



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



“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



Fairchild AFB 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

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



*Washington Army National Guard
UH-60, 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.

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 GSAB 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)

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 construction schedule.



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

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.

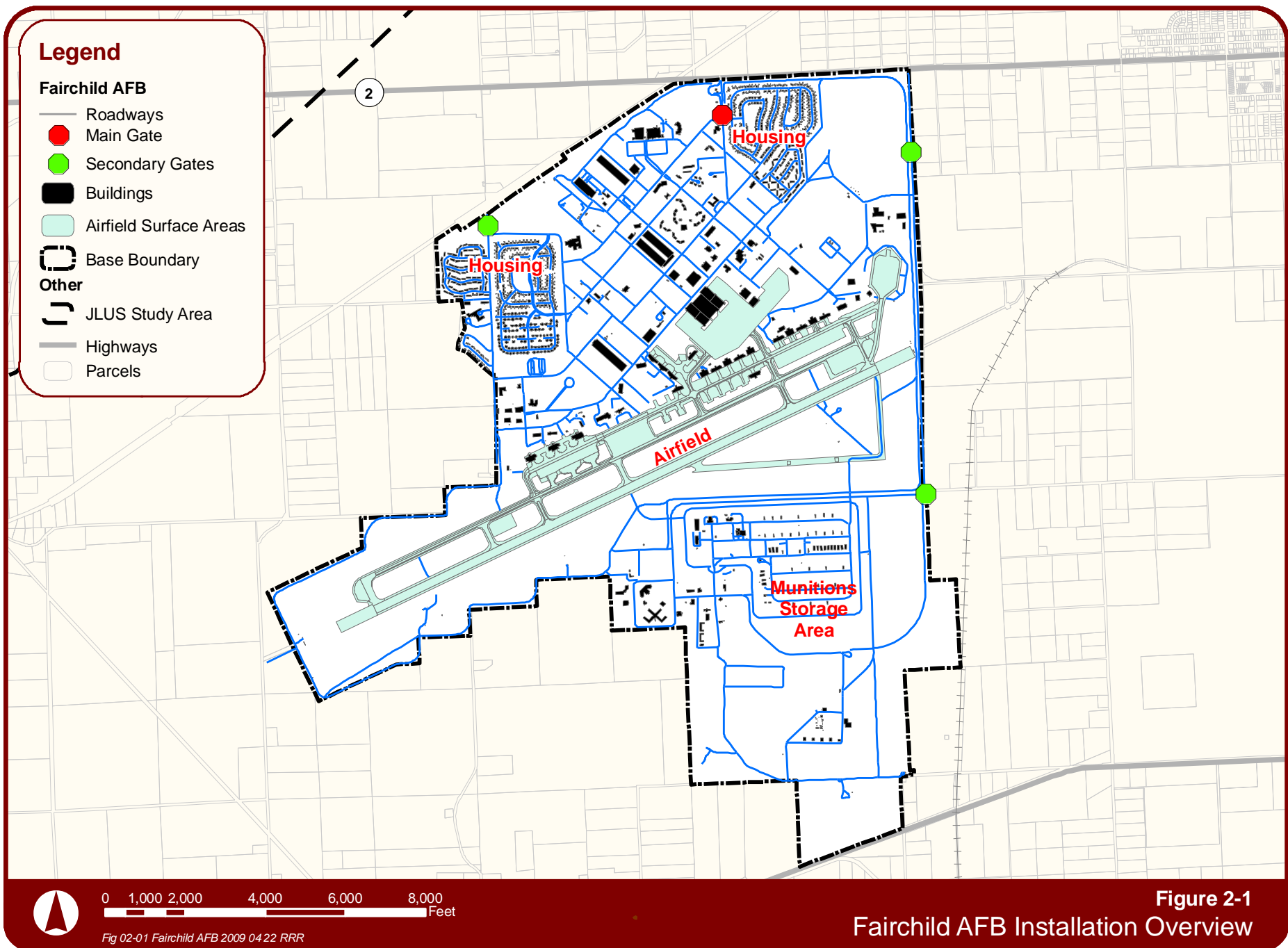
Airfield. The Fairchild AFB airfield is located in the center of the base. The runway and supporting airfield facilities are oriented northeast to southwest.

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).



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.

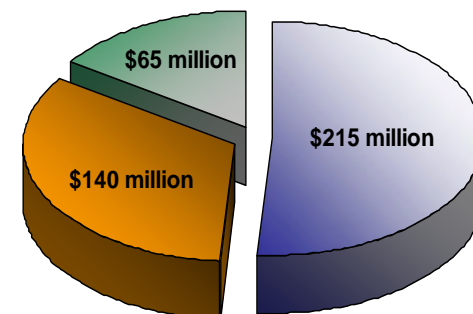
Installation Economic Impact

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.



■ Payroll (\$215 million) ■ Expenditures (\$140 million) ■ Value of Jobs Created (\$65 million)

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

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

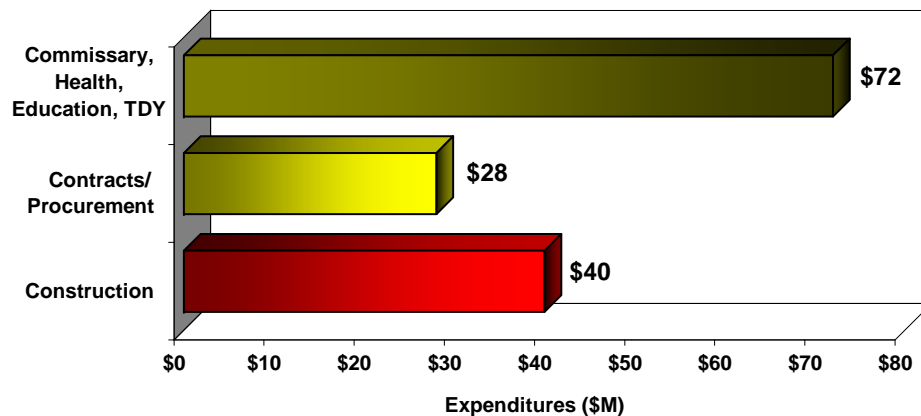
Variable	Value
Annual Payroll	\$215,639,434
Military	\$176,672,452
Appropriated Fund Civilian	\$30,001,973
Non-Appropriated Civilian and Private Business	\$8,965,008
Annual Expenditures (1)	\$140,436,016
Annual Dollar Value of Jobs Created (Estimated)	\$65,203,226
Indirect Jobs Created (Estimated)	1,942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

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

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

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 Oreille 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%

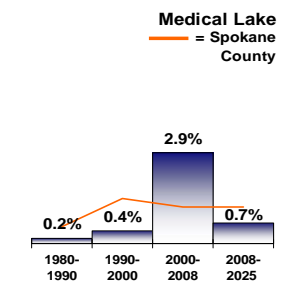
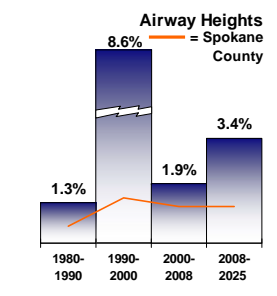
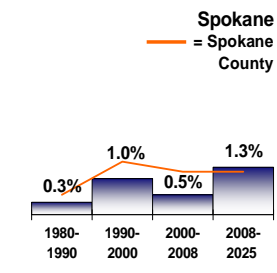
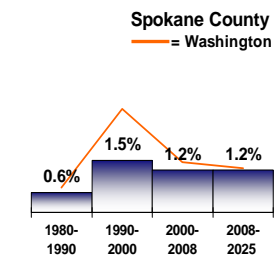
Sources: Washington Office of Financial Management; US Census Bureau; and Matrix Design Group, 2008.

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)

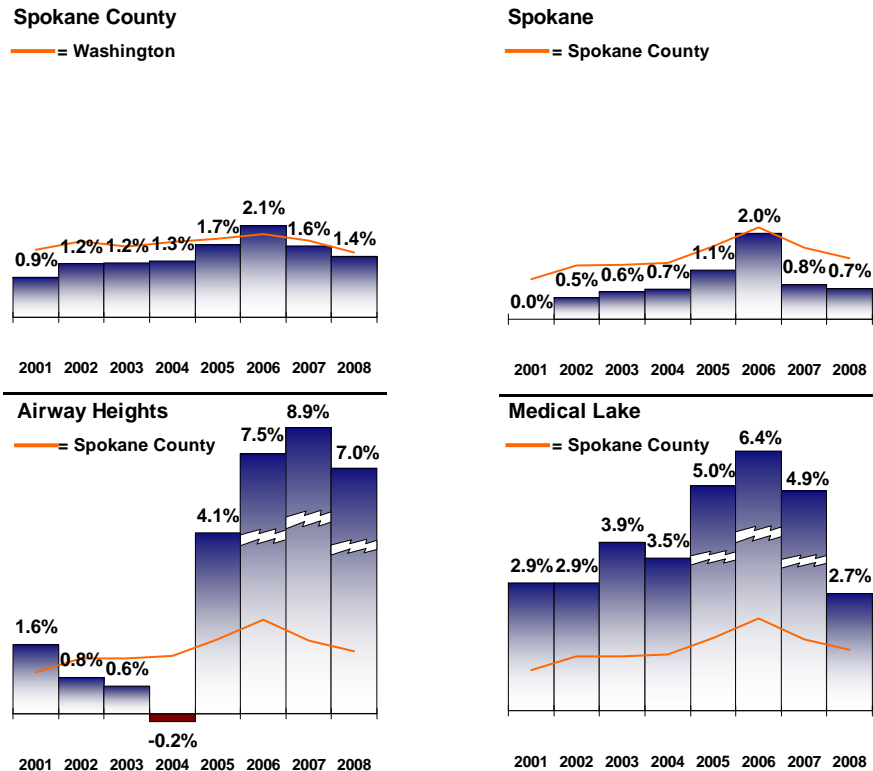


Figure 2-5. Annual Population Growth

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 indicator of future growth potential.

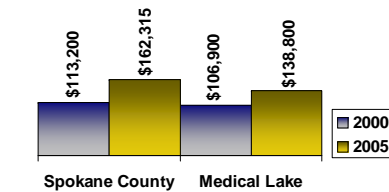
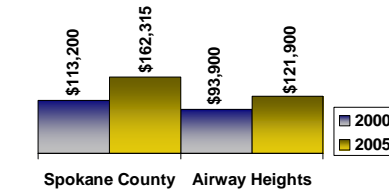
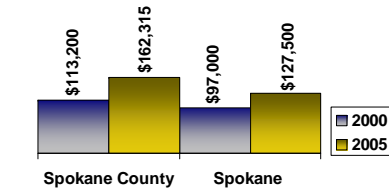
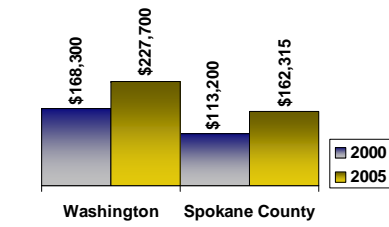
Overall, median housing values within Spokane County and the cities of Spokane, Airway Heights, and Medical Lake increased substantially between 2000 and 2005 (see Table 2-8 and Figure 2-6). The rate of housing value increase between 2000 and 2005 for the three cities analyzed in this JLUS are separated 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).

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.

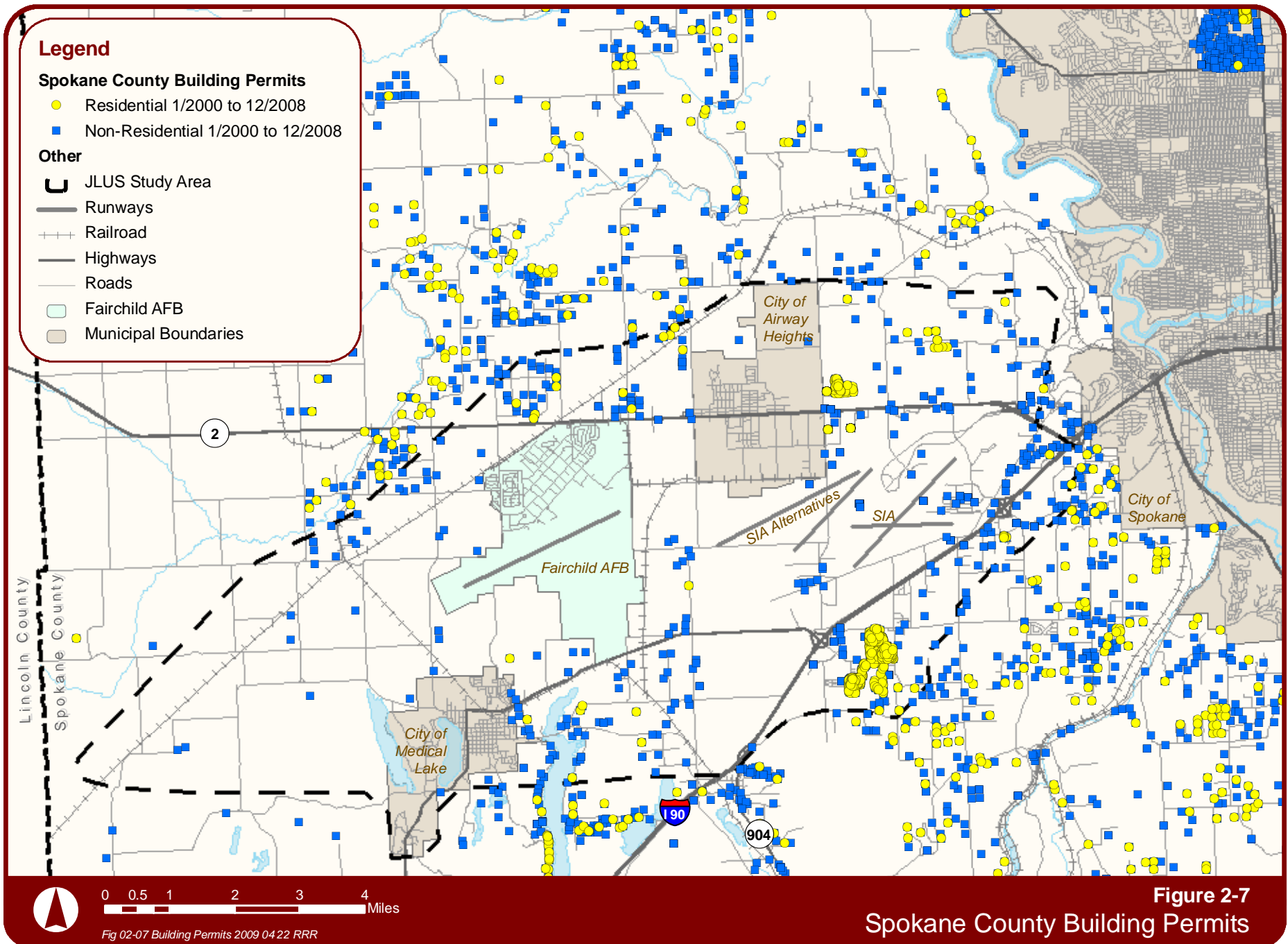


Figure 2-7
Spokane County Building Permits

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.

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.

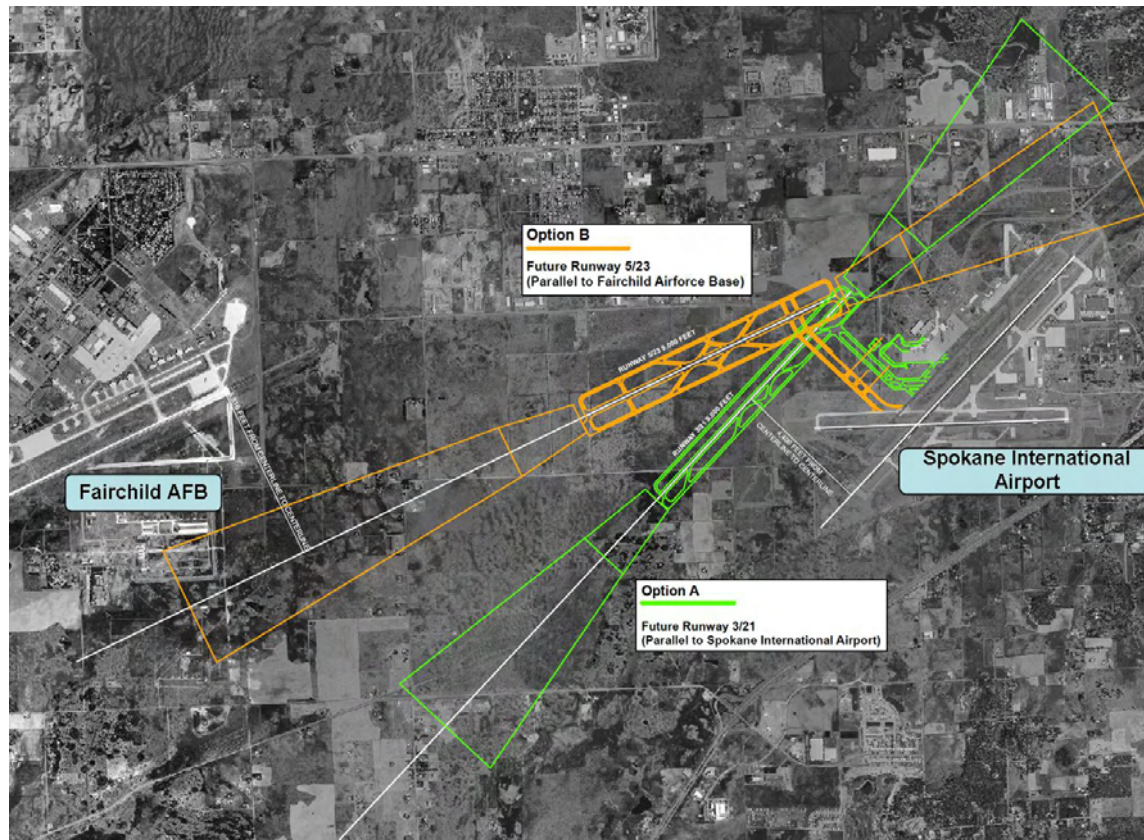


Figure 2-9. Third Runway Options – Spokane International Airport

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 an 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), Pincroft 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.
- Pincroft 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 Hills Natural Resources Conservation Area (NRCA)	Spokane
Pincroft 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.historyspokane.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 pedicels. (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)