

FINAL

# Fairchild JLUS

*prepared for*



SPOKANE COUNTY

*prepared by*



*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.

We would like to thank all of those who helped make this JLUS process and resulting document a success.

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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*

The JLUS project was prepared by Matrix Design Group under a contract with Spokane County. Matrix Design Group was assisted in the preparation of noise models by Harris Miller Miller & Hanson Inc.



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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](http://www.landusecompatibility.com/fairchild).

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*Please see the next page.*

**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 Ordnance 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 jurisdiction's 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.