors used in Section 3, this common approach ensures a comprehensive response to compatibility factors identified.

The 23 potential strategy types are listed below. For the 17 strategy types used for the Fairchild JLUS, a table number follows each heading. The table number refers to the location in this section where the proposed strategies under this strategy type can be found. It is important to note that not every strategy type is needed to address compatibility near Fairchild AFB.

- Military Influence Area Strategy (Table 5-2)
- Comprehensive Plan Strategies (Table 5-3)
- Acquisition Strategies (Table 5-4)
- AICUZ Strategy (Table 5-5)
- Airport Master Plans / Airspace Studies Strategies (None Proposed)
- Avigation Easement Strategies (Table 5-6)
- BASH Strategies (Table 5-7)
- Fairchild Planning and Operational Strategies (Table 5-8)
- Building Code Strategies (Table 5-9)
- CIP / Infrastructure Master Plan Strategies (Table 5-10)
- Cluster Development Strategies (None Proposed)
- Code Enforcement / Building Inspection Strategies (Table 5-11)
- Communications / Coordination Strategies (Table 5-12)
- Deed Restrictions / Covenants Strategy (Table 5-13)
- Habitat Conservation Strategies (None Proposed)
- Hazard Mitigation Plan Strategies (None Proposed)
- Legislative Strategies (None Proposed)
- MOU Strategies (Table 5-14)
- Partnership with Non-Governmental Organization Strategies (None Proposed)
- Real Estate Disclosure Strategy (Table 5-15)
- SEPA / NEPA Strategies (Table 5-16)
- Zoning / Subdivision Strategies (Table 5-17)
- Other Strategy (Table 5-18)

How to Read the Strategies

For the categories used, one or more strategies are presented. The strategies are all presented using the same format for easy reference. Figure 5-1 provides a guide to reading the strategies presented in this section.

For each strategy, the columns listing the major stakeholders (Spokane County, Airway Heights, etc.) identify who will be involved in implementing the strategy. Two symbols are used to represent the level of involvement.

- **Primary Responsibility**. A square symbol (■) designates that the stakeholder identified is responsible for implementing the strategy.
- **Partner**. A hollow circle symbol (○) designates that the stakeholder identified can provide technical information or otherwise support the efforts to implement the strategy, but is not directly responsible for its implementation.

Table 5-1 provides both an index and a summary of the strategies contained under each category. The corresponding page number for each strategy is also listed for quick reference.

Sensitive Land Uses

In this section, several strategies use the term "sensitive land uses". This term includes land uses which, due to their special sensitivity, should be excluded from certain locations near airfields. The following types of uses are classified as sensitive land uses within this JLUS.

- Child day-care center
- Church
- Community treatment facility
- Family day-care provider
- Heliport or helipad
- Hospital or convalescent facility
- Hotel
- Manufactured home park
- Motel
- Nursing home
- Participant sports and recreation
- Public assembly facilities (spectator amphitheater, spectator sports facility, theater)
- Recreational vehicle park
- Residential
- School

Figure 5-1. Sample Strategy Guide

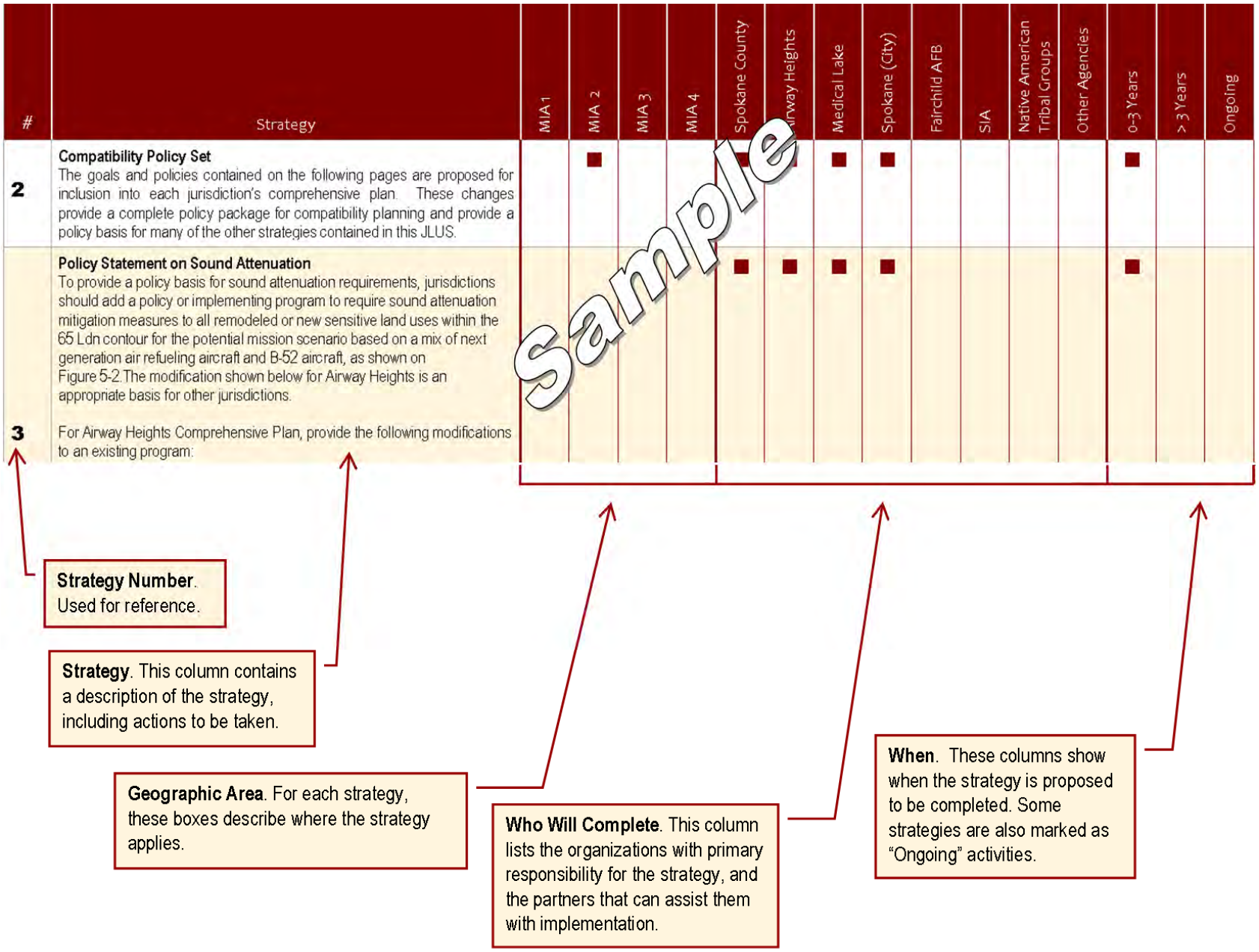


Table 5-1. Index of Strategies

Strategy #	Page #	Strategy Title	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
Military Influence Area Strategy																	
1	5-12	Define and Establish MIAs	■				■	■	■	■	○	○	■	■			■
Comprehensive Plan Strategies																	
2	5-17	Compatibility Policy Set		■			■	■	■	■			■		■		
3	5-17	Policy on Sound Attenuation			■		■	■	■	■			■		■		
4	5-17	Incorporating Military Housing Needs in Local Comprehensive Plans	■				■	■	■	■	○						■
Acquisition Strategies																	
5	5-25	Identify Priority Locations for Acquisition				■	○			○	■	■			■		
6	5-25	Maintain Existing Easements				■					■						■
7	5-25	Establish Conservation Easement Program				■	■				○					■	
8	5-25	Use Land and Water Conservation Fund Grants				■	■				○						■
9	5-25	Use DOD Easement Partnership Program				■					■						■
AICUZ Strategy																	
10	5-28	Implement AICUZ Recommendations			■		■	■	■	■	○		■		■		■
Avigation Easement Strategies																	
11	5-30	Update Avigation Easement Requirement for Spokane County			■		■								■		
12	5-30	Update Avigation Easement Requirement for Airway Heights			■			■							■		
13	5-30	Develop or Update Avigation Easement Programs			■				■	■					■		
BASH Strategies																	
14	5-32	Modify Spokane County's Zoning Ordinance on BASH	■				■								■		
15	5-32	Modify Zoning Ordinances for BASH	■					■	■	■						■	
16	5-32	BASH Consideration in Jurisdiction or Agency Projects		■			■	■	■	■	○	○	■	■			■
17	5-32	Develop and Distribute BASH Educational Materials	■								■					■	
18	5-32	Control Bird and Wildlife Attractions Near Base		■			■	■	■	■	■	■	■	■			■
Fairchild Planning and Operational Strategies																	
19	5-34	Flight Operations for Future Missions	■								■						■
20	5-34	Update Fairchild AFB General Plan	■								■					■	
21	5-34	Develop Public Summary for Fairchild AFB General Plan	■								■					■	
22	5-34	Involve Local Jurisdictions in Defining Data Needs	■				○	○	○	○	■	○	○	○		■	

Notes:

■ marks the geographic area to which this strategy applies
ⓘ committee input needed

■ *denotes the responsible agency / organization (implements)*
○ denotes a partner agency / organization (provides support)

■ when the strategy should be complete

Table 5-1. Index of Strategies (cont'd)

Strategy #	Page #	Strategy Title	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
Building Code Strategies																	
23	5-36	Sound Attenuation for New Construction			■		■	■	■	■			■	■	■		
24	5-37	Sound Attenuation for Existing Structures			■		■	■	■	■							■
CIP / Infrastructure Master Plan Strategies																	
25	5-39	Incorporate Compatibility Planning Concepts in CIPs / Infrastructure Master Plans				■	■	■	■	■	○		■				■
26	5-39	Ensure Adequate Transportation Infrastructure				■					■			■			■
Code Enforcement / Building Inspection Strategies																	
27	5-41	Ensure Construction Standards for Sound Attenuation Are Met			■		■	■	■	■	○		■				■
28	5-41	Code Enforcement Relative to Compatibility Concerns		■			■	■	■	■					■		■
Communications / Coordination Strategies																	
29	5-43	Establish a JLUS Coordinating Committee	■				■	■	■	■	■	■	■	■	■		■
30	5-44	Establish Procedures for Plan Review and Comment	■				■	■	■	■	○				■		
31	5-44	Fairchild as Part of Pre-Application Review		■			■	■	■	■	■						■
32	5-44	Refer Development Applications to Fairchild for Review and Comment		■			■	■	■	■	○						■
33	5-45	Refer Development Proposals to Fairchild for Review and Comment		■			■	■	■	■	○		■				■
34	5-45	Involve Fairchild AFB Officials in Airport Planning	■	■							■	■		■			■
35	5-45	Coordination on School Site Planning			■						○	○		■			■
36	5-46	Other Sensitive Uses in MIA 4				■	■	■	■	■			■				■
37	5-46	Educational Outreach on Aviation Planning	■								○	○		■			■
38	5-46	Develop and Distribute Public Education Materials		■							■				■		■
39	5-46	Fairchild Public Affairs Liaison to JLUS Coordinating Committee	■				○	○	○	○	■	○	○	○	■		
40	5-47	Technical Support for Local Decision Making Process	■				○	○	○	○	■	○	○	○			■
41	5-47	Establish and Maintain Compatibility Clearinghouse	■				■	○	○	○	○	○	○	○	■		■
Deed Restrictions / Covenants Strategy																	
42	5-49	Deed Notifications in Impacted Areas				■	■	■	■		○						■

Notes:

■ marks the geographic area to which this strategy applies
ⓘ committee input needed

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Table 5-1. Index of Strategies (cont'd)

Strategy #	Page #	Strategy Title	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
Memorandum of Understanding Strategies																	
43	5-52	Develop General MOU to Implement JLUS Process	■				■	■	■	■	■	■	■	■	■		
44	5-52	Develop Specific MOUs to Implement JLUS Recommendations	■				■	■	■	■	■	■	■	■	■		
Real Estate Disclosure Strategy																	
45	5-54	Develop an Enhanced Real Estate Disclosure Ordinance		■			■	■	■	■	○			■	■		
SEPA / NEPA Strategies																	
46	5-56	Refer SEPA Documents to Fairchild AFB		■			■	■	■	■	○			■			■
47	5-56	Refer NEPA Documents to Local Jurisdictions		■			○	○	○	○	■	○	○				■
48	5-56	SEPA Documentation Requirements	■				■	■	■	■					■		
Zoning / Subdivision Strategies																	
49	5-59	Land Uses Allowed in MIA 4				■	■	■	■	■					■		
50	5-59	Intensity Standards for Non-Residential Uses				■	■	■	■	■					■		
51	5-59	Encourage Area Planning Approach	■				■	■	■	■	○	○	■	○			■
52	5-60	Residential Zoning Expansion Limits				■	■	■	■	■	○		■				■
53	5-60	Ensure FAA Part 77 Compliance		■			■	■	■	■			■	○			■
54	5-60	Develop or Update Light and Glare Controls		■			■	■	■	■	○	○	■			■	
55	5-60	Dark Skies Ordinance		■			■	■	■	■	○	○	■			■	
56	5-60	Modify Subdivision Regulations, Disclosure	■				■	■	■	■	○						
Other Strategy																	
57	5-61	Maintain Existing and Pursue Additional Missions at Fairchild AFB	■				■	■	■	■	■			■			■

Notes:

■ marks the geographic area to which this strategy applies
ⓘ committee input needed

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■ when the strategy should be complete

5.2 STRATEGIES

Military Influence Area

Refer to Table 5-2 for strategies related to establishing Military Influence Areas.

A Military Influence Area (MIA) is a formally designated geographic planning area where military operations may impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. In other JLUS documents, terms such as Region of Military Influence (RMI), Military Influence Planning District (MIPD), Military Influence Overlay District (MIOD), Military Influence Disclosure District (MIDD), Airfield Influence Planning District (AIPD), and Areas of Critical State Concern (ACSC) have also been used to describe similar areas.

For the Fairchild JLUS, four MIAs have been designated to accomplish the following purposes.

- Protect public health, safety, and welfare.
- Promote an orderly transition between community and military land uses so that land uses remain compatible.
- Maintain operational capabilities of military installations and areas.
- Promote the awareness of the size and scope of military operations and training areas, in addition to the actual installation (i.e., critical air and sea space) that are critical to maintaining the military's mission.
- Establish compatibility requirements within the designated MIAs, such as requirements for sound attenuation, real estate disclosure, and avigation easements.

The MIAs are used to define where the other strategies in the Fairchild JLUS are to be applied. This technique ensures the strategies are applied to the appropriate areas, and that locations that do not raise a specific compatibility issue are not adversely impacted by regulations that are not appropriate for their location or circumstance.

The four MIAs defined under Strategy 1 for the Fairchild JLUS are defined as follows.

- **MIA 1 (Regional / Non-Geographic).** Strategies designated as part of MIA 1 fall into two types. The first type involves strategies that apply to Spokane County as a whole. These often reflect issues that can vary in geographic scope depending on the situation. For instance, changes in the use of airspace or flight operations at any airport in Spokane County could adversely impact operations at Fairchild AFB, and therefore are addressed in Strategy 34.

  The second type contains strategies that do not apply to a specific geographic area, but are instead procedures or processes. An example of this is Strategy 29, which discusses the creation of a JLUS Coordinating Committee that will oversee implementation of this JLUS.

  The MIAs for this JLUS are hierarchical in design. MIA 1 includes the areas defined for MIAs 2, 3, and 4. As such, there are no gaps in coverage with MIA 1.

- **MIA 2 (Coordination and Collaboration)**. Spokane County currently uses a 30,000-foot (about a 5.7-mile) radius drawn from the Fairchild AFB runway to define an area requiring notification of property owners (currently through an avigation easement) of the location and operations occurring at Fairchild. In this JLUS, this area was used to define an area where strategies are focused on continuing this notification effort, and expanding it to cover other effected jurisdictions. Building on this concept of coordination, this MIA also applies strategies dealing with interagency coordination.

  Other strategies within this MIA include controls of night lighting and reducing the potential for bird strikes on aircraft.

- **MIA 3 (Noise Impact Area)**. As a component of this JLUS, a noise study was conducted to assess potential noise related to four future mission scenarios. These scenarios assume the replacement of Fairchild's current KC-135 tanker aircraft with next generation tanker aircraft based on civilian passenger airframes. In all scenarios the new aircraft are larger than the KC-135 aircraft currently operated. The results of each of the scenarios were combined with the 20-year forecast for SIA to provide an overall perspective on the effect of all aircraft operations within the region.

  The scenario that combined the use of 32 KC-767A aircraft and 16 B-52 aircraft was selected for use in the JLUS. MIA 3 was defined by taking the modeled results for a new 65 Ldn noise contour and generalizing this area. The contour was generalized to reflect the fact that noise contours are annual averages of operations and associated noise levels, and will vary on any given day. Based on JLUS committee comments, the far eastern tail of the noise contour was removed based on the contours narrow footprint on the eastern side and the fact that land in this area was primarily developed. Figure 3-21 shows the contours for each of the scenarios evaluated.

  Strategies applied to MIA 3 focus on noise attenuation and a higher level of notification (required provision of an avigation easement) of the noise and safety hazard issues in this area due to flight operations from Fairchild AFB.

- **MIA 4 (Land Use Overlay)**. MIA 4 is the only MIA that contains strategies that restrict land uses that can be utilized near Fairchild AFB. The shape of this MIA was based on a number of inputs that encompass the areas of primary aircraft overflight (closed pattern flight) and areas potentially exposed to noise levels of 70 Ldn and above.

On Tables 5-3 thru 5-18, the MIA marked is the overall area that the strategy applies. If MIA 2 is marked, this strategy will apply to all areas within that polygon, including the areas within MIAs 3 and 4. Similarly, a strategy marked as applying to the area within MIA 3 also includes the area within MIA 4.

Land use restrictions associated with strategies in MIA 4 do not apply to land on Fairchild AFB. The Air Force has separate guidance on the placement of land uses on an installation.

Table 5-2. Military Influence Area Strategy

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
1	**Define and Establish MIAs** Create a set of four MIAs (referred to as MIA 1, 2, 3, and 4), as shown on Figure 5-2, that reflect the types and intensity of compatibility issues. The MIAs should be used by stakeholders to identify areas where specific compatibility issues are more likely to occur. Implementation of strategies for these MIAs will: ■ Create a framework for making sound planning decisions around Fairchild AFB ■ More accurately identify areas that can affect or be affected by military missions ■ Protect the public health, safety, and welfare ■ Protect the military missions ■ Create a compatible mix of land uses ■ Promote an orderly transition and rational organization of land use around military airfields The four MIAs are defined as follows and are illustrated on Figure 5-2. ■ MIA 1 (Regional / Non-Geographic). Reflects strategies that are general in nature, and may not have a geographic extent. This MIA covers strategies that deal with establishment of common plans and programs dealing with compatibility. This MIA also covers regional strategies that apply to Spokane County as a whole. ■ MIA 2 (Coordination and Collaboration). Areas inside the 30,000 foot conical area surrounding the Fairchild AFB runway. This MIA covers coordination on planning activities in the region relative to compatibility planning. ■ MIA 3 (Noise Impact Area). Is a generalized area that is defined by a ¼ miles area around the 65 LDN contour for the potential mission scenario, which is based on a mix of next generation air refueling aircraft and B-52 aircraft.	■				■	■	■	■	○	○	■	■			■

- MIA 4 (Land Use Overlay). Includes areas defined as having a high potential for noise and safety impacts to which land use controls are appropriate. Within MIA 4, intensification of land use designations over currently adopted designations (Comprehensive Plan amendments and zone changes) shall not occur without site specific studies defining the appropriateness of the change in relation to the protection of operations at Fairchild AFB.

Unless already permitted as part of an existing development, subdivision or development approval, only land use designations consistent with the potential mission noise contours shall be used on the jurisdiction's Land Use Diagram, with an intensity of use consistent with zoning code requirements specified in the Fairchild JLUS.

To assist in this effort, geographic information system (GIS) files of these boundaries can be obtained from Spokane County. Updates to the data relative to noise contours should be provided by Fairchild AFB as a result of significant changes that support a public release of an updated AICUZ.

Notes:	■ *marks the geographic area to which this strategy applies*	■ *denotes the responsible agency / organization (implements)* ○ *denotes a partner agency / organization (provides support)*	■ *when the strategy should be complete*

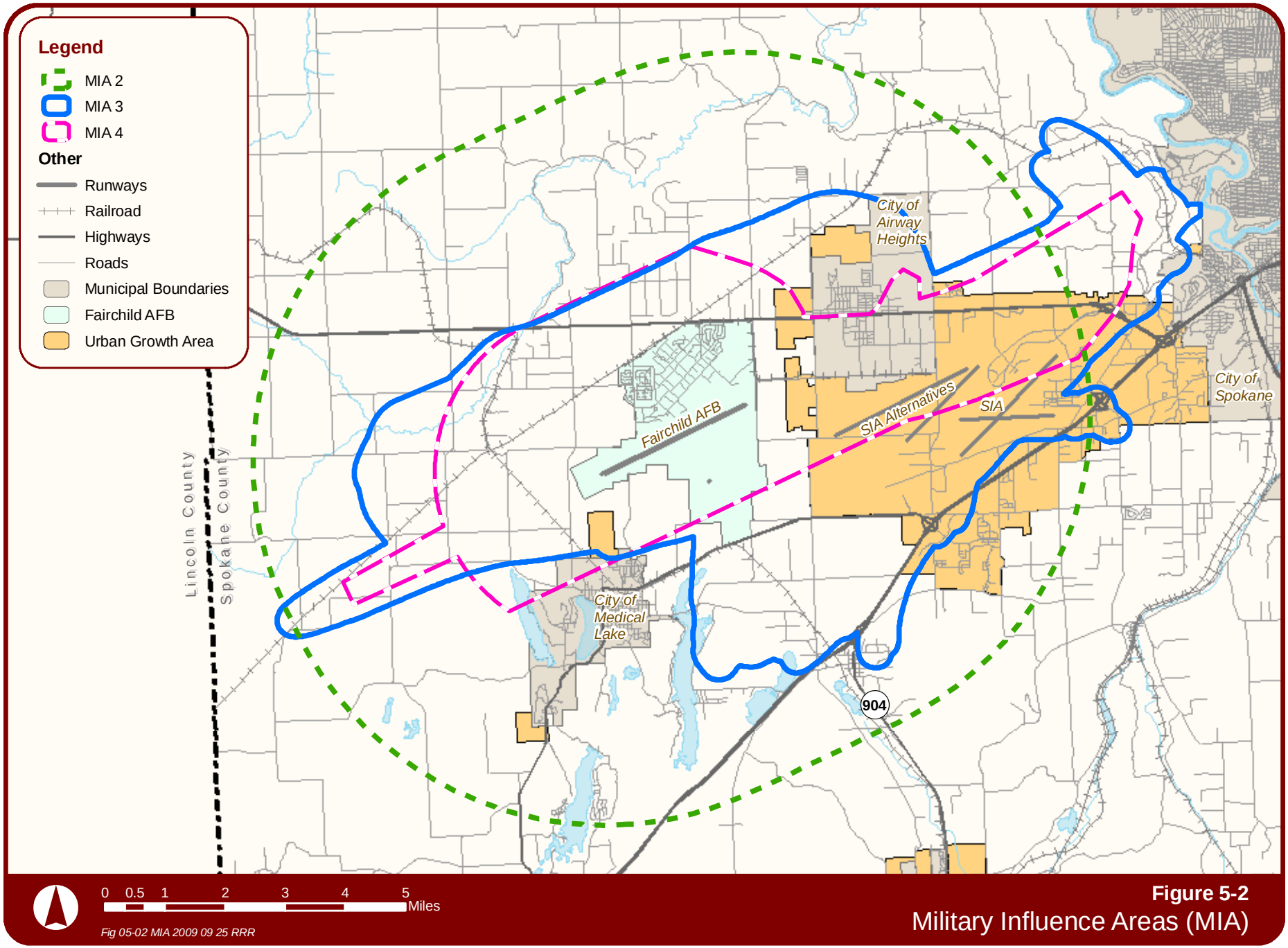

Figure 5-2
Military Influence Areas (MIA)

Comprehensive Plans (Counties / Cities)

A comprehensive plan is designed to serve as the jurisdiction's "construction" or "blueprint" for future decisions concerning land use, infrastructure, public services, and resource conservation. Typically, there are three defining features of a comprehensive plan:

A. **General.** A comprehensive plan provides the general guidance that will be used to direct future land use and resource decisions.

B. **Comprehensive.** A comprehensive plan covers a wide range of social, economic, infrastructure, and natural resource factors. These include topics such as land use, housing, circulation, utilities, public services, recreation, agriculture, economic development and many other topics.

C. Long-range. Comprehensive plans provide guidance on reaching a future envisioned 20 or more years in the future.

Within the State of Washington, the Growth Management Act (GMA) establishes the primacy of the comprehensive plan. The comprehensive plan is the cornerstone for any planning process and serves as the foundation of the local land use planning. Development regulations (zoning, subdivision, and other controls) must be consistent with comprehensive plans. In addition, state agencies are required to comply with comprehensive plans and development regulations of jurisdictions planning under the GMA.

According to the GMA, local comprehensive plans are to include chapters on the following topics: land use, utilities, housing, transportation, capital facilities, and shorelines. Counties must also include a chapter on rural planning. Cities and counties fully planning under the GMA are to renew their comprehensive plans and ordinances at least every seven years and ensure compliance with state legislation.

By including Fairchild AFB and other US Air Force stakeholders in the JLUS process, the jurisdictions participating in this JLUS are complying with the State Growth Management Act, RCW 36.70A.530, which requires that counties and cities with federal military installations consult with commanders of those installations when amending comprehensive plans and development regulations.

Current Status

Comprehensive plans, and the Washington Growth Management Act, provide guidance on some compatibility issues. One of the primary tools available within the GMA to regulate growth and promote compatibility planning is the establishment of urban growth areas (UGAs). As required under the GMA, the jurisdictions in the study area have worked together to develop countywide planning policies (CWPPs) to ensure a coordinated and regional approach to planning. For compatibility planning, the key policy in the CWPP is Policy 11.

- **Policy 11, Policy Topic 2, Joint Planning within Urban Growth Areas UGAs).** Where applicable, comprehensive plans should contain land use policies which provide protection for the continued viability of Fairchild Air Force Base, Spokane International Airport, Felts Field, Deer Park Airport and other publicly owned airports within Spokane County.

In Spokane County, the comprehensive plan provides broad guidance to develop regulations to protect Fairchild AFB. Like the Zoning Code, would recommend the addition of Fairchild AFB to some policies that simply use the term "airport", which could be misconstrued by the public as to intent.

Policy T.3i.4 includes the statement "…Coordinate the protection of Fairchild AFB by developing regulations that utilize Department of Defense AICUZ land use criteria for encouraging compatible land uses adjacent to military airports." As discussed under the section on AICUZ, it is recommended that the County change its Zoning Code to modify its AOZs to add a new definition for Fairchild AFB that uses the DOD Accident Potential Zones.

The City of Airway Heights Comprehensive Plan provides broad policy support for compatibility with Fairchild AFB. One implementation program discusses noise dampening mitigation measures. This program is recommended for modifications to reflect the change shown under Strategy 10.

The City of Medical Lake's comprehensive plan recognizes the city's strong link with Fairchild AFB, specifically noting proper land uses in areas in proximity to the base. The plan creates an Air Base Noise Overlay (ABN) that identifies areas with the potential to encroach into areas within the 65 (dB) Day-Night Average Sound Level (DNL). The plan recommends the creation of a zoning overlay to implement design standards to mitigate noise impacts. Medical Lake also identifies Fairchild AFB as a major commercial center, complimenting the city's central business district.

For the City of Spokane, potential annexation into the UGA will bring the city limits closer to Fairchild AFB. Accordingly, some changes to their Comprehensive Plan are required to reflect compatibility issues.

Table 5-3. Comprehensive Plan Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
2	**Compatibility Policy Set** The goals and policies contained on the following pages are proposed for inclusion into each jurisdiction's comprehensive plan. These changes provide a complete policy package for compatibility planning and provide a policy basis for many of the other strategies contained in this JLUS.		■			■	■	■	■					■		
3	**Policy Statement on Sound Attenuation** To provide a policy basis for sound attenuation requirements, jurisdictions should add a policy or implementing program to require sound attenuation mitigation measures to all remodeled or new sensitive land uses within the 65 Ldn contour for the potential mission scenario based on a mix of next generation air refueling aircraft and B-52 aircraft, as shown on Figure 5-2.The modification shown below for Airway Heights is an appropriate basis for other jurisdictions. For Airway Heights Comprehensive Plan, provide the following modifications to an existing program: ■ **Implementing Program:** Require sound attenuation mitigation measures to all remodeled or new sensitive land uses (residential, schools, hospitals, convalescent homes, public assembly facilities, libraries, and churches) within the 65 Ldn contour for the potential mission scenario based on a mix of next generation air refueling aircraft and B-52 aircraft, as shown on Figure [TBD]. (Figure number will be determined when plan is updated).			■		■	■	■	■					■		
4	**Incorporating Military Housing Needs in Local Comprehensive Plans** When a jurisdiction updates its chapter on housing in its comprehensive plan, the chapter should include a discussion of military housing needs and programs to address housing needs. As part of this effort, Fairchild AFB will provide jurisdictions with current information on housing demands; amount of housing provided by the installation; generalized income, by rank, of personnel living off-base; and current distribution data on off-base personnel by zip code.	■				■	■	■	■	○						■

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Proposed Policy Framework (see Strategy 2)

General

Goal	To ensure that future land uses are compatible with the continued operation of Fairchild AFB and avoid risk to life, property and the well-being of City residents from hazards associated with aircraft operations.

Policy: Role of Fairchild AFB

Continue to support the role of Fairchild AFB as a significant contributor to the economic base of the community.

Policy: Development Constraints

The [County / City] shall not allow development in areas where the risks to potential health and safety cannot be mitigated to an acceptable level.

Policy: Local Supplies and Services

The [County/City] will work with Fairchild AFB to enhance the use local contractors and services, and to purchase material, equipment, and supplies from in-City sources. The City should identify and support development of businesses and suppliers to the military and their contractors that are compatible with Fairchild AFB.

Military Compatibility

Goal	To enhance land use compatibility between Fairchild AFB and property in the surrounding area and to protect public health and safety.

Policy: Military Influence Area (MIA) Overlay

The [County / City] will define and maintain a set of Military Influence Areas (MIA) as an overlay on the General Plan Land Use Diagram and Zoning map. The MIA will be defined based on noise and safety guidance from the current AICUZ study as well as other compatibility factors evaluated in the Fairchild JLUS program.

The MIA is designated to accomplish the following purposes.

- Protect public health, safety, and welfare.
- Promote an orderly transition between community and military land uses so that land uses remain compatible.
- Maintain operational capabilities of military installations and areas.
- Promote the awareness of the size and scope of military operations and training areas, in addition to the actual installation (i.e., critical air and sea space) that are critical to maintaining the military's mission.

- Establish compatibility requirements within the designated MIAs, such as requirements for sound attenuation, real estate disclosure, and avigation easements.

The MIA shall, at a minimum, reflect the current mission 65 CNEL contour, but may be expanded to address additional issues relative to safety, overflight, light and glare, vertical hazard potential, and other related compatibility issues as identified in the Fairchild JLUS or follow on assessments. MIA shall be defined as follows:

- **MIA 1 (Regional / Non-Geographic).** Reflects strategies that are general in nature, and may not have a geographic extent. This MIA covers strategies that deal with establishment of common plans and programs dealing with compatibility. This MIA also covers regional strategies that apply to Spokane County as a whole.
- **MIA 2 (Coordination and Collaboration).** Areas inside the 30,000 foot conical area surrounding the Fairchild AFB runway. This MIA covers coordination on planning activities in the region relative to compatibility planning.
- **MIA 3 (Noise Impact Area).** Is a generalized area that is defined by a ¼ miles area around the 65 LDN contour for the potential mission scenario, which is based on a mix of next generation air refueling aircraft and B-52 aircraft.
- **MIA 4 (Land Use Overlay).** Includes areas defined as having a high potential for noise and safety impacts to which land use controls are appropriate. Within MIA 4, intensification of land use designations over currently adopted designations (Comprehensive Plan amendments and zone changes) shall not occur without site specific studies defining the appropriateness of the change in relation to the protection of operations at Fairchild AFB.

  Unless already permitted as part of an existing development, subdivision or development approval, only land use designations consistent with the potential mission noise contours shall be used on the jurisdiction's Land Use Diagram, with an intensity of use consistent with zoning code requirements specified in the Fairchild JLUS.

  ✱ *JLUS Strategies: 25 and 26*

Communications / Coordination

Goal	To provide opportunities for the [County/City], Fairchild AFB, residents, industry, and agencies to collaboratively participate in all phases of the GMA planning process or development review.

Policy: Coordinate with on JLUS Implementation

The [County/City] shall coordinate closely with jurisdictions, agencies, organizations, and Native American tribal governments in and near the JLUS Study Area to ensure their policies and regulations are consistent with the City's General Plan, the Fairchild AFB AICUZ, and the Fairchild JLUS.

✱ *JLUS Strategy: 29*

Policy: Increase Public Awareness

Provide property owners in proximity to Fairchild AFB education on the installation's mission, potential impacts associated with military aviation operations, land use constraints, and potential mitigations for appropriate development.

JLUS Strategies: 17 and 38

Policy: Development Review

Development proposals shall be reviewed for hazards to aircraft in flight, including: uses that release into the air of any substance such as steam, dust and smoke which would impair pilot visibility; uses that produce light emissions, glare or distracting lights which could interfere with pilot vision or be mistaken for airfield lighting; sources of electrical emissions which would interfere with aircraft communications or navigation; and uses which would attract birds or waterfowl to the extent that they would pose a danger to aircraft operation in the vicinity of the Fairchild AFB.

JLUS Strategies: 30, 31, 32, 33, 34 and 53

Policy: Information Exchange with Fairchild AFB

The [County/City] shall work with Fairchild AFB to establish an on-going consultation mechanism between the City and Fairchild AFB on issues of mutual concern. This will include:

- Early notification by the [County/City] to Fairchild AFB officials of development applications
- Early notification by Fairchild AFB to the [County/City] of potential changes in aircraft operations (patterns, number, etc.)

JLUS Strategies: 19, 22, 30, 31, 32, 33, 34 and 53

Policy: Military Involvement and Review Process

The [County/City] shall provide SEPA notifications to Fairchild AFB for review and comment on [County/City] discretionary land use actions to include, but not limited to, Comprehensive/Specific Plan amendments or updates, zone changes, tract maps, parcel maps, master plans, and conditional use permits.

JLUS Strategies: 46 and 48

Policy: Coordinate Military Compatibility Planning with Other Local Jurisdictions

The [County/City] shall maintain close contact with their counterparts in other local jurisdictions to coordinate military compatibility planning and management activities.

JLUS Strategies: 30, 31, 32, 33, 34 and 53

Policy: Meeting Military Housing Needs

The [County/City] will work with Fairchild AFB officials in identifying strategies to meet the housing needs of military personnel during updates to the [County's/City's] housing chapter in the Comprehensive Plan.

JLUS Strategy: 4

Policy: Enhanced Real Estate Disclosure

Develop an enhanced Real Estate Disclosure Ordinance to ensure appropriate information about the missions and operations at Fairchild AFB are fully disclosed at the earliest possible point in the interaction between REALTOR® / real estate agent and a buyer or renter.

JLUS Strategies: 30, 31, 32, 33, 34 and 53

Policy: Staff Training on Military Compatibility Planning

The [County/City] and Fairchild AFB shall cooperate to provide [County/City] staff with on-going training opportunities to maintain their awareness of the latest technology and regulations concerning military compatibility issues.

❋ *JLUS Strategies: 37 and 40*

Policy: Infrastructure Capacity for Fairchild AFB

The projected need for additional infrastructure and other municipal services by Fairchild AFB should be considered in the development of new infrastructure master plans.

❋ *JLUS Strategies: 25 and 26*

Policy: Infrastructure Expansion

The [County / City] shall review and address capital improvement plans (CIP) and master infrastructure plan projects that may impact the missions at Fairchild AFB. These plans should be reviewed on an annual basis or when an agency is updating their plans. Coordination with Fairchild AFB during these reviews will be conducted.

❋ *JLUS Strategy: 25*

Mitigating Compatibility Issues

Goal	To mitigate encroachment issues associated with land uses and development.

Policy: Avigation Easements

The [County/City] shall require the dedication of avigation easements when development is proposed on property within identified airport safety zones.

❋ *JLUS Strategies: 11, 12 and 13*

Policy: Major Plan Coordination with Military

Require that specific plans, area plans, and other regional plans (either new plans or updates/revisions) in the Fairchild JLUS Study Area specifically address compatibility issues involving the military, such as dark skies, water availability and quality, density, cluster development, and other development design issues.

❋ *JLUS Strategies: 30, 31, 32, 33, 34, 53, 54 and 55*

Policy: Fairchild AFB AICUZ Recommendations

The [County/City] shall review and, to the greatest extent possible, take actions to implement the recommendations provided in the current and future Fairchild AFB AICUZ studies.

❋ *JLUS Strategy: 10*

Policy: Vertical Obstructions

All new development in the [County/City] shall conform to FAR Part 77 height limits.

❋ *JLUS Strategy: 53*

Policy: Outdoor Lighting

The [County/City] shall ensure that future development includes provisions for the design of outdoor light fixtures to be directed / shielded downward and screened to avoid nighttime lighting spillover effects on adjacent land uses and nighttime sky conditions.

❋ *JLUS Strategies: 54 and 55*

Policy: Lighting

The [County/City] shall continue to improve and maintain proper lighting at [County/City] facilities and assist in reducing undue nuisance light and glare spillage on adjoining areas from development.

❋ *JLUS Strategies: 54 and 55*

Acquisitions

As a land use planning tool, property rights can be acquired through donation, easement, or the outright purchase of property for public purposes. Types of acquisition include the following:

- **Fee Simple Acquisition**. This option involves the purchase of property and is typically the most costly method to protect open space, sensitive, or critical areas. Cost and the need for a willing seller can be constraints.
- **Fee Simple/Leaseback**. A land trust is established when a government agency purchases the full title to a property and then leases it back to the previous owner. The land's natural resource and open space values are protected through lease controls that restrict land uses.
- **Easements**. The development rights associated with a parcel of land can be individually purchased from the bundle of rights that go with the land which include the right to possess, use, develop, lease, or sell the land. An easement involves the purchase of some of the rights associated with a property.

  Easements, such as conservation easements, can be acquired through a number of mechanisms, including donation or purchase. If they are donated, the donor could qualify for a federal income tax deduction making this option more desirable to the property owner. Easements are a more cost effective method to protect land than outright purchase.
- **Lease**. In cases where the landowner does not want to, or cannot make a permanent commitment, this may be a way to control land uses for a short timeframe. Leases can be obtained by government agencies or jurisdictions, non-profit organizations, land trusts, or private entities.
- **Management Agreement**. A management agreement is a specified plan under which the landowner or the land trust (or combination thereof) will manage the land. Management agreements last for a specific amount of time making them a short-term approach to protecting land.
- **Eminent Domain**. A local government can use the power of eminent domain to appropriate private property for public use, in exchange for payment of fair market value, through the process of condemnation.

Refer to Table 5-4 for strategies related to acquisitions.

The purpose of acquisition tools is to eliminate land use incompatibilities through market transactions. Acquisition tools are particularly effective because they advance the complementary goals of shifting future growth away from military installations or operations areas and preserving community assets such as agriculture, open space, rural character, or sensitive natural habitats. Land use compatibility issues can be addressed by:

- Creating a land barrier between active military installations and incompatible land uses;
- Shifting future growth away from critical military lands;
- Protecting public safety by directing incompatible land uses to other locations;
- Protecting the natural environment;
- Maintaining and protecting existing agriculture resources; and,
- Conserving open space.

Current Status

As shown on Figure 3-12, Fairchild AFB maintains a number of easements that protect all off-base portions of the Clear Zone (CZ) and most of Accident Potential Zones (APZ) I and about half of APZ II as defined by the Department of Defense (DOD). Fairchild also maintains easements on the southern edge of the base near the on-base firing ranges.

The military has become a major participant in preserving critical habitat for threatened and endangered (T&E) species due to the ownership of large, contiguous land holdings managed by the DOD to support national defense. As habitat is removed through the course of ongoing development in an area, pressure can be put on military installations with large habitat areas to preserve the habitat. At a certain point, the installation can become a refuge of sorts, which can have impacts critical DOD missions and training.

The installation supports numerous native species and habitats, as well as Federal and state-listed threatened and endangered species. One of the species of principal concern is Spalding's catchfly (Silene spaldingii). If development on the installation causes impacts to a special status species or its habitat, a land trust mechanism to acquire and hold additional conservation easements may be advantageous. Such a trust could also be used to mitigate for habitat loss in the area from other development while further protecting the base.

In the evaluation of this issue, the potential impact was considered low at the current time. This is related to the relatively small area on Fairchild AFB and strategies contained in this JLUS that will limit intensive development near the installation (which will have the additional benefit of protecting existing habitats and species).

Table 5-4. Acquisition Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
5	**Identify Priority Locations for Acquisition** Identify priority locations for acquisition programs (property purchase or easement purchase) should funds become available. ■ Fairchild AFB to work with local jurisdictions and SIA to identify locations requiring additional protections. Potential locations include 1) completion of easements covering the APZs on the southwest approach/departure route, and 2) areas near on base ranges exposed to nuisance noise. ■ Acquisitions that benefit both Fairchild AFB and SIA should be pursued.				■	○			○	■	■			■		
6	**Maintain Existing Easements** Fairchild AFB should maintain existing easements.				■					■						■
7	**Establish Conservation Easement Program** Establish a Conservation Easement (purchase or donation of Development Rights) program in association with local land trusts to protect areas of critical importance to maintaining public safety and mission sustainability.				■	■				○					■	
8	**Use Land and Water Conservation Fund Grants** Take part in Land and Water Conservation Fund (LWCF) matching grants program that provides funds to states for planning, developing, and acquiring land and water areas for state and local parks and recreation areas. ■ This is an annual program with a current expiration data of January 2015. A 50 percent local match is required.				■	■				○						■
9	**Use DOD Easement Partnership Program** Fairchild AFB and the DOD should pursue conservation opportunities near the installation using the DOD Easement Partnership Program and other available federal funding sources.				■					■						■

Notes:
■ *marks the geographic area to which this strategy applies*
■ *denotes the responsible agency / organization (implements)*
○ *denotes a partner agency / organization (provides support)*
■ *when the strategy should be complete*

AICUZ Standards

Refer to Table 5-5 for strategies related to implementing AICUZ standards.

The Air Installation Compatibility Use Zone (AICUZ) program is a DOD planning program that was developed in response to incompatible urban development and land use conflicts around military airfields. The AICUZ program has two objectives: (1) to assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence; and (2) to protect operational capabilities from the effects of land uses that are incompatible with aircraft operations. While prepared by or for a military installation, the primary users of an AICUZ study are the local communities surrounding the installation or an offsite location (such as auxiliary fields or training areas). The AICUZ study is also a tool used by the installation's community planner to evaluate proposed projects (both on and off the installation) for their compliance with the information presented in the AICUZ study.

Current Status

The current Fairchild AFB AICUZ study is dated October 2007. A copy of the main AICUZ document is included in Appendix D for reference. This appendix contains information on compatible land use types within each of the AICUZ noise contours and Accident Potential Zones. In the AICUZ strategy presented in Table 5-5, the land uses guidance presented in the AICUZ is expanded to apply to the potential future mission noise contours prepared as part of this JLUS.

In preparing the Fairchild JLUS, the land use compatibility guidance included in the Fairchild AICUZ was thoroughly reviewed and found to be appropriate for application by local jurisdictions in the study area. The AICUZ standards have been in use for several decades, and are nationally recognized planning criteria. The land use compatibility guidance is also proposed as a means to protecting the long-term sustainability of Fairchild AFB. In past Base Realignment and Closure (BRAC) processes, criteria pertaining to local jurisdictions compliance with AICUZ recommendations have been part of the BRAC evaluation. Implementing the strategy shown in Table 5-5 will provide positive confirmation if this criteria were applied in the future.

It should be noted that the AICUZ is a snapshot in time of existing aircraft and operational parameters. Overtime, noise contours can changes as these parameters change. When changes are considered major according to DOD standards, the Air Force typically will update the AICUZ study and provide new noise contours to local jurisdictions and the public. The safety zones contained in the AICUZ are based on Air Force standards, and remain the same even if the aircraft or operations at the base change.

Spokane County's Comprehensive Plan discusses the protection of Fairchild AFB and states the County can further protect the base by developing regulations that utilize the DOD AICUZ land use criteria (Policy T.3i.4). Protection is currently provided by the use of the Airport Overlay Zone (AOZ) (Section 14.702.210 of the Spokane County Zoning Code). An issue with this protection is the definition. The AO zone is based on a protection area

developed by the Federal Aviation Administration (FAA), and does not match the shape of the Accident Potential Zones used by the Air Force (see 2, Safety Zone Factors in Section 3 for more information).

Other key differences between the AOZ and AICUZ safety zones.

- AOZ has more stringent building/structure height restrictions;
- AOZ incorporates two safety zones while the AICUZ has an additional safety zone (the Clear Zone);
- AICUZ is more detailed relative to APZ land use criteria than AOZ.

The existence of two safety zone geometry standards affecting Fairchild AFB is problematic, specifically when applied to Fairchild AFB and in the locations of overlap in the City of Airway Heights. The City of Airway Heights has also adopted the County's AOZ lines, but they have also included the DOD Accident Potential Zones too. This duplication, while covering all requirements, may cause confusion in application where areas and requirements differ.

This disconnect can lead to negative evaluations for the base since local regulations do not fully implement the recommendations in the AICUZ.

At the present time, the Cities of Spokane and Medical Lake and Native American Tribal governments in the area do not have regulations covering the AICUZ recommendations. Both cities do not currently have land that would be inside the DOD Accident Potential Zones. The City of Spokane is pursuing an annexation in the West Plains area, and should include AICUZ-type regulations in preparation of future annexation.

Table 5-5. AICUZ Strategy

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
10	**Implement AICUZ Recommendations** Implement recommendations contained in the current Fairchild AFB AICUZ. ■ For purposes of this strategy, the noise contours used will be as established for the potential mission scenario based on a mix of next generation air refueling aircraft and B-52 aircraft, as shown on Figure 3-22. Within this area, local jurisdictions will use the Air Force Land Use Compatibility Guidelines to evaluate existing and future land use proposals in this area. ■ The County of Spokane should modify its AOZ to define the current definition as applying to civilian airports, and add a new definition for Fairchild AFB that utilizes the DOD Accident Potential Zones and allowed land use guidance contained in the current AICUZ document. ■ The City of Airway Heights should modify its zoning code to use the DOD Accident Potential Zones and allowed land use guidance contained in the current AICUZ document (deleting references to the current AOZ and land use guidance contrary to AICUZ guidance). ■ The City of Spokane should revise its Zoning Ordinance to contain an AOZ that utilizes: 1) DOD Accident Potential Zones, and 2) allowed land use guidance contained in the current AICUZ document.			■		■	■	■	■	○		■		■		■

Notes: ■ *marks the geographic area to which this strategy applies* ■ *denotes the responsible agency / organization (implements)* ○ *denotes a partner agency / organization (provides support)* ■ *when the strategy should be complete*

Avigation Easements

An easement is a non-possessory right to use land owned by another party. An avigation easement is an easement that grants the holder one or more of the following rights: the right of flight; the right to cause noise, dust, or other impacts related to aircraft flight; the right to restrict or prohibit certain lights, electromagnetic signals, and bird-attracting land uses; the right to unobstructed airspace over the property above a specified height; and, the right of ingress or egress upon the land to exercise those rights.

Avigation easements transfer certain property rights from the owner of the underlying property to another entity. This entity could be the owner of an airport or, in the case of military airports, to a local government agency or authorized federal agency on behalf of the military. Due to the timing involved, the DOD does not typically process avigation easements. Historically, if the military desires such easements, there are several ways they can be obtained. The US Army Corps of Engineers serves as the negotiator and the principle real estate agent for the Air Force.

Entities acquire avigation easements to the airspace over neighboring properties to: (1) prevent construction of buildings and towers, planting of trees, installation of lighting, or any other development that might interfere with aircraft takeoff and landing, or (2) protect against liability for any nuisance caused by aircraft using the airport (i.e. noise, fumes, and vibration) that might impact the use and enjoyment of properties adjacent to an airfield or under its flight paths.

Current Status

In the unincorporated portions of Spokane County, the Spokane County Zoning Code (14.702.220) states:

> a. Spokane International Airport, Felts Field, and Deer Park Airport: Prior to development or issuance of a building permit in any of the airspace and/or Accident Potential Areas defined herein, the awarding of an avigation easement by the property owner(s) to the appropriate airport(s) shall be required and recorded with the Spokane County Auditor's Office.

The issue is that this requirement is specified to only apply to the conical area (30,000 foot radius from the airports primary surface) of Spokane International Airport, Felts Field, and Deer Park Airport. Therefore, it does not appear that this requirement is in place for development near Fairchild AFB (other then the coverage that occurs due to its proximity to SIA).

Airway Heights has a similar requirement in Chapter 17.15.030 of their Zoning Code. It would be recommended for Airway Heights that the term "airport" could be misinterpreted to not include Fairchild AFB. Clarification is recommended to Chapters 17.15.010, 17.15.020, and 17.15.030.

For the cities of Medical Lake and Spokane, they do not currently have a requirement for filing such easements on development.

Refer to Table 5-6 for strategies related to avigation easements.

Table 5-6. Avigation Easement Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
11	**Update Avigation Easement Requirement for Spokane County** Modify Spokane County Zoning Code Chapter 14.702.220, part 2.a. to read: a. Spokane International Airport, Fairchild AFB, Felts Field, and Deer Park Airport: Prior to development or issuance of a building permit in any of the airspace and/or Accident Potential Areas defined herein, the awarding of an avigation easement by the property owner(s) to the appropriate airport(s) shall be required and recorded with the Spokane County Auditor's Office.			■		■								■		
12	**Update Avigation Easement Requirement for Airway Heights** Modify Airway Heights Zoning Code Chapter 17.15.010 to include a statement such as: "Within this Chapter, the term airport is used to refer to Fairchild Air Force Base and general aviation airports."			■			■							■		
13	**Develop or Update Avigation Easement Programs** Using Spokane County or Airway Heights as a starting point, incorporate similar language to require that an avigation easement be recorded with the local jurisdiction for all land divisions, building permits, and other discretionary actions within 30,000 feet of the Fairchild AFB primary surface. Sample language for an avigation easement is included in Appendix E.			■				■	■					■		

Notes:

■ *marks the geographic area to which this strategy applies*

■ *denotes the responsible agency / organization (implements)*
○ *denotes a partner agency / organization (provides support)*

■ *when the strategy should be complete*

BASH Coordination

The DOD Bird Wildlife Aircraft Strike Hazard (BASH) program is aimed at minimizing collisions between military aircraft and birds. Knowledge of where birds travel, nest, and feed helps DOD avoid problem areas, and therefore save lives and avoid the destruction of valuable aircraft. The program considers not only wildlife within the confines of the airfield, but also in neighboring areas. The BASH program covers predatory birds, nuisance flocking birds (gulls), and migratory geese and ducks. In addition to birds, the BASH program also addresses other animals that could pose a hazard to aircraft operations, such as coyotes, deer, and rabbits that wander onto runways.

The objective of the BASH program is to reduce the potential for collisions between aircraft and birds or other animals, and to minimize damage and injuries when collisions occur. The BASH program promotes both land management practices that minimize bird attractants and safety procedures to recognize, control, and avoid hazardous bird concentrations.

Current Status

For unincorporated portions of Spokane County, Zoning Code section 14.702.220 states:

> 1. No use shall be made of any land in the conical area defined hereinabove that would cause any one of the following circumstances.
>
>   f. The use creates a bird attractant that, in the opinion of the airport, could interfere with aircraft operations.

This is adequate except the definition of "airport" is unclear in the code, and may not be interpreted to include Fairchild AFB.

For Airway Heights, their Zoning Code provides only limited discussion relative to agricultural uses near Fairchild AFB. Section 17.15.070, Accident potential zone A (APZ-A), states:

> E. General agricultural use except feed lots or other agricultural uses which attract substantial quantities of birds;

The regulations for the cities of Medical Lake and Spokane do not specifically address this topic currently.

Refer to Table 5-7 for BASH protection strategies.

Table 5-7. BASH Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
14	Modify Spokane County's Zoning Ordinance on BASH Modify Spokane County Zoning Code Chapter 14.702.220, part 1.f. to read: f. The use creates a bird attractant that, in the opinion of Fairchild AFB or appropriate airport, could interfere with aircraft operations.	■				■								■		
15	Modify Zoning Ordinances for BASH Using Spokane County as a guide, incorporate similar language to require in Zoning Codes that address bird attraction as part of project design or conditions of approval.	■					■	■	■						■	
16	BASH Consideration in Jurisdiction or Agency Projects All projects sponsored by a local jurisdiction or agency should consider bird attraction and will consult with Fairchild AFB on the review and mitigation of significant attraction issues. The SEPA review process for projects in MIA 2 should evaluate this issue as part of its analysis.		■			■	■	■	■	○	○	■	■			■
17	Develop and Distribute BASH Educational Materials Provide educational information to local jurisdictions and agencies in the region relative to reducing the potential for bird and wildlife attractions that may impede safe air operations.	■								■					■	
18	Control Bird and Wildlife Attractions Near Base Work directly with local jurisdictions and other agencies on control of bird and wildlife attractions in the immediate vicinity of the base. For surface mining, include measures to reduce bird and wildlife attractions as part of all mining applications, remediation plans, and other SMARA reviews.		■			■	■	■	■	■	■	■	■			■

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Fairchild Planning and Operations

Similar to a local jurisdiction, Fairchild AFB maintains a long-range General Plan. The Fairchild General Plan is the primary document that provides the installation commander and other military decision makers with a condensed picture of whether or not an installation has the physical assets and delivery systems to support its mission. The purpose of the Fairchild AFB General Plan is to provide an assessment of the installation's infrastructure and attributes for the purpose of gauging the installation's development and growth potential.

In addition to its General Plan, Fairchild AFB also maintains a number of plans that describe the operational parameters for activities on the installation and in the airspace around the base. They also maintain a set of plans aimed at protection of natural and cultural resources.

Current Status

Fairchild's current General Plan is dated April 2004. An update for this General Plan is currently underway, with approval in 2009.

Table 5-8 contains strategies relevant to planning activities conducted by Fairchild AFB.

Table 5-8. Fairchild Planning and Operational Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
19	**Flight Operations for Future Missions** For future air missions or aircraft at Fairchild AFB, design flight operations to minimize impacts on developed areas surrounding Fairchild AFB.	■								■						■
20	**Update Fairchild AFB General Plan** Update Fairchild AFB General Plan to incorporate the accepted strategies of the Fairchild JLUS.	■								■					■	
21	**Develop Public Summary of Fairchild AFB General Plan** On update of the Fairchild AFB General Plan, Fairchild AFB will prepare a public summary that is provided to local jurisdictions, interested parties, and is publicly accessible from the base website.	■								■					■	
22	**Involve Local Jurisdictions in Defining Data Needs** Fairchild AFB will work with the JLUS Coordinating Committee (see Strategy 29) to assist in refining the information that could be contained in the General Plan public summary that would assist local jurisdictions in compatibility planning. ► See also Strategy 29	■				○	○	○	○	■	○	○	○		■	

Notes:
- ■ *marks the geographic area to which this strategy applies*
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- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Building Codes

Construction standards and building codes are ordinances and regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to safeguard human safety and welfare. They include both technical and functional standards and generally address the following.

- Structural Safety. Buildings should be strong enough to resist internally and externally applied forces without collapsing.
- Fire Safety. Includes requirements to prevent fire from spreading to and from neighboring structures, provide warning to occupants, provide for safe exit routes from the building, and provide access for fire suppression.
- Health Requirements. Relative to compatibility planning, building codes can be used to set noise attenuation standards and establish structural height limits.
- Accessibility. Requires a building to be accessible for persons in wheelchairs or having other disabilities.

Construction standards and building codes are designed to protect the health, safety, and welfare of citizens.

As part of the Fairchild AICUZ, certain uses are considered acceptable based on noise attenuation measures included in the construction of new buildings. For instance, residential uses may be considered compatible inside the 65 – 69 DNL noise zone with sound attenuation materials installed. The strategy on Table 5-9 provides guidance on acceptable noise attenuation based on the Sound Transmission Class (STC) of the materials used in a building construction.

Table 5-9 contains strategies built on enhancement of existing building codes.

Sound Transmission Class

Sound Transmission Class (or STC) is an integer rating of how well a building partition attenuates airborne sound. In the USA, it is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations.

The STC number is derived from sound attenuation values tested at sixteen standard frequencies from 125 Hz to 4000 Hz. STC is roughly the decibel reduction in noise a partition can provide, abbreviated 'dB'. The dB scale is a logarithmic one and the human ear perceives a 10dB reduction in sound as roughly halving the volume - a 40 dB noise subjectively seems half as loud as a 50 dB one. (For more detail on equal-loudness curves see: Fletcher-Munson curves.) If an 80dB sound on one side of a wall/floor/ceiling is reduced to 50dB on the other side, that partition is said to have an STC of 30.

Source: http://en.wikipedia.org/wiki/Sound_transmission_class

Current Status

For all jurisdictions, additional guidance on sound attenuation related to aircraft noise is needed.

Table 5-9. Building Code Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
23	Sound Attenuation for New Construction Amend local building codes to require sound attenuation as part of new construction of sensitive land uses within MIA 3. For commercial uses and office / break room areas of industrial uses, sound attenuation will be required for new construction inside of the 75 Ldn contour for the potential mission scenario based on a mix of next generation air refueling aircraft and B-52 aircraft. Other Agencies: These standards should be used as a minimum by school districts and proposed schools within MIA 3. In this area, the minimum Sound Transmission Class (STC) rating of structure components shall be provided in compliance with the table shown below. As an alternative to compliance with this table, structures should be permitted to be designed and constructed so as to limit the interior noise level to no greater than 45 Ldn. Exterior structures, terrain and permanent plantings shall be permitted to be included as part of the alternative design. The alternative design should be certified by an acoustical engineer. Further information on sound attenuation can be found in the "Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations" published by the US Navy.			■		■	■	■	■			■	■	■		

LDN	STC Of Exterior Walls And Roof/Ceiling Assemblies	STC Of Doors And Windows
65-69	39	25
70-74	44	33
75 or greater	49	38

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
24	**Sound Attenuation for Existing Structures** Any extension, enlargement, relocation, reconstruction or substantial alteration of an existing residential use within the noise impacted area should be subject to the acoustical performance standards as set forth in Strategy 23 unless otherwise modified by the building official. Each jurisdiction shall determine the threshold over which modified structures will be subject to the acoustical performance standards. Application of this strategy is defined as an activity that modifies, alters or expands an existing use by 50 percent. This shall also apply to changes in a structure that results in an increase in the number of habitable units within the structure (with habitable units as defined by the 2000 US Census).			■		■	■	■	■							■

Notes:

■ *marks the geographic area to which this strategy applies*

■ *denotes the responsible agency / organization (implements)*
○ *denotes a partner agency / organization (provides support)*

■ *when the strategy should be complete*

Refer to Table 5-10 for strategies related to infrastructure planning in the study area.

Capital Improvements Programs (CIP) / Infrastructure Master Plans

A Capital Improvements Program (CIP) is a detailed fiscal and planning document used to plan and direct a jurisdiction's or agency's (federal or state) investment in facilities, including infrastructure. A CIP lays out the facility plans and programs of the jurisdiction or agency and provides details on expenditures that can be incorporated into the jurisdiction's or agency's annual budgeting process. Most CIPs cover multiple years in order to plan for major expenditures and projects that may occur over several years. Jurisdictions can influence where and when growth will take place through capital investment decisions, such as the placement of roadways or other infrastructure systems. In addition to facility planning and design, the timing of the facilities is also critical to compatibility. Premature extension of infrastructure can encourage growth in an area. Inversely, lack of funding for regional transportation projects can cause capacity shortages in the short term.

Similar to CIPs, there are other regional infrastructure plans that would have similar effects, such as the Route Development Plan (RDP) along US Highway 2 from the Lincoln County line to I-90.

Current Status

The key issue to be addressed is to ensure that long-range capital programs do not provide increased capacity in areas where development encouraged by the CIP could be incompatible with Fairchild AFB. For instance, the extension of water service to an unserved area could encourage incompatible development near the installation.

Table 5-10. CIP / Infrastructure Master Plan Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
25	**Incorporate Compatibility Planning Concepts in CIPs / Infrastructure Master Plans** Incorporate land use compatibility planning concepts into CIPs / Infrastructure Master Plans for infrastructure extensions and improvements. ■ Avoid extension of infrastructure capacity to an area adjacent to the base and currently zoned Rural Traditional.				■	■	■	■	■	○		■				■
26	**Ensure Adequate Transportation Infrastructure** Work with WSDOT to ensure adequate queuing space and traffic controls are provided at the main entry gate to Fairchild AFB. Other Agencies: WSDOT				■					■			■			■

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Refer to Table 5-11 for strategies related to code enforcement / building inspection.

Code Enforcement / Building Inspection

Code enforcement attempts to ensure that property owners maintain their property and bring substandard structures and conditions up to Building and Zoning Code standards. Code enforcement programs are responsible for enforcing codes that address public health and safety issues, including regulations related to garbage, specific nuisances, removal of vegetation, zoning violations, and structures. Enforcement actions are taken both proactively and in response to complaints from residents.

The purpose of code enforcement programs is to promote and maintain a safe and desirable living and working environment. Related to land use compatibility, code enforcement is a tool used by the community to ensure its rules are enforced. Issues could arise relative to structure heights, light and glare, and fire hazards.

Current Status

Each jurisdiction maintains staff to conduct code enforcement activities. The major need is to add inspection review for proposed sound attenuation (Strategies 23 and 24), and better coordination on code compliance.

Table 5-11. Code Enforcement / Building Inspection Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
27	**Ensure Construction Standards for Sound Attenuation Are Met** Ensure contractors are following appropriate sound attenuation standards as part of new construction or substantial remodels or reconstructions. ▶ See also Strategies 23 and 24 on process			■		■	■	■	■	○		■				■
28	**Code Enforcement Relative to Compatibility Concerns** Pursue correction of code violations that impact operations at Fairchild AFB, including vertical height obstructions, light and glare issues, dust and debris, and bird and wildlife attractions. ▪ It is the responsibility of Fairchild AFB to identify issue areas outside the installation boundaries where conditions exist that endanger operations, and to provide notification to the appropriate local jurisdiction or agency. ▶ See also Strategies 30 and 32 on process.		■			■	■	■	■					■		■

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Effective communications are the key to JLUS implementation. Table 5-12 contains the strategies designed to meet this need.

Communications / Coordination

In any planning effort, plans can only move towards successful implementation if there are ongoing communications between Fairchild AFB, local jurisdictions, agencies, Native American tribal groups, landowners, and the public. Enhanced communication and coordination is seen as being integral to successful compatibility planning in the study area.

Current Status

In the study area, the local jurisdictions, agencies, Native American Tribal Groups, and Fairchild AFB have an established working relationship.

The six metro jurisdictions in the region (Spokane County, and the cities of Spokane, Spokane Valley, Airway Heights, the Liberty Lake and Medical Lake) participated in a collaborative planning study to analyze differences and similarities in planning processes. For land use planning, the evaluation of current land use designations and processes found the local jurisdictions to be fairly consistent in standards. This is beneficial for maintaining a consistent approach as areas are annexed within the UGA.

Section 4.3 discusses some recommendations from the study. The following is a brief recap of those recommendations relevant to compatibility planning and this JLUS:

- **Enhanced Communication and Process**
- **SEPA Notification Improvement** (see Strategy 46)
- **Adoption of Area-Specific Regulations** (see strategies under Zoning / Subdivision / Other Local Regulations)
- **Adoption of UGA-wide Development Regulations** (see strategies under Zoning / Subdivision)

The first item, enhanced communications, is covered in this strategy.

For the public, issues related to base operations and aircraft can be directed to the 92nd Public Affairs office at (509) 247-5705 or via e-mail: e-Connection@fairchild.af.mil.

Table 5-12. Communications / Coordination Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
29	**Establish a JLUS Coordinating Committee** Establish a JLUS Coordinating Committee (multi-stakeholder) to maintain efficient and effective coordination between local jurisdictions, Fairchild AFB, and other interested parties to focus on the implementation of the JLUS. ■ The JLUS Coordinating Committee shall be formed within one year of the published date for the Fairchild JLUS. ■ The JLUS Coordinating Committee shall be made up of two representatives from each of the following: ■ Spokane County ■ City of Airway Heights ■ City of Medical Lake ■ City of Spokane ■ Fairchild AFB ■ SIA ■ Kalispel Tribe of Indians ■ Spokane Tribe of Indians ■ WSDOT Aviation Division ■ The JLUS Coordinating Committee membership can be modified as established by the Memorandum of Understanding (per Strategy 43). A standing JLUS Technical Committee, including representatives from the entities noted above, plus other agency members with expertise needed to advise the JLUS Coordinating Committee, will be maintained and will meet as requested to provide input on issues of interest to the JLUS Coordinating Committee. ■ The JLUS Coordinating Committee should meet on a regular basis, or as agreed to by the Committee. ■ Meetings between individual members pertaining to issues specific to Fairchild AFB and the effected agency(ies) is encouraged.	■				■	■	■	■	■	■	■	■	■		■

Table 5-12. Communications / Coordination Strategies (cont'd)

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
30	**Establish Procedures for Plan Review and Comment** Fairchild AFB shall work with local jurisdictions and relevant agencies to establish procedures for consultation between the base and local jurisdictions relative to planning review and comment. This will include: ■ Definition of projects that will require review based on type and location ■ Definition of project types that require pre-application review and where Fairchild AFB should attend ■ Identification of the Points of Contact for all coordination ■ Establishing a formal procedure for requesting and receiving comments ■ Establishing a standard timeline for responses, keeping in mind mandated review time periods as specified by State law and local procedures ■ Providing notice to Fairchild AFB on all public hearings regarding projects identified for coordination Procedures should be reviewed annually and updated as appropriate by the JLUS Coordinating Committee.	■				■	■	■	■	○				■		
31	**Fairchild as Part of Pre-Application Review** Based on the project types discussed in Strategy 30, incorporate Fairchild AFB personnel in pre-application meetings for significant projects.		■			■	■	■	■	■						■
32	**Refer Development Applications to Fairchild for Review and Comment** Refer projects to Fairchild AFB officials for review and comment as defined under the process developed under Strategy 30. Fairchild AFB shall provide timely input on projects where the installation has concerns. ▶ See also Strategies 25, 30, and 46		■			■	■	■	■	○						■

Table 5-12. Communications / Coordination Strategies (cont'd)

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
33	**Refer Development Proposals to Fairchild for Review and Comment** Refer appropriate projects to Fairchild AFB officials for review and comment on jurisdictional or agency plans such as General Plans and General Plan Amendments, zone changes, specific plans, and similar comprehensive plans defined under Strategy 30. Fairchild AFB should provide timely input on projects where the installation has concerns. ▶ See also Strategies 25, 30, 32, and 46		■			■	■	■	■	○		■				■
34	**Involve Fairchild AFB Officials in Airport Planning** Ensure Fairchild AFB officials are involved, in an advisory capacity, relative to operational changes at public airports and in the update of airport master plans and expansion plans for all airports in the surrounding region. Continue coordination activities currently performed between SIA, Fairchild AFB, WSDOT, and FAA. Other Agencies: WSDOT, FAA	■	■							■	■		■			■
35	**Coordination on School Site Planning** Provide input to local school districts on areas that are not suitable for school development due to noise, safety, or other operational concerns. ■ Provide information on the location of MIA 4 and the desire to avoid school sites in these areas ■ Request school districts consult with Fairchild AFB on school site selection in MIA 4 to provide a cooperative foundation for more informed land use decisions ▶ See also Strategies 23 and 36 Other Agencies: School Districts			■						○	○		■			■

Table 5-12. Communications / Coordination Strategies (cont'd)

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
36	**Other Sensitive Uses in MIA 4** MIA 4 is not considered suitable for the following uses: ■ Public or private schools ■ Hospitals ■ Convalescent facilities ■ Public assembly facilities (such as theaters, stadiums, community centers, churches, and similar facilities) ■ Libraries				■	■	■	■	■			■				■
37	**Educational Outreach on Aviation Planning** WSDOT and FAA should provide assistance and technical information to help inform local decision making, especially during general plan or zoning ordinance updates. Other Agencies: WSDOT, FAA	■								○	○		■			■
38	**Develop and Distribute Public Education Materials** Fairchild AFB should develop and distribute public education materials providing information on the installation's AICUZ program, land use, noise, safety, and operational overviews, and the ability to take public comments. ■ Printed summaries on these issues should be provided to local jurisdictions within the study area for staff education and as a handout to the public. ■ Information on these topics should be provided on the publicly available part of the installation's website. ■ Fairchild AFB should provide timely updates as key information changes to ensure local jurisdictions, agencies, and the public are informed on current mission requirements and operations.		■							■				■		■
39	**Fairchild Public Affairs Liaison to JLUS Coordinating Committee** Establish a Public Affairs liaison with JLUS Coordinating Committee to address noise and other community issues.	■				○	○	○	○	■	○	○	○	■		

Table 5-12. Communications / Coordination Strategies (cont'd)

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
40	**Technical Support for Local Decision Making Process** Fairchild AFB should assign personnel to supply technical input and assistance to local jurisdictions to support discussion of projects with potential compatibility issues at Spokane County Board of Commissioners, city council, and planning commission meetings. This support should be provided as needed relative to projects defined under Strategy 30. ▶ See also Strategy 30	■				○	○	○	○	■	○	○	○			■
41	**Establish and Maintain Compatibility Clearinghouse** Create a clearinghouse of planning information regarding compatibility planning through collaboration with Spokane County. This clearinghouse should provide web access to this information. ▪ Information of local importance should be maintained by the member agencies of the JLUS Coordinating Committee ▪ Pursue funding from OEA or other DOD sources to maintain this database	■				■	○	○	○	○	○	○	○	■		■

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Refer to Table 5-13 for strategies related to Deed Restrictions and Covenants.

Deed Restrictions / Covenants

Deed restrictions, or covenants, are written agreements that restrict or limit some of the rights associated with property ownership. These restrictions are recorded with the deed for the property and stay with the property when it is sold to a new owner (i.e., remain in effect). Deed restrictions are private agreements or contracts between an interested buyer and a seller. Deed restrictions are often established by the initial subdivider, either voluntarily or as a condition of approval on the subdivision.

Deed restrictions can cover a wide range of restrictions and can be tailored to meet specific needs. They can also be used to eliminate or mitigate impacts associated with local development on military installations. This is done through the incorporation of restrictions or limitations on development types or certain land uses. Examples include specifying a maximum height for trees and structures, restricting the use of motorized vehicles, limiting lighting, and so forth.

Current Status

In some jurisdictions, avigation easements and deed restrictions are used interchangeably for the purpose of protecting air operations, but they do this in two very different ways. An avigation easement provides acknowledgement that the airspace over a given property is used for air operations, and that these operations have the potential for noise and safety issues. The easement provides a "right" to a portion of the rights that come with property ownership. In this case, the right to fly over the property, much in the same way an easement can be given for a shared driveway.

A deed restriction records a notice on the property's deed, but does provide a portion of the rights that come with that property.

Besides notification, the deed restriction can also be used to restrict the use of a property. It can discuss height restrictions, building locations and intensities, and other use restrictions.

Deed restrictions should be part of the toolkit for protecting Fairchild AFB, but whereas the avigation easement is used broadly across the area, deed restrictions should be more targeted in their use.

Table 5-13. Deed Restrictions / Covenants Strategy

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
42	Deed Notifications in Impacted Areas All land divisions, building permits, and other discretionary actions within a current Accident Potential Zone, as defined in the current Fairchild AICUZ, should be required to file a deed notifications that notes the property's location within this area and describe the zone as defined in the Fairchild AICUZ. The notice should state that the property is subject to operational impacts associated with flight operations at Fairchild AFB.				■	■	■	■		○						■

Notes:

- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Habitat Conservation Tools

The Federal Endangered Species Act allow for the development of Habitat Conservation Plans (HCPs). Incidental take permits help landowners legally proceed with activities that might otherwise result in illegal impacts to a listed species. A HCP is a document that supports an incidental take permit application pursuant to section 10(a)(1)(B) of the Federal Endangered Species Act. HCPs are an evolving tool. Initially designed to address individual projects, HCP are currently more likely to be broad-based plans covering a large area. The geographically broader HCP is used as the basis for an incidental take permit for any project within the boundaries of the HCP. Regardless of size, a HCP should include measures that, when implemented, minimize and mitigate impacts to the designated species to the maximum extent possible, and the means by which these efforts will be funded.

Current Status

While several threatened and endangered species existing in the area, the application of standard review practices under SEPA and NEPA were seen as adequate in terms of compatibility planning. Therefore, no strategies area proposed under this type.

Hazard Mitigation Plans

Hazard mitigation is defined as any sustained, cost-effective action taken to reduce or eliminate long-term risk to people, property, and the environment from natural and man-made hazards and their effects. Hazard Mitigation Plans include actions that have a positive impact over an extended period of time. This distinguishes them from emergency planning or emergency services, which are associated with preparedness for immediate response to, and short-term recovery from, a specific event. Hazard mitigation actions, which can be used to eliminate or minimize the risk to life and property, fall into three categories: (1) those that keep the hazard away from people, property, and structures; (2) those that keep people, property, and structures away from the hazard; and (3) those that reduce the impact of the hazard, such as property insurance.

A hazard mitigation plan identifies hazard mitigation goals, objectives, and recommended actions that will reduce or prevent injury to people and damage to property from natural and man-made hazards. The hazard mitigation plan provides guidance for hazard mitigation activities in the designated planning area.

Current Status

No strategies under this type were found to be necessary.

Memorandum of Understanding

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The governing bodies of the participating public agencies must take appropriate legal actions, often adoption of an ordinance or, resolution, before such agreements become effective. These agreements are also known as Joint Powers Agreements or Interlocal Agreements.

The Revised Code of Washington allows public agencies to enter into joint agreements. The definition of public agency includes, but is not limited to, the federal government or a federal agency, the state or any state department or agency, a county, city, county board of education or school superintendent, public corporation, or public district.

The purpose of an MOU is to establish a formal framework for coordination and cooperation. These agreements may also assign roles and responsibilities for all of the agreement's signatories. MOUs generally promote:

- Coordination and collaboration by sharing information on specific community development proposals, such as rezonings and subdivisions.
- Joint communication between participating jurisdictions and the military ensuring that residents, developers, businesses, and local decision makers have adequate information about military operations, possible impacts on surrounding lands, procedures to submit comments, and any additional local measures to promote land use compatibility around installations.
- Formal agreement on land use planning activities, such as implementation of a Fairchild JLUS.

Table 5-14 includes guidance for creating MOUs that will be used to implement the JLUS.

Current Status

While the jurisdictions in the area work together on planning in the study area, no formal agreement on compatibility planning exists. This strategy type is proposed to formalize specific actions contained in this JLUS to help ensure a coordinated regional approach.

Table 5-14. MOU Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
43	**Develop General MOU to Implement JLUS Process** Member jurisdictions and agencies of the JLUS Coordinating Committee should develop a general MOU to be executed at the beginning stages of implementation of the recommendations adopted by each jurisdiction. This MOU will detail the expectations for coordination and agreement to establish and maintain the JLUS Coordinating Committee.	■				■	■	■	■	■	■	■	■	■		
44	**Develop Specific MOUs to Implement JLUS Recommendations** Sign specific MOUs between individual jurisdictions and Fairchild AFB as tools are adopted. MOUs should cover: ■ Interagency coordination (see Strategies under "Communication / Coordination") ■ Other tools involving the interaction of two or more jurisdictions, agencies, or Fairchild AFB.	■				■	■	■	■	■	■	■	■	■		

Notes:
- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Real Estate Disclosure

The purpose of real estate disclosure is to protect the seller, buyer, and sales agent from potential litigation resulting from specified conditions (i.e., hazard areas, existing easements). Real estate disclosure can be used to inform potential buyers and renters of the possible affects from nearby military installations. This disclosure can be one of the most practical and cost effective land use compatibility tools.

Current Status

Since January 1995, sellers of residential real estate in Washington State have been required to provide the purchasers with a form which details any known defects with the property, unless the purchaser has expressly waived the right to receive the disclosure statement. The form itself, called a "Seller Disclosure Statement." As currently require, specific statements concerning Fairchild AFB are not required.

The strategy in Table 5-15 implements enhanced real estate disclosure.

Table 5-15. Real Estate Disclosure Strategy

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
45	Develop an Enhanced Real Estate Disclosure Ordinance Develop an enhanced Real Estate Disclosure Ordinance to ensure appropriate information about the missions and operations at Fairchild AFB are fully disclosed at the earliest possible point in the interaction between REALTOR® or real estate agent and a buyer or renter. ■ Work with State Real Estate Commission and local real estate representatives to develop and implement adequate language for inclusion in disclosure notices. ■ Work with State Real Estate Commission and local real estate representatives to ensure compliance with notification requirements. ■ Local jurisdictions and Fairchild AFB should work cooperatively to make available the information required for real estate disclosure (as defined by this strategy) regarding operational issues at Fairchild AFB (aircraft, gunnery, and explosive noise potential; overflight; light and glare; etc.). Other Agencies: Washington Real Estate Commission		■			■	■	■	■	○			■	■		

Notes: ■ *marks the geographic area to which this strategy applies* ■ *denotes the responsible agency / organization (implements)* ○ *denotes a partner agency / organization (provides support)* ■ *when the strategy should be complete*

SEPA / NEPA

Similar to the National Environmental Policy Act (NEPA), the State Environmental Policy Act of Washington (SEPA) provides a mechanism to identify environmental impacts resulting from state and local governmental decisions. SEPA provides a mechanism to identify environmental impacts resulting from state and local governmental decisions.

The NEPA is the federal law, effective on January 1, 1970, that established a national policy for the environment and requires federal agencies (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

SEPA and NEPA ensure that the environmental impacts of a proposed action, and potential alternatives to the action, will be considered by an agency before it decides to fund and implement the action. The process required is intended to increase the quality of decisions because it demands a full understanding of the various impacts, and because input must be received from a range of stakeholders. Emergency exceptions are made when the immediate health and safety of people are threatened.

Current Status

SEPA and NEPA documentation requirements are carried out by local jurisdictions, Fairchild AFB, and agencies as required by law. The purpose of the following strategies is to ensure early and full disclosure relative to future projects / actions.

Refer to Table 5-16 for strategies related to information exchange via SEPA / NEPA.

Table 5-16. SEPA / NEPA Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
46	**Refer SEPA Documents to Fairchild AFB** Local jurisdictions and agencies will refer the SEPA documentation of projects to Fairchild AFB officials for review and comment. Projects for review and comment process will be as defined under Strategy 30. Review timeframes for Fairchild AFB are also defined under Strategy 30. ▶ See also Strategies 30 and 32 on process.		■			■	■	■	■	○			■			■
47	**Refer NEPA Documents to Local Jurisdictions** Refer to affected jurisdictions, agencies, and organizations notice of all NEPA documentation, except for categorical exemptions, or as otherwise refined by the JLUS Coordinating Committee (see Strategy 29), for comment. This strategy applies to jurisdictions with land within the JLUS study area. ▶ See also Strategies 29, 30, and 32 on process.		■			○	○	○	○	■	○	○				■
48	**SEPA Documentation Requirements** Local jurisdictions will modify their standard SEPA checklists to ensure potential impacts on Fairchild AFB operations are clearly discussed.	■				■	■	■	■					■		

Notes:
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- ■ *when the strategy should be complete*

Zoning / Subdivision

Zoning

Zoning is the division of a jurisdiction into districts (zones) within which permissible uses are prescribed and restrictions on building height, bulk, layout, and other requirements are defined.

The primary purpose of zoning is the protection of public health, safety, and welfare. Refining this goal further, zoning provides opportunities for the implementation of regulations supporting land use compatibility, as shown in the following examples.

- Protection against:
  - Physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas.
  - Nuisances associated with military operations, such as noise, vibration, air emissions, etc.
  - Heavy traffic flows or truck routes in residential areas.
  - Aesthetic nuisances impacting military installations.
  - Psychological nuisances, such as perceived and actual dangers associated with military operations.
  - Light and glare, air emissions, and loss of privacy.
- Provision of open space and agricultural preservation.
- Zoning and the general plan are inexorably tied to each other. Policies recommended within the general plan should be reflected within the zoning ordinance or development code.
- Zoning ordinances requiring rigid separation of uses or inflexible provisions can make creative solutions to land use compatibility, such as cluster development, difficult or impossible.
- When designating military compatible use districts, the ordinance should recognize that the local community has no regulatory control over development or activities on federal property.

Table 5-17 provides updates to existing zoning ordinance sections in order to enhance compatibility planning.

Subdivisions

Land cannot be divided in Washington without local government approval. Dividing land for sale, lease or financing is regulated by local ordinances. The local general plan, zoning, subdivision, and other ordinances govern the design of the subdivision, the size of its lots, and the types of required improvements, such as street construction, sewer lines, and drainage facilities.

Subdivision ordinances set forth the minimum requirements deemed necessary to protect the health, safety, and welfare of the public. More specifically, the subdivision ordinances are designed to accomplish the following initiatives.

- Assure that effective protection is given to the natural resources of the community, especially ground water and surface waters.

- Encourage well-planned subdivisions through the establishment of adequate design standards.
- Facilitate adequate provisions for transportation and other public facilities.
- Secure the rights of the public with respect to public lands and waters.
- Improve land records by the establishment of standards for surveys and plats.
- Safeguard the interests of the public, the homeowner, the subdivider, and units of local government.
- Prevent, where possible, excessive governmental operating and maintenance costs.

Current Status

Both Spokane County and the City of Airway Heights have zoning components dealing with some compatibility issues. Relative to safety zones, please see the discussion on these regulations presented under the AICUZ heading earlier in this section.

For vertical height, Spokane County and Airway Heights both provide adequate protections of airspace from vertical obstructions. For Spokane County, this is covered as part of Chapter 14.702, Airport Overlay (AO) Zone. For Airway Heights, the regulations are under Chapter 17.15, Airport Overlay Zone (AO). The City of Medical Lake does not have guidance on vertical obstruction. For the City of Spokane, the code should be modified to discuss Fairchild AFB specifically.

For light and glare, local jurisdictions include code that prohibits the production of glare, with Spokane County and Airway Heights Zoning Codes specifically discussing the impact of glare on pilots. Spokane County does include the statement "All lighting shall be positioned and shielded so that the direction of the light is downward and within the property lines" within land use designations. No "dark skies" type ordinances exist in the study area. Darker skies near Fairchild can assist in the conduct of training missions and flight operations.

Table 5-17. Zoning / Subdivision Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
49	Land Uses Allowed in MIA 4 Within MIA 4, land use designations (comprehensive plan or zoning code) in place as of May 2009 should be reviewed using the following criteria prior to any designation change: ■ Land currently designated for non-residential use shall not be redesignated to a residential use category. It may be redesignated to another non-residential use category (except for mixed use) as long as conditions of approval restrict the intensity of development allowed (see Strategy 50). ■ Land currently designated for a residential use shall not be modified to another residential designation that allows a higher density of use than allowed in the current designation. ■ Existing approved subdivisions or other residential developments within MIA 4 shall not be amended or otherwise modified to increase the number or intensity of residential units previously approved. ■ All uses in MIA 4 shall be required to do an acoustical study and provide appropriate noise attenuation. (See also Strategy 20) ■ No new residential development shall be approved within the 70 LDN (or higher) noise contours for the potential mission scenario, as updated. ▶ See also Strategy 50				■	■	■	■	■					■		■
50	Intensity Standards for Non-Residential Uses Non-residential uses in MIA 4 can have a maximum occupancy of 150 persons per gross acre. Gross acreage is measured based on the site for a given use. In other words, the building or structure and land area associated with that development (parking, storage, etc.).				■	■	■	■	■							■
51	Encourage Area Planning Approach Encourage the use of specific plans, planned unit developments, or other techniques to help minimize conflicts and enhance compatibility between Fairchild AFB and new land uses.	■				■	■	■	■	○	○	■	○			■

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
52	**Residential Zoning Expansion Limits** Prevent further urban density residential development close to Fairchild AFB by not permitting additional rezoning lands for urban density residential uses.				■	■	■	■	■	○		■				■
53	**Ensure FAA Part 77 Compliance** For all structures, ensure compliance with FAA Part 77 requirements when establishing height regulations or restrictions. NOTE: For further information on Part 77, please refer to the discussion under Factor #3, Vertical Obstructions, in Section 3 and Appendix G. Other Agencies: WSDOT and FAA		■			■	■	■	■			■	○			■
54	**Develop or Update Light and Glare Controls** Develop or update light and glare controls to protect the operational environment near Fairchild AFB. These controls should be designed to reduce the amount of light that spills into surrounding areas and impacts regional ambient illumination.		■			■	■	■	■	○	■	■			■	
55	**Dark Skies Ordinance** Adopt a dark skies ordinance to cover the JLUS Study Area.		■			■	■	■	■	○	○				■	
56	**Modify Subdivision Regulations, Disclosure** Modify subdivision regulations to require appropriate disclosures are recorded as part of a property's deed upon sale of land. Disclosure should notify purchasing party of Fairchild AFB operations and potential compatibility issues. See also Strategies 11, 12, 13, 42, and 45	■				■	■	■	■	○				■		

Notes:

- ■ *marks the geographic area to which this strategy applies*
- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

Other

One strategy did not fit specifically under one of the previous strategy types. This strategy, which discusses the future of the base, is shown on Table 5-18.

Table 5-18. Other Strategies

#	Strategy	MIA 1	MIA 2	MIA 3	MIA 4	Spokane County	Airway Heights	Medical Lake	Spokane (City)	Fairchild AFB	SIA	Native American Tribal Groups	Other Agencies	0-3 Years	> 3 Years	Ongoing
57	Maintain Existing and Pursue Additional Missions at Fairchild AFB State and federal legislators will work with interested local jurisdictions, agencies, and organizations to advocate for additional, compatible missions at Fairchild AFB and for the deployment of next generation air refueling aircraft. Other Agencies: WSDOT, State Legislature	■				■	■	■	■	■			■			■

Notes:
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- ■ *denotes the responsible agency / organization (implements)*
- ○ *denotes a partner agency / organization (provides support)*
- ■ *when the strategy should be complete*

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