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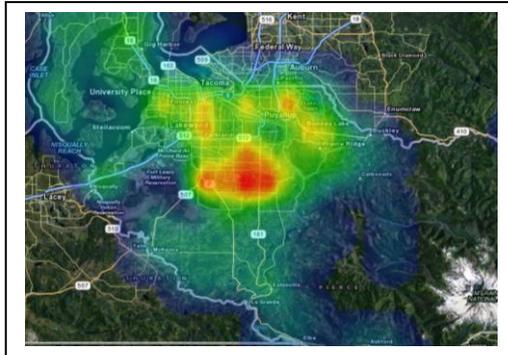
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REGIONAL GROWTH IMPACT ANALYSIS

DRAFT Existing Conditions Technical Memorandum



Date: March 19, 2010
To: Expert Panel Members: Robert Allen, Michael Cade, Ellie Chambers-Grady, Denise Dyer, Ed Galligan, Chris Green, Anita Olszyk, Mark Simonson, Linda Smith, Jenny Thorsell
From: RKG Associates, Inc.
Re: Regional Growth Impact Analysis

A. INTRODUCTION

This section examines the regional economic and demographic implications of installation growth at Joint Base Lewis McChord (JBLM). The primary purpose of this section is to present an evaluation of direct and indirect changes associated with the increase in the number of military, civilian, and contractor personnel, as well as other related changes in the Primary Impact Area (PIA) that includes Pierce County and Thurston County.

In order to evaluate expected impacts associated with base expansion; this section uses two scenarios to identify a possible range of impacts. The first scenario, which is referred to as the "Baseline Growth Scenario," assumes that no changes occur at JBLM and that only natural growth patterns continue to expand into the future. The second scenario is the "JBLM Expansion Scenario" accounts for the projected growth in permanent party military, civilian government employees and federal contractors, as well as future construction impacts.

The use of these two growth scenarios offers a way to isolate the impacts of JBLM expansion versus those driven by natural growth forces. This section does not address impacts to such things as regional housing, educational services, childcare and healthcare. These impacts, and others, are detailed in their own sections in this report.

B. JOINT BASE MISSION

In 1981, Fort Lewis became home to I Corps. This senior headquarters is involved in the operation and training of active, reserve, and National Guard units from Alaska to Alabama, and from Pennsylvania to Puerto Rico. The principal Fort Lewis maneuver units are the 1st Brigade, 25th Infantry Division and the 3rd Brigade, 2nd Infantry Division. It is also home to the 593rd Corps Support Group, the 555th Engineer Group, the 1st MP Brigade (Provisional), the I Corps NCO Academy, Headquarters, Fourth ROTC Region, the 1st Personnel Support Group, 1st Special Forces Group (Airborne), 2d Battalion (Ranger), 75th Infantry, and Headquarters, 5th Army (West).

Fort Lewis is contiguous to McChord Air Force Base, the home of the C-17 transport fleet. McChord Air Force Base is the home of Combat Airlift. Team McChord has flown continuous combat airlift every day since October 2001, providing airlift and aero medical evacuation in support of Operations Iraqi and Enduring Freedom and other contingencies around the world. Adjacent also to Ft. Lewis is the headquarters of the Washington National Guard, Camp Murray, and the multi-purpose American Lake Veterans Hospital.¹

On Feb. 1, 2010, Fort Lewis and McChord Air Force Base became Joint Base Lewis-McChord (JBLM) under the command of BLM Commander, Army Col. Thomas H. Brittain. JBLM is one of 12 joint bases worldwide. On that day, JBLM reached its initial operational capability, meaning the installation support functions at Fort Lewis and McChord Air Force Base began a phased consolidation to Army management under the Joint Base Garrison. The process will be complete on Oct. 1, 2010, when JBLM reaches its full operational capability and all installation support functions have transferred. The mission at Joint Base Lewis McChord includes the following mission support commands and supported organizations and units.

I CORPS MISSION SUPPORT COMMANDS (MSCs)

<p>I CORPS MISSION SUPPORT COMMANDS (MSCs) 3rd Brigade, 2nd Infantry Division Stryker Brigade Combat Team (SBCT)</p> <ul style="list-style-type: none"> • 1st Battalion, 23rd Infantry Regiment • 1st Battalion, 37th Field Artillery • 1st Squadron, 14th Cavalry • 2nd Battalion, 3rd Infantry Regiment • 5th Battalion, 20th Infantry Regiment • 18th Engineer Company • 209 Military Intelligence Battalion • 296th Brigade Support Battalion • 334th Signal Company • Company C, 52nd Infantry Regiment (Anti-Tank) <p>4th Brigade, 2nd Infantry Division Stryker Brigade Combat Team</p> <ul style="list-style-type: none"> • 1st Battalion, 38th Infantry Regiment • 2nd Squadron, 1st Cavalry • 2nd Battalion, 12th Field Artillery • 2nd Battalion, 23rd Infantry Regiment • 4th Battalion, 9th Infantry Regiment • 202nd Brigade Support Battalion <p>4th Squadron, 6th Air Cavalry 5th Brigade, 2nd Infantry Division</p>	<p>51st MP Detachment 67th MP Company 759th MP Battalion Regional Corrections Facility 51st Signal Battalion 62nd Medical Brigade</p> <ul style="list-style-type: none"> • Brigade Staff • HHC • 47th Combat Support Hospital <p>Professional Officer Filler System (PROFIS)</p> <ul style="list-style-type: none"> • 56th MMB <p>98th Medical Det.(Combat Stress Control) 102d Med. Det. (Forward Surgical Team) 153d Med. Det. (Blood Support) 218th Med. Det. (Veterinary Support) 227th Med. Det. (Preventative Medicine) 250th Med. Det. (Fwd Surgical Team, AB) 514th Med Det. (Ground Ambulance) 520th Medical Det. (Area Support) 547th Medical Det. (Area Support) 551st Medical Det. (Logistics) 673d Medical Det. (Dental Surgery) 758th Medical Det. (Forward Surgical Team) 201st Battlefield Surveillance Brigade</p> <ul style="list-style-type: none"> • 502nd Military Intelligence Battalion
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¹ Joint Base Lewis McChord Growth Coordination website: www.jblm-growth.com.

Stryker Brigade Combat Team

- 1st Battalion, 17th Infantry Regiment
- 2nd Battalion, 1st Infantry Regiment
- 3rd Battalion, 17th Field Artillery Regiment
- 4th Battalion, 23rd Infantry Regiment
- 8th Squadron, 1st Cavalry Regiment
- 402nd Brigade Support Battalion
- » Brigade Special Troops Battalion

17th Fires Brigade

- HHB
- 1st Battalion, 94th Field Artillery Regiment
- 1st Battalion, 377th FA Regiment
- 5th Battalion, 3rd FA Regiment
- 256th Signal Company
- 308th Brigade Support Battalion
- Co. F, 56th FA Regiment (Target Acquisition Batt.)
- 42nd Military Police Brigade
- HHC
- 504th MP Battalion

51st MP Company

66th MP Company

170th MP Company

571st MP Company

- 508th MP Battalion

- 38 Long Range Surveillance Company
- 63 Network Support Company
- 109 Military Intelligence Battalion
- 602 Forward Support Company

311th Corps Support Command (COSCOM)

- 304th Material Management Center

555 Engineer Brigade

- 3rd Explosive Ordnance Disposal Battalion (AKO Required)

» 5th Battalion, 5th Air Defense Artillery Regiment

- 14th Engineer Battalion
- 23rd Chemical Battalion
- 110 Chemical Battalion
- 864th Engineer Battalion

593rd Sustainment Brigade

- 9th Finance Management Company
- 57th Transportation Battalion
- 80th Ordnance Battalion
- 593rd Special Troops Battalion

JBLM SUPPORTED ORGANIZATIONS / UNITS

1st Air Support Operations Group

- 5th Air Support Operations Squadron
- 1st Weather Squadron

1st Special Forces Group

2nd Battalion, 75th Ranger Regiment

(Special Operations Command)

- 4th Battalion, 160th Special Operations Aviation Regiment (SOAR)

6th Military Police Group

(Criminal Investigation Command)

- 22 Military Police Battalion

8th Brigade Reserve Officers' Training Corps (ROTC)

22nd Special Tactics Squadron

191st Infantry Brigade

- 1/356th Logistics Support Battalion
- 1/357 Infantry Battalion
- 1/364 Combat Service & Support Battalion
- 2/357 Infantry Battalion
- 2/364 Combat Service & Support Battalion
- 2/358 Armor Battalion
- 3/358 Field Artillery Battalion
- 3/364 Engineer Battalion

- 262nd Information Warfare Aggressor Squadron
- 361st Recruiting Squadron

404th Army Field Support Brigade

446th Airlift Wing

Center for Health Promotion and Preventive Medicine-West (CHPPM-W)

Madigan Army Medical Center (MAMC)

Departments, Divisions & Services

Warrior Transition Battalion

Western Air Defense Sector (WADS)

Western Region Medical Command

- Strategic Communications Division
- G-1
- G-3 (Operations)
- National Guard Advisor
- Regional Retention
- Warrior Transition Office

Source: Joint Base Lewis McChord website: <http://www.lewis.army.mil/>

C. JOINT BASE LEWIS-McCHORD EXPANSION

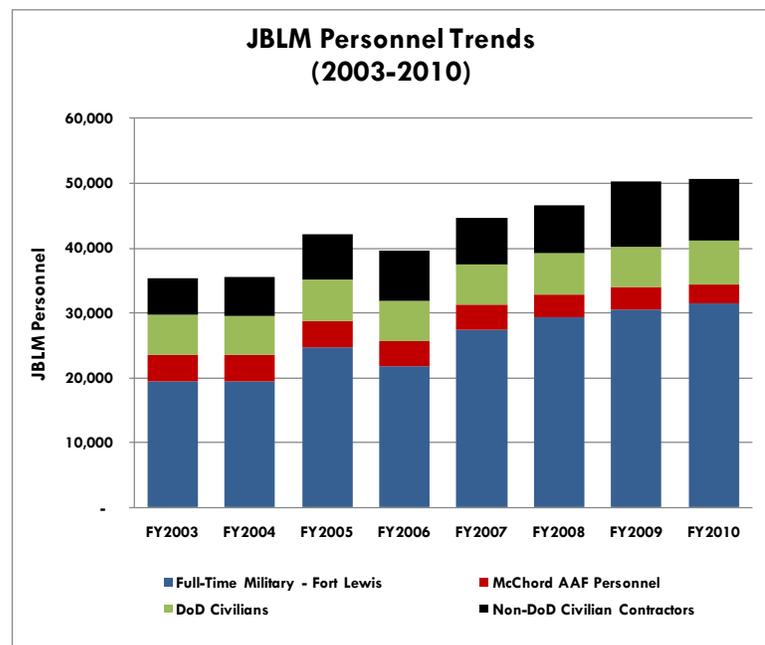
In 2005, the Department of the Army announced that the military missions at Fort Lewis and McChord Air Force Base would combine and expand significantly due to three Department of Defense initiatives: the transformation of units in the Army to Modular Forces (AMF), the implementation of 2005 Base Realignment and Closure (BRAC) decisions, and stationing changes resulting from the Integrated Global Presence and Basing Strategy (IGPBS). When combined into Joint Base Lewis-McChord on February 1, 2010, the base became the largest military installation on the west coast of the United States with more than 415,000 acres, including Yakima Training Center in central Washington. It will support an on-base population and in neighboring communities of more than 130,000 people including military personnel, families, civilian and contract employees, and retirees and their families.²

1. JBLM Personnel Trends

For federal FY 2003, Ft. Lewis had 19,476 (55%) full-time military, McChord AFB had 4,007 (11%) full-time military, and there were another 6,249 (18%) DoD civilian workers and 5,599 (16%) non-DoD federal contract employees (Figure 1/Table 1). The total staffing levels in 2003 equalled 35,331.

During the seven year period from 2003, the total employment at JBLM rose from 35,331 to 50,587, for an increase of 43.2%. The most significant growth has occurred in the number of full-time military at Fort Lewis, which have accounted for 78% of the 15,256 new personnel at the Joint Base. The number of new DoD civilians and non-DoD contract employees increased by roughly 4,259 personnel during this period, and experienced the fastest growth (66.7%) since 2003. Staffing levels at McChord AFB actually declined by 964 personnel during the 2003-2010 period.

Figure 1



Source: Plans, Analysis and Integrations Office at Joint Base Lewis-McChord, 2010

In addition to this direct employment, Joint Base personnel have thousands of dependents including spouses, children, and other family members. In FY2003, 36,399 military family members were associated with 23,383 direct military personnel, for a ratio of 1.55 dependents for every direct military at JBLM. RKG estimates that another 19,801 family members were associated with 11,848 civilian employees. By FY2010, the number of military family members had increased 46.8% to 53,444 on 34,480 direct military personnel (Table 1).

² Ibid.

Table 1

**Joint Base Lewis-McChord
Direct Personnel and Dependent Population Trends
FY2003-FY2010**

Category	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY03-FY10 CHANGE
Full-Time Military - Fort Lewis	19,476	19,497	24,754	21,725	27,494	29,316	30,426	31,437	11,961
McChord AAF Personnel	4,007	4,007	4,007	4,007	3,750	3,483	3,637	3,043	-964
DoD Civilians	6,249	6,100	6,419	6,210	6,327	6,464	6,233	6,773	524
Non-DoD Civilian Contractors	5,599	6,049	6,893	7,676	7,170	7,255	10,056	9,334	3,735
Subtotal - Direct Employment	35,331	35,653	42,073	39,618	44,741	46,518	50,352	50,587	15,256
School Aged Children of Military	11,366	11,376	13,920	12,454	15,122	15,875	16,486	16,688	5,323
School Aged Children of DoD Civilians	3,025	2,952	3,107	3,006	3,062	3,129	3,017	3,278	254
School Aged Children of Non-DoD Civilians	2,710	2,928	3,336	3,715	3,470	3,511	4,867	4,518	1,808
Military Family Members	36,399	36,431	44,580	39,885	48,428	50,838	52,798	53,444	17,045
Civilian & Contractor Family Members	19,801	20,402	22,440	23,563	22,810	23,174	27,977	27,470	7,669
TOTAL	91,530	92,486	109,093	103,066	115,979	120,531	131,127	131,501	39,970
NET ANNUAL CHANGE									
Full-Time Military (Army & Navy)	--	21	5257	(3029)	5512	1555	1264	417	10997
DoD Civilians	--	(149)	319	(209)	117	137	(231)	540	524
Non-DoD Civilian Contractors	--	450	844	783	(506)	85	2801	(722)	3735
Subtotal - Direct Employment	--	322	6420	(2455)	5123	1777	3834	235	15256
School Aged Children of Military	--	10	2544	(1466)	2668	753	612	202	5323
School Aged Children of DoD Civilians	--	(72)	154	(101)	57	66	(112)	261	254
School Aged Children of Non-DoD Civilians	--	218	408	379	(245)	41	1356	(349)	1808
Military Family Members	--	33	8148	(4695)	8544	2410	1959	646	17045
Civilian & Contractor Family Members	--	602	2038	1123	(753)	365	4803	(508)	7669
TOTAL	--	956	16606	(6027)	12913	4552	10596	374	39970
NET ANNUAL PERCENTAGE CHANGE									
Full-Time Military (Army & Navy)	--	0.1%	22.4%	-10.5%	21.4%	5.0%	3.9%	1.2%	46.8%
DoD Civilians	--	-2.4%	5.2%	-3.3%	1.9%	2.2%	-3.6%	8.7%	8.4%
Non-DoD Civilian Contractors	--	8.0%	14.0%	11.4%	-6.6%	1.2%	38.6%	-7.2%	66.7%
Subtotal - Direct Employment	--	0.9%	18.0%	-5.8%	12.9%	4.0%	8.2%	0.5%	43.2%
School Aged Children of Military	--	0.1%	22.4%	-10.5%	21.4%	5.0%	3.9%	1.2%	46.8%
School Aged Children of DoD Civilians	--	-2.4%	5.2%	-3.3%	1.9%	2.2%	-3.6%	8.7%	8.4%
School Aged Children of Non-DoD Civilians	--	8.0%	14.0%	11.4%	-6.6%	1.2%	38.6%	-7.2%	66.7%
Military Family Members	--	0.1%	22.4%	-10.5%	21.4%	5.0%	3.9%	1.2%	46.8%
Civilian & Contractor Family Members	--	3.0%	10.0%	5.0%	-3.2%	1.6%	20.7%	-1.8%	38.7%
TOTAL	--	1.0%	18.0%	-5.5%	12.5%	3.9%	8.8%	0.3%	43.7%

Source: Plans, Analysis and Integrations Office at Joint Base Lewis-McChord, 2010 & RKG Associates, Inc, 2010

Note: FY2010 figures represent current population

- Full-Time Authorizations including PCS Student and FTE Other Services (EXCLUDES TDY, Transient and Rotational)
- Full-Time USD, Local National, PCS Students, NAF, AAFES, and Other Civilians (EXCLUDES Transient and Rotational)
- Other Civilians (Compo Z) not designated as NAF or USD Civilians (EXCLUDES Transient and Rotational Loads)
- Full-Time Military multiplied by 0.484 (0.48 Married Military)
- DOD Civilians multiplied by 0.484 School Aged Dependents per Civilian
- Non-DOD Civilians multiplied by 0.484 School Aged Dependents per Civilian
- Full-Time Military multiplied by 1.55 Family Members per Military
- Civilian Government personnel multiplied by 1.52 dependents based on RKG previous research
- Federal Contractor personnel multiplied by 1.84 dependents based on RKG previous research

D. STUDY AREA POPULATION TRENDS (1980-2010)

RKG Associates analyzed population growth trends in the region to provide a foundation for coordinating growth over the next twenty years. The analysis focuses on trends in specific cities, towns and census-designated places (CDPs) located closest to Joint Base Lewis-McChord to detail the concentrations of

population growth (or declines) occurring near the installation. Data for this analysis was obtained from DemographicsNow, a private data vendor that compiles and analyzes housing, socio-economic and demographic data. It should be noted that data from 1980, 1990 and 2000 are U.S. Census reported figures, while data from 2009 are estimates provided by DemographicsNow.

1. Pierce County

According to estimates provided by DemographicsNow, the current population of Pierce County slightly exceeds 808,000 people. The population in Pierce County has increased by 67%, or 2.2% annually, since 1980. Approximately 25% of this population exists in the City of Tacoma, which is considered the employment center of the County (Table 2). Other established areas near Joint Base Lewis-McChord also comprise larger populations, such as Lakewood (59,150 pop.) and University Place (31,800 pop.). In addition to proximity to employment, these areas north of JBLM maintain relatively easy access to both the military installation and Interstate 5, which provides a direct connection to Seattle.

Table 2
Population Trends; Pierce County
1980-2009

Area	Population Trends				Net Change in Population			Total Change	Percent Change in Population			Total Change
	1980	1990	2000	2009	'80-'90	'90-'00	'00-'09	'80-'09	'80-'90	'90-'00	'00-'09	'80-'09
Pierce County	485,478	586,498	700,820	808,298	101,020	114,322	107,478	322,820	20.8%	19.5%	15.3%	66.5%
Tacoma	159,826	178,290	194,082	204,120	18,464	15,792	10,038	44,294	11.6%	8.9%	5.2%	27.7%
Lakewood	52,089	55,613	57,984	59,156	3,524	2,371	1,172	7,067	6.8%	4.3%	2.0%	13.6%
South Hill	13,173	22,006	31,797	48,382	8,833	9,791	16,585	35,209	67.1%	44.5%	52.2%	267.3%
Puyallup	20,122	26,886	33,066	37,313	6,764	6,180	4,247	17,191	33.6%	23.0%	12.8%	85.4%
University Place	19,757	26,218	29,626	31,809	6,461	3,408	2,183	12,052	32.7%	13.0%	7.4%	61.0%
Parkland	20,170	21,557	24,314	26,584	1,387	2,757	2,270	6,414	6.9%	12.8%	9.3%	31.8%
Spanaway	13,325	18,238	21,217	26,346	4,913	2,979	5,129	13,021	36.9%	16.3%	24.2%	97.7%
Elk Plain	5,797	9,711	15,661	17,205	3,914	5,950	1,544	11,408	67.5%	61.3%	9.9%	196.8%
Graham	3,398	5,476	8,801	10,442	2,078	3,325	1,641	7,044	61.2%	60.7%	18.6%	207.3%
Waller	8,399	8,446	9,227	9,927	47	781	700	1,528	0.6%	9.2%	7.6%	18.2%
Frederickson	1,475	3,093	6,103	9,324	1,618	3,010	3,221	7,849	109.7%	97.3%	52.8%	532.1%
Midland	3,515	5,177	7,095	8,374	1,662	1,918	1,279	4,859	47.3%	37.0%	18.0%	138.2%
Summit	6,098	6,109	7,951	8,373	11	1,842	422	2,275	0.2%	30.2%	5.3%	37.3%
Fircrest	5,875	5,987	6,052	7,097	112	65	1,045	1,222	1.9%	1.1%	17.3%	20.8%
DuPont	913	886	2,374	7,088	(27)	1,488	4,714	6,175	-3.0%	167.9%	198.6%	676.3%
Steilacoom	4,894	5,427	5,946	6,306	533	519	360	1,412	10.9%	9.6%	6.1%	28.9%
Roy	229	263	235	357	34	(28)	122	128	14.8%	-10.6%	51.9%	55.9%
Rest of County	146,423	187,115	239,289	290,095	41,864	46,356	46,634	134,854	28.6%	24.8%	19.5%	92.1%

Source: Washington Office of Financial Management (OFM) & RKG Associates, Inc., 2010

This growth has been consistent over the past 30 years as the County has experienced growth of between 100,000 and 115,000 persons in each of the past three decades. While population growth has been substantial in the County, some areas have seen growth rates that far surpass the County rate. Of the areas with a population above 25,000, South Hill (48,400 persons) has experienced the strongest growth rate (267%) since 1980. Most of the growth in South Hill has occurred during the most recent decade as the population increased by approximately 16,600 persons compared with 18,600 over the previous two decades. County officials and local real estate professionals claim that much of this growth can be attributed to people employed in King County to the north searching for more affordable housing as home prices escalated rapidly in the Seattle metropolitan area during the first half of the most recent decade.

Other areas that have experienced substantial growth in population over the last decade include those considered popular among military personnel. DuPont and Spanaway are each located close to main gates at JBLM and have seen large increases in housing development recently. More than half of the

population (67%), or 4,700 persons, in DuPont have been added since 2000, while Spanaway, which is located along the eastern edge of JBLM, has experienced an increase of 5,100 persons. The population growth in these areas is likely in part due to the influx of new personnel at the installation and an inadequate amount of on-post housing to accommodate this growth. According to recent reports, approximately 24% of the military population is housed on-post, while the U.S. Army generally targets 30% for each installation.

2. Thurston County

According to Census and the state Office of Financial Management, population in Thurston County has increased by 101% since 1980 (Table 3). Population growth has been robust during the past three decades, with an average of 41,000 new residents added each decade, resulting in an average annual growth rate of 3.5%. The most significant growth occurred in the 1990s when population expanded by 46,118 persons (28.6%). Anecdotally, local Realtors report that Thurston County’s growth has been driven by regional homebuyers seeking more affordable housing compared to that in Pierce County and King County near the Seattle metropolitan area. As with areas in the northern portions of Pierce County, larger cities in Thurston also have quick access to Interstate 5 connecting county residents to major employment centers outside of Thurston County.

**Table 3
Population Trends; Thurston County
1980-2009**

Area					Net Change in Population			Total Change	Percent Change in Population			Total Change
	1980	1990	2000	2009	'80-'90	'90-'00	'00-'09	'80-'09	'80-'90	'90-'00	'00-'09	'80-'09
Thurston County	124,275	161,237	207,355	249,800	36,962	46,118	42,445	125,525	29.7%	28.6%	20.5%	101.0%
Olympia	28,567	34,353	42,136	45,250	5,786	7,783	3,114	16,683	20.3%	22.7%	7.4%	58.4%
Lacey	19,434	23,431	32,962	39,250	3,997	9,531	6,288	19,816	20.6%	40.7%	19.1%	102.0%
Tumwater	7,614	10,218	12,868	16,710	2,604	2,650	3,842	9,096	34.2%	25.9%	29.9%	119.5%
Yelm	1,636	2,249	3,445	5,625	613	1,196	2,180	3,989	37.5%	53.2%	63.3%	243.8%
Rainier	733	913	1,334	1,755	180	421	421	1,022	24.6%	46.1%	31.6%	139.4%
Rest of County	66,291	90,073	114,610	141,210	23,782	24,537	26,600	74,919	35.9%	27.2%	23.2%	113.0%

Source: U.S. Census Bureau, 1980-2000 and Office of Financial Management, 2009

The City of Olympia had the largest estimated population (45,250 pop.) in Thurston County in 2009. As the State Capitol, Olympia is the employment center of the County. Despite its rapid growth rate during the 1980-2009 period, Olympia experienced the slowest growth rate among communities in the eastern part of the County. In fact, the second largest city, Lacey (39,250 pop.), has doubled in population since 1980, adding more new residents (19,816) than the larger Capitol City. The growth in Lacey can be in part attributed to less expensive land and housing compared with Olympia and the annexation of the Hawks Prairie area, which has experienced substantial housing growth.

Most local real estate professionals interviewed by RKG Associates report the cities of Lacey and Yelm are becoming popular housing destinations for military personnel. For instance, newer neighborhoods in Lacey, such as those along Willamette Drive in Hawks Prairie and Horizon Point in the southern portion of the City, have attracted many residents stationed at JBLM and have contributed to population growth. In Yelm, the population is comparatively small at 4,900 residents (2009); however annual growth rates the past decade have averaged 7%. In addition, the growth figures attributable to Yelm do not include the areas in the immediate vicinity that are also experiencing rapid population change. One of these areas is the Clearwood community that is located southeast of Yelm, which was originally platted at a vacation home community, but has seen strong single family home development over the past decade. Realtors report that this community is too far from JBLM for many military personnel to locate.

E. DISTRIBUTION OF REGIONAL GROWTH

1. Vision 2040 Regional Growth Management Plan

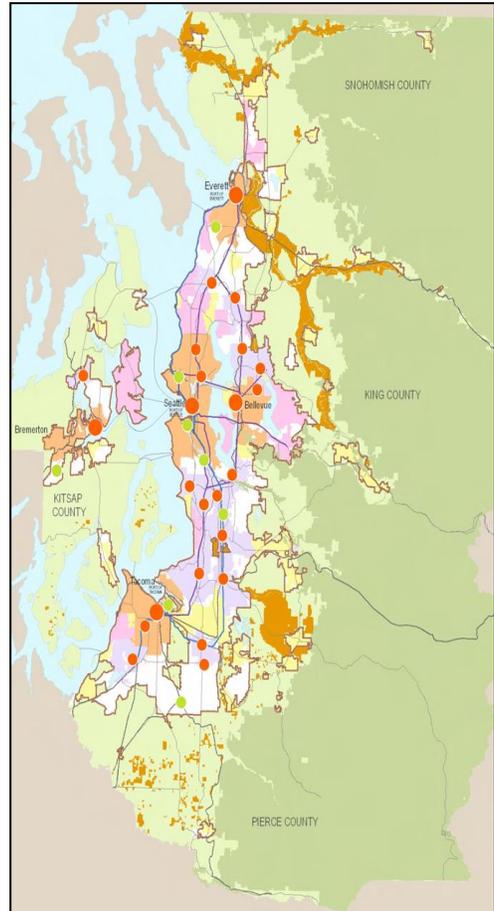
As part of the Puget Sound Regional Council's (PSRC) planning region and service area, Pierce County's growth management planning and growth allocations must be consistent with PSRC's regional growth strategy entitled, Vision 2040, which was adopted in April 2008 by the PSRC general assembly. However, as the Puget Sound Region's Metropolitan Planning Organization (MPO), the PSRC controls the receipt and allocation of state and federal transportation dollars. As such, eligibility for future funding requires member communities to comply with the region's growth management plan. Thurston County is not within the PSRC region and is not bound by the provisions and requirements of Vision 2040, but must adhere to state's Growth Management Act provisions.

The principles behind VISION 2040 provide specific numeric guidance to achieve a development pattern with fewer environmental impacts and a more compact urban form. VISION 2040 provides guidance for the distribution of growth to regional geographies, which are defined by the idea that different types of cities and unincorporated areas will play distinct roles in the region's future. Cities, towns, and neighborhoods of various sizes and character will continue to offer a wide choice of living options.

The region's original growth center concept fits within the regional geographies framework, with centers of different sizes and scales envisioned for all cities (Figure 2). In the Regional Growth Strategy, the region's landscape has been divided into seven types of geographies; six growth receiving zones and the seventh zone consisting of natural resource lands protected from future development. Metropolitan Cities (five cities) and Core Cities (14 cities – including unincorporated Silverdale) include cities that have designated regional growth centers. These two groups of cities are and will be the most intensely urban places in the region. The Larger Cities (13 cities) category groups together the next tier of large cities that have similar amounts of population and employment. The Small Cities (51 cities) category is further subdivided into three types to reflect the wide variety of smaller cities and towns throughout the region, as well as the different roles they will likely play in accommodating forecast growth.

Unincorporated Urban Growth Areas capture a wide variety of urban lands, both lightly and heavily developed. The transformation of these urban lands will be critical to the region's future success. Rural Areas and Natural Resources Lands are categories that describe the different types of unincorporated areas outside the urban growth area, and include very low density housing, working landscapes, and open space. These regional geographies provide a framework for the distribution of the region's forecast growth for the year 2040. The use of these geographies provides more specificity than at the broader county level, yet it does not get too specific at the individual city level. (However, in some instances an

Figure 1 – Growth Management Framework



Source: Vision 2040, PSRC, April 2008

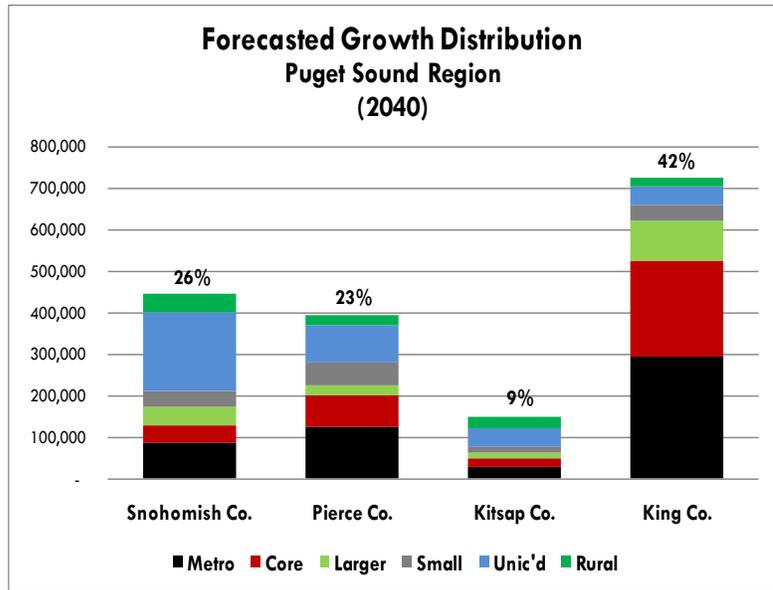
individual city may stand alone within a regional geography category.) This framework provides clearer regional guidance about the roles of different types of cities in accommodating regional growth.³

2. Regional Growth Allocation Targets

Vision 2040 calls for the distribution of forecasted growth throughout the region in accordance with the framework of: (1) metro cities, (2) core cities, (3) larger cities, (4) small cities, (5) unincorporated areas and (6) rural communities. This approach logically gives preference to areas with areas of greater population density and allocates less growth to more rural areas.

The distribution of 1.7 million in new population over the 2000 to 2040 projection period is heavily weighted in King County, which receives 42%. Snohomish received the second largest allocation with 28%, followed by Pierce (23%) and Kitsap County (9%) (Figure 3).

Figure 3



Source: Vision 2040, PSRC, April 2008

3. Pierce County Growth Patterns

Pierce County’s ability to meet the Vision 2040 growth distribution targets is dependent on its success in directing growth in a way that’s consistent with the Vision’s framework principles. Also, the distribution of growth in the Vision 2040 plan is assumed to reflect future growth patterns and rates of growth. This could become problematic for places such as Pierce County that seem to be growing rapidly outside Metro and core cities in unincorporated parts of the county and in smaller towns. One unique aspect of Pierce County is the presence of JBLM, which over the past decade has driven some growth in these lower density parts of the county. An examination of proposed plats and developable lots data from New Home Trends, Inc., indicate that Pierce County (27.3%) is poised to capture a larger share of the region’s single family development than either King (24.9%) or Snohomish (19.1%) Counties over the next 15 to 20 years (Table 4). Much of that development is being positioned by developers to occur in second tier and emerging growth centers and not the central cities. While the joint base population appears to be leveling off, developers have already stated claims on where they believe growth will occur in the future.

The percentage of development plats and lots in each community is a proxy for local capacity to support future growth. While many of the lots depicted in Table 5 have not yet been approved for development, they suggest that future growth pressures on Pierce County over the first half of the Vision 2040 projection period, could actually exceed the long range forecasts; especially in areas outside metro, core, and larger cities. If Thurston and Skagit Counties are removed from the totals shown at the bottom of Table 4, which would then represent the PSRC region, then Pierce’s share of the region’s single and multi-family lot and unit inventory rises from 23.7% to 27.7%. Likewise, King County rises to 47.7% and Snohomish and Kitsap

³ Vision 2040, People – Prosperity – Planet, Puget Sound Regional Council, April 24, 2008, p. 18.

Counties drop to 17.1% and 7.6% respectively. At an average household size of 2.5 persons, Pierce County's 72,525 proposed lots and apartment units translate into an estimated 181,312 new population, or 45% of the Vision 2040 projections. While this may be in line with long range population projections, the pattern of growth may become a bigger challenge for Pierce County as suburban densities move away from the urban cities.

It should be noted that many of the lots tracked by New Home Trends, particularly in certain subdivisions, have been slowed due to bankruptcy, foreclosures, and the deep economic recession. As such, it is difficult to project when these lots will be approved and developed in the future. In the short-term, this could result in some lot shortages in areas as housing demand returns.

Table 4
Puget Sound Regional Housing Inventory (Current and Pipeline Development)
Single Family and Multi-Family Units and Lots
As of 4th Quarter 2009

	Pierce Co.	Thurston Co.	King Co.	Snohomish Co.	Kitsap Co.	Skagit Co.	Total - Puget Sound Region
Single Family Lot Inventory							
Recorded Vacant Lots/Unsold Specs.	8,230	4,008	6,613	5,118	966	1,420	26,355
Lots in the Pipeline w/Preliminary Approval	15,351	6,128	10,048	9,979	6,538	1,077	49,121
Lots in the Pipeline Under Review	5,053	7,683	9,505	4,990	1,097	1,191	29,519
Total Lot Inventory	28,634	17,819	26,166	20,087	8,601	3,688	104,995
Percentage of Regional Lot Inventory							
Recorded Vacant Lots/Unsold Specs.	31.2%	15.2%	25.1%	19.4%	3.7%	5.4%	100.0%
Lots in the Pipeline w/Preliminary Approval	31.3%	12.5%	20.5%	20.3%	13.3%	2.2%	100.0%
Lots in the Pipeline Under Review	17.1%	26.0%	32.2%	16.9%	3.7%	4.0%	100.0%
Share of Regional Lot Inventory	27.3%	17.0%	24.9%	19.1%	8.2%	3.5%	100.0%
Current Real Estate Listings							
Active Resale Listings	5,057	1,549	7,541	3,951	1,524	1,028	20,650
Average Listing Price	\$ 259,000	\$ 250,000	\$ 419,950	\$ 309,950	\$ 299,900	\$ 299,000	\$ 317,025
Average Days on Market	75	81	65	68	79	101	78.2
Months of Resale Active Listings	8.9	8.9	6.9	9.6	5.1	14.7	---
Multi-Family Unit Inventory (Apartments & Condos)							
Total Units on the Market (1)	1,480	292	5,393	722	301	97	8,285
Total Units in the Pipeline	13,777	4,342	44,046	6,358	3,081	624	72,228
Total Unit Inventory	15,257	4,634	49,439	7,080	3,382	721	80,513
Percentage of Regional Lot Inventory							
Total Units on the Market (1)	17.9%	3.5%	65.1%	8.7%	3.6%	1.2%	100.0%
Total Units in the Pipeline	19.1%	6.0%	61.0%	8.8%	4.3%	0.9%	100.0%
Share of Regional Inventory	18.9%	5.8%	61.4%	8.8%	4.2%	0.9%	100.0%
Inventory Depth							
Months of Inventory of Marketed Units	70.2	109.5	38.2	28.2	38.8	50.6	---
Months of Inventory of Pipeline Units	163.1	111.4	73.8	100.7	283.9	99.8	---
Total Single Family & Multi-Family Inventory							
Units Currently Marketed for Sale	9,710	4,300	12,006	5,840	1,267	1,517	34,640
Units in the Pipeline	34,181	18,153	63,599	21,327	10,716	2,892	150,868
Total Units - Marketed and Pipeline	43,891	22,453	75,605	27,167	11,983	4,409	185,508
Percentage of Regional Inventory	23.7%	12.1%	40.8%	14.6%	6.5%	2.4%	100.0%

Source: New Home Trends, Inc. 3rd Quarter 2009

Note: (1) Includes units that are being marketed for sale or taking reservations

F. EMPLOYMENT AND ESTABLISHMENT TRENDS

Employment and establishment trends were analyzed to identify the types of industries that have experienced growth in the most recent decade. The employment and establishment data was collected

from the U.S. Census Bureau's County Business Patterns (CBP). The County Business Pattern database is an annual data series that provides employment and establishment growth trends data by industry.

In order to identify growth trends for the study area, RKG collected data for the years 1998 and 2007. In 1998, the Census Bureau switched from the Standard Industrial Classification (SIC) system to the North American Industrial Classification System (NAICS). As such, data prior to 1998 date is not compatible with the most recent information. The consultant collected the employment and establishment data for both Pierce and Thurston counties.

It is important to note that some of employment and establishment data are suppressed by the Census Bureau to protect the confidentiality of individual companies. In these cases, RKG prepared employment estimates by using averages that fell into the employment ranges provided by the Census Bureau. The information presented in this analysis is intended to be a representation of market trends, not an exact count. Though there are some limitations to the data, it provides a good sense of what types of industries have been gaining or losing employment and establishments in the recent past.

1. Region's Largest Employers

The top employers in Thurston County are largely healthcare organizations and service related industries. More specifically, the five largest employers in the County include St. Peter's Hospital (2,400 employees) and Capital Medical Center (837 employees). These employers are followed by the Red Wind Casino (626 employees) and Lucky Eagle Casino (550 employees), which together employ 1,376 people. Other top employers include Great Wolf Lodge, which employs 575 people and several large retailers including Fred Meyer Marketplace (470 employees), Costco Wholesale Corporation (461 employees) and Wal-Mart (450 employees).

Pierce County has a very large and expanding government employment base. According to data provided by the Economic Development Board of Tacoma-Pierce County, the U.S. Army Fort Lewis was the County's largest employer in 2009 at an estimated 42,231 military and civilian personnel (Table 5). With an additional 10,301 personnel at McChord AFB, the total military and civilian employment at JBLM equals more than 52,500. Current estimates prepared by the JBLM Plans, Analysis & Integration Office, indicate that total personnel are closer to 50,500. Over the next six years, JBLM is projected to add 2,052 new personnel. Pierce County is a regional health service center with several large hospitals including: Multicare Health System (6,204 employees) and Franciscan Health System (4,406 employees). Madigan Hospital on JBLM employs another 4,000 employees.

Table 5
Thurston County Top Ten Employers

Employer	Type	Employees
St. Peter's Hospital	Health Services	2,400
Capital Medical Center	Health Services	837
Red Wind Casino	Casino	626
Great Wolf Lodge	Hospitality	575
Lucky Eagle Casino	Casino	550
Fred Meyer Marketplace	Retail	470
Costco Wholesale Corporation	Retail	461
Community College	Education	459
Wal-Mart	Retail	450
BHR	Health Services	440

Source: Thurston Economic Development Council and RKG Associates, Inc., 2010

Pierce County Top Ten Employers

Employer	Type	Employees
U.S. Army Fort Lewis (Total Military and Civilian)	Federal Govt. - Military	42,231
Local Public Schools	Education	13,736
U.S. Air Force McChord (Total Military and Civilian)	Federal Govt. - Military	10,301
Washington State Employees	State Govt.	7,889
Multicare Health System	Health Services	6,204
Franciscan Health System	Health Services	4,406
U.S. Army Madigan Hospital	Health Services - Military	4,023
Pierce County Government	County Govt.	3,299
Washington State Higher Education	Education	2,912
WA State National Guard	State Govt. - Military	2,476

Source: Economic Development Board for Tacoma-Pierce County and RKG Associates, Inc., 2010

2. Pierce County Employment Trends

In Pierce County, health care and social assistance (42,945 workers) was the top employment sector in 2007 and accounted for 17.4% of the total employment in the County (Table 6). This economic sector was followed by retail trade (35,745 jobs/14.5% of total employment), and accommodation and food services (25,712 jobs/10.4% of total employment). In addition, construction employment was also prevalent in the County, comprising the fourth largest employment sector in 2007 with 24,169 jobs (9.8%).

Employment growth has been strong in Pierce County, as the county experienced a net increase of 56,638 new jobs, or 29.7%, between 1998 and 2007. This employment growth has been primarily concentrated in the retail and service sector. The retail trade, accommodation and food services, and health care and social assistance sectors alone accounted for 22,934 new jobs, or over 40% of the total net gain in the region. It should be noted that the construction sector also experienced large employment gains (10,540 new jobs) from 1998 to 2007. In particular, specialty trade contractors (e.g., carpenters, electricians, plumbers, etc.) experienced the largest net gain at more than 6,367 new jobs, which is not surprising given the county's strong residential development activity (Table 6). The largest service industries to experience a net gain in employment were administrative and support services (6,171 new jobs) and ambulatory health care services (4,927).

In contrast, much of the County's employment losses have been in the manufacturing sector. Of the Top 10 net employment losing industries, manufacturing accounts for almost 50%. The decline in manufacturing employment is a trend seen throughout the United State, as the economy shifts from a goods producing to a service producing economy. In addition to manufacturing employment declines, the amusement, gambling, and recreation industry experienced a 967 job loss and nursing and residential care facilities experienced a 570 job decline.

Warehousing and storage, and accommodation services were the fastest growing industries. Warehousing and storage employment increased 537% to 2,147 jobs in 2007, while accommodation grew by approximately 276%. Manufacturing industries had the largest percentage loss in employment. Within the manufacturing sector, apparel manufacturing had the largest percentage loss (89% decline) followed by computer and electronic manufacturing (61%). Another industry experiencing large percentage job losses included water transportation, which experienced a decline of approximately 75% (Table 7).

Table 6
Employment Trends By Major Industry Classification
Pierce County; 1998 to 2007

NAICS	DESCRIPTION	Employment		Net Change	% Change
		1998	2007		
	TOTAL - ALL INDUSTRIES	190,567	247,205	56,638	29.7%
11	Forestry, Fishing, Hunting, and Agriculture Support	426	277	(149)	-35.0%
21	Mining	228	288	60	26.3%
22	Utilities	616	586	(30)	-4.9%
23	Construction	13,629	24,169	10,540	77.3%
31	Manufacturing	21,493	19,123	(2,370)	-11.0%
42	Wholesale Trade	10,058	12,024	1,966	19.5%
44	Retail Trade	29,681	35,745	6,064	20.4%
48	Transportation and Warehousing	7,615	12,259	4,644	61.0%
51	Information	2,984	3,688	704	23.6%
52	Finance and Insurance	7,833	12,250	4,417	56.4%
53	Real Estate and Rental and Leasing	4,038	5,682	1,644	40.7%
54	Professional, Scientific, and Technical Services	6,269	9,761	3,492	55.7%
55	Management of Companies and Enterprises	2,865	4,247	1,382	48.2%
56	Administrative and Support and Waste Management Services	8,559	15,225	6,666	77.9%
61	Educational Services	5,675	6,994	1,319	23.2%
62	Health Care and Social Assistance	33,411	42,945	9,534	28.5%
71	Arts, Entertainment, and Recreation	4,020	3,139	(881)	-21.9%
72	Accommodation and Food Services	18,376	25,712	7,336	39.9%
81	Other Services (except Public Administration)	11,150	13,047	1,897	17.0%
95	Auxiliaries (exc corporate, subsidiary & regional mgt)	1,530		(1,530)	-100.0%
99	Unclassified	111	44	(67)	-60.4%

Source: County Business Patterns and RKG Associates, Inc., 2010

Table 7
Employment Trends By Major Industry Classification
Pierce County; 1998 to 2007

NAICS	DESCRIPTION	Employment		Net Change	% Change
		1998	2007		
LARGEST EMPLOYMENT NET GAIN					
238	Specialty Trade Contractors	8,314	14,681	6,367	76.6%
561	Administrative and Support Services	7,753	13,924	6,171	79.6%
621	Ambulatory Health Care Services	9,226	14,153	4,927	53.4%
722	Food Services and Drinking Places	17,490	22,385	4,895	28.0%
541	Professional, Scientific, and Technical Services	6,269	9,761	3,492	55.7%
622	Hospitals	11,178	13,810	2,632	23.5%
237	Heavy and Civil Engineering Construction	1,669	4,290	2,621	157.0%
624	Social Assistance	6,781	9,326	2,545	37.5%
721	Accommodation	886	3,327	2,441	275.5%
524	Insurance Carriers and Related Activities	2,154	4,528	2,374	110.2%
LARGEST EMPLOYMENT NET LOSS					
713	Amusement, Gambling, and Recreation Industries	3,488	2,521	(967)	-27.7%
315	Apparel Manufacturing	898	100	(798)	-88.9%
623	Nursing and Residential Care Facilities	6,226	5,656	(570)	-9.2%
334	Computer and Electronic Product Manufacturing	929	361	(568)	-61.1%
331	Primary Metal Manufacturing	930	416	(514)	-55.3%
321	Wood Product Manufacturing	2,886	2,434	(452)	-15.7%
511	Publishing Industries (except Internet)	1,135	687	(448)	-39.5%
332	Fabricated Metal Product Manufacturing	2,309	1,878	(431)	-18.7%
483	Water Transportation	564	138	(426)	-75.5%
323	Printing and Related Support Activities	1,124	721	(403)	-35.9%
LARGEST EMPLOYMENT PERCENTAGE GAIN					
493	Warehousing and Storage	337	2,147	1,810	537.1%
721	Accommodation	886	3,327	2,441	275.5%
237	Heavy and Civil Engineering Construction	1,669	4,290	2,621	157.0%
514	Information & data processing services	293	741	448	152.9%
492	Couriers and Messengers	276	672	396	143.5%
524	Insurance Carriers and Related Activities	2,154	4,528	2,374	110.2%
488	Support Activities for Transportation	967	1,862	895	92.6%
485	Transit and Ground Passenger Transportation	389	748	359	92.3%
523	Securities, Commodity Contracts, and Other Financial I	1,574	2,904	1,330	84.5%
443	Electronics and Appliance Stores	622	1,127	505	81.2%
LARGEST EMPLOYMENT PERCENTAGE LOSS					
315	Apparel Manufacturing	898	100	(798)	-88.9%
483	Water Transportation	564	138	(426)	-75.5%
334	Computer and Electronic Product Manufacturing	929	361	(568)	-61.1%
331	Primary Metal Manufacturing	930	416	(514)	-55.3%
511	Publishing Industries (except Internet)	1,135	687	(448)	-39.5%
323	Printing and Related Support Activities	1,124	721	(403)	-35.9%
713	Amusement, Gambling, and Recreation Industries	3,488	2,521	(967)	-27.7%
333	Machinery Manufacturing	870	685	(185)	-21.3%
322	Paper Manufacturing	1,306	1,049	(257)	-19.7%
332	Fabricated Metal Product Manufacturing	2,309	1,878	(431)	-18.7%

Source: County Business Patterns and RKG Associates, Inc., 2010

3. Pierce County Establishment Trends

Pierce County experienced a fast percent growth in establishments (17.4%) from 1998 to 2007 (Table 8). However, establishment growth was slower than employment growth (29.7%), indicating existing companies are expanding or a few large companies are locating to the region. The top five sectors, in terms of number of businesses, were very similar to the top employment sectors. Construction had the largest amount of businesses (2,901 businesses) followed by Accommodation and Food Services (1,598 businesses) and Real Estate and Rental Leasing (1,436 businesses).

Changes in establishments among the various 3-digit industries have varied within the region. Special trade contractors (535 new businesses) experienced the largest net gain during the study period (Table 9). Real Estate also experienced a large net gain, (343 new businesses). food services and drinking places also showed a comparatively large increase in establishments (341 new businesses).

The fastest growing establishments were in securities, commodity contracts, and other financial investments (67% establishment growth) and heavy and civil engineering construction (64.4% establishment growth). The largest percentage losses occurred in Gas Stations (16.6% establishment decline) and furniture and home furnishing stores (11.9% establishment decline). Merchant wholesalers of durable goods experienced the largest net loss of businesses (47 establishment decline) followed by gas stations (34 establishment decline).

Table 8
Establishment Trends By Major Industry Classification
Pierce County; 1998 to 2007

NAICS	DESCRIPTION	Establishments		Net Change	% Change
		1998	2007		
	TOTAL - ALL INDUSTRIES	15,257	17,913	2,656	17.4%
11	Forestry, Fishing, Hunting, and Agriculture Support	97	76	(21)	-21.6%
21	Mining	10	12	2	20.0%
22	Utilities	38	24	(14)	-36.8%
23	Construction	2,203	2,901	698	31.7%
31	Manufacturing	690	665	(25)	-3.6%
42	Wholesale Trade	794	798	4	0.5%
44	Retail Trade	2,278	2,311	33	1.4%
48	Transportation and Warehousing	438	599	161	36.8%
51	Information	143	184	41	28.7%
52	Finance and Insurance	828	1,105	277	33.5%
53	Real Estate and Rental and Leasing	752	1,098	346	46.0%
54	Professional, Scientific, and Technical Services	1,116	1,415	299	26.8%
55	Management of Companies and Enterprises	60	74	14	23.3%
56	Administrative and Support and Waste Management Services	779	948	169	21.7%
61	Educational Services	135	200	65	48.1%
62	Health Care and Social Assistance	1,715	1,885	170	9.9%
71	Arts, Entertainment, and Recreation	193	228	35	18.1%
72	Accommodation and Food Services	1,234	1,598	364	29.5%
81	Other Services (except Public Administration)	1,572	1,762	190	12.1%
95	Auxiliaries (exc corporate, subsidiary & regional mgt)	35		(35)	-100.0%
99	Unclassified	147	30	(117)	-79.6%

terns and RKG Associates, Inc., 2010

Table 9
Largest Establishment Shifts
Pierce County; 1998 to 2007

NAICS	DESCRIPTION	Establishments			
		1998	2007	Net Change	% Change
LARGEST ESTABLISHMENT NET GAIN					
238	Specialty Trade Contractors	1,323	1,858	535	40.4%
531	Real Estate	599	942	343	57.3%
722	Food Services and Drinking Places	1,155	1,496	341	29.5%
541	Professional, Scientific, and Technical Services	1,116	1,415	299	26.8%
522	Credit Intermediation and Related Activities	401	585	184	45.9%
621	Ambulatory Health Care Services	1,079	1,244	165	15.3%
561	Administrative and Support Services	733	888	155	21.1%
812	Personal and Laundry Services	405	522	117	28.9%
236	Construction of Buildings	776	872	96	12.4%
523	Securities, Commodity Contracts, and Other Financial Investments	117	195	78	66.7%
484	Truck Transportation	260	332	72	27.7%
237	Heavy and Civil Engineering Construction	104	171	67	64.4%
611	Educational Services	135	200	65	48.1%
445	Food and Beverage Stores	298	355	57	19.1%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	585	636	51	8.7%
LARGEST ESTABLISHMENT NET LOSS					
423	Merchant Wholesalers, Durable Goods	549	502	(47)	-8.6%
447	Gasoline Stations	205	171	(34)	-16.6%
453	Miscellaneous Store Retailers	346	313	(33)	-9.5%
623	Nursing and Residential Care Facilities	216	196	(20)	-9.3%
442	Furniture and Home Furnishings Stores	134	118	(16)	-11.9%
424	Merchant Wholesalers, Nondurable Goods	245	231	(14)	-5.7%
451	Sporting Goods, Hobby, Book, and Music Stores	165	156	(9)	-5.5%
532	Rental and Leasing Services	151	151	0	0.0%
448	Clothing and Clothing Accessories Stores	239	239	0	0.0%
LARGEST ESTABLISHMENT PERCENTAGE GAIN					
523	Securities, Commodity Contracts, and Other Financial Investments anc	117	195	78	66.7%
237	Heavy and Civil Engineering Construction	104	171	67	64.4%
531	Real Estate	599	942	343	57.3%
611	Educational Services	135	200	65	48.1%
522	Credit Intermediation and Related Activities	401	585	184	45.9%
238	Specialty Trade Contractors	1,323	1,858	535	40.4%
488	Support Activities for Transportation	99	138	39	39.4%
722	Food Services and Drinking Places	1,155	1,496	341	29.5%
721	Accommodation	79	102	23	29.1%
812	Personal and Laundry Services	405	522	117	28.9%
LARGEST ESTABLISHMENT PERCENTAGE LOSS					
447	Gasoline Stations	205	171	(34)	-16.6%
442	Furniture and Home Furnishings Stores	134	118	(16)	-11.9%
453	Miscellaneous Store Retailers	346	313	(33)	-9.5%
623	Nursing and Residential Care Facilities	216	196	(20)	-9.3%
423	Merchant Wholesalers, Durable Goods	549	502	(47)	-8.6%
424	Merchant Wholesalers, Nondurable Goods	245	231	(14)	-5.7%
451	Sporting Goods, Hobby, Book, and Music Stores	165	156	(9)	-5.5%
532	Rental and Leasing Services	151	151	0	0.0%
448	Clothing and Clothing Accessories Stores	239	239	0	0.0%

Pierce County -Min. 100 Businesses

Source: County Business Patterns and RKG Associates, Inc., 2010

4. Thurston County Employment Trends

Thurston County has a smaller economy than Pierce County, however Thurston experienced faster employment growth from 1998 to 2007 (33.6% growth compared to 29.7% in Pierce County) (Table 10). The State Capital is in Thurston County, which helps to provide a stable employment base. The largest employment sector is retail trade (12,284), which accounts for 18.5% of the total employment in the County. Similar to Pierce County, other large employment sectors include health care and social assistance (11,301 jobs) and accommodation and food services (7,694 jobs).

The industries with the largest net employment gain are all service industries. More specifically, the top 3 largest net gaining industries include: professional, scientific and technical services (2,338 new jobs), food services and drinking places (1,457 new jobs) and social assistance (1,274 new jobs) (Table 11). The fastest growing industries include warehousing and storage (1,828% growth), management of companies and enterprises (362% growth) and motion picture and sound recording industries (298% growth).

In terms of the largest employment losing industries, manufacturing accounts for over 54% of the total job losses. Other subsectors to experience decline include broadcasting and telecommunication (258 job losses) and gas stations (140 job losses). Likewise, the fastest percent decline is in the same subsectors. Wood product manufacturing (73.2% decline), beverage and tobacco product manufacturing (48.8% decline), and broadcasting and telecommunications (31.8% decline) all experienced large percent declines.

Table 10
Employment Trends By Major Industry Classification
Thurston County; 1998 to 2007

NAICS DESCRIPTION	Employment		Net Change	% Change
	1998	2007		
TOTAL - ALL INDUSTRIES	49,668	66,338	16,670	33.6%
11 Forestry, Fishing, Hunting, and Agriculture Support	371	418	47	12.7%
21 Mining	62	68	6	9.7%
22 Utilities	180	165	(15)	-8.3%
23 Construction	3,570	5,064	1,494	41.8%
31 Manufacturing	3,117	3,096	(21)	-0.7%
42 Wholesale Trade	1,853	2,049	196	10.6%
44 Retail Trade	9,262	12,284	3,022	32.6%
48 Transportation and Warehousing	728	1,666	938	128.8%
51 Information	1,378	1,541	163	11.8%
52 Finance and Insurance	2,055	2,876	821	40.0%
53 Real Estate and Rental and Leasing	883	1,239	356	40.3%
54 Professional, Scientific, and Technical Services	2,842	5,180	2,338	82.3%
55 Management of Companies and Enterprises	159	735	576	362.3%
56 Administrative and Support and Waste Management Services	2,095	3,297	1,202	57.4%
61 Educational Services	931	1,329	398	42.7%
62 Health Care and Social Assistance	9,070	11,301	2,231	24.6%
71 Arts, Entertainment, and Recreation	1,533	2,257	724	47.2%
72 Accommodation and Food Services	6,271	7,694	1,423	22.7%
81 Other Services (except Public Administration)	3,033	4,070	1,037	34.2%
95 Auxiliaries (exc corporate, subsidiary & regional mgt)	248		(248)	-100.0%
99 Unclassified	27	9	(18)	-66.7%

terns and RKG Associates, Inc., 2010

Table 11
Largest Employment Shifts
Thurston County; 1998 to 2007

NAICS	DESCRIPTION	Employment		Net Change	% Change
		1998	2007		
LARGEST EMPLOYMENT NET GAIN					
541	Professional, Scientific, and Technical Services	2,842	5,180	2,338	82.3%
722	Food Services and Drinking Places	5,763	7,220	1,457	25.3%
624	Social Assistance	1,040	2,314	1,274	122.5%
561	Administrative and Support Services	1,973	3,049	1,076	54.5%
238	Specialty Trade Contractors	2,013	3,069	1,056	52.5%
452	General Merchandise Stores	1,814	2,673	859	47.4%
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	1,667	2,408	741	44.5%
522	Credit Intermediation and Related Activities	1,350	1,994	644	47.7%
713	Amusement, Gambling, and Recreation Industries	1,467	2,107	640	43.6%
621	Ambulatory Health Care Services	3,925	4,523	598	15.2%
551	Management of Companies and Enterprises	159	735	576	362.3%
444	Building Material and Garden Equipment and Supplies Dealers	914	1,420	506	55.4%
448	Clothing and Clothing Accessories Stores	504	966	462	91.7%
493	Warehousing and Storage	25	482	457	1828.0%
611	Educational Services	931	1,329	398	42.7%
LARGEST EMPLOYMENT NET LOSS					
513	Broadcasting & telecommunications	811	553	(258)	-31.8%
321	Wood Product Manufacturing	317	85	(232)	-73.2%
312	Beverage and Tobacco Product Manufacturing	379	194	(185)	-48.8%
447	Gasoline Stations	660	520	(140)	-21.2%
332	Fabricated Metal Product Manufacturing	487	435	(52)	-10.7%
326	Plastics and Rubber Products Manufacturing	514	473	(41)	-8.0%
721	Accommodation	508	474	(34)	-6.7%
322	Paper Manufacturing	288	263	(25)	-8.7%
221	Utilities	180	165	(15)	-8.3%
113	Forestry and Logging	233	228	(5)	-2.1%
LARGEST EMPLOYMENT PERCENTAGE GAIN					
493	Warehousing and Storage	25	482	457	1828.0%
551	Management of Companies and Enterprises	159	735	576	362.3%
512	Motion Picture and Sound Recording Industries	57	227	170	298.2%
337	Furniture and Related Product Manufacturing	89	283	194	218.0%
514	Information & data processing services	135	351	216	160.0%
339	Miscellaneous Manufacturing	85	206	121	142.4%
624	Social Assistance	1,040	2,314	1,274	122.5%
562	Waste Management and Remediation Services	122	248	126	103.3%
523	Securities, Commodity Contracts, and Other Financial Investments and R	131	263	132	100.8%
237	Heavy and Civil Engineering Construction	236	466	230	97.5%
LARGEST EMPLOYMENT PERCENTAGE LOSS					
321	Wood Product Manufacturing	317	85	(232)	-73.2%
312	Beverage and Tobacco Product Manufacturing	379	194	(185)	-48.8%
513	Broadcasting & telecommunications	811	553	(258)	-31.8%
447	Gasoline Stations	660	520	(140)	-21.2%
332	Fabricated Metal Product Manufacturing	487	435	(52)	-10.7%
322	Paper Manufacturing	288	263	(25)	-8.7%
221	Utilities	180	165	(15)	-8.3%
326	Plastics and Rubber Products Manufacturing	514	473	(41)	-8.0%
721	Accommodation	508	474	(34)	-6.7%
113	Forestry and Logging	233	228	(5)	-2.1%

Source: County Business Patterns and RKG Associates, Inc., 2010

5. Thurston County Establishment Trends

Private establishments in Thurston County experienced growth of 22.2% from 1998 to 2007, however, this rate of growth is slower than the employment growth during the same time period (33.6%). In 2007, construction (911 establishments), retail trade (822 establishments) and health care and social assistance (706 establishments) were the largest business sectors (Table 12).

Similar to employment net gains in Thurston County, professional, scientific, and technical industries also accounted for the largest establishment gain (158 new establishments) in the County (Table 13). Specialty trade contractors (142 new establishments) and ambulatory health care services (114 new establishments) are other subsectors that have experienced large net gains. In terms of losses, only 7 subsectors that had a minimum of 50 businesses have declined in establishments. Merchant wholesalers of durable goods (10 establishment decline) and merchant wholesalers of nondurable goods (9 establishment decline) were the industries that experienced the largest decline in establishments.

Table 12
Establishment Trends By Major Industry Classification
Thurston County; 1998 to 2007

NAICS	DESCRIPTION	Establishments		Net Change	% Change
		1998	2007		
TOTAL - ALL INDUSTRIES		4,960	6,059	1,099	22.2%
11	Forestry, Fishing, Hunting, and Agriculture Support	60	62	2	3.3%
21	Mining	7	5	(2)	-28.6%
22	Utilities	16	10	(6)	-37.5%
23	Construction	751	911	160	21.3%
31	Manufacturing	164	193	29	17.7%
42	Wholesale Trade	202	196	(6)	-3.0%
44	Retail Trade	720	822	102	14.2%
48	Transportation and Warehousing	117	153	36	30.8%
51	Information	76	81	5	6.6%
52	Finance and Insurance	260	379	119	45.8%
53	Real Estate and Rental and Leasing	213	313	100	46.9%
54	Professional, Scientific, and Technical Services	460	618	158	34.3%
55	Management of Companies and Enterprises	16	21	5	31.3%
56	Administrative and Support and Waste Management Services	256	322	66	25.8%
61	Educational Services	59	68	9	15.3%
62	Health Care and Social Assistance	531	706	175	33.0%
71	Arts, Entertainment, and Recreation	80	77	(3)	-3.8%
72	Accommodation and Food Services	400	511	111	27.8%
81	Other Services (except Public Administration)	520	602	82	15.8%
95	Auxiliaries (exc corporate, subsidiary & regional mgt)	9		(9)	-100.0%
99	Unclassified	43	9	(34)	-79.1%

terns and RKG Associates, Inc., 2010

Table 13
Top Industry Establishment Gains and Losses
Thurston County; 1998 to 2007

NAICS DESCRIPTION	Establishments		Net Change	% Change
	1998	2007		
LARGEST ESTABLISHMENT NET GAIN				
541 Professional, Scientific, and Technical Services	460	618	158	34.3%
238 Specialty Trade Contractors	384	526	142	37.0%
621 Ambulatory Health Care Services	372	486	114	30.6%
722 Food Services and Drinking Places	368	476	108	29.3%
531 Real Estate	176	267	91	51.7%
522 Credit Intermediation and Related Activities	116	197	81	69.8%
561 Administrative and Support Services	245	310	65	26.5%
624 Social Assistance	120	172	52	43.3%
812 Personal and Laundry Services	120	160	40	33.3%
445 Food and Beverage Stores	67	107	40	59.7%
LARGEST ESTABLISHMENT NET LOSS				
423 Merchant Wholesalers, Durable Goods	122	112	(10)	-8.2%
424 Merchant Wholesalers, Nondurable Goods	80	71	(9)	-11.3%
447 Gasoline Stations	84	77	(7)	-8.3%
451 Sporting Goods, Hobby, Book, and Music Stores	71	66	(5)	-7.0%
713 Amusement, Gambling, and Recreation Industries	57	55	(2)	-3.5%
453 Miscellaneous Store Retailers	81	80	(1)	-1.2%
513 Broadcasting & telecommunications	37	37	0	0.0%
LARGEST ESTABLISHMENT PERCENTAGE GAIN				
522 Credit Intermediation and Related Activities	116	197	81	69.8%
523 Securities, Commodity Contracts, and Other Financial Investments and Related Activities	35	57	22	62.9%
445 Food and Beverage Stores	67	107	40	59.7%
531 Real Estate	176	267	91	51.7%
624 Social Assistance	120	172	52	43.3%
238 Specialty Trade Contractors	384	526	142	37.0%
541 Professional, Scientific, and Technical Services	460	618	158	34.3%
812 Personal and Laundry Services	120	160	40	33.3%
621 Ambulatory Health Care Services	372	486	114	30.6%
722 Food Services and Drinking Places	368	476	108	29.3%
LARGEST ESTABLISHMENT PERCENTAGE LOSS				
424 Merchant Wholesalers, Nondurable Goods	80	71	(9)	-11.3%
447 Gasoline Stations	84	77	(7)	-8.3%
423 Merchant Wholesalers, Durable Goods	122	112	(10)	-8.2%
451 Sporting Goods, Hobby, Book, and Music Stores	71	66	(5)	-7.0%
713 Amusement, Gambling, and Recreation Industries	57	55	(2)	-3.5%
453 Miscellaneous Store Retailers	81	80	(1)	-1.2%

Thurston County -Min. 50 Businesses

Source: County Business Patterns and RKG Associates, Inc., 2010

G. REGIONAL ECONOMIC COMPETITIVENESS

The data in Table 14 indicates that the region enjoys a number of economic competitive advantages over other parts of the country. Calculating location quotients is one technique for comparing the presence of local industries, in terms of employment and establishment levels, versus the national average for those same industries. Location quotients in excess of 1.0 indicate that the local industry has higher employment or establishments, as a percentage of total employment, than is reflected in the national economy. For example, the presence of forestry and logging establishments in Pierce County are 6.45 times the rate found in the rest of the U.S. economy. This intuitively makes sense since forestry and logging have been a core industry of the Pacific Northwest economy.

The presence of natural resource-based industries is strong in the region. Such industries as: petroleum and coal products, forestry and logging, wood products manufacturing, fishing, hunting and trapping, and furniture manufacturing are well represented in both Pierce and Thurston Counties. In support of the region’s forestry and wood products industry, the region has a strong representation in building construction and specialty trade contractors.

As the larger of the two counties, Pierce County enjoys more competitive industry advantages Thurston County, with 15 industries exceeding the national average for employment. Other Information Services has the highest employment LQ in Pierce County equivalent to 3.4 times the national average. Industries in the Other Information Services include establishments supplying information, storing information, providing access to information, and searching and retrieving information. The main components of the subsector are news syndicates, libraries, and archives.

Table 14
Location Quotients 1.5 or Greater
Pierce County and Thurston County (2007)

NAICS	Economic Subsector	Location Quotients
PIERCE COUNTY EMPLOYMENT		
519	Other Information Services	3.401
324	Petroleum and Coal Products Manufacturing	2.727
321	Wood Product Manufacturing	2.251
484	Truck Transportation	2.203
237	Heavy and Civil Engineering Construction	2.059
114	Fishing, Hunting and Trapping	1.911
624	Social Assistance	1.850
562	Waste Management and Remediation Services	1.787
337	Furniture and Related Product Manufacturing	1.622
238	Specialty Trade Contractors	1.564
493	Warehousing and Storage	1.542
236	Construction of Buildings	1.516
113	Forestry and Logging	1.514
327	Nonmetallic Mineral Product Manufacturing	1.514
523	Securities, Commodity Contracts, and Other Financial Activities	1.504
PIERCE COUNTY ESTABLISHMENTS		
113	Forestry and Logging	6.432
115	Support Activities for Agriculture and Forestry	3.274
713	Amusement, Gambling, and Recreation Industries	2.653
114	Fishing, Hunting and Trapping	2.289
312	Beverage and Tobacco Product Manufacturing	2.259
451	Sporting Goods, Hobby, Book, and Music Stores	2.177
519	Other Information Services	1.962
444	Building Material and Garden Equipment and Supplies Dealers	1.879
443	Electronics and Appliance Stores	1.786
453	Miscellaneous Store Retailers	1.736
624	Social Assistance	1.710
525	Funds, Trusts, and Other Financial Vehicles	1.688
452	General Merchandise Stores	1.677
236	Construction of Buildings	1.662
813	Religious, Grantmaking, Civic, Professional Organizations	1.554
THURSTON COUNTY EMPLOYMENT		
114	Fishing, Hunting and Trapping	3.601
483	Water Transportation	1.562
321	Wood Product Manufacturing	1.553
238	Specialty Trade Contractors	1.551
488	Support Activities for Transportation	1.539
236	Construction of Buildings	1.532
THURSTON COUNTY ESTABLISHMENTS		
114	Fishing, Hunting and Trapping	6.920
113	Forestry and Logging	3.515
115	Support Activities for Agriculture and Forestry	2.363
236	Construction of Buildings	1.766
492	Couriers and Messengers	1.561
339	Miscellaneous Manufacturing	1.510

Source: County Business Patterns, 2007 and RKG Associates, Inc., 2010

H. OCCUPATIONAL EMPLOYMENT AND WAGES

The following occupational analysis provides a snapshot of the current occupational employment in the Tacoma Metropolitan Division (Pierce County) and the Olympia Metropolitan Division (Thurston County). RKG Associates collected occupational data from the Bureau of Labor Statistics and then categorized this data by general occupational group (e.g., white collar and blue collar) and skill level (e.g. lower skilled, semi-skilled, and higher-skilled).

These groupings were derived from the consultant's experience and knowledge regarding the skill and educational requirements of general occupational categories. Although it is difficult to group occupational categories in this manner with great precision, the results provide some indication of the distribution and diversity of skills available within the labor force. The occupational categories and their descriptions are as follows:

- Higher-Skilled White Collar (HSWC) – a professional position requiring a college degree, with supervisory/management responsibility or specialized training while working within a white-collar work environment.
- Higher-Skilled Blue Collar (HSBC) – a trade or non-professional position requiring less than an advanced degree, but some post secondary education, a certificate, or specialized training or skill while working within a blue collar work environment.
- Semi-Skilled White Collar (SSWC) – a professional position requiring less than an advanced degree, but some post secondary education, a certificate, or specialized training or skill while working within a white collar work environment.
- Semi-Skilled Blue Collar (SSBC) – a trade position requiring less than an advanced or trade school degree but requiring some specialized training or skill, while working within a blue collar environment.
- Lower-Skilled White Collar (LSWC) – a position within a white collar work environment requiring no degree or formal schooling beyond high school, but requiring some on-the-job training.
- Lower-Skilled Blue Collar (LSBC) – a position within a trade profession requiring no advanced degree or formal schooling, but requiring some on-the-job training.

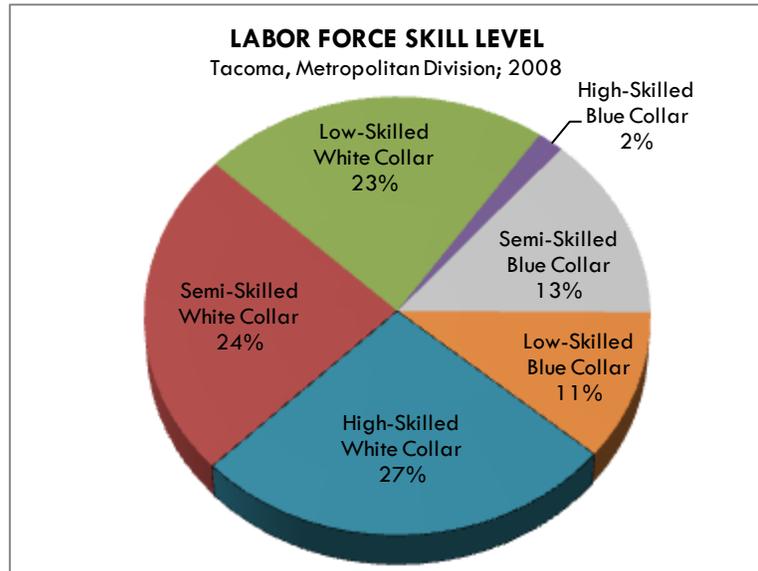
1. Tacoma Occupational Distribution

Occupations within the Tacoma labor market area are predominantly white collar in nature, accounting for almost three-quarters of all jobs (Figure 4). Of these white collar occupations, the largest concentration is in high-skilled workers, with registered nurses (6,370 jobs) being the largest occupation in this category. Other high-skilled occupations within this category include elementary school teachers (3,090), managers of office and administrative support (2,920), and managers of retail sales workers (2,270).

The other white collar occupations are almost evenly distributed in both the semi-skilled positions (24.2%) and low-skilled positions (22.8%). Office clerks and stock clerks are the largest semi-skilled positions (5,460 and 4,470 occupations respectively). The major low-skilled white collar occupations include Retail Salespersons (8,360 occupations) and combined food preparation and serving workers (8,180 occupations).

Blue Collar jobs comprise 26.4% of the total occupations. Of the blue collar jobs, semi-skilled positions account for the largest percentage (13.6%). Top occupations in this category include carpenters (3,640 occupations), maintenance and repair workers (2,240 occupations) and construction laborers (2,220 occupations). Low-skilled blue collar positions account for 11% of the occupational composition and include such occupations as laborers and freight stock movers (5,720 occupations) and truck drivers heavy and tractor trailer (3,720 occupations). Lastly, high-skilled blue collar workers comprise only 1.7% of the total occupations. Top occupations in this category are managers of construction trade (1,700 occupations) and managers of production and operating workers (1,080 occupations).

Figure 4

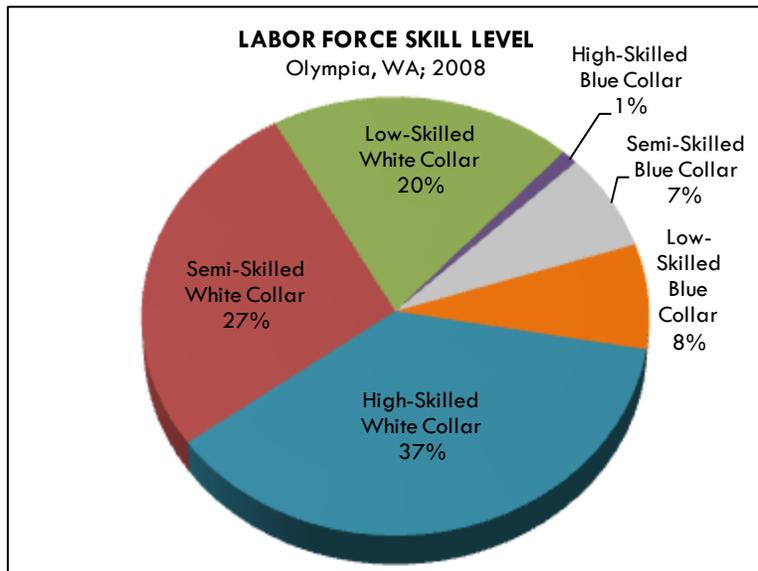


Source: Bureau of Labor Statistics and RKG Associates, Inc., 2010

2. Olympia Occupational Distribution

The Olympia labor market area is composed of a greater percentage of white collar workers than in the Tacoma Metropolitan District. Approximately 84% of the workers in Olympia are classified as white collar, compared with 74% in Tacoma. Of these white collar workers, 37.2% are in high-skilled white collar positions (Figure 5). Major occupations in this category include business operation specialists (2,850 occupations), computer software engineers (2,520) and registered nurses (1,490 occupations). semi-skilled occupations comprise 27.0% of the total occupations. Office clerks (3,000 occupations) and secretaries except legal, medical, and executive (1,970 occupations) are major occupational categories within the semi-skilled level. Low-white occupations include cashiers (2,840 occupations) and retail salespersons (2,580 occupations).

Figure 5



Source: Bureau of Labor Statistics and RKG Associates, Inc., 2010

Blue-collar positions comprise 16.6% of the total occupations, with an almost even distribution between low-skilled and semi-skilled workers (7.7% and 7.2%, respectively). The major semi-skilled blue collar occupations include maintenance and repair workers (820 occupations) and carpenters (800 occupations). Low-skilled blue collar occupations include laborers and freight stock movers (950 occupations) and truck drivers (900 occupations). Similar to Tacoma, high-skilled blue collar only comprises only 1.1% of the total occupations. Top occupations in this category include Managers of Construction Trades (300 occupations) and Managers of Mechanics Installers (220 occupations).

3. Tacoma Labor Market - Annual Mean Wages

Occupational data obtained from the Bureau of Labor Statistics also includes annual wage data. In the Tacoma Metropolitan Division, the annual mean wage was \$43,330 in 2008, which was 2.5% above the national annual mean wage of \$42,270. In Tacoma, the largest occupation category (Office and Administrative Support - 45,920 occupations) has a mean annual wage of \$34,280 or 79% of the mean wage (Table 15). Although the top four occupations all have an annual wage under the average for the area, the next three largest occupation categories (construction, education training, and healthcare practitioners) all have an annual mean wage of above the average. The highest wage category in Tacoma is management occupations, which employ 7,020 for an annual mean wage of \$102,910 or nearly 240% greater than the annual mean wage.

As compared to the rest of the State of Washington, wages in the Tacoma Labor Market in 2008 were roughly 93% of the state mean wage of \$46,430. The Seattle-Tacoma-Bellevue metropolitan region had even higher mean wages of \$50,350 in 2008, or roughly 16% higher than the Tacoma labor market. This difference in wages is one of the reasons why the region's labor force is drawn to the Seattle market. Within an hour commute, workers in Pierce and Thurston Counties can attain higher pay without absorbing Seattle's higher living costs.

Many occupational categories actually pay higher in the Tacoma area than the state mean. These include: farming, fishing, and forestry workers (114%), health care professionals (106%), food preparation worker (102%), and construction workers (102%), among others. Health care workers in particular have annual wages (\$78,590) that exceed those in the Seattle market (\$72,460). Some of the lower performing occupations include legal occupations (80%), computer and mathematical occupations (81%), and art & design occupations (82%), which fall well below the state mean (Table 15).

4. Olympia Labor Market – Annual Mean Wages

Olympia has a slightly higher annual mean wage (\$44,440) than Tacoma (\$43,330) (Table 14). Similar to Tacoma, office and administrative support is the largest occupational category (18,330 occupations) and the annual mean wage is \$33,910. Although the management occupation mean annual wage (\$92,830) is less than in Tacoma for the same position (\$102,910) there are proportionally more people employed in management occupations in Olympia, roughly 3.2% compared to 2.6% in Tacoma. Regardless, the occupational wage data shows that both communities have a diversity of occupations with the average wage falling above the national average.

As compared to the State of Washington, only four occupational categories exceed the state mean. Those occupations include: farming, fishing, and forestry (135%), protective services (115%), health care support occupations (108%), and community and social service occupations (106%).

Table 15

Major Occupational Categories

Average Mean Wages

Tacoma, Olympia, Seattle-Tacoma-Bellevue and State (2008)

Occupation	Tacoma		Olympia		Seattle-Tacoma-Bellevue		Washington State
	Annual Mean Wage	% of State Mean Wage	Annual Mean Wage	% of State Mean Wage	Annual Mean Wage	% of State Mean Wage	Annual Mean Wage
TOTAL - ALL OCCUPATIONS	\$43,330	93%	\$44,440	96%	\$50,350	108%	\$46,430
Architecture and Engineering Occupations	\$69,190	91%	\$66,350	87%	\$78,300	102%	\$76,410
Arts Design Entertainment Sports and Media Occupations	\$42,410	82%	\$47,170	92%	\$55,590	108%	\$51,540
Building and Grounds Cleaning and Maintenance Occupations	\$28,020	101%	\$27,760	100%	\$28,680	104%	\$27,630
Business and Financial Operations Occupations	\$62,070	93%	\$61,540	93%	\$68,860	104%	\$66,450
Community and Social Services Occupations	\$42,690	99%	\$45,560	106%	\$44,000	102%	\$43,020
Computer and Mathematical Occupations	\$66,600	81%	\$69,960	85%	\$85,670	104%	\$82,310
Construction and Extraction Occupations	\$50,630	102%	\$47,050	95%	\$52,640	106%	\$49,690
Education Training and Library Occupations	\$46,820	98%	\$45,770	96%	\$50,290	105%	\$47,780
Farming Fishing and Forestry Occupations	\$33,790	114%	\$39,800	135%	\$30,830	104%	\$29,550
Food Preparation and Serving Related Occupations	\$24,610	102%	\$23,820	99%	\$24,860	103%	\$24,120
Healthcare Practitioner and Technical Occupations	\$78,590	106%	\$72,460	97%	\$77,410	104%	\$74,350
Healthcare Support Occupations	\$30,050	100%	\$32,370	108%	\$31,750	106%	\$29,990
Installation Maintenance and Repair Occupations	\$47,240	102%	\$42,810	93%	\$48,060	104%	\$46,130
Legal Occupations	\$65,910	80%	\$69,110	84%	\$90,430	110%	\$82,410
Life Physical and Social Science Occupations	\$62,710	95%	\$59,690	90%	\$71,310	108%	\$66,110
Management Occupations	\$102,910	93%	\$92,830	84%	\$118,840	107%	\$111,060
Office and Administrative Support Occupations	\$34,280	99%	\$33,910	98%	\$36,300	105%	\$34,650
Personal Care and Service Occupations	\$25,710	93%	\$27,550	100%	\$28,750	104%	\$27,580
Production Occupations	\$37,930	102%	\$33,300	89%	\$39,200	105%	\$37,350
Protective Service Occupations	\$48,580	100%	\$55,880	115%	\$49,500	102%	\$48,700
Sales and Related Occupations	\$36,200	92%	\$33,350	85%	\$43,680	111%	\$39,450
Transportation and Material Moving Occupations	\$36,060	102%	\$33,130	94%	\$37,400	106%	\$35,200

Source: Bureau of Labor Statistics and RKG Associates, Inc., 2010

I. COST OF LIVING

The Cost of Living Index compares costs of common consumer products on a quarterly basis across all metropolitan areas. The average cost of living of all the cities participating in the survey is equal to 100. The cost of living of a given area speaks to its competitive climate for both business and households. A higher cost of living will impose costs to will impact buying power households and increase operating costs for business and industry. According to ACCRA, the cost of living in the Olympia region is 5.6% higher than the average of all 320 urban areas participating in the survey (Table 16). The Olympia area does enjoy a competitive advantage in terms of lower utility costs, which are 25% below the national average. Housing costs are also considered competitive with other metropolitan areas. The Tacoma area has a slightly higher cost of living, which is on average 8.8% more expensive then the national average. This is largely due to elevated healthcare (117.8) and housing costs (116). Tacoma and Olympia are considerably more cost competitive than Seattle area, which has a cost of living that is 21.9% higher than the national average.

Table 16

ACCRA Cost of Living Index

Select U.S. Metropolitan Areas, Second Quarter, 2009

	100% Composite Index	12% Grocery Items	30% Housing	10% Utilities	11% Transportation	4% Health Care	33% Misc. Goods & Services
Average of Cities Participating in the Survey this Quarter	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Olympia, WA	105.6	110.8	100.3	75.8	119.2	122.9	110.5
Everett, WA	115.0	119.3	133.8	89.0	117.5	123.8	102.9
Kennewick-Richland-Pasco, WA	92.1	90.7	81.2	93.3	110.9	110.3	93.2
Seattle, WA	121.9	108.4	150.1	83.3	118.5	120.2	115.3
Spokane, WA	93.6	91.8	84.2	83.0	113.2	105.2	97.7
Tacoma, WA	108.8	109.1	117.8	83.0	110.7	116.0	106.9
Bellingham, WA	111.7	110.8	133.1	87.3	115.2	113.5	99.1

Source: ACCRA and RKG Associates, Inc., 2010

J. REGIONAL INDUSTRY CLUSTERS

The Prosperity Partnership, a coalition, comprised of government, business, labor and nonprofit leaders, is focused on creating long term economic prosperity for the Puget Sound Region of Washington, including Pierce County. Part of their efforts includes identifying “Star” industry clusters, or those which the Puget Sound has some presence, but also ones that may experience above-average growth over the next decade. These clusters include:

“Star” Clusters

- Information Technology,
- Life Sciences,
- Long-Term Care,
- Electronic Shopping and
- Environment & Alternative Energy.

These are the industries the region should continue to emphasize as key sectors for employment growth. In addition, there are other industry clusters identified as “Mature” clusters, or those that are fundamental to the region’s economy and job base. In some case, these core industries are facing slow growth or may experience job losses in the future. These mature clusters include:

“Mature” Clusters

- Aerospace,
- Tourism,
- Military,
- Business Services,
- Logistics & International Trade,
- Head Offices,
- Specialty Food,
- Boat Building, and
- Sound Recording.

These clusters are valuable assets for the region, but still require a great deal of investment to achieve the desired level of growth. Lastly, the “Challenge” clusters are those that have some presense and strength

within the Puget Sound Region, but are not as dominant locally as compared to other regions. In addition, the traditional markets for these clusters are growing much more slowly than average. The main “Challenge” cluster in the Puget Sound Region is:

“Challenge” Cluster

- Wood Products.

The Prosperity Partnership has established target industry priorities for the region over the next five years. These priority clusters include: (1) Aerospace, (2) Clean Technology, (3) Information Technology, (4) Life Sciences, and (5) Logistics and International Trade. Actions for strengthening these industries range from legislative action to conducting marketing campaigns to developing support networks. The next steps for the Prosperity Partnership are to begin to implement the action initiatives. The goal is to create 100,000 new jobs for the Puget Sound Region.

The Thurston County Economic Development Council (EDC) is charged with recruitment and the promotion of private investment and job creation, expansion of markets, and the retention of existing businesses. The EDC established the Northwest Manufacturers Alliance (NWMA), which promotes and retains manufactures in the County. This alliance was formed as a partnership with the EDC, the Pacific Mountain Workforce Development Council, South Puget Sound Community College and local private companies. Another economic development asset for Thurston County is the Port of Olympia, which is a municipal corporation and is part of the South Puget Sound Foreign Trade Zone (FTZ). Under the FTZ, companies can import foreign products into the U.S. and defer payment of customs duties until the goods leave the zone. Imports may be stored, exhibited, processed or assembled without duties being paid until the goods are physically moved out of the zone. The Foreign Trade Zone thereby promotes assemblers and processors to locate to the area.

K. REMI POLICY INSIGHT MODEL®

1. Model Overview

Regional Economic Models, Inc. (REMI) developed a custom Policy Insight model to evaluate the economic impacts associated with installation expansion at Joint Base Lewis McChord (JBLM). This Policy Insight model was used to evaluate economic impacts related to Pierce and Thurston Counties and the rest of Washington State. Throughout this section, the results are often expressed for the PIR or Primary Impact Region, which consists of the two host communities. The distinguishing features of the REMI Policy Insight model are listed below:

- The REMI model is a multi-year forecasting and simulation model, enabling users to evaluate policy alternatives in terms of “what if” scenarios in order to estimate economic impacts. The model has strong dynamic properties, which means that it forecasts not only what will happen but also when it will happen.
- REMI developed a custom multi-regional economic and demographic forecast for PIR communities. This dynamic year-by-year forecast represents the baseline, or no-build scenario. The REMI forecast extends to the year 2030.
- The Industrial Sectors in Policy Insight are based on the North American Industry Classification System (NAICS). NAICS replaced the old Standard Industrial Classification (SIC) System in 1997, and was developed jointly by the United States, Canada and Mexico to allow business statistics comparability across North America.

- Policy Insight's forecast was assembled at the county level using data from various U.S. government agencies, including the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics (BLS), the Department of Energy, Department of Defense (DoD), the Bureau of Census, and other public sources.
- The disaggregation methodology employed a proportional method to reflect the cities, towns, and unincorporated economic impacts. This method is explained in detail later in this chapter.
- The REMI model generates estimates for both DIRECT and INDIRECT impacts. Direct impacts for this analysis are expanded military operations: military personnel, on-post jobs, and on-post infrastructure spending. The indirect impacts can be split into two groups: Intermediate and Induced. Intermediate impacts are essentially business to business purchases. Induced impacts are associated with increased regional disposable income resulting in a change in consumer spending.
- The model structure has been developed to include "new economic geography" assumptions. Economic geography theory explains regional and urban economies in terms of competing factors of dispersion and agglomeration. Producers and consumers are assumed to benefit from access to variety, which tends to concentrate production and the location of households.
- For businesses, the demand for labor, capital, and fuel depends on their relative costs. For example, if there were an increase in the price of capital, businesses would likely have a preference shift away from capital toward labor and fuel.
- Individuals respond to price changes. Consequently, economic migrants will respond to wages, new employment opportunity, local prices, and other labor market factors.

Figure 6 is a representation of REMI Policy Insight's structure and illustrates the linkages within the local economy. The output block shows how businesses will produce goods to sell to other firms, consumers, investors, governments, and purchasers outside the region. The Labor and Capital Demand block shows how labor and capital requirements depend both on total sales (output) and on relative costs. In the Demographic block, Population and Labor Supply contribute to consumer spending (demand) and influence wages. Supply and demand interact in the Wage, Price, and Profit block. Production costs determine market shares locally, for the rest of the U.S., and for the rest of the world. Output depends on market shares and the components of demand.

Figure 6

REMI Model Linkages (Excluding Economic Geography Linkages)

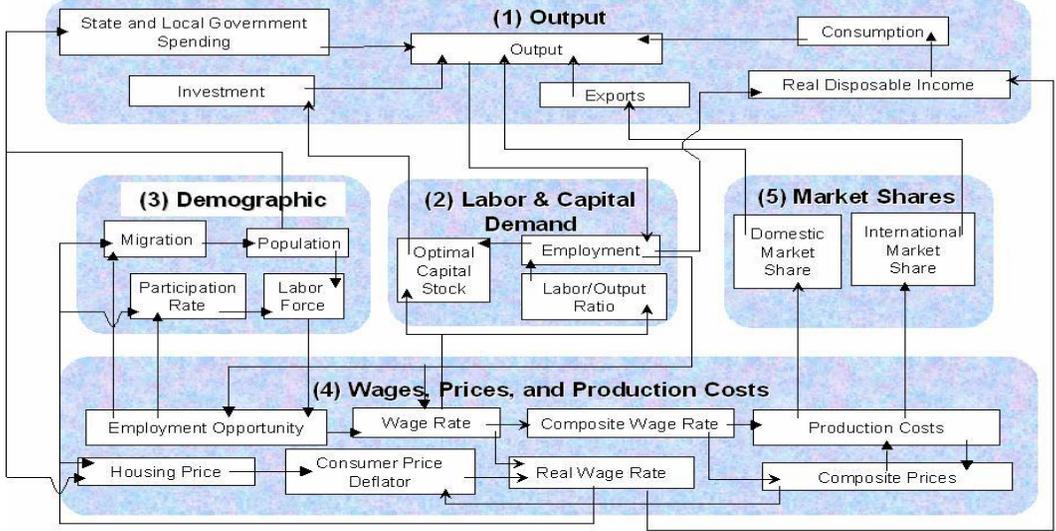
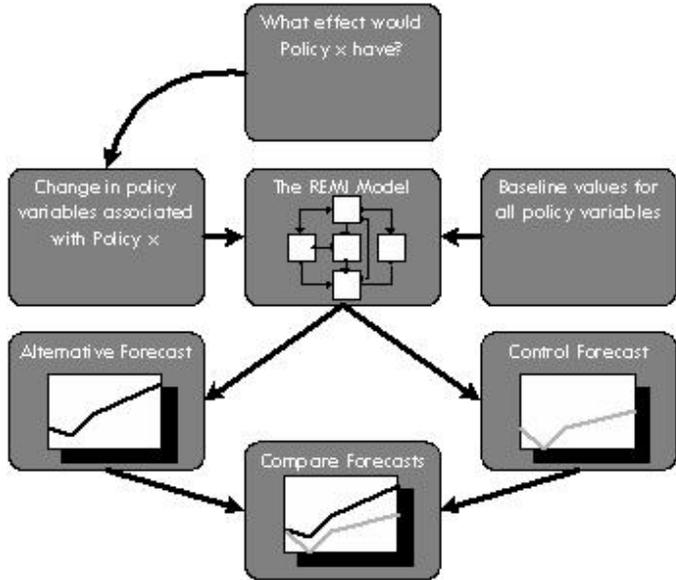


Figure 7 illustrates the policy simulation process for a scenario called "Policy X." To determine the effects of this scenario, the user must select the appropriate policy variables and then enter the values and assumptions that represent the direct effects of the scenario. The alternative forecast is then generated using these policy variable inputs. Two alternative forecasts are used in this analysis, the Expected Growth Scenario and the Alternative Growth Scenario. The impacts of these scenarios are then determined by comparing the baseline REMI forecast (or Control Forecast) with these new alternative forecasts to quantify the expected change to the baseline economy.

Figure 7
REMI Model Policy Simulation Process



2. Population Forecast

a. JBLM Deployment Impacts

By October 2010, the region should feel the full weight and impact of JBLM's recent personnel growth described previously. According to Joint Base Command, more than 17,000 soldiers will be returning to JBLM from deployments in Iraq and Afghanistan during much of 2010. Figure 9 shows the deployment and redeployment actions at Fort Lewis between FY2004 and FY2010. This data only does not reflect the movements Fort Lewis personnel and not McChord personnel, nor does it include soldiers being deployed through Fort Lewis from other installations.

According to the JBLM Public Affairs Office, more than 16,300 soldiers from the region were deployed from JBLM during FY 2009, while approximately 3,300 returned to the region (Figure 9). As of August 2010, over 12,000 Fort Lewis soldiers were redeployed to JBLM, leaving a balance of several thousand soldiers to return to the base by the fall of 2010. With the termination of combat operations in Iraq, it is expected that additional JBLM brigades will be redeploying in the coming months. This will be the first time in recent memory that the JBLM population will be substantially in place at one time. This will have a variety of impacts on such things as social services, health and medical services, transportation, housing, public safety, education, etc. Regarding the likelihood of future deployments, JBLM personnel could not estimate or confirm the size and timing of future deployments.

While the service impacts of this returning population could be significant for the region, it is largely believed that as many as 75% of the military family households with dependents have remained in place waiting for JBLM personnel to redeploy. As such, 75% of returning soldiers living in family households will be reuniting with their families, which are already in place (living both on and off base), while unaccompanied soldiers will be reestablishing their residence in the region. This is different than past deployments, where the Army's social support network for family members was not as comprehensive and many spouses would move during deployments to live with relatives and friends outside the region.

As stated previously, it is believed that roughly 51.5% of JBLM personnel live in family households. Based on these assumptions, 8,155 (51.5%) of 17,000 soldiers would be returning to households with dependents, 75% of which or 6,566 soldiers, would be returning to households already established within the region. The remaining 1,589 (25%) soldiers with family households and 8,845 unaccompanied soldiers would be returning to reestablish residence within the South Puget Sound Region.

Based on data provided by the Joint Base Command, approximately 93.1% of *unaccompanied personnel* live on base in barracks and the balance live in off base housing. In addition, approximately 26% of *military family households* live on base and 74% live off base. Using historical residency data for JBLM, RKG estimates that as many as 1,175 redeploying soldiers with family households and 570 unaccompanied soldiers could be looking to establish new residency off base within the region. The remaining military personnel will either return to existing family households within the region or will live in on-base military housing.

b. Direct JBLM Personnel Projections

Unlike the 2003 to 2010 period, when nearly 11,000 new military personnel were added to JBLM's population, growth over the next six years is projected to be relatively modest. According to JBLM's Plans, Analysis and Integrations Office, approximately 2,493 additional Army personnel will be stationed at JBLM by 2016. These new soldiers will be offset by the loss of 594 Navy personnel at McChord Air Force Base, resulting in a net change of 1,899 new military personnel by 2016 (Table 17). These projections are calculated off a base year of 2009 to capture the

changes occurring during the current year 2010. Utilizing the dependent multipliers referenced earlier, the number of family members associated with this increase in direct military personnel is projected at 2,943 dependents by 2016.

Table 17
Joint Base Lewis-McChord
Direct Personnel and Dependent Projections
FY2009-FY2016

Category	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY09-FY16 CHANGE
Full-Time Military - Fort Lewis	30,426	31,437	31,724	31,546	32,999	32,996	32,925	32,919	2,493
McChord AAF Personnel	3,637	3,043	3,043	3,043	3,043	3,043	3,043	3,043	-594
DoD Civilians	6,233	6,773	7,110	7,108	7,108	7,108	7,108	7,108	875
Non-DoD Civilian Contractors	10,056	9,334	9,334	9,334	9,334	9,334	9,334	9,334	-722
Subtotal - Direct Employment	50,352	50,587	51,211	51,031	52,484	52,481	52,410	52,404	2,052
School Aged Children of Military	16,486	16,688	16,827	16,741	17,444	17,443	17,409	17,406	919
School Aged Children of DoD Civilians	3,017	3,278	3,441	3,440	3,440	3,440	3,440	3,440	424
School Aged Children of Non-DoD Civilians	4,867	4,518	4,518	4,518	4,518	4,518	4,518	4,518	-349
Military Family Members	52,798	53,444	53,889	53,613	55,865	55,860	55,750	55,741	2,943
Civilian/Contractor Family Members	27,977	27,470	27,982	27,979	27,979	27,979	27,979	27,979	2
TOTAL	131,127	131,501	133,082	132,623	136,328	136,320	136,139	136,124	4,997
NET ANNUAL CHANGE									
Full-Time Military (Army & Navy)	---	417	287	(178)	1,453	(3)	(71)	(6)	1,899
DoD Civilians	---	540	337	(2)	0	0	0	0	875
Non-DoD Civilian Contractors	---	(722)	0	0	0	0	0	0	(722)
Subtotal - Direct Employment	---	235	624	(180)	1,453	(3)	(71)	(6)	2,052
School Aged Children of Military	---	202	139	(86)	703	(1)	(34)	(3)	919
School Aged Children of DoD Civilians	---	261	163	(1)	0	0	0	0	424
School Aged Children of Non-DoD Civilians	---	(349)	0	0	0	0	0	0	(349)
Military Family Members	---	646	445	(276)	2,252	(5)	(110)	(9)	2,943
Civilian/Contractor Family Members	---	(508)	512	(3)	0	0	0	0	2
TOTAL	---	374	1,581	(459)	3,705	(8)	(181)	(15)	4,997
NET ANNUAL PERCENTAGE CHANGE									
Full-Time Military (Army & Navy)	---	1.2%	0.9%	-0.6%	4.6%	0.0%	-0.2%	0.0%	5.6%
DoD Civilians	---	8.7%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%
Non-DoD Civilian Contractors	---	-7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-7.2%
Subtotal - Direct Employment	---	0.5%	1.2%	-0.4%	2.8%	0.0%	-0.1%	0.0%	4.1%
School Aged Children of Military	---	1.2%	0.8%	-0.5%	4.2%	0.0%	-0.2%	0.0%	5.6%
School Aged Children of DoD Civilians	---	8.7%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%
School Aged Children of Non-DoD Civilians	---	-7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-7.2%
Military Family Members	---	1.2%	0.8%	-0.5%	4.2%	0.0%	-0.2%	0.0%	5.6%
Civilian/Contractor Family Members	---	-1.8%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	---	0.3%	1.2%	-0.3%	2.8%	0.0%	-0.1%	0.0%	3.8%

Source: Plans, Analysis and Integrations Office at Joint Base Lewis-McChord, 2010

Note: FY2010 figures represent current population

The entire population increase will consist of 1,899 new full-time military (Table 15). Using the standard multiplier of 1.55 military family members per full-time personnel, the total number of dependents is expected to increase by 2,943 by FY2016. The combined total of direct military personnel and family members is projected to equal 4,842 persons for an increase of 5.6% over the projection period. The multiplier used to estimate the number of family members is a ratio used by the U.S. Army for planning purposes and does not constitute an actual number.

The projections contained in Table 15 reflect the addition of the 16th Combat Aviation Brigade (CAB) to JBLM. Part of the brigade (1,179 soldiers) are already in place at the Joint Base and includes the

4/6, 2/158, and the 46th. By FY2013, the number of soldiers is projected to increase to 1,354. The CAB could grow to 2,500 soldiers and 100 helicopters at JBLM.

c. Civilian Personnel

The civilian personnel changes projected for JBLM are largely due to an increase of 875 civilian government employees, since non-DoD contractors are expected to decline by 722, resulting in a net gain 153 civilian employees over 2009 levels. The net change in family members for civilian employee households is projected to be stable. This is primarily due to the fact that non-DoD contractor households are larger (1.84 dependents) than civilian government households (1.52 dependents), which effectively erases gains in civilian government households.

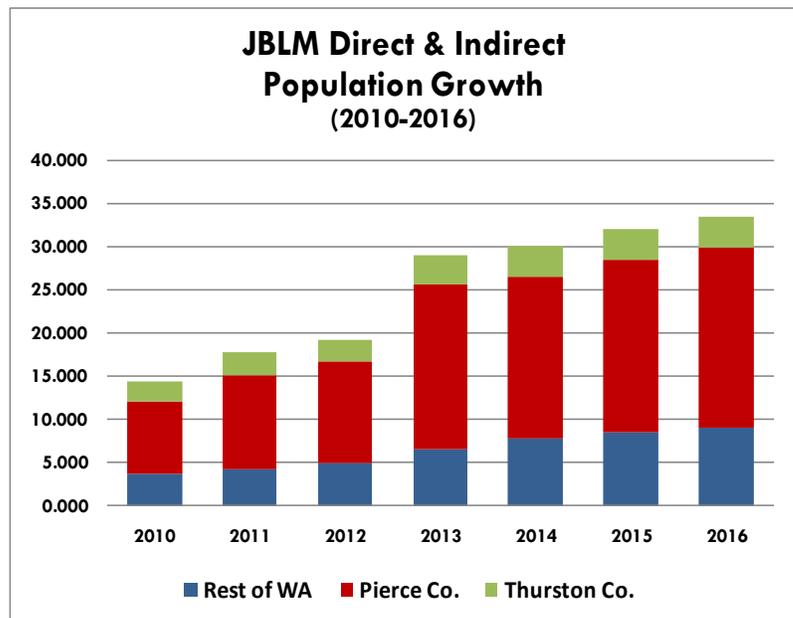
d. Total JBLM Population Forecast (2009-2016)

By 2016, JBLM projects that the combined total of direct military, DoD civilian, and non-DoD civilian contractor employment, plus family members related to this personnel will equal 136,124 people. That includes 52,404 direct JBLM personnel and 83,720 family members (Table 15). JBLM projects that this population will increase by 4,997 persons or 3.8% between the 2010-2016 study period. RKG used 2009 as a base year to capture the changes occurring in the current year 2010.

e. Regional Population Forecast (Direct & Indirect)

The REMI model simulation accounts for the direct JBLM population changes described above, but also projects indirect and induced population changes in Pierce and Thurston Counties and the rest of the Washington during the 2010-2016 period. Figure 8 shows the relative cumulative population impacts associated with the growth at JBLM. The population impacts reflect the change between the REMI baseline simulation and the JBLM impact simulation. The cumulative change in population by 2016 is projected at 33,440 people, with approximately 62.2% being captured in Pierce County. The next largest population change (9,083 pop.) is projected to occur outside the region in the rest of Washington.

Figure 8



Source: REMI Model, Inc. and RKG Associates, Inc., 2010

This reflects the fact that JBLM’s impacts will extend beyond the immediate region, and will more than likely be captured by King County to the north as the state’s largest urban county.

3. Projected Economic Growth

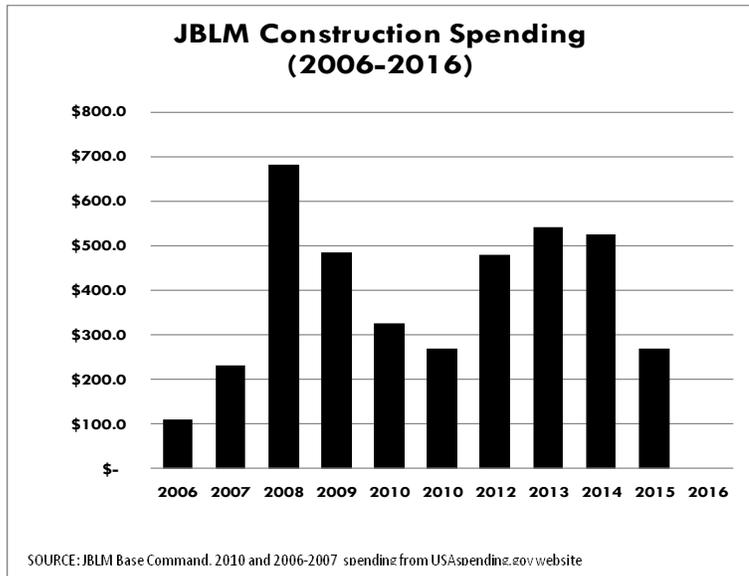
The expansion of JBLM will generate additional economic benefits to the region in several forms. In order to measure these impacts, RKG Associates utilized the REMI Model, a sophisticated econometric model developed by Regional Economic Models, Inc. (REMI) of Amherst, MA. The REMI model is driven by changes in policy variables such as new employment, capital investment and tax or regulatory changes,

among others. For the JBLM expansion, the model is driven by: (1) annual construction spending at JBLM, (2) annual net changes in new personnel and payroll at JBLM, and (3) annual changes in operations and maintenance costs.

a. Construction Spending

According to data provided by the JBLM Base Command, it is anticipated that more than \$3.9 billion will be spent on new construction at JBLM between 2006 and 2016, for an average of \$356 million per year. This money is being used to construct new facilities in support of JBLM’s expanded mission and the addition of more than 12,000 new soldiers, officers, and airman that are being assigned to JBLM by 2016 (Figure 9). The peak construction year occurred in FY 2008, when approximately \$683 million was appropriated for a variety capital improvement projects. During the 2010 to 2016 period, it is projected that approximately \$2.4

Figure 9



billion or 62% of all construction spending will occur at JBLM. This will have significant impacts on the region’s economy, far beyond the just construction sector. Some of the projects planned for JBLM include new barracks to house enlisted soldiers, 563 new family housing units, a new town center development, expanded medical and behavior health facilities and much more.

b. Regional Employment Forecasts (2010-2016)

The REMI Model simulation projects that the majority of employment growth will be captured by Pierce County during the 6-year projection period. Employment is projected to peak in 2013 as in-coming military personnel (1,453 personnel) and construction spending (\$541 million) peak during the same year. During 2013, the employment spin-off related to JBLM growth is projected to peak at 14,265 jobs, with construction accounting for 4,151 jobs or 29% of the total (Table 18). It is important to note that the employment projections shown in Table 2-5 represent the change in employment from the REMI baseline forecast for the region from the JBLM impact simulation. As such, this is the resulting employment related to JBLM and does not account for other employment growth.

Similar employment patterns occur in Thurston County during the projection period, but at much lower levels. This is primarily because 100% of military construction and operating expenditures are being realized in Pierce County. Despite this fact, significant employment growth and purchases are made across boundaries and are being captured in Thurston County. By the end of the projection period, employment levels are projected to drop roughly 40% in Pierce County and 62% in Thurston County off the 2013 peak levels. This is largely due to the loss of thousands of construction jobs as the final construction projects are completed in 2015. The large increase in federal military jobs should be interpreted as the difference between the new military personnel levels at JBLM as compared to the REMI baseline forecast, which projects a gradual decline in military personnel in the future.

**Table 18
Pierce County Employment Change (2010-2016) from REMI Baseline Forecast**

Category	2010	2011	2012	2013	2014	2015	2016
Sector (in thousands)	5,384	6,639	8,231	14,265	12,523	10,679	9,075
Forestry, Fishing, Related Activities, and Other	1	1	1	3	2	1	-
Mining	-	-	-	-	-	-	-
Utilities	7	8	8	16	13	13	12
Construction	2,561	2,153	3,495	4,151	3,973	2,276	508
Manufacturing	58	65	75	138	107	83	63
Wholesale Trade	88	103	113	230	174	147	126
Retail Trade	399	456	541	953	804	678	564
Transportation and Warehousing	51	67	75	161	133	125	123
Information	14	19	20	44	36	33	33
Finance and Insurance	54	60	71	151	103	60	26
Real Estate and Rental and Leasing	133	163	174	333	276	243	214
Professional and Technical Services	(247)	320	354	830	698	711	757
Management of Companies and Enterprises	6	8	9	20	16	14	13
Administrative and Waste Services	204	316	350	765	642	628	638
Educational Services	49	59	61	114	104	103	103
Health Care and Social Assistance	268	341	409	759	661	593	540
Arts, Entertainment, and Recreation	57	79	91	177	160	157	158
Accommodation and Food Services	208	266	281	557	466	448	438
Other Services, except Public Administration	188	241	285	527	454	406	367
State and Local	632	775	898	1,591	1,407	1,276	1,174
Federal Civilian	346	216	(1)	-	-	-	-
Federal Military	307	923	921	2,745	2,294	2,684	3,218

Thurston County Employment Change (2010-2016) for REMI Baseline Forecast

Sector (in thousands)	1,083	1,308	505	2,289	983	867	899
Forestry, Fishing, Related Activities, and Other	-	-	(1)	-	-	(1)	(1)
Mining	-	-	-	-	-	-	-
Utilities	2	2	1	4	2	2	2
Construction	105	97	59	117	76	59	49
Manufacturing	6	6	4	12	7	5	4
Wholesale Trade	15	16	9	28	15	13	12
Retail Trade	90	97	55	147	89	80	78
Transportation and Warehousing	7	8	5	16	9	8	8
Information	5	5	2	10	4	3	4
Finance and Insurance	14	14	1	25	6	3	1
Real Estate and Rental and Leasing	36	39	26	57	40	36	35
Professional and Technical Services	(187)	78	27	186	70	64	71
Management of Companies and Enterprises	3	3	1	6	3	2	2
Administrative and Waste Services	49	60	23	120	48	42	44
Educational Services	20	20	14	28	23	22	22
Health Care and Social Assistance	73	82	43	137	79	73	74
Arts, Entertainment, and Recreation	18	21	14	36	24	23	24
Accommodation and Food Services	59	66	47	100	73	69	68
Other Services, except Public Administration	50	56	30	94	52	47	47
State and Local	373	396	184	598	307	276	277
Federal Civilian	194	121	(1)	-	-	-	-
Federal Military	151	121	(38)	568	56	41	78

Source: REMI Model and RKG Associates, Inc., 2010

c. Gross Regional Product

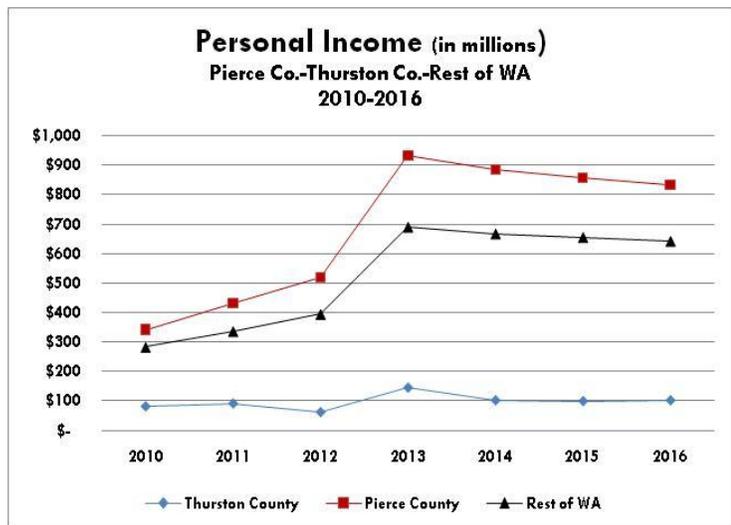
Gross Regional Product (GRP) is a value-added concept that is analogous to the national concept of Gross Domestic Product. GRP is essentially the market value of all final goods and services produced within a given region. The components that make up GRP are spending by governments, investment within the region by firms and individuals, consumption by individuals, the combined effects of trade (net exports equals exports minus imports), and the change in business inventories (CBI). GRP is usually a smaller dollar amount than total economic output because output includes the production of final goods and intermediate inputs (business to business transactions), whereas GRP reports only final goods production.

The REMI model projects that total GRP for the region, will increase over the REMI baseline forecast from \$708 million in 2010 to over \$1.3 billion in 2016 (in fixed (2000) dollars).

d. Personal Income

Personal income is represented in the REMI Policy Insight model as the income that is received by, or on behalf of, the individuals who live in the area. Personal income estimates are adjusted to represent income earned by the place of residence and not by place of work. Personal income is the sum of wage and salary disbursements, proprietors' income, rental income, personal dividend income, personal interest income, and current transfer payments not including contributions to government social insurance.

Figure 10



Personal income within the primary impact area is projected to increase from \$706 million in 2010 to \$1.6 billion in 2016 in current dollars over the REMI baseline simulation (Figure 10). Pierce County is projected to experience the strongest growth during the projection period. In real terms, personal income in Pierce and Thurston Counties is projected to increase from \$42.7 billion in 2006 to \$59.5 billion in 2016 (expressed in current dollars).

4. Implications

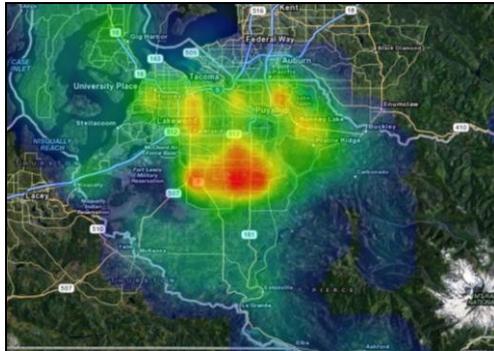
The impacts associated with JBLM's projected growth are expected to be modest during the 2010-2016 period as compared to the size of the region's economy. The bulk of the installation's growth occurred during the years 2003 to 2010 when nearly 11,000 new personnel were assigned to the base. However, given the installation's heavy deployment schedule, a large share of the personnel have been stationed abroad in Iraq and Afghanistan. However, with the conclusion of the combat mission in Iraq, it is expected that most of JBLM's military personnel will be returning to the region by the end of September 2010. This redeployment will place strains on local jurisdictions in terms of increased service demand and will further stimulate the economy.

Relative to economic development, JBLM is far and away the region's largest employer with over 50,000 military and civilian personnel. While technically military personnel are not part of the labor force, they contribute significantly to the region's demand for consumer goods and services. With their basic allowances for housing and subsistence, the average JBLM military personnel exceed \$50,000 in annual

compensation. In order to understand the economic linkages between JBLM and the region's economy and its federal contracting relationship, RKG will coordinate a meeting between regional economic developers and the JBLM base command in the fall of 2010.

REGIONAL GROWTH IMPACT ANALYSIS

DRAFT Needs Assessment Technical Memorandum



Date: June 18, 2010
To: JBLM Public Economic Impact Expert Panel
From: Russell Archambault and Sean Pink, RKG Associates, Inc.
Re: Regional Growth Impact Analysis Needs Assessment
 Joint Base Lewis-McChord Growth Coordination Plan

INTRODUCTION

This memorandum provides a Regional Economic Impact Needs and Opportunities Assessment within the JBLM study area. This technical memorandum is the second in a series of three economic impact studies prepared as part of the development of the Joint Base Lewis-McChord (JBLM) Growth Coordination Plan to be completed by December 2010. The first study, the Regional Economic Impact Analysis Technical Memorandum, was issued in early April 2010 for the Economic Impact Expert Panel, Growth Coordination Committee, and Regional Steering Committee to review and provide the consultant team with feedback. The Expert Panel met on April 16, 2010, to review findings from the Existing Conditions memo and to receive a briefing on the GCC and Regional Steering Committee meetings.

The stakeholders engaged in this process had the following input on the Regional Economic Impact Existing Conditions Technical Memorandum:

Comments from the JBLM Economic Analysis Expert Panel

The Expert Panel discussed the content of the Existing Conditions memo at their April 16 meeting.

A number of revision comments were made by reviewers of the expert panel. The most significant revisions are summarized below.

Comments from the Economic Impact Expert Panel

- It was requested the official state population numbers from OFM be used instead of DemographicsNow data for 2009 population estimates.
- It was noted that the Clearwood subdivision in Yelm was originally platted about 35 years ago as a vacation home community. However, over the past decade its orientation has changed and lots are being developed for year-round homeowners.
- Clarification was requested on the use of a multiplier to estimate the dependent population associated with JBLM military personnel. The multiplier represents the average number of dependents per military person throughout the entire Army and not just JBLM. No JBLM multiplier currently exists.
- There was a question raised about RKG's conclusion that Pierce County's growth targets may not be sufficient to accommodate current rates of growth and that its regional growth share should be increased.
- Members of the expert panel wanted to discuss options to meet with JBLM staff to discuss potential economic development opportunities arising out of the expansion of JBLM. Expert panelists will meet separately this summer to begin drafting a set of questions and objectives for this upcoming meeting, which will be scheduled in September.

Comments from the Growth Coordination Committee

The following comments were received on April 9 and June 4, 2010:

- JBLM does not do the best job transitioning retired personnel into local workforce.
- Military personnel skill sets are largely unknown, but those workers that separate from the military are desired in the workforce due to their dependability and disciplined work attitudes.
- We need to build a business community that can support and complement the operations on Joint Base. What businesses could be attracted to the region to support the Stryker mission?
- Many spouses of soldiers are often well educated and can be integrated into the labor force.
- We need to know how the base can be leveraged to enhance the region's economic development efforts.
- We need to understand the occupational breakout of those personnel on Joint Base.
- Some members of the GCC questioned the results of the gravity model distribution of military personnel and their dependents. Other members thought the results were representative of "on-the-ground" conditions. No changes were recommended.

Review Comments of Regional Growth Allocation Gravity Model from County and Regional Planners on April 7-8, 2010.

- The Thurston County assessment database does not recognize wetlands or other environmentally sensitive areas. The gravity model must account for those constraints.
 - Buffers can be huge – undevelopable.
 - Will obtain GIS environmental constraints layer from TRPC.
- TRPC will make available capacity shapefile at parcel level.

- The county includes a demo rate of 0.2% annually.
- TRPC will provide employment density estimates for use in gravity model.
- RKG should include other county roads in gravity model to drive growth to those areas – Rainier Rd., Littlerock Rd., Old Hwy 99, Black Lake Blvd.
- Outside UGA densities may be lower in county (1 DU/5 ac.).
- Current Pierce targeting is slightly above the mid-OFM population estimates.
- Outside UGA density factor may be high.
 - Much of the vested land has been absorbed
 - Maybe 1 dwelling units/3 ac. Or more
- Assuming 8.1% decrease in household size out until 2030
- County has developments at the point-level that are in the development pipeline and will provide to RKG
- Housing affordability factors should be weighted higher in the gravity model and schools and employment factors should be weighted lower
- Include light rail nodes.
- Add acreage from designated forest, open space, agriculture inside the UGA. County takes gross acreage minus environmental constraints (wetlands, slopes), minus 15% for roads and minus a factor for civil uses.
- Some reviewers questioned the REMI model projections for employment, which appear to be far less than projections prepared by local growth planners. According to REMI, the model's projections may be negatively influenced by its current forecast base year of 2008. With 2008 being influenced by the current recession, all forecasts at the regional, state and national level are being suppressed.

NEEDS ASSESSMENT

The needs assessment memorandum identifies needs arising out of the regional growth impact analysis. RKG Associates has recently completed its impact simulation using the REMI model and the regional growth allocation gravity model. The findings are considered preliminary and are being vetted by the consultants. As such, it is not yet possible to identify needs and strategies until this vetting is complete.

NEEDS ASSESSMENT METHODOLOGY

In order to allocate JBLM growth impacts, both population and employment, RKG Associates was required to construct a Growth Allocation Gravity Model. The gravity model was constructed by assigning weighted measures to nearly 2,000 transportation analysis zones (TAZ) throughout Pierce and Thurston Counties. The TAZ zones contain estimates of population, dwelling units, and employment and are used to drive the region's transportation demand modeling forecasts. RKG adapted these geographic units for its gravity model for purposes of allocating future population and employment growth as reported by the REMI Model. The REMI Model is a sophisticated econometric model that is able to simulate the economies of Pierce and Thurston Counties and measure the growth impacts resulting from the proposed expansion at JBLM.

The Growth Allocation Gravity Model takes the output of the REMI Model (annual population and employment forecasts) and allocates this growth throughout the region in a manner that mirrors existing development patterns, but also takes into account the relative “attractiveness” of individual TAZ zones. The attractiveness of each TAZ zone, and thus their likelihood of capturing a share of future growth, was determined by employing a series of weighted factors that accounted for locational and market attributes of each TAZ. Those factors included:

Residential Weighted Factors:

- Land Availability – RKG calculated the developable acreage for each TAZ using parcel based GIS data provided by each county’s planning and GIS departments. RKG accounted for each parcels’ zoning, density, and environmental constraints before calculating the acreage totals for residential, commercial, and industrial land area. The availability of land would dictate each TAZ’s ability to support new development. Land acreage was also divided into three categories: (1) vacant land, (2) underutilized land, and (3) potential redevelopment land. Redevelopment areas were identified as areas that were severely underperforming (in terms of property values), than other properties in the same category (i.e., residential, commercial and industrial).
- Proximity to Schools – TAZ zones located near elementary schools were weighted higher than those that were not located near a school. Elementary schools were used as a proxy for all schools. In addition, each TAZ received a numerical grade from 1 to 10, with 10 being the top score, representing the composite of all test scores for all grades within the school district in which the TAZ was located. The test score grade was obtained from: www.greatschools.org.
- Proximity to Highways and Major Arterial Roads – TAZ located within proximity to major Interstates, state highway and major arterials were weighted greater than those not served by major roadways. This measure speaks to the importance of regional transportation network and growing traffic congestion.
- Proximity to Major Employment Centers - Higher weighting for TAZs located with 5 miles of major employment centers. The measure recognizes the importance of begin close to employment and minimizing commuting times.
- Submarket Lot Inventory – A measure that compares the availability of residential lots by residential submarket. Includes lots for sale and lots that are in the permitting pipeline.
- Submarket Housing Sales Pricing – A measure that combines median homes sales price for newly built homes and average existing home sales price for 2007 to 2009.
- Residential Submarket Growth Trends (2000-2010) – Measures residential development activity by submarket area during the 2000 to 2009 period.

Employment Weighted Factors

- Proximity to Highways and Major Arterial Roads – TAZ located within proximity to major Interstates, state highway and major arterials were weighted greater than those not served by major roadways. Road provide convenient access to customers.

Technical Memorandum

- Proximity to Major Employment Centers - Higher weighting for TAZs located with 5 miles of major employment centers. Businesses tend to cluster around other businesses, usually at locations of prime highway access or where population clusters are located.
- Population & Employment Density Ratio – A measure that combines a TAZ population density with employment density. This factor is a measure of “urbanity” and higher densities denote denser development. For businesses this is a measure of market potential. The higher density of people and businesses, the greater market size and potential.
- Projected Population Growth (2007-2030) – A measure that accounts for TAZs that are projected to experience growth in the future, as projected by county planners.
- Projected Employment Growth (2007-2030) – A measure that accounts for TAZs that are projected to experience employment growth in the future, as projected by county planners.
- Submarket Non-Residential Lot Inventory – A measure that represents the available lots for commercial development by TAZ, less environmental and other constraints.

REMI Model Inputs

The REMI Model is driven by three primary inputs: (1) changes in JBLM employment, (2) changes in construction employment, and (3) changes in JBLM operating expenditures.

1. JBLM Personnel Changes (2003-2016) - The following tables shows the changes in JBLM personnel from 2003 to 2016. During the 2003 to 2010 period, Fort Lewis experienced an increase of 11, 961 full-time military personnel while McChord AFB experienced a loss of 964 personnel. Both DoD civilians (524 new personnel) and Non-DoD civilian contractors (3,735 new personnel) combined for an additional 4,259 new employees during the period.

Over the 2009 to 2016 period, JBLM’s personnel levels are expected to increase by 2,052 new personnel, with nearly 1,899 being permanent party military. RKG Associates has added the full Combat Aviation Bridge (CAB) of 2,500 personnel during the projection period.

**Joint Base Lewis-McChord
Cumulative Direct Personnel and Dependent Population Trends
FY2003-FY2010**

Category	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY03-FY10 CHANGE
Full-Time Military - Fort Lewis	19,476	19,497	24,754	21,725	27,494	29,316	30,426	31,437	11,961
McChord AAF Personnel	4,007	4,007	4,007	4,007	3,750	3,483	3,637	3,043	-964
DoD Civilians	6,249	6,100	6,419	6,210	6,327	6,464	6,233	6,773	524
Non-DoD Civilian Contractors	5,599	6,049	6,893	7,676	7,170	7,255	10,056	9,334	3,735
Subtotal - Direct Employment	35,331	35,653	42,073	39,618	44,741	46,518	50,352	50,587	15,256
School Aged Children of Military	11,366	11,376	13,920	12,454	15,122	15,875	16,486	16,688	5,323
School Aged Children of DoD Civilians	3,025	2,952	3,107	3,006	3,062	3,129	3,017	3,278	254
School Aged Children of Non-DoD Civilians	2,710	2,928	3,336	3,715	3,470	3,511	4,867	4,518	1,808
Military Family Members	36,399	36,431	44,580	39,885	48,428	50,838	52,798	53,444	17,045
Civilian & Contractor Family Members	19,801	20,402	22,440	23,563	22,810	23,174	27,977	27,470	7,669
TOTAL	91,530	92,486	109,093	103,066	115,979	120,531	131,127	131,501	39,970

Source: REMI Model simulation, RKG Associates, Inc., 2010

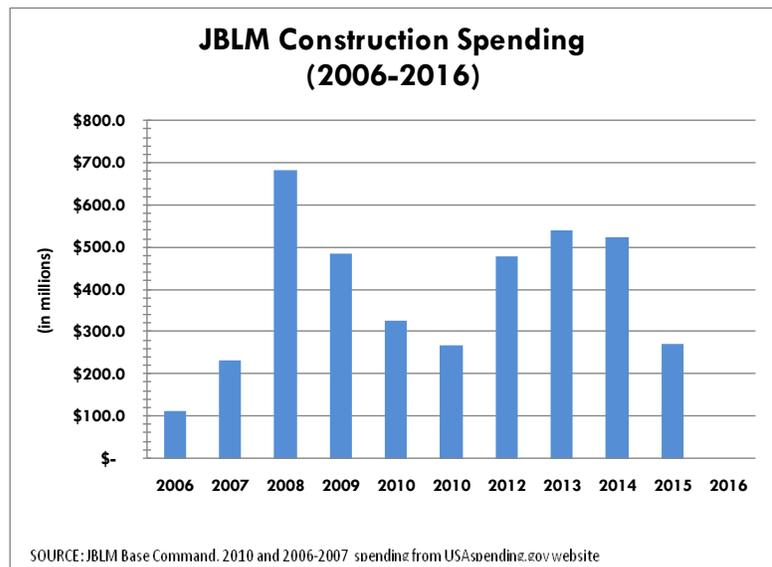
**Joint Base Lewis-McChord
Cumulative Direct Personnel and Dependent Projections
FY2009-FY2016**

Category	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY09-FY16 CHANGE
Full-Time Military - Fort Lewis	30,426	31,437	31,724	31,546	32,999	32,996	32,925	32,919	2,493
McChord AAF Personnel	3,637	3,043	3,043	3,043	3,043	3,043	3,043	3,043	-594
DoD Civilians	6,233	6,773	7,110	7,108	7,108	7,108	7,108	7,108	875
Non-DoD Civilian Contractors	10,056	9,334	9,334	9,334	9,334	9,334	9,334	9,334	-722
Subtotal - Direct Employment	50,352	50,587	51,211	51,031	52,484	52,481	52,410	52,404	2,052
School Aged Children of Military	16,486	16,688	16,827	16,741	17,444	17,443	17,409	17,406	919
School Aged Children of DoD Civilians	3,017	3,278	3,441	3,440	3,440	3,440	3,440	3,440	424
School Aged Children of Non-DoD Civilians	4,867	4,518	4,518	4,518	4,518	4,518	4,518	4,518	-349
Military Family Members	52,798	53,444	53,889	53,613	55,865	55,860	55,750	55,741	2,943
Civilian/Contractor Family Members	27,977	27,470	27,982	27,979	27,979	27,979	27,979	27,979	2
TOTAL	131,127	131,501	133,082	132,623	136,328	136,320	136,139	136,124	4,997

Source: REMI Model simulation, RKG Associates, Inc., 2010

2. Projected Construction Spending

– According to JBLM Base Command, the total construction spending at JBLM is estimated at \$3.9 billion from 2006 to 2015. Construction will include a number of different facilities including new residential dormitories, 500 to 700 units of family housing, new facilities at Madigan Hospital and a new Town Center development which will be a mixed-use project containing residential and commercial development. The peak construction year occurred in 2008 when nearly \$700 million in construction was initiated. Approximately \$2.5 billion in construction spending is projected between 2010 and 2015.



2. **REMI Model Input Shares**

In order to run the REMI Model simulation, it was necessary for RKG to share-out some of the inputs between Pierce and Thurston Counties. Since the footprint of JBLM is within Pierce County, RKG input all construction and operating expenditures in Pierce. That meant that no direct construction or expenditure impacts would be felt directly in Thurston County. However, due to Thurston’s proximity to JBLM, many indirect economic benefits would accrue to the county, nonetheless. Regarding the new off-base population (direct personnel and dependents) associated with JBLM, RKG made a 64% to 36% distribution between Pierce and Thurston Counties. These percentages were consistent with an estimate made by Joint Base command in 2007, which attempted to identify the location of military personnel by zip code. While the Joint Base Command did not feel

the current zip code data was complete enough for RKG’s use for this analysis, the previous analysis was the only estimate of regional distribution and was used to share out population.

3. JBLM Population Projections (2010-2016)

The results of the REMI Model project that Pierce County could add over 75,000 new population by 2016, including the growth associated with JBLM (20,828 pop.). This rate of growth equals approximately 9.7% for an annual rate of 1.6%. During the same 6-year period, Thurston County is projected to add 35,987 new population or 13.9% growth. On an average annual basis this equates to 2.3% growth rate. While the REMI Model makes assumptions about the current economic recession, there are structural problems in the region’s housing markets that could constrain these projections. Housing demand projections presented to the MBA of Pierce County indicate that a recovery could occur as early as the 1st Quarter of 2011. If foreclosures, problem subdivisions, and development financing do not get resolved, then it’s likely that the housing recovery will take larger.

**Pierce County Population Projections
2010 to 2016**

	2010	2011	2012	2013	2014	2015	2016	Change	% Change
Pierce County	813.604	826.338	837.499	855.299	865.781	877.606	889.238	75.634	9.3%
Ages 0-9	116.332	119.878	123.227	128.771	132.122	135.854	138.569	22.237	19.1%
Ages 10-19	107.100	106.020	104.720	104.515	103.913	103.837	104.928	-2.172	-2.0%
Ages 20-34	178.142	182.515	185.628	189.888	189.265	189.468	188.875	10.733	6.0%
Age 35-44	109.713	109.307	109.833	112.009	114.521	116.180	118.893	9.180	8.4%
Ages 45-54	118.938	118.379	117.011	115.851	115.145	114.006	112.737	-6.201	-5.2%
Ages 55-64	92.893	96.939	98.848	101.601	103.697	106.436	108.929	16.036	17.3%
Ages 65+	90.486	93.300	98.232	102.664	107.118	111.825	116.307	25.821	28.5%
JBLM-Related Direct, Indirect & Induced Population									
Pierce Co.	8.492	10.846	11.647	18.971	18.842	19.978	20.828	20,828	---

Source: REMI Model forecast and RKG Associates, Inc., 2010

**Thurston County Population Projections
2010 to 2016**

	2010	2011	2012	2013	2014	2015	2016	Change	% Change
Thurston County	258.405	264.631	270.446	277.233	283.06	288.753	294.392	35.987	13.9%
Ages 0-9	31.818	32.764	33.915	35.304	36.279	37.322	38.205	6.387	20.1%
Ages 10-19	31.763	32.112	32.121	32.509	32.940	33.278	33.766	2.003	6.3%
Ages 20-34	58.299	60.017	61.217	62.670	63.148	63.218	63.189	4.890	8.4%
Age 35-44	33.778	34.617	35.916	37.162	38.670	40.253	41.929	8.151	24.1%
Ages 45-54	36.649	36.734	36.421	36.182	36.396	36.775	36.979	0.330	0.9%
Ages 55-64	33.418	34.682	35.141	35.919	36.263	36.627	37.149	3.731	11.2%
Ages 65+	32.680	33.705	35.715	37.487	39.364	41.280	43.175	10.495	32.1%
JBLM-Related Direct, Indirect & Induced Population									
Thurston Co.	2.332	2.577	2.493	3.450	3.499	3.500	3.529	3,529	---

Source: REMI Model forecast and RKG Associates, Inc., 2010

4. Off-Base Housing Demand

As presented in the housing needs assessment, the JBLM population living off-post in the future is likely to increase as new housing on-base is projected to be modest over the next six years. As military seek housing in the private market, they propensity to own versus rent is closely correlated with rank, income, and marital status. The following table indicates that officers own their homes at a rate of 50%, warrant officers at 57% and enlisted soldiers (E6-E9) at roughly 52%. Only 12% of lower enlisted soldiers, E5 and below, are homeowners. The rate of homeownership is higher among accompanied military with families (41.4%) versus unaccompanied military (28.7%). In total, roughly 38.9% of all JBLM personnel living off-base own their own home while 61.1% rent. Based on current personnel levels, RKG estimates that roughly 45% of JBLM military population live off-base. At a current population of 34,480, that would equate into 15,516 direct military living off-base with their dependents. This would equate to roughly 6,035 homeowners and 9,480 renters.

Distribution of Personnel by Housing Type

2008 Pay Grade	Accompanied		Unaccompanied		Total		% of	
	Owners	Renters	Owners	Renters	Owners	Renters	Total	Total
Officers	58.2%	41.8%	34.1%	65.9%	50.1%	49.9%	3,452	23.0%
Warrants	61.2%	38.8%	33.8%	66.2%	57.8%	42.2%	521	3.5%
E-6 to E9	56.3%	43.7%	34.1%	65.9%	51.6%	48.4%	6,183	41.1%
E5 <	14.1%	85.9%	0.0%	100.0%	12.7%	87.3%	4,875	32.4%
TOTAL	41.4%	58.6%	28.7%	71.3%	38.9%	61.1%	15,031	100.0%

Source: Joint Housing Requirements Update, January 14, 2009

5. Regional Employment Impacts

The REMI Model simulation projects that the majority of employment growth will be captured by Pierce County during the 7-year projection period. Employment is projected to peak in 2013 as in-coming military personnel (1,453 personnel) and construction spending (\$541 million) peak during the same year. During 2013, the employment spin-off related to JBLM growth is projected to peak at 14,265 jobs, with construction accounting for 4,151 jobs or 29% of the total. It is important to note that the employment projections shown in the following table represent the change in employment from the REMI baseline forecast for the region. As such, this is the resulting employment related to JBLM and does not account for other employment growth.

Pierce County Employment Change (2010-2016) from REMI Baseline Forecast

Category	2010	2011	2012	2013	2014	2015	2016
Sector (in thousands)	5,384	6,639	8,231	14,265	12,523	10,679	9,075
Forestry, Fishing, Related Activities, and Other	1	1	1	3	2	1	-
Mining	-	-	-	-	-	-	-
Utilities	7	8	8	16	13	13	12
Construction	2,561	2,153	3,495	4,151	3,973	2,276	508
Manufacturing	58	65	75	138	107	83	63
Wholesale Trade	88	103	113	230	174	147	126
Retail Trade	399	456	541	953	804	678	564
Transportation and Warehousing	51	67	75	161	133	125	123
Information	14	19	20	44	36	33	33
Finance and Insurance	54	60	71	151	103	60	26
Real Estate and Rental and Leasing	133	163	174	333	276	243	214
Professional and Technical Services	(247)	320	354	830	698	711	757
Management of Companies and Enterprises	6	8	9	20	16	14	13
Administrative and Waste Services	204	316	350	765	642	628	638
Educational Services	49	59	61	114	104	103	103
Health Care and Social Assistance	268	341	409	759	661	593	540
Arts, Entertainment, and Recreation	57	79	91	177	160	157	158
Accommodation and Food Services	208	266	281	557	466	448	438
Other Services, except Public Administration	188	241	285	527	454	406	367
State and Local	632	775	898	1,591	1,407	1,276	1,174
Federal Civilian	346	216	(1)	-	-	-	-
Federal Military	307	923	921	2,745	2,294	2,684	3,218

Similar employment patterns occur in Thurston could during the projection period, but at much lower levels. This is primarily because 100% of military construction and operating expenditures are being realized in Pierce County. Despite this fact, significant employment growth and purchases are made across boundaries and are being captured in Thurston County.

By the end of the projection period, employment levels are projected to drop roughly 40% in Pierce County and 62% in Thurston County off the 2013 peak levels. This is largely due to the loss of thousands of construction jobs as the final construction projects are completed in 2015. The large increase in federal military jobs should be interpreted as the difference between the new military personnel levels at JBLM as compared to the REMI baseline forecast, which projects a gradual decline in military personnel in the future.

Thurston County Employment Change (2010-2016) for REMI Baseline Forecast

Sector (in thousands)	1,083	1,308	505	2,289	983	867	899
Forestry, Fishing, Related Activities, and Other	-	-	(1)	-	-	(1)	(1)
Mining	-	-	-	-	-	-	-
Utilities	2	2	1	4	2	2	2
Construction	105	97	59	117	76	59	49
Manufacturing	6	6	4	12	7	5	4
Wholesale Trade	15	16	9	28	15	13	12
Retail Trade	90	97	55	147	89	80	78
Transportation and Warehousing	7	8	5	16	9	8	8
Information	5	5	2	10	4	3	4
Finance and Insurance	14	14	1	25	6	3	1
Real Estate and Rental and Leasing	36	39	26	57	40	36	35
Professional and Technical Services	(187)	78	27	186	70	64	71
Management of Companies and Enterprises	3	3	1	6	3	2	2
Administrative and Waste Services	49	60	23	120	48	42	44
Educational Services	20	20	14	28	23	22	22
Health Care and Social Assistance	73	82	43	137	79	73	74
Arts, Entertainment, and Recreation	18	21	14	36	24	23	24
Accommodation and Food Services	59	66	47	100	73	69	68
Other Services, except Public Administration	50	56	30	94	52	47	47
State and Local	373	396	184	598	307	276	277
Federal Civilian	194	121	(1)	-	-	-	-
Federal Military	151	121	(38)	568	56	41	78

Source: REMI Model and RKG Associates, Inc., 2010

Off-Joint Base Housing Needs Assessment

Needs

1. Prepare for Off-Joint Base Housing Needs – It is anticipated that the demand for off-joint base housing for JBLM personnel is expected to be modest over the next six years. Roughly 62% of all military personnel living in the region are likely to be renters. The issues for rental housing will be affordability, condition, and location. The condition of rental housing in some communities is older and the number of professional managed rental communities is limited in areas near JBLM.

Opportunity

The opportunity to create higher quality rental housing in places like Lakewood and Tacoma appear to be the greatest given the significant rental inventory that exists in those communities. Lakewood is best positioned due to its convenient location and the more affordable rents and price points in that market. While there has been some contemporary apartment development in Lakewood, the single family housing stock is older, and some residential areas are experiencing rental housing in established single-family neighborhoods. This condition can erode single family neighborhoods over time if not managed closely.

JBLM Economic Development Spin-offs

Needs

1. Leverage JBLM for Regional Economic Development - The region's economic developers are eager to leverage JBLM's economic potential to drive local business start-ups, employment growth and industry recruitment efforts.

Opportunity

Enhanced communication and coordination is needed between JBLM and the region's economic developers to leverage the full value of JBLM's economic potential. The first step is to establish regular communication and to educate the community on the technological activities and occur of the installation. Very little is know about the military and contractor relationships that are currently in place and how they can be expanded to include other support firms in the region.

2. Open Construction Contracting Opportunites to Local Firms – With nearly \$4 billion in construction spending occurring over the next six years, a great opportunity exists for local contractors and specialty trade contractors to subcontract to the large prime contractors managing most of the larger construction contracts.

Opportunity

A local contract specialist needs to work closely with the JBLM construction managers to ensure that local companies have opportunities to bid on projects. In fact, most small contractors will not be aware of or understand the federal procurement requirements associated with large federal contracts. As such, they will need assistance to be eligible to pursue these contracting opportunities.

3. Leverage JBLM Workforce to Support Business Growth – Finding skilled, reliable, and detail-oriented employs is hard for most businesses. However, military retirees or those separating from the military each year create a labor supply that is desired by many employers. However, very little is known about the skill sets of separating personnel at JBLM. In order to tap this resource effectively, much more must be learned about the basic and advance skill set of these workers when they separate. Also, the number of separations that occur on an annual basis is not shared with privated sector groups such as the chamber of commerce or regional economic developer, who attempt to market this resource to new companies. In addition, the spouses of military personnel are often skilled and educated and seeking a second job for their households. Integrating this population into the civilian work force should be a top priority.

Opportunity

An immediate opportunity exists to begin coordinating with JBLM personnel responsible for preparing separated personnel for private sector employment. The most skilled and educated military personnel often transition into private employment opporunities working for the same federal contractors they worked with while working for the Army. Those that do not have such opportunities would likely be desirable to any number of employers.

ECONOMIC IMPACT & DEVELOPMENT STRATEGIES

JLBM Growth Coordination Plan

Need	Opportunities/Challenges	Potential Strategies	Ranges (High, Mid, Low)			Estimated Cost	Partners	Implementation Timing	Action Steps
			Need	Benefit	Cost				
Capitalize on, and leverage, JBLM's untapped regional economic development benefits	<p><u>Opportunity</u> – Enhanced communication between JBLM and regional economic developers will help the region capitalize on JBLM's multiplier effect</p> <p><u>Challenge</u> – Little is known about local military and contractor relationships at JBLM</p>	1. Establish a regular forum between JBLM and economic development officials to identify specific JBLM contracting needs that can be met by the community	High	Mid	Low	\$0-\$25,000	<p><u>Lead:</u> Local economic developers, JBLM Public Affairs Office</p> <p><u>Other Key Partners:</u> Implementation LRA, PSRC, Chambers of Commerce</p>	0-2 years	<ul style="list-style-type: none"> • Arrange introductory meeting between JBLM and private partners • Identify JBLM contracting relationships and unclassified technologies • Analyze industry relationships with JBLM • Prepare strategy to attract businesses that could serve JBLM or capitalize federal contracting relationships
		2. Educate the community (ED officials, business associations, etc...) on unclassified technology/activities occurring at the installation and potential industry clusters	High	High	Mid	\$25,000-\$100,000	<p><u>Lead:</u> Implementation LRA, Local Economic Developers, JBLM Public Affairs Office</p> <p><u>Other Key Partners:</u> County Chambers of Commerce, PSRC</p>	0-2 years	<ul style="list-style-type: none"> • Consult with Washington Defense Partnership to learn more about economic linkages to military installations in WA • Commission target industry cluster analysis for Pierce and Thurston Counties with an emphasis on capitalizing on JBLM economic linkages & assets • Organize regional economic development summit to review target cluster industries for region • Assemble regional industry cluster teams to provide leadership and support for growing top clusters
Make construction contracts more accessible to local construction and specialty trade firms	<p><u>Opportunity</u> – Increase local job growth by utilizing regional asset</p> <p><u>Challenge</u> – Many smaller contractors may not be aware of federal procurement guidelines</p>	3. Coordinate and hold regional workshops to educate local construction firms on how to qualify for federal construction contracts at JBLM	High	High	Mid	\$25,000-\$100,000	<p><u>Lead:</u> Implementation LRA, Building & Construction Trade Councils, JBLM Contracting</p> <p><u>Other Key Partners:</u> Chambers of Commerce, Master Builders Association of Pierce County and Olympia Master Builders Pacific Northwest Defense Coalition (PNDC)</p>	0-2 years	<ul style="list-style-type: none"> • Coordinate with regional and local groups currently providing similar services • Assess geographic and topic area coverage to ensure workshops are tailored to JBLM opportunities • If necessary, redesign program to address JBLM opportunities • Seek OEA funding for continuation of workshops
		4. Encourage prime contractors to recruit and openly advertise for local subcontractors on JBLM construction projects	High	High	Low	\$100,000-\$250,000	<p><u>Lead:</u> Implementation LRA, JBLM Contracting Office</p> <p><u>Other Key Partners:</u> Chambers of Commerce, building & construction trade councils</p>	0-2 years	<ul style="list-style-type: none"> • Appoint ombudsman to work directly with JBLM prime contractors • Assemble list of pre-qualified contractors by specialty • Assemble list of contractors attending workshops by specialty

ECONOMIC IMPACT & DEVELOPMENT STRATEGIES

JLBM Growth Coordination Plan

									<ul style="list-style-type: none"> • Work with prime contractors to market/advertise contracting opportunities • Design “ open house” event for local contractors to meet prime contractors and review contracting needs and procurement process
Leverage JBLM’s separated workforce to support business growth	<p><u>Opportunity</u> – Identify links between skill sets of military personnel (active, veteran, and retired) and local employers</p> <p><u>Challenge</u> – Private sector employers are not currently notified of the number of military personnel annually separating from the military</p> <p><u>Challenge</u> – Skill sets of military personnel and their spouse are largely unknown or sometimes highly specialized</p>	5. Implement program similar to that of PipelineNC, (Fort Bragg, NC) or “Helmuts to Hardhats”, that creates database that matches skill sets of military personnel/spouses with private sector occupations and job opportunities	High	High	Mid	\$100,000-\$250,000	<p><u>Lead</u>: Technical College System, Regional Workforce Development Councils</p> <p><u>Other Key Partners</u>: Washington Virtual Academies (WAVA), JBLM, Helmuts to Hardhats, Implementation LRA</p>	3-5 years	<ul style="list-style-type: none"> • Organize coordination meeting through regional workforce development councils to discuss need for military workforce transition programs • Identify technology and programmatic needs • Apply for OEA and Dept. of Labor funding to create web-based assessment technology • Develop in-take procedures and methods for assessing skill sets of military personnel and spouses • Link military applicants with job placement counselors and or job training providers
		6. Design custom training programs to transition separated military into private employment	High	High	Mid	\$250,000-\$500,000	<p><u>Lead</u>: Technical College system, Regional Workforce Development Councils</p> <p><u>Other Key Partners</u>: JBLM, Washington Virtual Academies (WAVA), Helmuts to Hardhats, Implementation LRA</p>	0-2 years	<ul style="list-style-type: none"> • Organize coordination meeting through regional workforce development councils to bring training providers together • Design methods for assessing skill sets of personnel separating from the military (exit surveys, Work Keys, etc.) • Meet with JBLM to discuss military separation process and referral process • Review existing training programs targeting military and spouses • Customize or design new training programs to address specific industry needs • Link military applicants with job placement counselors and or job training providers
Understand the future consumer spending habits of JBLM personnel in the context of the new Freedom’s Crossing development	<p><u>Opportunity</u> – Identify shifting spending patterns caused by new retail establishments on-base</p> <p><u>Challenge</u> – Commercial establishments off-base will experience change in sales without knowing competition on-base</p>	7. Conduct retail market study to isolate shift in local spending habits	Mid	Mid	Low	\$0-\$25,000	<p><u>Lead</u>: Implementation LRA</p> <p><u>Other Key Partners</u>: Chambers of Commerce, Business Community, Impacted Communities</p>	0-2 years	<ul style="list-style-type: none"> • Retain consultant to study economic and spending impacts associated with the development of Freedom’s Crossing • Conduct survey or focus groups of military households to assess how spending pattern changes • Meet with community and business leaders to discuss potential spending shifts inside and outside the JBLM gate • Prepare strategy to prepared

ECONOMIC IMPACT & DEVELOPMENT STRATEGIES

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									local businesses for impacts
		8. Communicate information about Freedom's Crossing project to retailers/brokers within immediate region of JBLM	High	High	Low	No Cost	<u>Lead:</u> Implementation LRA <u>Other Key Partners:</u> Chambers of Commerce, Business Community, Impacted Communities	0-2 years	<ul style="list-style-type: none"> • Convene presentations through local chambers of commerce presenting results of retail market analysis to business community • Inform local governments about impacts to sales tax revenues
Conduct annual review of JBLM growth progress	<p><u>Opportunity</u> – Identify changes in JBLM growth on an annual basis and adjust community response</p> <p><u>Challenge</u> – Very difficult to adjust public response to changes at JBLM</p>	9. Monitor annual growth activities at JBLM to adjust implementation strategy and delivery of services	High	High	Med	\$0-\$25,000	<u>Implementation LRA and JBLM Public Affairs Office</u>	0-2 years	<ul style="list-style-type: none"> • Meet with the JBLM Base Command at least semi-annually to monitor changes in personnel, project construction activities, and other factors • Make periodic presentations to the community and implementation committees to brief them on the changes. • Take steps to respond to the changes to ensure proper community services are either reduced or increased to support the actions.