

ADCOMM Engineering Company

Bridging the Gap Between Operations and Technology®

DATE: July 23, 2015
TO: Karl Hatton, Jefferson County
Steve Romberg, Clallam County
FROM: Joe P. Blaschka Jr., P.E.
SUBJECT: Jefferson/Clallam County Consolidation Study Final Baseline Revised Report

Attached is the final Jefferson/Clallam County Consolidation Study baseline revised report. I corrected the telephone call volume information as you requested with the new numbers.

Kevin Kearns is still recovering from his surgery so I do not have a revised date for the second report. I will get that too you as soon as I know.

Please let me know if you have any questions.



Washington Military Department

Emergency Management Division

Final Report

Jefferson/Clallam County Consolidation Study Baseline Report

Prepared for
Washington State Military Department 9-1-1 Office

Prepared by
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ADCOMM Engineering Company
Bridging the Gap Between Operations and Technology®

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Acronyms and Abbreviations

ADCOMM	ADCOMM Engineering Company
APSAP	alternative public safety answering point
CAD	computer aided dispatch
CENCOM	Kitsap County 9-1-1 Center
IP	Internet Protocol
JeffCom	Jefferson County Communications Center
PenCom	Peninsula Communications Center
PSAP	public safety answering point
RMS	records management system
UHF	ultra high frequency
VHF	very high frequency
VoIP	Voice over Internet Protocol
WA-REAP	Washington Regional Economic Analysis Project

Introduction

The Washington State Military Department 9-1-1 Office contracted with ADCOMM Engineering Company (ADCOMM) to review the possibility of dispatch center consolidation between JeffCom¹ and PenCom.² JeffCom and PenCom are similar in size, serve populations with similar demographics, and are both at the limits of their physical facilities. As a result, there is interest in these two entities and their associated user agencies to investigate the feasibility of dispatch center consolidation.

The project is divided into three phases: the first phase is to develop a baseline report, the second phase is to develop courses of action and the third optional phase is to develop an implementation plan for the recommended option. This report is the baseline report. The courses of action report will be provided in draft form shortly after the baseline report has been reviewed. The implementation plan, if desired, will be requested by the State and regional stakeholders.

This document contains the following sections:

- Introduction: introductory text.
- Executive Summary: high-level summary of the baseline report
- County Information: Geographic and terrain similarities and differences are discussed, as well as an analysis of anticipated population and economic changes that have occurred or are anticipated to occur in the future. This helps to illustrate the growth potential for the two counties over the next 30 years.
- Current Operational State Analysis: a description of how JeffCom and PenCom operate, their staffing levels, their labor agreements, and other factors. This includes input from the users through interviews.
- Current Technology Analysis: an evaluation and description of the existing technologies and facilities used in the two centers, including telephone, computer aided dispatch (CAD), and radio console systems.

The second phase of the report will include an analysis of the following consolidation options:

- **Regionalizing:** combining both operations and forming a new operating entity in a new facility
- **Co-locating:** JeffCom and PenCom remain as separate entities but move to a single facility, sharing the facility, some technology, and possibly some personnel
- **Interoperable:** Both operations remain separate entities and stay in their current facilities but increase their ability to interoperate, including increased CAD and radio system sharing

¹ JeffCom – Jefferson County Communications Center, which is an interlocal agency providing 9-1-1 call taking and dispatch services for Jefferson County, Washington, agencies.

² PenCom – Peninsula Communications Center, which is operated by the City of Port Angeles providing 9-1-1 call taking and dispatch services for agencies located in the Clallam County, Washington, area.

- **Consolidate:** combining and sharing equipment, technology, and administration while continuing to operate two separate, fully interoperable centers in their current facilities

The courses of action report will also identify costs, staffing levels, break-even analyses, and a ranking of each option in terms of effectiveness and efficiency as defined in the **Goal** identified in the Request for Proposal. ADCOMM will recommend a course of action.

The optional third phase includes an implementation plan, costing, a work plan, schedule, recommended governance model, and a revenue plan to include a plan for assessment of user fees. A facility selection with comparisons of legal requirements, ongoing costs, infrastructure costs, and geographic location are also part of the third optional phase of the project.

This report was revised July 22, 2015 to correct the numbers reported for telephone calls.

Executive Summary

This report establishes a baseline view of demographic, funding, technology, 9-1-1 operations, and public safety communication systems information in Clallam and Jefferson counties. The report will be used to determine the feasibility of consolidating or regionalizing the primary public safety answering points serving the two counties, known as PenCom and JeffCom respectively.

Demographically and geographically, there are many similarities between Jefferson and Clallam counties. Both contain large areas of federal land, both have coastlines, and both contain aging populations. Clallam and Jefferson counties face similar challenges as well, with rugged terrain and a proximity to Canada complicating radio coverage and remote locations that can increase cost and reduce availability for some types of connectivity technology that would be useful in consolidation and interoperability scenarios.

The two organizations share common missions to process 9-1-1 calls, dispatch emergency services, interface with state and national databases, and leverage computer technology to increase efficiency. JeffCom and PenCom are organized quite differently, however, with governance and authority being vested in an independent political entity in Jefferson County's case, while PenCom is a division of the City of Port Angeles Police Department offering services to other entities by contract.

Technologically, the most striking difference between the two dispatch centers is in their levels of responsibility for the respective radio systems. PenCom draws a clear line of demarcation for radio system responsibility and does not take responsibility for any radio system elements outside of the dispatch center. JeffCom takes a different approach, one in which JeffCom owns portions of the radio system infrastructure and is responsible for the annual operational and maintenance costs.

The other primary tools used by PenCom and JeffCom – E9-1-1 telephone systems, CAD, and so on – are either the same (in the case of CAD) or similar enough that transition to one or the other system would be fairly straightforward for staff to accomplish.

The study finds that the areas of organizational governance, the levels of authority granted the organization, and funding are the major differences between the two organizations and would likely be the biggest issues in discussions of the four options being considered. The radio system differences are also largely a matter of what potential partners to a regionalized organization would be willing to take on; the impact of radio system responsibility is diminished in the other three scenarios.

Because it is a baseline report, this study does not offer conclusions or recommendations; those will be provided in phase two.

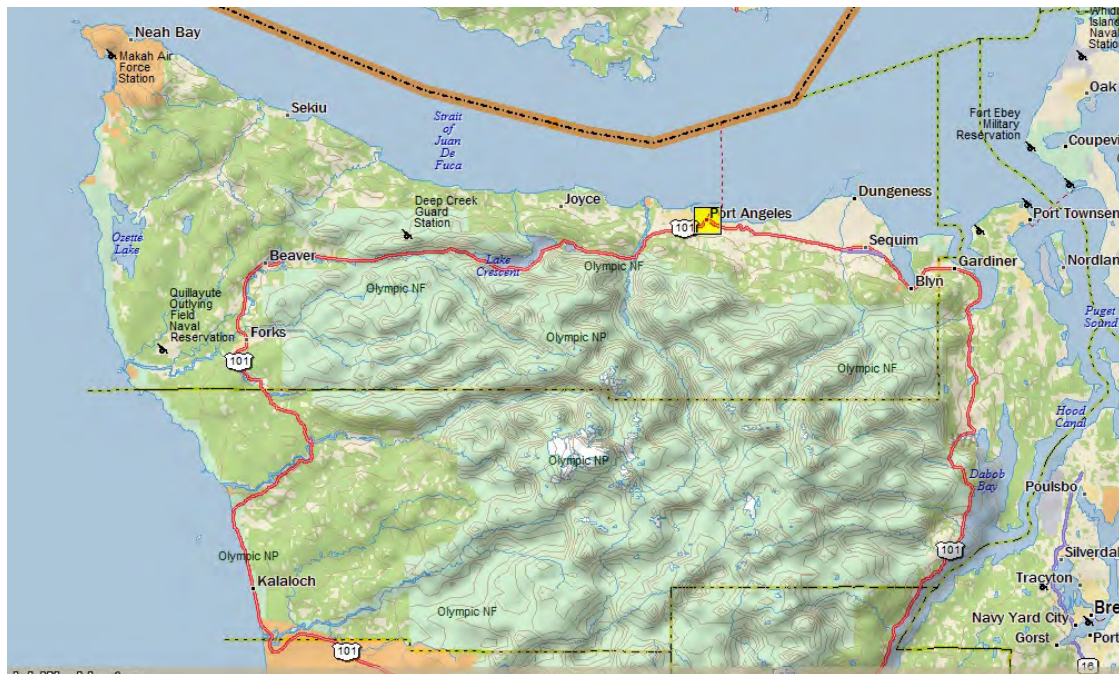
SECTION 1

County Information

Clallam County and Jefferson County share many similarities in geography, populations served, and growth projections. Jefferson County has the smaller population of the two counties although it is slightly larger in physical size.

Geography

- Jefferson and Clallam counties both have a large expanse of shoreline both coastal along the Pacific Ocean and inland in the Strait of Juan de Fuca; this means both dispatch centers have interaction with the United States Coast Guard on a regular basis
- Access to the west side of Jefferson County along the coast (Kalaloch, for example) is primarily through Clallam County
- Both counties have extensive remote areas including state and national forest areas such as Olympic National Park
- The terrain in both counties is very rugged with mountains, valleys, and coastline, which makes providing radio coverage difficult
- There is close proximity to the United States/Canadian border and direct radio line-of-site to a large Canadian population, which significantly complicates radio system engineering and frequency choices



Population

- Both counties have similar demographic makeup, with relatively slow growth predicted.
- Both counties include Native American communities.
- Both have an aging population, with the 65-years-and-over segment increasing as a percentage of total population over the next 10 to 15 years, the same period during which the 40-to-59-year-old segment will be diminishing. This has tax revenue implications that need to be considered in each of the scenarios under review.

Operations, Technology, Facilities

Both counties have:

- Similar simulcast radio communications networks with fire agencies using VHF and law enforcement using UHF
- Similar operational policies, procedures, and labor agreements
- Aging 9-1-1 and conventional telephone systems/equipment in both 9-1-1 centers that need replacement
- The same computer aided dispatch and records management system software and equipment, however each function separately
- Facilities that are limited in space and where the hosting agencies also have space needs so there would be benefit for the dispatch operations to move to a different location
- Access to a microwave and data transport network to connect the two centers – or a single center – to both radio system infrastructures
- Records management services for their respective law enforcement agencies including warrant verification
- General philosophical agreement by the users that consolidation could result in better service for the same cost as they are currently paying
- Some funding for operations provided through the state E9-1-1 program

There are also several differences between the two centers that need to be considered:

- JeffCom owns their radio system and is responsible for the maintenance. At this time, PenCom does not have any radio system responsibilities.
- JeffCom's Zetron radio console system can still be upgraded and maintained. The PenCom Motorola Gold Elite console system is manufacturer-discontinued and maintenance will become increasingly difficult in the future.
- Both JeffCom and PenCom answer a large number of after-hour and weekend administrative calls for the law enforcement agencies they serve.
- JeffCom is a fully standalone agency formed through an Interlocal Agreement and granted a number of autonomous responsibilities, whereas PenCom is a division of Port Angeles Police Department that has individual Interlocal Agreements with each of the user agencies

for whom they perform services. This means there are significantly different governance and financial models in use by the two centers.

- Because of the different organizational structures, the ability to discern actual operational costs is more difficult in Clallam County than in Jefferson County. Many of the facilities and supporting functions (like legal, janitorial, utilities, and human resources, among others) are provided by various City departments and/or the overall police department budget in PenCom's case. JeffCom pays a set rental fee for the space they use and, while they can leverage the County's resources to a certain degree, has some of the facility related costs covered by the lease, presumably. As the phase two report will detail, the true costs of operating a facility and having the appropriate support functions will become apparent when a single, standalone agency in a new facility is considered as an option.

Overview

Clallam County

Clallam County borders define a long, narrow area in the farthest northwestern corner of Washington State and is part of the Olympic Peninsula.³ The county is 1,738 squares of forested and mountainous land, with 41.1 persons per square mile.

The county contains 200 miles of coastline that has cultivated the maritime and fishing industries, so much of the county's economy has reflected jobs in forestry, wood products, and fisheries. However, since the goods-producing and agricultural products industries have seen a recent decline, leisure and tourism have grown in their place.

The service sector has experienced growth over the past decades. The county houses a prison, two hospitals, and several school districts, which are top employers. Other new industries have moved into the county in the past decade (e.g., advanced composites manufacturing that provides manufactured parts to the aerospace and marine industries).

Over the past 20 years, the economy in Clallam County has experienced slow but steady growth. This economic growth has been shaped by a water port district in the county's major coastal city of Port Angeles. The so-called "sun belt" climate of Sequim has attracted many retirees as well, adding to growth in businesses catering to seniors' needs.

Jefferson County

Jefferson County is also located on the Olympic Peninsula in northwestern Washington State.⁴ It is sparsely populated; its 1,803.7 square miles contain an average of 7.02 persons per square mile. Jefferson County is situated between the Admiralty Inlet to the east, Clallam County to the north, and Mason, Grays Harbor, and Kitsap counties to the south. The western border of Jefferson County is the Pacific Ocean.

Much of the central portion of the county is publicly owned land. About 60 percent of the county is comprised of the Olympic National Park and Olympic National Forest, and roughly 20 percent is under the jurisdiction of federal and state agencies. The Hoh Reservation and a small corner of the Quinault Reservation are also located in Jefferson County.

³ Washington State Employment Security Department, Clallam County Profile, May 2012, retrieved May 29, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/county-profiles/clallam-county-profile>.

⁴ Washington State Employment Security Department, Jefferson County Profile, May 2012, retrieved May 29, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/county-profiles/jefferson-county-profile>.

Jefferson County's economy has industrial and agricultural bases. The industrial base supports forest products and maritime sectors including ship building, maintenance, and repair. The agricultural base includes tree farms for logging, aquaculture, and an organic farming sector. Artisanal cheese and bread production has grown from the agricultural base as well. The county houses a prison, a hospital, and several school districts.

Tourism also provides revenue streams to the county. Economic activity is supported by a water port and airport, ferry terminal, and state highways.

Employment and Income

In Clallam and Jefferson counties, employment is projected to increase 1.6 percent (2013 to 2015), with specific growth in construction, manufacturing, and professional services.⁵ Employment through 2017 is expected to increase about 1.3 percent and about 1.0 percent from 2017 to 2022.⁶

Table 1 tracks unemployment history for both counties.⁷ Each county has shown consistent improvement over the past 3 years.

TABLE 1
County Unemployment History (not seasonally adjusted)⁸

County	2009	2010	2011	2012	2013	2014 (1/2014–7/2014)
Jefferson	8.9%	9.9%	9.9%	9.6%	9.0%	7.8%
Clallam	10.0%	10.6%	10.4%	10.0%	9.2%	8.2%

Wages and Income

The 2013 average annual wage⁹ in Clallam County was \$36,400 and in Jefferson County was \$35,256, well below the state average of \$53,768.

Personal Income

Personal income includes earned income, investment income, and government payments such as Social Security and Veterans Benefits. Investment income includes income imputed from pension funds and from owning a home. Per capita personal income equals total personal income divided by the resident population.

In 2012,¹⁰ the per capita personal income was \$38,545 in Clallam County and \$44,946 in Jefferson County.

⁵ Washington State Employment Security Department, Employment Projections, Short-Term Occupational Projections, retrieved August 19, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/industry-reports/employment-projections>.

⁶ Washington State Employment Security Department, Employment Projections, Long-Term Occupational Projections, retrieved August 19, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/industry-reports/employment-projections>.

⁷ Washington State Employment Security Department, Local Unemployment Statistics, Historical Estimates (not seasonally adjusted), retrieved August 19, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/local-unemployment-statistics>.

⁸ Washington State Employment Security Department, Local Unemployment Statistics, retrieved August 19, 2014, from <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/local-unemployment-statistics>.

⁹ United States Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, retrieved August 19, 2014, from <http://www.bls.gov/cew/datatoc.htm>.

¹⁰ Federal Reserve Economic Data (FRED), retrieved September 4, 2014, from <http://research.stlouisfed.org/fred2/>.

Revenue

Figures 1 and 2 show the sales tax and property tax revenue for both Clallam and Jefferson counties.

Sales tax is collected by the merchant on all qualifying sales in Clallam and Jefferson counties; groceries are exempt from the state portion of the tax. Clallam County’s local tax is 1.9 percent, while Jefferson’s is 2.5 percent. Both counties have enacted the 0.01 percent sales tax for emergency communications.

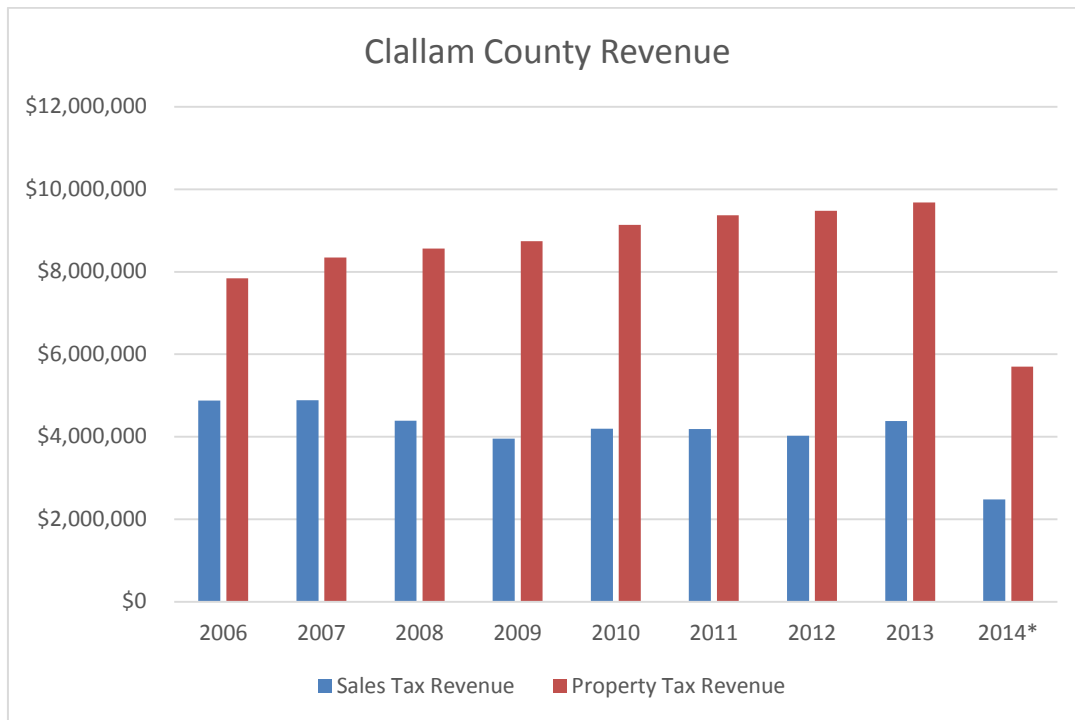


FIGURE 1
Clallam County Revenue¹¹
**2014 data through July 2014*

For Clallam County the median real estate property taxes paid for housing units with mortgages in 2009 was \$1,760 (0.8 percent). The median real estate property taxes paid for housing units with no mortgage in 2009 was \$1,554 (0.7 percent). The total amount of property tax collected in 2013 was \$9,677,090.

For Jefferson County, the median real estate property taxes paid for housing units with mortgages in 2009 was \$1,886 (0.6 percent). The median real estate property taxes paid for housing units with no mortgage in 2009 was \$2,039 (0.7 percent). The total amount of property tax collected in 2013 was \$7,145,004.

¹¹ Clallam County, Washington, Budget & Finance, retrieved August 19, 2014, from <http://websrv7.clallam.net/forms/uploads/FinancialReportingGraphs.pdf>.

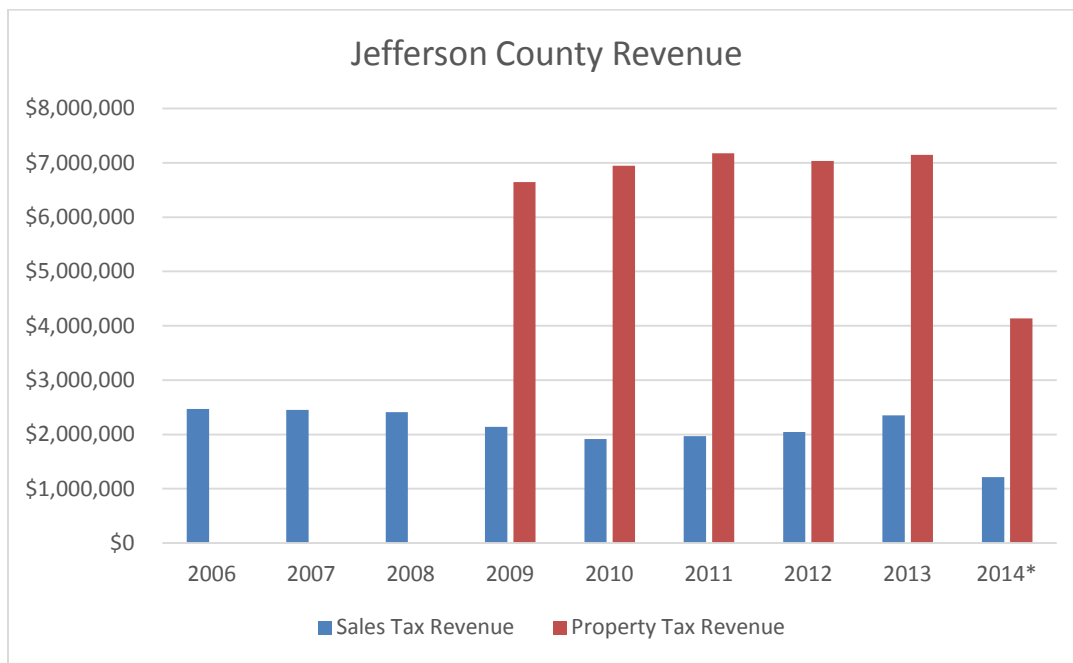


FIGURE 2
Jefferson County Revenue¹²
*2014 data through July 2014

Population

Clallam County's current population is approximately 72,312 (2013)¹³ (see Figures 3 and 4 and Table 2). Port Angeles is the largest city in the county with Sequim being the next largest city. Sequim has experienced phenomenal growth from 2000 to 2010 at 52.4 percent, due in large part to the influx of retirees, drawn to its dry, moderate climate.

Clallam County's population in the 65-years-or-older segment is 24.6 percent, nearly twice the state's 12.7 percent proportion in the same age group. The county has fewer young people overall than other locations in the state, with 17.8 percent of the population aged 18 and younger and children under five comprising only 4.6 percent of the county's population.

Ethnically, Clallam County is largely Caucasian; the County showed much less diversity in 2010 than the state in all racial/ethnic categories except American Indians and Alaskan Natives. In Clallam County, American Indians and Alaskan Natives made up 5.3 percent of the population compared to 1.8 percent of the state's population. Women comprised 50.3 percent of the County's population in 2010 (the latest available data), slightly ahead of the state average 50.1 percent.

Although Jefferson County's population is smaller (30,076 in 2013),¹⁴ it is demographically similar to Clallam County. Largely Caucasian in ethnicity, American Indian and Alaska Natives make up the largest non-White segment with 2.3 percent of the population. Women accounted for 50.5 percent of the population in 2010.

¹² Jefferson County, Treasurer Department, retrieved August 19, 2014, from [http://www.co.jefferson.wa.us/treasurer/Revenue Reports/](http://www.co.jefferson.wa.us/treasurer/Revenue%20Reports/).

¹³ FRED, projection retrieved August 26, 2014, from <http://research.stlouisfed.org/fred2/series/WACLAL0POP>.

¹⁴ FRED, retrieved August 26, 2014, from <http://research.stlouisfed.org/fred2/series/WAJEFF1POP>.

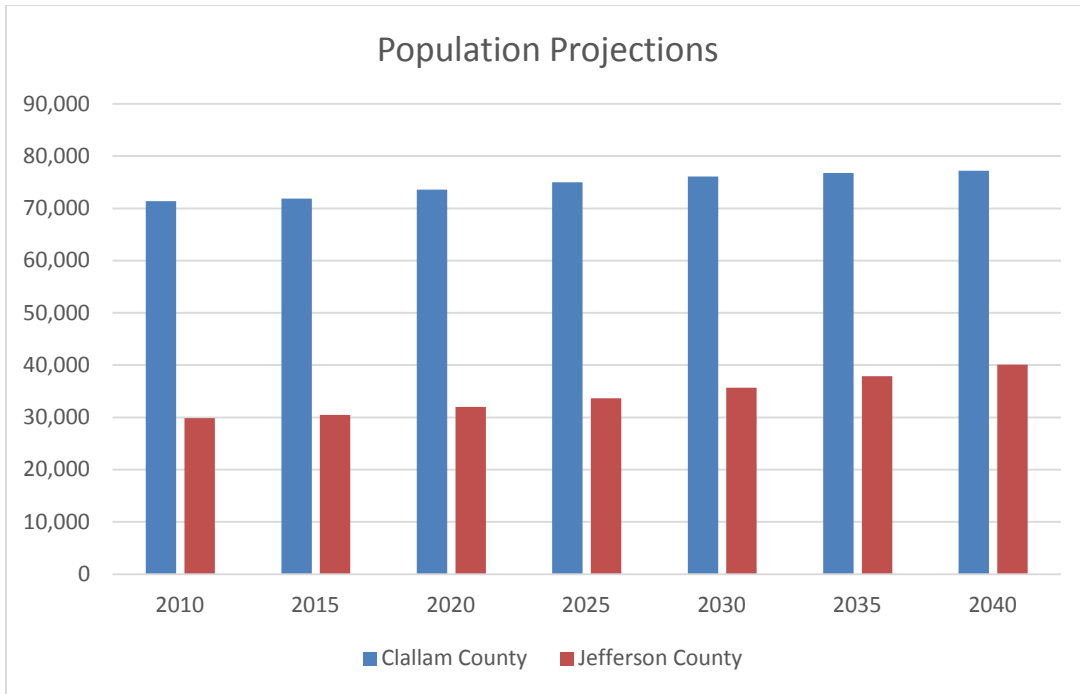


FIGURE 3
Population Projections for Clallam and Jefferson Counties¹⁵

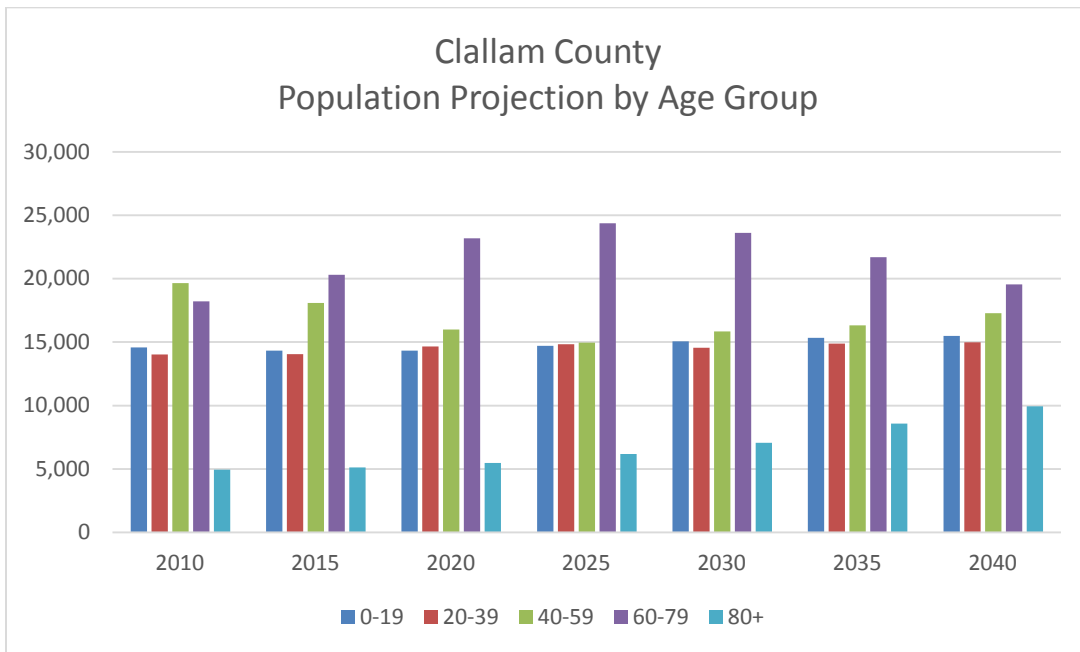


FIGURE 4
Population Projection by Age Group for Clallam County¹⁵

¹⁵ State of Washington, Office of Financial Management, Forecasting Division, 2012 Projections, County Growth Management Population Predictions by Age and Sex: 2010-2040, August 2012.

As in Clallam County, Jefferson County’s population has a significant segment aged 65 or older; 26.3 percent of residents fit that description (see Figures 3 and 5 and Table 3).

Population projections show that the 65 and older population will continue to rise for the next 10 to 15 years and then begin to decline. Simultaneously, people 40 to 59 years old (who are often at the peak of their financial earning power) will comprise a declining segment of the population in both counties, reaching a low point at about the same time the 65 and older group is at its highest numbers. This could put a strain on local resources in both counties as demand for emergency medical and other services rise with an aging demographic. There may also be a reduction in overall spending that could adversely impact local sales tax revenues but property tax revenues would likely be unaffected by the demographic change.

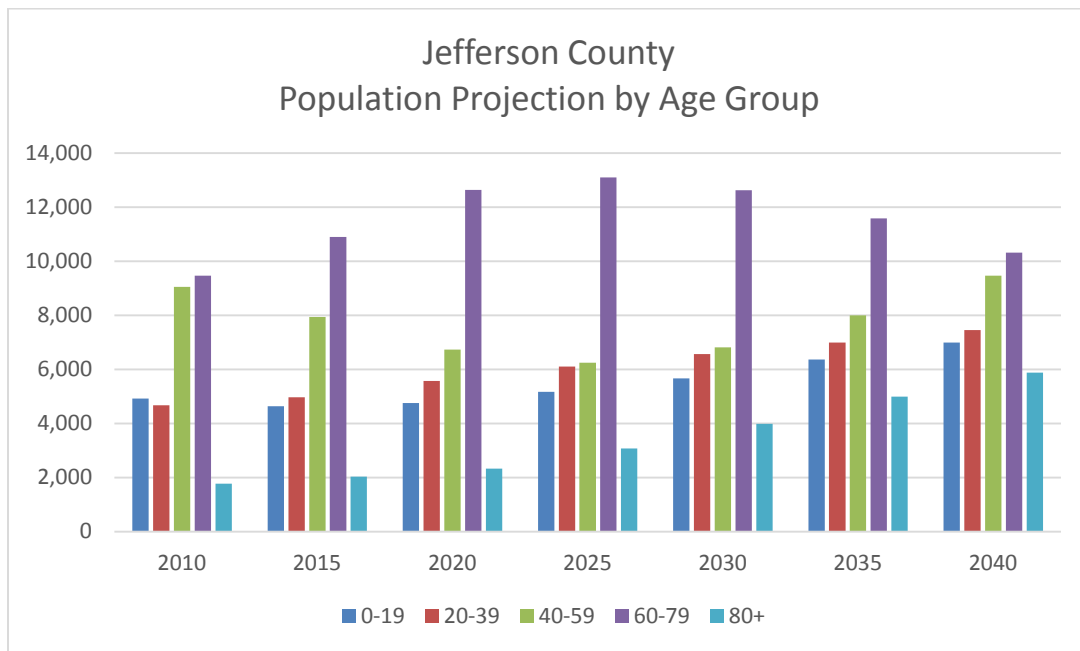


FIGURE 5
Population Projection by Age Group for Jefferson County¹⁵

TABLE 2
Clallam County April 1, 2013, Population¹⁶

Municipality	Census 2010	Estimate 2011	Estimate 2012	Estimate 2013
Unincorporated	42,228	42,395	42,560	42,830
Incorporated	29,176	29,205	29,440	29,520
Total	71,404	71,600	72,000	72,350
Forks	3,532	3,500	3,545	3,545
Port Angeles	19,038	19,080	19,100	19,120
Sequim	6,606	6,625	6,795	6,855

¹⁶ State of Washington, Office of Financial Management, http://www.ofm.wa.gov/pop/april1/ofm_april1_population_final.pdf

TABLE 3
Jefferson County April 1, 2013, Population⁴

Municipality	Census 2010	Estimate 2011	Estimate 2012	Estimate 2013
Unincorporated	20,759	20,870	20,990	21,050
Incorporated	9,113	9,180	9,185	9,225
Total	29,872	30,050	30,175	30,275
Port Townsend	9,113	9,180	9,185	9,225

SECTION 2

Current Operational State Analysis

Agency Profiles

This section of the report represents information collected from the center directors, technical staff, and communications employees. Information was reviewed to assist in developing profiles of each communication center.

Jefferson County Communications Center (JeffCom)

JeffCom was organized in 2004 under the provisions of an Interlocal Agreement executed by Jefferson County, the City of Port Townsend, and the Jefferson County Fire Protection District Nos. 1, 2, 3, 4, and 5.

The primary mission of the Center is to provide emergency communications services to law enforcement agencies, fire departments, fire districts, and emergency medical service providers within Jefferson County. As part of this effort, the Center also functions as the 9-1-1 PSAP for Jefferson County. Additionally, the Center provides radio communications and other levels of support for public safety and the community.

The Center provides emergency communications and related services for the following communities:

- Jefferson County Sheriff's Office
- Port Townsend Police
- Jefferson County Emergency Management
- East Jefferson Fire & Rescue¹⁷
- JCFPD 2 Quilcene Fire
- JCFPD 3 Port Ludlow Fire
- JCFPD 4 Brinnon Fire
- JCFPD 5 Discovery Bay Fire

JeffCom has a staffing component of nine full-time and three part-time dispatchers who primarily work 12-hour shifts to cover the 24-hour/7-day operation. There are two supervisors who also work 12-hour shifts to provide oversight.

JeffCom typically staffs one dispatch position handling fire dispatching and one position handling law. Both dispatchers also function as call takers answering 9-1-1 and non-emergency telephone calls. Additionally, the supervisors function as dispatchers to fill in for emergencies, high call volume, and breaks. Supervisors also have had to fill in for normal scheduled positions to maintain minimum staffing when vacancies or unexpected leaves occur, which limits their ability to provide overall supervisory functions for the center.

¹⁷ EJF&R covers the incorporated City of Port Townsend and the unincorporated Jefferson County communities of Cape George, Chimacum, Irondale, Kala Point, Marrowstone Island and Port Hadlock,

Governance

JeffCom is governed by the JeffCom Administrative Board ("Board"), an entity created by Interlocal Agreement among the parties noted above.¹⁸ The five-person Board consists of:

1. Jefferson County Sheriff or designee
2. City of Port Townsend representative, selected by the City
3. Jefferson County Fire Commissioner's Association representative
4. Jefferson County Fire Chief's Association representative
5. One Jefferson County Commissioner, appointed by the other County Commissioners

The Board has responsibility for the following areas related to JeffCom:

1. Setting policy.
2. Selecting, hiring, evaluating the performance of, and terminating the Director.
3. All fiscal matters, including budget approval, bill payment, cost share allocation, and fund transactions and maintenance. (Jefferson County acts as JeffCom's treasurer and, as is standard practice, keeps JeffCom funds separate from other County funds).
4. Approval of all contracts, including agreements to provide services to other entities.
5. Staffing levels, training standards, and personnel issues.
6. Evaluation of technical system replacements or upgrades.
7. Implementing and discontinuing programs within JeffCom.
8. Ownership of equipment purchased by JeffCom, with some exceptions.
9. Other responsibilities as set out in the Interlocal Agreement.

The Board is also the employer for purposes of collective bargaining.

Fiscal

The Board and JeffCom Director develop an annual operating budget and submit preliminary copies to all Board members for comment. Budget adoption occurs no later than the first Board meeting in September of each year. Once the budget is approved by the Board, it is considered adopted. Because the cost allocation is developed along with the budget, each Board member is aware of their own user fee commitment before voting.

Budget adoption votes require a supermajority, either a four-to-one vote or a three-to-one vote if a Board member is absent.

JeffCom's budget allocation is determined by calculating the total amounts of funds received from all sources except user fees and subtracting that amount from the total operating expenses. Any remaining operating expenses are divided by each individual user's call for service to arrive at each user's share. The formula for calculations is outlined in the Interlocal Agreement and states:

¹⁸ The current Interlocal Agreement (dated February 23, 2012) also refers to the governing body as the "Administrative Board of JeffCom."

"After formulating the budget for JeffCom, all outside revenue from taxes, grants, contracts for service and other sources shall be deducted from the total. The resulting balance shall be distributed proportionally among JeffCom member's as determined by the member's actual usage of JeffCom services as evidenced by the number of Calls for Service (C.F.S.) generated by each member agency. Each year a total count shall be made to determine the number of C.F.S's each participating agency generated between July 1st of the year previous to the year in which the budget is being formulated and June 30th of the year in which the budget is being formulated for calculating the allocable proportion for each member for the following calendar year."

The funding agreement is established under the provisions of the Interlocal Agreement and is defined as:

"... the amount of money chargeable to each Party as its share of capital costs and maintenance and operation expenses for the emergency communications system"...

The allocable proportion is determined by the formula outlined previously.

The Interlocal Agreement defines a call for service as:

"an event or incident resulting in a dispatched call, including field unit initiated activity, including traffic stops by law enforcement officers"

JeffCom receives funds generated from 9-1-1 excise tax revenue and emergency communications sales and use tax. The funds are then used to fund operational costs, minus anticipated grant funding. The County also receives CPD funds that are used to offset training costs. In addition, JeffCom is a contract agency with the Washington State Military Department Emergency Management Division and is eligible to receive 9-1-1 operational grants.

Additional information on the financial and the impacts on the regionalization effort can be found in the Phase 2 Report of Consolidation Options.

Facilities

The Center currently leases space in the Jefferson County Sheriff's Office and Correctional facility located in Port Hadlock at a cost of \$30,919 annually.¹⁹ The building was constructed in 1980 and remodeled in 2004 to create the space required for the communications operation.

The space included in the lease arrangement consists of approximately 860 square feet and includes the area for dispatch functions, equipment, storage, and an administrative office. There are restrooms, locker rooms, and a break area that are shared with Sheriff Department staff.

The communications operational area is approximately 400 square feet of the space and is equipped with four console positions. Three of the positions are fully functional equipped with a telephone, radio, and CAD capabilities. The fourth position used as a call taker has limited functionality and is not normally staffed.²⁰ The director and office manager share the

¹⁹ Some facilities' services are included in this lease cost.

²⁰ The position has 9-1-1 and administrative telephone equipment and CAD and is used for overflow call taking. There is no radio dispatch available at this position.

administrative offices area that is comprised of approximately 100 square feet. The area is furnished with two desks and minimal file storage.²¹

The County Emergency Operations Center is located in an area adjacent to the communications operation area. This arrangement provides some additional space for training and meetings through the use of the EOC conference room and provides for County interoperability functions during large-scale emergency events.

JeffCom currently has an operational arrangement with East Jefferson Fire and Rescue for space in their facility located in Station 1-6 for establishment of an alternative public safety answering point (APSAP). This space is limited in size and provides for telephone, limited radio, and CAD; it would be inadequate for a long-term emergency event.

PenCom provides backup support for JeffCom in the event of a telephone service outage. The support is limited to basic 9-1-1 answering and call creation. Once a request for response is entered into CAD by PenCom and sent to JeffCom for dispatch, it can no longer be viewed or edited by PenCom.²²

CENCOM, located in Bremerton, Washington, could function as a backup for major 9-1-1 service disruptions and could support a large-scale incident or service outage occurring in Jefferson County. However, at this point, no arrangement exists between the two organizations.

Workload

Information presented was obtained from the annual workload reports prepared by JeffCom staff. The numbers reflect the standard method of calculation based upon their established definition on a "call for service." As outlined in their operational process, a call for service is defined as "any event dispatched either by radio or CAD reflecting a request for services or any event classified as a 'check-out' by any law or fire unit." A 3-year history of the workload is presented in Table 4 and Table 5. This information reflects the overall activity experienced at the dispatch center.

TABLE 4
JeffCom 9-1-1/Telephone Calls Volume

Call Type	2012	2013	Change + or -	%
9-1-1	16,542	18,794	2,252	13.6%
Non-Emergency	37,156	39,362	2,206	5.9%
Combined Total	53,698	58,156	4,758	8.9%

TABLE 5
JeffCom CAD Incidents / Calls for Service

Call Type	2012	2013	Change + or -	%
Fire	5,103	5,160	57	1.1%
Law	24,241	23,952	(289)	(1.2%)
Combined Total	29,344	29,112	(232)	(0.8%)

²¹ Supervisors do not have a separate, dedicated private space (i.e., with a door) they can use to conduct counseling and other personnel matters. There is space in the EOC area but it is not private.

²² Both dispatch centers use the same CAD software and have invested in a "CAD-to-CAD" link.

Information pertaining to the telephone workload activity is broken into two categories: (1) 9-1-1, which includes 9-1-1 wireline, 9-1-1 cellular (wireless), and 9-1-1 calls received via VoIP systems calls; and (2) non-emergency calls from all sources. The information reflects workload increases in the number of calls received over the past 2 years. Between 2012 and 2013, the Center has seen a 13.6 percent increase in 9-1-1 calls. The numbers of non-emergency calls have increased by 5.9 percent during the same period. Overall, there has been an average 8.9 percent increase in telephone workload during the period examined. This is not an insignificant increase.

ADCOMM evaluated the supplied CAD response information (Table 5).²³ The information is separated by discipline. Fire agencies have seen a slight increase in reported workload over that period (1.1 percent). The law enforcement agencies have seen a 1.2 percent decrease during the same period. Overall, the average workload has seen a decrease of 0.8 percent.

The level of increases seen over the target period has resulted in a minor impact to the Center. Staffing and facilities are affected by these levels of workload increases. County demographic projections indicate that Jefferson County will continue to see moderate increases in the population over the next 10 years.²⁴ Additionally, the information reflects an aging population that can result in additional impacts to the call volume, specifically in the area of medical and fire calls.

Progressive planning efforts need to be applied to proactively address the future impacts on the capabilities for the Center to respond to community needs. Additional information on demographic information for Jefferson County is presented in Section 1 of this report.

Other Tasks

In addition to processing 9-1-1 and 10-digit phone calls and dispatching Fire, EMS, and law enforcement organizations, JeffCom communications officers monitor closed circuit television monitors (security cameras). A warrant clerk position performs a variety of warrant data entry, revision, and removal of served or canceled warrants, as well as supporting general office functions.

Stakeholder Interviews

As part of the research and data collection phase, ADCOMM staff conducted interviews and a site visit at JeffCom. The onsite work was focused on conducting interviews with elected officials, department heads representing fire and law enforcement, communications center employees, and other stakeholders.

The interviews reveal that most are supportive of some form of regionalization between Jefferson and Clallam Counties' 9-1-1 communications centers. The major point of discussion focused on how to achieve the end result.

During the process, each of the potential options were presented and discussed.

Most of the participants indicated that the ultimate goal of the process should be to develop a path of progression toward a fully functioning consolidated communications center. However,

²³ CAD report information supplied for 2011 had to be excluded from calculations due to inconsistencies in the reporting methods used.

²⁴ Washington State Office of Financial Management, "Annual Population Projections 2005 - 2024."

the consensus was focused on moving into the process through a series of steps beginning with a functional regionalization. The first step would be relocating both centers into a single facility and sharing some common resources. Resource sharing would allow for such functions as administration and technical support from each individual center to be combined into a single function.

It should be noted that neither organization has adequate facility space to accommodate a combined operation. The limitations and impacts resulting from inadequate space to accommodate a combined operation must be addressed early in the regionalization discussions. Facilities and space limitations will become a major factor in selecting the path to achieving the ultimate goal of regionalization of communications systems.

The participants were also concerned about the impacts that regionalizing the agencies may have on receiving State 9-1-1 funding. To clarify this, ADCOMM submitted the question to the State 9-1-1 Office and has determined this not to be the case as referenced in the Washington Emergency Management E9-1-1 Section policies pertaining to the regionalization of 9-1-1 centers.²⁵

Some stakeholders were concerned about the potential loss of jobs in Jefferson County if the center is relocated to Clallam County. Additional research in determining the economic impact may be needed to address this issue during the planning and implementation phase of a regionalization process.

ADCOMM interviewed several dispatchers. The comments voiced at the meetings expressed a belief that some form of regionalization or consolidation would occur. Dispatch personnel's major concerns are focused on three areas: how the process would occur, the impacts on seniority, and where the new facility might be located. A few participants expressed concerns relating to an appearance that PenCom is taking over JeffCom. To address this, it is important that whatever the form a new organization takes, a new name is recommended. Neither JeffCom nor PenCom should be used in referring to the new Center.

After reviewing all information developed through the interview and investigative process, it becomes clear that a combined level of support exists toward making the best possible choices for the citizens of Jefferson County. There is strong support for moving this process forward toward the next step in regionalization.

Peninsula Communications (PenCom)

PenCom was established in 1990 under the provisions of an Interlocal Agreement executed by the City of Port Angeles, Clallam County, City of Sequim, Clallam Rural Fire Protection District Nos. 2, 3, 4 and 5, Lower Elwha Klallam Tribe, Quileute Tribe, and the National Park Service. The primary focus of the Center is providing call receiving for 9-1-1 and emergency 10-digit telephone calls along with fire, medical, and law enforcement dispatching and communications support for the agencies they serve.

The Center provides emergency communications and related services for the following communities:

²⁵ Washington Military Department Emergency Management Division "E9-1-1 County Regionalization Policy", and "E9-1-1 County Regionalization Contract Police," July 1, 2013.

- Port Angeles Police Department
- Port Angeles Fire Department
- Clallam County Sheriff Department
- Sequim Police Department
- Forks Police Department
- Forks Ambulance
- Lower Elwha Tribal Police
- La Push Tribal Police
- Quileute Fire Department
- Olympic National Park Rangers
- Clallam County Fire District No. 1
- Clallam County Fire District No. 2
- Clallam County Fire District No. 3
- Clallam County Fire District No. 4
- Clallam County Fire District No. 5
- Clallam County Fire District No. 6
- Jamestown S'Klallam Fish and Game Enforcement

PenCom has a staffing component of 15 dispatchers who primarily work 12-hour shifts to cover the 24-hour/7-day operation. Currently, there are two vacant dispatch positions; open recruitment activities are in progress as of this writing. PenCom has three supervisors who also work 12-hour shifts to provide oversight and extra coverage. Additionally, the on-duty supervisor functions as dispatchers to fill in for emergencies, high call volume, breaks, etc.

PenCom typically staffs three dispatch positions, handling 9-1-1 and non-emergency telephone calls and radio traffic. The positions are divided by jurisdictional/geographic lines for law enforcement, with two fire/EMS dispatch positions.

Governance

Prior to 1990, the Port Angeles Police Department and the Clallam County Sheriff's Office operated their own emergency communications center.

Under the terms of the Interlocal Agreement, the Port Angeles City Manager is responsible for the general supervision over the administration of the Center. The Port Angeles City Council is designated as the legislative body for the Center and has ultimate authority. The communications manager is responsible to the Port Angeles Chief of Police for staffing, management, and the efficient operation of the Center. Functionally, PenCom is a division of the Port Angeles Police Department and contracts with its users for services. All PenCom personnel are employees of the police department, which also acts as the employer for purposes of collective bargaining.²⁶

The Interlocal Agreement establishes the PenCom Advisory Board ("Board") comprised of representatives from the City of Port Angeles and each user ("Member"). The Board has no legal authority or fiscal responsibility regarding PenCom. The Board may make recommendations in the following areas:

1. PenCom operations in accordance with industry standards
2. Other agencies joining PenCom
3. Additional services PenCom could or should provide to Members
4. Cost allocation

²⁶ There may be exceptions to this depending upon collective bargaining and job classification changes, especially in the technical areas.

5. Establish committees to develop policy, procedure, and standards recommendations, to be presented to the communications manager for consideration

Fiscal

PenCom's overall budget is determined through the process of goal setting, strategic planning, and budget information supplied by the Port Angeles Financial Services Department.

Cost allocation is defined in the Interlocal Agreement:

"Funding for PenCom will be provided through local and state imposed 9-1-1 taxes, emergency communications sales and use tax, grants, City and Member service fees, with the balance of the required revenue being derived from the Members and City through a funding formula."

PenCom receives funds generated from local 9-1-1 excise tax revenue and emergency communications sales and use tax. The revenues received are then used to fund operational costs, minus anticipated grant funding. Additionally, they receive State 9-1-1 CPD Funds to offset costs of training. However, they are typically not eligible to receive additional State 9-1-1 Operational Funds based upon the amount of revenue generated within the County through the telephone line tax.

The distribution of the unfunded balance is determined based upon a Member fee ratio calculated from the Members' annual calls for services provided by PenCom. In establishing this formula, a call for service is defined as:

"any incident resulting in one or more emergency service units being dispatched and/or a report or event number being generated."

User fees are calculated for each individual discipline receiving services from the Center. As a result, a formula has been developed as a provision of the Peninsula Communications (PENCOM) Dispatch and Computer Records Service Agreement allowing for the distribution of operational and capital costs based upon formulas developed for fire and law enforcement members.

Fire – "Calculation of the percentage of use for all fire members are determined by taking the total calls for service for each fire agency and dividing it by the total of all fire members. These figures are used to allocate each Member's share of the overall fire share of the budget."

Law Enforcement – "The number of full-time sworn officers for each Member is multiplied by \$2,000 for a base amount. These numbers are then totaled and subtracted from the police share of the overall budget. The total is then divided further based upon the percentage of calls for service for those agencies that use PenCom's full services, including the records management system. The base amount is added to the percentage amount for a grand total for each Member."

Additional information on the financial and the impacts on the regionalization effort can be found in the Phase 2 Report of Consolidation Options.

Facilities

The Center currently occupies space in the Port Angeles Police Department office located in Port Angeles, Washington. The space consists of approximately 920 square feet and includes the

area for dispatch functions, equipment, storage, and an administrative office. Dispatchers and police officers share restrooms, locker rooms, and a break area.

The communications operation is approximately 600 square feet of the space and is equipped with four console positions. The four positions are fully functional equipped with a telephone, radio, and CAD capabilities. The fourth position is not normally staffed but is used for special events, breaks, etc. There is a fifth telephone position located in the supervisor's office that has limited functionality (telephone and CAD only). The director's office is approximately 120 square feet. The area is furnished with a desk and minimal file storage.

PenCom currently has an operational arrangement with Clallam County Fire District No. 3 for space in their facility located in Sequim for establishment of a backup communications facility. This space is limited and provides for telephone support but is limited in functionality for the purpose of a long-term emergency event.

JeffCom functions as a backup 9-1-1 call center for services outages that occur in the Clallam County area. Additionally, JeffCom has the ability to enter a CAD call for PenCom. However, once the call is routed to PenCom, JeffCom loses the ability to view or edit that CAD call.²⁷

CENCOM, located in Bremerton, Washington, could function as a backup for major 9-1-1 service disruptions and could support a large-scale incident or service outage occurring in Clallam County. However, at this point, no arrangement exists between the two organizations.

Workload

Information presented was obtained from the annual workload reports prepared by PenCom staff. The numbers reflect the standard method of calculation based upon the definition established in the Interlocal Agreement. A 2-year history of the workload is presented in Table 6 and Table 7. This information reflects the overall activity experienced at the dispatch center.

Information pertaining to the telephone workload activity is broken into three distinct categories: 9-1-1 wireline, 9-1-1 cellular (wireless), and 9-1-1 calls received via VoIP systems. The information reflects substantial workload increases in the number of calls received over the past 3 years. Between 2012 and 2013, the Center has seen a 2.3 percent increase in 9-1-1 calls. The numbers of non-emergency calls have decreased by 6.2 percent during the same period. Overall, there has been an average of a 4.6 percent decrease in telephone workload during the period examined.

TABLE 6
PenCom 9-1-1/Telephone Calls Volume

Call Type	2012	2013	Change + or -	%
9-1-1	34,317	35,092	775	2.3%
Non-Emergency	142,565	133,709	(8,856)	(6.2%)
Combined Total	176,882	168,801	(8,081)	(4.6%)

²⁷ This is made possible by an electronic link between each centers' CAD system. Both JeffCom and PenCom use the same CAD software.

Table 7 below presents CAD calls for service supplied by PenCom for 2012 and 2013. The information is separated by discipline. Law enforcement and fire agencies have seen a roughly 5 percent increase, year for year.

TABLE 7
PenCom CAD Incidents / Calls for Service

Call Type	2012	2013	Change + or -	%
Fire	11,287	11,948	661	5.9%
Law	67,433	70,915	3,482	5.2%
Combined Total	78,720	82,863	4,143	5.3%

Other Tasks

In addition to processing 9-1-1 calls, non-emergency calls, and dispatching over the radio, PenCom dispatchers monitor fire and security alarms, monitor security cameras, and help compile regular statistical reports.²⁸ The PenCom warrants clerk performs general office work including data entry of warrants and restraining orders.

Stakeholder Interviews

As part of the research and data collection phase, ADCOMM staff conducted interviews and a site visit at PenCom. The onsite work was focused on conducting interviews with Board members and communications center employees.

The stakeholder interviews reflect that most are supportive of some form of regionalization of the 9-1-1/communications centers. The major point of discussion focused on how to achieve the end result.

The Board members support getting to a fully functioning independent entity located in a new center. They favor starting with regionalizing functions where possible as a first step.

ADCOMM held separate meetings with the communications staff. During these interviews, the four options under consideration were presented and discussed. In general, the staff felt that some form of regionalization would result from the efforts, primarily driven by operational efficiencies and cost savings. There seems to be a high level of support for the regionalization process.

The employees seemed less concerned about relocating a new center outside of Port Angeles. They expressed a desire to remain local but recognized that the move to a new facility may require additional commute time. According to the supervisory staff, the majority of dispatch employees live in the Port Angeles area; however, the staff has been discussing alternative transportation such as carpooling as a solution to longer commute times.

²⁸ The alarms and cameras being monitored are for the facility PenCom occupies, part of a campus housing other City departments as well.

Labor Agreement Comparison

Both JeffCom and PenCom employees are represented by the International Brotherhood of Teamsters Union Local No. 589, Communications and Support Unit. Each organization has its own labor agreement in place. JeffCom has adopted a new contract run through December 31, 2017. PenCom's current contract is in effect until December 31, 2017.

In comparison, the contracts are similar in content. Each contract addresses management and labor rights, seniority issues, working hours, compensation, leave time, call back, and the grievance process. Table 8 below provides more detail.

Depending on which option is selected as the pathway towards regionalization, labor agreements may need to be re-established. Only if the decision is made to have the operations remain independent and separate organizations will the existing agreements be unaffected.

TABLE 8
Contract Comparison

Category	JeffCom	PenCom
Labor Organization	Teamsters International – Local 589	Teamsters International – Local 589
Contract Expiration Date	Current Contract in Effect until 2017	Current Contract expires December 31, 2014 2017
Salary Structure	Identified in labor agreement	Identified in labor agreement
Dispatcher	\$16.71 – \$25.81	\$19.37 – \$ 24.71
Supervisor	\$18.87 – \$29.87	\$24.83 – \$28.76
Office Manager	\$16.35 – \$24.64	N/A
Records / Warrant Clerk	\$13.13 – \$20.01	\$19.14 – \$23.26
IT / Technologist	\$22.18 – \$33.08	\$29.51 – \$35.22
Hours per Week	42	42
Hours per Pay Period	84	84
Overtime Pay	Allowed at rate of 1½ for time worked in excess of 40 hours	Allowed at rate of 1½ for time worked in excess of 40 hours
Holiday Time	88 hours per year – beginning January	96 hours per year – beginning January
Sick Time	96 hours per year up to 1,920 hours	96 hours per year up to 960 hours
Vacation Time	Accrued annually at a rate of: 0 to 2 years = 80 hours 3 to 4 years = 96 hours 5 to 9 years = 120 hours 10-14 years = 128 hours 15+ years = 160 hours	Accrued annually at a rate of: 1 to 5 years = 80 hours 6 to 10 years = 120 hours 11 to 15 years = 160 hours 16 to 20 years = 200 hours 21+= years = 240 hours
Call- Back	Yes	Yes
Call –Back Response Time	None	30 minutes
Comp Time	Yes – up to 60 hours	Yes – up to 80 hours
Shift Bidding	By seniority	By seniority
Shift Differential Pay	+\$0.50 per hour for graveyard shift	None
Shift Schedule	Dispatch – 10 hr and 12 hr Supervisor – 12 hr	Dispatch – 12 hr Supervisor – 12 hr
Shift Schedule Rotation	2 on 3 off, 2 on 2 off, 3 on	2 on 3 off, 2 on 2 off, 3 on

Policy Comparison

Each organization has developed separate policies to meet the individual requirements of their customers. New policies would be required to meet the mission, goals, and needs of a regionalized operation. It would be possible, however, to take the existing individual policies and merge them into a revised version to meet the operational requirements for a regionalized organization.

Each organization's policies exist in a series of documents. The first of these documents are the existing labor contracts that have been negotiated for each organization. The policy items listed in the contracts include major topics relating to working conditions, employee and management rights compensation, seniority, and personal leave time.

The second set of documents is the general policies relating to the organizational and operational aspects of each center. These include chain of command, notification, and job descriptions.

Next are the training documents. This is a series of procedures and guidelines that address specific operational issues such as call answering and processing, agency specific responses, and so on.

A comparison of how each center addressed the core issues is provided below:

Category	JeffCom	PenCom
Chain of Command	Yes	Yes
Complaint Process	Yes	Yes
On-Call Requirements	Yes	Yes
Organization Structure	Yes	Yes
Rules of Conduct	Yes	Yes
Shift Rotation	Yes	Yes
Work Assignment Rules	Yes	Yes
Workplace Rules	Yes	Yes

Finally, there are the Interlocal Agreement documents. Each organization has adopted legal and binding documents that establishes authorization, fiscal, structure, managerial authority, and other parameters that define the relationship between customer and provider (in PenCom's case) and the entity itself (as seen in JeffCom's documents).

In general, the review of the policies and procedures for each organization indicated a series of well-established documents and operational policies. Based on the similarities, the process of merging the individual documents into the directives needed in a regionalized operation would be achievable. ADCOMM recommends a comprehensive Standard Operating Procedures/ Standard Operating Guidelines document be prepared reflecting each center's unique needs. This should be done regardless of which option is ultimately selected. Should regionalization occur, the document could address the single, new entity. However if PenCom and JeffCom continue to operate as individual entities, it would be advantageous to each internally, and to

the interoperability of the two organizations together, to have clear operational instructions available in one convenient location.

Should regionalization occur, considerable effort will be required to develop common call classification coding, response plans, and related CAD activity information.

Training Procedures Comparison

Each individual communication center has well-established training procedures for integrating new employees into their respective organizations. The process for training and verification of skill levels is established through a set of training documents and testing procedures to provide direction throughout the training process.

New employees are assigned to work with an experienced employee designated as a trainer as outlined under their respective Communications Officer Training programs. The trainer is responsible for ensuring information contained in the manuals are reviewed and successfully mastered. A record of completion is created to track progress throughout the process.

Category	JeffCom	PenCom
CAD Procedure	Yes	Yes
Fire / Med Call Taking Procedure	Yes	Yes
Fire Radio Procedure	Yes	Yes
General Operations Procedures	Yes	Yes
Law Enforcement Radio Procedures	Yes	Yes
Law Radio Procedure	Yes	Yes
Liability Training	Yes	Yes
Phone Procedure	Yes	Yes
Specialized Agency Procedures	Yes	Yes
Technical Radio Procedures	Yes	Yes
Warrant Process Procedures	Yes	Yes

In examining the training procedures for each organization, there appear to be similarities in topic and tasks that correspond with standard call taking/dispatching protocols. Each program is tailored to fit the unique needs of their specific organizational goals and mission. However, the individual procedures could be blended to develop the documents necessary for a regionalized operation.

Budget Comparison

The PenCom budget is considerably larger than the JeffCom budget as can be seen in the comparison in Table 9. The information is representative of 2013 budget information provided by the centers.

TABLE 9
Budget Comparison

Description	JeffCom 2013	PenCom 2013
Fund Balance		
Beginning Balance	\$157,400.00	\$824,168.00
Revenues		
9-1-1 Phone Taxes	\$309,650.00	\$902,250.00
9-1-1 Grant Revenue	\$312,434.00	\$0.00
User Fees	\$722,953.00	\$305,208.00
Misc. Revenue	\$43,130.00	\$71,792.00
Comm./Alarm/Dispatch	\$78,000.00	\$0.00
Capital Fund Balance	\$9,000.00	\$230,000.00
9-1-1 Sales Tax (0.01%)	\$76,000.00	\$670,000.00
Misc. Revenue/Earnings/Interest	\$85,000.00	\$0.00
Other Revenue (Transfer from Capital)	\$78,000.00	\$0.00
Total Revenues	\$1,714,167.00	\$2,179,250.00
Expenditures		
Wages and Salaries	\$761,474.80	\$1,302,900.00
Benefits	\$265,300.00	\$520,200.00
Supplies/Operations	\$190,059.00	\$513,800.00
Radio Lease & Maintenance	\$152,119.00	\$0.00
Other Administration	\$39,762.00	\$87,000.00
Information Systems/IT Charges	\$11,265.00	\$15,350.00
Bond & Loan Payments	\$140,000.00	\$0.00
Capital Expenses	\$78,000.00	\$243,750.00
Building Space Lease	30,000.00	\$0.00
Total Expenditures	\$1,667,979.80	\$2,683,000.00

The budget highlights some important differences between the organizations. The impact of paying for the facilities being used is apparent in JeffCom's budget, as is the debt service shown in the "Capital Expense" line item. This underlines the organizational difference yet again: JeffCom can take on debt directly whereas PenCom's major capital projects would be funded by debt incurred by the City.

As noted above, both counties enacted a one-tenth of one percent sales tax for emergency communications. The parameters for using the funds collected by the tax are broad. Some agencies in Washington use the money to fund capital projects while others use it to subsidize operational costs, thereby lowering user fees for customers. A new, regionalized agency could have the ability to decide how best to use the funds assuming the two counties can agree.

Staffing Comparison

Each organization has several similar positions that would be duplicated in a regional operation. Below is a comparison of staffing for each respective agency.

Category	JeffCom	PenCom
Director	1	1
Deputy / Assistant Director	0	0
Office Manager	1	0
Dispatch Supervisor	2	3
Dispatcher – Full Time	9	13
Dispatch – Full Time Vacancies	0	2
Dispatcher – Part Time	4	0
Records / Warrant Staff	1	1
IT Staff	1	2
IT Technician – Part Time	2	0
Dispatch Supervisor Average Tenure	13 years	14 years
Dispatcher Average Tenure	5 years	15 years
Technical Service Average Tenure	N/A	N/A

Currently the dispatch staff for both centers is working 12-hour shifts. Each center uses a variation of work days and days off. A supervisor fills in and assists with coverage during peak times and breaks. In general, each position is assigned to a dispatch function based upon jurisdictional or geographical regions.

SECTION 3

Current Technology Analysis

This section describes and outlines the current technology being used by both JeffCom and PenCom. As discussed below, both centers are using similar if not the same technology and both centers have a need to upgrade their equipment due to its age. This report does not address or analyze the radio systems used by the two agencies except as the radio system relates to the consoles and consolidation. A detailed radio system analysis is outside of the scope of this report. In addition, JeffCom has recently completed an extensive radio system upgrade. Clallam County is in the process of making some incremental improvements to the Clallam County radio system, and PenCom is in the process of having a comprehensive radio system study done.

Equipment	Console Positions	
	JeffCom	PenCom
Console Furniture	4	4
CAD	4	5
Telephone	4	5
Radio	3	4

Telephone System Equipment

JeffCom and PenCom use Positron LifeLine/Power 9-1-1 telephone answering system equipment. This equipment is connected to the CenturyLink provided ESINet for the transport of 9-1-1 calls to each center. The two systems are standalone and the only telephone system inter-connection between the two centers is through the ESINet for the transfer of 9-1-1 calls. The two centers have the following 9-1-1 trunk distribution.

Description	Telephone System Information	
	JeffCom	PenCom
Wireline Trunks	2	4
Wireless Trunks	2	3
VoIP	1	1
Equipment	Lifeline-100/Power 9-1-1	Lifeline-100/Power 9-1-1
Positions	4	5
Status	Obsolete Manufacturer Discontinued	Obsolete Manufacturer Discontinued
Support	Time and Maintenance/Part Availability is Declining	Time and Maintenance/Part Availability is Declining

The existing telephone equipment is manufacturer-discontinued and near the end of its useful life. The equipment should be replaced over the next year or so. This represents an opportunity for the two dispatch centers to either wait and have the new equipment installed as part of consolidation should that occur or at the very least they should coordinate their equipment purchases so as not to create an impediment to consolidation at some time in the future.

Radio Console System

PenCom and JeffCom operate two different console systems. However, both operate conventional analog radio systems so the type of console and brands of consoles systems are independent of the radio system.

Description	Radio Console Information	
	JeffCom	PenCom
Manufacturer	Zetron	Motorola
Model	4048/CRT	Gold Elite
Positions	3	4
Radio System	Analog Conventional	Analog Conventional
Positions	4	4
Status	In Production capable of being expanded	Obsolete Manufacturer Discontinued
Support	Steady	Declining

Jefferson County and Clallam County interconnect to analog conventional UHF radio systems for their law enforcement personnel and analog conventional VHF radio systems for fire personnel. These systems use an extensive microwave network that exists within each county to interconnect their radio sites.

JeffCom owns their radio network infrastructure. PenCom does not own any radio network infrastructure and their user agencies must provide their own radio infrastructure and bring the interface point to PenCom.

Computer Aided Dispatch

JeffCom and PenCom both have New World Systems AEGIS MSP computer aided dispatch systems. These systems are currently interconnected such that incident information can be transmitted between the two CAD systems for situational awareness, but the two systems cannot back each other up.

JeffCom and PenCom also provide New World Records Management System (RMS) access as part of the CAD systems. Since both dispatch agencies use the same CAD and RMS systems, combining the two into a single CAD system for consolidation would not be a significant technical effort.²⁹

Alarm System Equipment

PenCom operates an ADEMCO burglary, fire, and panic alarm system and three additional analog panels that supplies alarm reporting to a variety of locations around Port Angeles and Clallam County facilities on a Centurion system. The monitoring responsibility has recently been expanded to include three additional analog panels.

²⁹ Combining and normalizing each organization's event coding scheme, event upgrade and handling procedures, numbering schemes, clearance codes, and other data will require a significant operational and political effort, however.

Facilities

The two dispatch centers are operated within the facilities of another agency. In addition, the two agencies are in crowded spaces.

Description	Dispatch Facilities		Comments
	JeffCom	PenCom	
Location	JCSO Jail Complex/EOC	Port Angeles Police Department	
Security	Excellent	Excellent	Located in a secure facility.
Access	Limited	Limited	Access through locked and controlled doors.
Dispatch Floor	400 sq. ft.	600 sq. ft.	
Total Space	860 sq. ft.	920 sq. ft.	Ancillary space such as break rooms, restrooms, etc. shared with other functions and not included in the total space.
Emergency Power	Yes	Yes	
Adequate Space	No	No	Neither location has adequate space.
Ability to expand	No	No	Neither space is located in a facility that could be easily expanded to support a larger center.
Tower	Yes	Yes	
Microwave Connection	Yes	Yes	Both microwave connections interconnect so there is connectivity between centers

Logging Recorder

JeffCom and PenCom both have Stancil version 3.4.12.2 logging recorders. These recorders could be reused. However, as the technology for dispatch and telephone moves to IP-based platforms, the recorders will need to support IP-based recording and may need to be replaced.

Technical System Summary

PenCom and JeffCom have many technical system commonalities. This makes the process of consolidation easier should that approach be chosen. Some of those similarities are:

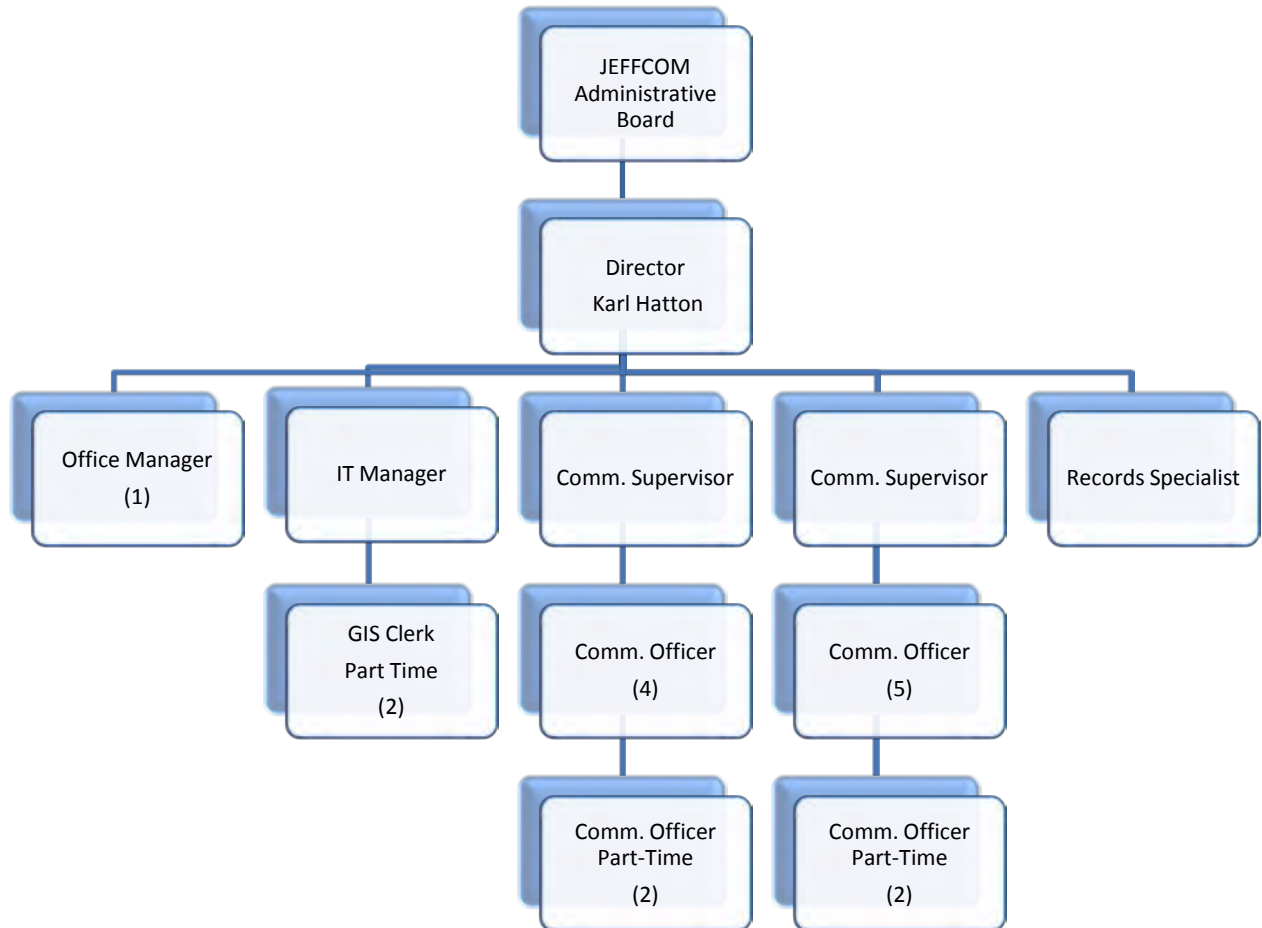
- Same CAD vendor and system
- Common telephone platforms that both need to be replaced
- Analog conventional radio systems with law enforcement on UHF and fire responders on VHF
- Same logging recorder vendor and model
- Facilities that are both at maximum capacity with little ability to expand

Appendix

- A JeffCom Organization Chart
- B PenCom Organization Chart
- C Population Data Tables
- D Data Sources

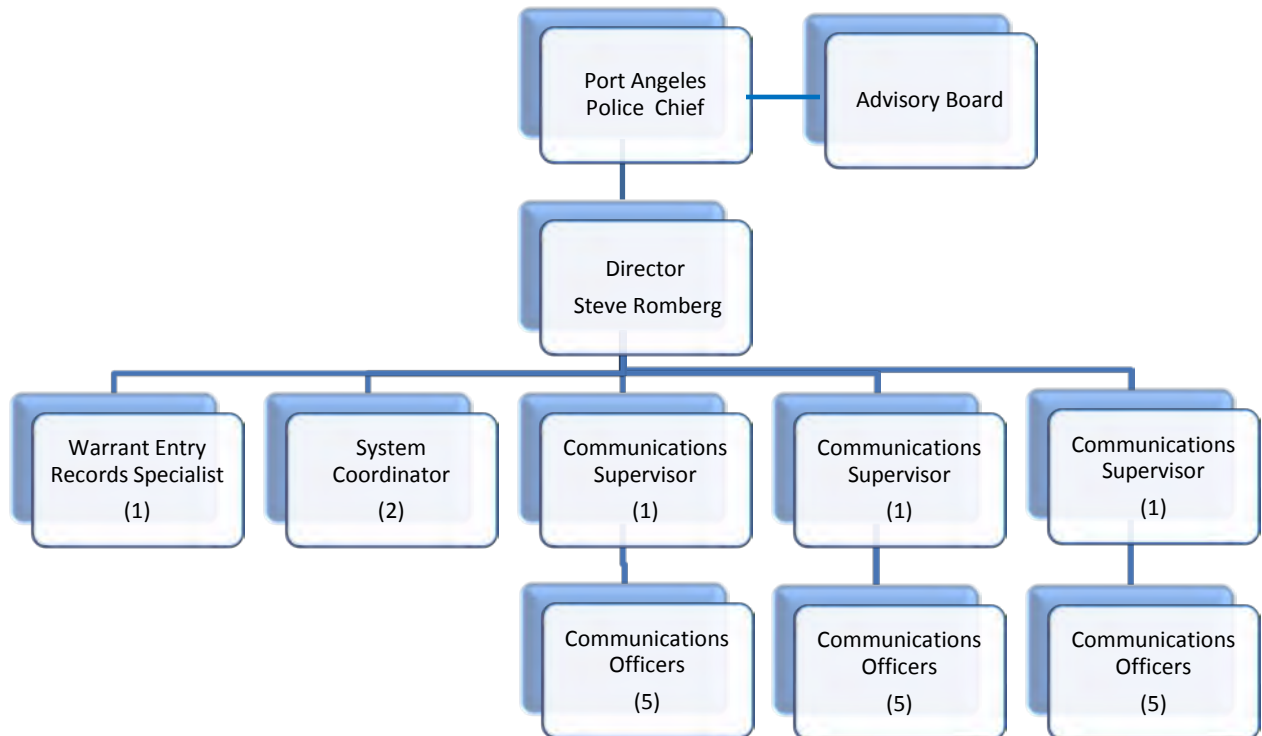
APPENDIX A

JeffCom Organization Chart



APPENDIX B

PenCom Organization Chart



APPENDIX C

Population Data Tables

TABLE C-1
Clallam County Population Projection: Intermediate Series (2010-2040)³⁰

Age	2010			2015			2020		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	71,404	35,429	35,975	71,868	35,577	36,291	73,616	36,368	37,248
0-4	3,363	1,792	1,571	3,281	1,678	1,603	3,403	1,738	1,665
5-9	3,398	1,734	1,664	3,421	1,830	1,591	3,465	1,773	1,692
10-14	3,822	1,935	1,887	3,447	1,761	1,686	3,558	1,891	1,667
15-19	3,994	2,160	1,834	4,166	2,241	1,925	3,892	2,119	1,773
20-24	3,598	2,004	1,594	3,254	1,839	1,415	3,423	1,905	1,518
25-29	3,591	1,917	1,674	3,962	2,088	1,874	3,500	1,832	1,668
30-34	3,460	1,848	1,612	3,553	1,867	1,686	4,146	2,152	1,994
35-39	3,365	1,736	1,629	3,290	1,706	1,584	3,579	1,832	1,747
40-44	3,579	1,799	1,780	3,436	1,768	1,668	3,350	1,745	1,605
45-49	4,497	2,165	2,332	3,532	1,766	1,766	3,463	1,786	1,677
50-54	5,480	2,647	2,833	4,684	2,231	2,453	3,659	1,816	1,843
55-59	6,093	2,854	3,239	6,435	3,086	3,349	5,516	2,613	2,903
60-64	5,975	2,824	3,151	6,807	3,184	3,623	7,351	3,515	3,836
65-69	5,255	2,509	2,746	5,614	2,632	2,982	6,770	3,150	3,620
70-74	3,961	2,001	1,960	4,547	2,146	2,401	5,127	2,380	2,747
75-79	3,021	1,430	1,591	3,326	1,633	1,693	3,935	1,790	2,145
80-84	2,439	1,121	1,318	2,355	1,047	1,308	2,619	1,231	1,388
85+	2,513	953	1,560	2,758	1,074	1,684	2,860	1,100	1,760

Age	2025			2030			2035		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	75,022	37,002	38,020	76,112	37,518	38,594	76,786	37,913	38,873
0-4	3,463	1,773	1,690	3,463	1,770	1,693	3,466	1,774	1,692
5-9	3,589	1,830	1,759	3,683	1,883	1,800	3,673	1,876	1,797
10-14	3,612	1,842	1,770	3,775	1,930	1,845	3,863	1,970	1,893
15-19	4,036	2,275	1,761	4,134	2,248	1,886	4,321	2,349	1,972
20-24	3,220	1,816	1,404	3,383	1,968	1,415	3,469	1,947	1,522
25-29	3,722	1,933	1,789	3,464	1,816	1,648	3,622	1,978	1,644
30-34	3,678	1,881	1,797	3,986	2,038	1,948	3,707	1,912	1,795
35-39	4,205	2,132	2,073	3,726	1,842	1,884	4,078	2,022	2,056
40-44	3,665	1,877	1,788	4,310	2,180	2,130	3,835	1,898	1,937
45-49	3,384	1,759	1,625	3,716	1,901	1,815	4,379	2,211	2,168
50-54	3,588	1,840	1,748	3,530	1,820	1,710	3,866	1,957	1,909
55-59	4,325	2,139	2,186	4,286	2,183	2,103	4,226	2,176	2,050
60-64	6,322	2,991	3,331	4,979	2,453	2,526	4,941	2,502	2,439
65-69	7,352	3,498	3,854	6,303	2,952	3,351	4,975	2,437	2,538
70-74	6,258	2,889	3,369	6,825	3,221	3,604	5,817	2,691	3,126
75-79	4,426	1,988	2,438	5,493	2,463	3,030	5,969	2,739	3,230
80-84	3,076	1,316	1,760	3,476	1,481	1,995	4,420	1,905	2,515
85+	3,101	1,223	1,878	3,580	1,369	2,211	4,159	1,569	2,590

Age	2040			Summary Data				
	Total	Male	Female	Period	Change	Births	Deaths	Migration
Total	77,224	38,239	38,985	2010-15	464	3,273	4,696	1,887
0-4	3,523	1,797	1,726	2015-20	1,748	3,316	5,116	3,548
5-9	3,683	1,877	1,806	2020-25	1,406	3,341	5,471	3,536
10-14	3,851	1,963	1,888	2025-30	1,090	3,322	5,837	3,605
15-19	4,418	2,402	2,016	2030-35	674	3,331	6,208	3,551
20-24	3,644	2,056	1,588	2035-40	438	3,382	6,488	3,544
25-29	3,723	1,960	1,763					
30-34	3,865	2,079	1,786					
35-39	3,758	1,883	1,875					
40-44	4,194	2,083	2,111					
45-49	3,897	1,926	1,971					
50-54	4,565	2,290	2,275					
55-59	4,624	2,345	2,279					
60-64	4,883	2,498	2,385					
65-69	4,983	2,518	2,465					
70-74	4,626	2,249	2,377					
75-79	5,060	2,257	2,803					
80-84	4,794	2,113	2,681					
85+	5,133	1,943	3,190					

³⁰ State of Washington, Office of Financial Management, Forecasting Division, 2012 Projections, County Growth Management Population Projections by Age and Sex: 2010-2040, August 2012.

TABLE C-2
Jefferson County Population Projection: Intermediate Series (2010-2040)⁷

Age	2010			2015			2020		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	29,872	14,798	15,074	30,469	15,033	15,436	32,017	15,718	16,299
0-4	1,068	554	514	1,017	518	499	1,142	585	557
5-9	1,127	556	571	1,118	582	536	1,146	592	554
10-14	1,367	694	673	1,178	587	591	1,248	645	603
15-19	1,354	696	658	1,328	688	640	1,220	620	600
20-24	1,105	619	486	1,210	620	590	1,244	642	602
25-29	1,121	611	510	1,323	742	581	1,422	719	703
30-34	1,197	605	592	1,227	674	553	1,567	890	677
35-39	1,253	649	604	1,202	596	606	1,335	721	614
40-44	1,478	763	715	1,308	667	641	1,274	623	651
45-49	1,942	913	1,029	1,502	767	735	1,369	694	675
50-54	2,561	1,204	1,357	2,050	948	1,102	1,586	792	794
55-59	3,063	1,438	1,625	3,074	1,446	1,628	2,503	1,155	1,348
60-64	3,394	1,616	1,778	3,504	1,664	1,840	3,677	1,746	1,931
65-69	2,852	1,422	1,430	3,267	1,559	1,708	3,612	1,708	1,904
70-74	1,878	959	919	2,554	1,258	1,296	3,117	1,458	1,659
75-79	1,338	700	638	1,575	777	798	2,222	1,066	1,156
80-84	948	477	471	1,046	526	520	1,228	580	648
85+	826	322	504	986	414	572	1,105	482	623

Age	2025			2030			2035		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	33,678	16,468	17,210	35,657	17,403	18,254	37,914	18,536	19,378
0-4	1,272	647	625	1,345	687	658	1,455	735	720
5-9	1,300	661	639	1,467	748	719	1,616	828	788
10-14	1,291	663	628	1,484	761	723	1,710	867	843
15-19	1,300	695	605	1,371	723	648	1,583	829	754
20-24	1,161	589	572	1,256	664	592	1,321	692	629
25-29	1,458	756	702	1,448	730	718	1,607	853	754
30-34	1,742	892	850	1,842	953	889	1,862	949	913
35-39	1,747	977	770	2,017	1,026	991	2,196	1,128	1,068
40-44	1,439	772	667	1,941	1,078	863	2,283	1,147	1,136
45-49	1,369	667	702	1,558	832	726	2,124	1,167	957
50-54	1,473	732	741	1,468	695	773	1,712	888	824
55-59	1,962	988	974	1,848	910	938	1,873	879	994
60-64	3,013	1,398	1,615	2,433	1,228	1,205	2,308	1,158	1,150
65-69	3,849	1,820	2,029	3,218	1,483	1,735	2,620	1,333	1,287
70-74	3,494	1,626	1,868	3,820	1,778	2,042	3,178	1,438	1,740
75-79	2,734	1,235	1,499	3,151	1,424	1,727	3,478	1,576	1,902
80-84	1,761	798	963	2,185	937	1,248	2,589	1,122	1,467
85+	1,313	552	761	1,805	746	1,059	2,399	947	1,452

Age	2040			Summary Data				
	Total	Male	Female	Period	Change	Births	Deaths	Migration
Total	40,093	19,708	20,385	2010-15	597	1,008	1,911	1,500
0-4	1,575	800	775	2015-20	1,548	1,083	2,248	2,713
5-9	1,718	878	840	2020-25	1,661	1,178	2,527	3,010
10-14	1,878	957	921	2025-30	1,979	1,239	2,857	3,597
15-19	1,818	949	869	2030-35	2,257	1,301	3,214	4,170
20-24	1,536	796	740	2035-40	2,179	1,411	3,476	4,244
25-29	1,663	870	793					
30-34	2,057	1,099	958					
35-39	2,195	1,106	1,089					
40-44	2,466	1,247	1,219					
45-49	2,487	1,240	1,247					
50-54	2,345	1,279	1,066					
55-59	2,169	1,128	1,041					
60-64	2,358	1,129	1,229					
65-69	2,494	1,248	1,246					
70-74	2,602	1,314	1,288					
75-79	2,858	1,249	1,609					
80-84	2,863	1,243	1,620					
85+	3,011	1,176	1,835					

TABLE C-3Selected Economic Indicators: Clallam County, 1969-2012³¹*Part I, Population and Total Employment*

Year	Population				Total Employment						
	Population	Index ¹	Percent Change	Percent of Statewide Total	Jobs	Index ¹	Percent Change	Percent of Statewide Total	Job Ratio: Jobs ÷ Population	Job Ratio: Percent of U.S. Avg.	
1969	34,050	100.0	N	1.02	13,628	100.0	N	0.89	0.40	88.48	
1970	34,999	102.8	2.79	1.02	13,923	102.2	2.16	0.93	0.40	88.82	
1971	36,103	106.0	3.15	1.05	14,127	103.7	1.47	0.97	0.39	88.37	
1972	36,600	107.5	1.38	1.06	15,200	111.5	7.60	1.03	0.42	92.15	
1973	39,029	114.6	6.64	1.12	16,679	122.4	9.73	1.07	0.43	91.76	
1974	40,705	119.5	4.29	1.15	17,476	128.2	4.78	1.08	0.43	91.49	
1975	41,251	121.1	1.34	1.14	17,617	129.3	0.81	1.06	0.43	93.04	
1976	43,847	128.8	6.29	1.19	19,139	140.4	8.64	1.10	0.44	93.47	
1977	45,182	132.7	3.04	1.20	20,515	150.5	7.19	1.13	0.45	94.99	
1978	47,367	139.1	4.84	1.22	21,100	154.8	2.85	1.09	0.45	90.20	
1979	49,969	146.8	5.49	1.25	21,877	160.5	3.68	1.06	0.44	86.89	
1980	51,703	151.8	3.47	1.24	21,729	159.4	-0.68	1.03	0.42	83.78	
1981	51,825	152.2	0.24	1.22	21,063	154.6	-3.07	0.99	0.41	81.16	
1982	51,217	150.4	-1.17	1.20	20,440	150.0	-2.96	0.98	0.40	80.98	
1983	51,162	150.3	-0.11	1.19	20,936	153.6	2.43	0.98	0.41	82.73	
1984	51,629	151.6	0.91	1.19	21,300	156.3	1.74	0.96	0.41	80.72	
1985	52,068	152.9	0.85	1.18	21,820	160.1	2.44	0.96	0.42	80.54	
1986	52,687	154.7	1.19	1.18	22,099	162.2	1.28	0.94	0.42	79.79	
1987	53,797	158.0	2.11	1.19	22,899	168.0	3.62	0.93	0.43	79.61	
1988	54,425	159.8	1.17	1.17	24,171	177.4	5.55	0.93	0.44	81.30	
1989	55,241	162.2	1.50	1.16	24,944	183.0	3.20	0.92	0.45	81.84	
1990	56,525	166.0	2.32	1.15	26,364	193.5	5.69	0.93	0.47	84.17	
1991	57,926	170.1	2.48	1.15	26,856	197.1	1.87	0.93	0.46	85.23	
1992	59,494	174.7	2.71	1.15	27,599	202.5	2.77	0.95	0.46	86.13	
1993	60,643	178.1	1.93	1.15	27,746	203.6	0.53	0.94	0.46	84.48	
1994	61,485	180.6	1.39	1.14	28,641	210.2	3.23	0.94	0.47	85.00	
1995	62,108	182.4	1.01	1.13	28,651	210.2	0.03	0.92	0.46	83.05	
1996	62,916	184.8	1.30	1.13	29,193	214.2	1.89	0.91	0.46	82.75	
1997	63,380	186.1	0.74	1.12	30,121	221.0	3.18	0.91	0.48	83.84	
1998	63,998	188.0	0.98	1.11	31,035	227.7	3.03	0.92	0.48	84.41	
1999	64,252	188.7	0.40	1.10	31,332	229.9	0.96	0.91	0.49	84.24	
2000	64,269	188.7	0.03	1.09	32,023	235.0	2.21	0.91	0.50	85.02	
2001	64,756	190.2	0.76	1.08	31,892	234.0	-0.41	0.91	0.49	84.79	
2002	65,777	193.2	1.58	1.09	32,297	237.0	1.27	0.93	0.49	85.51	
2003	66,301	194.7	0.80	1.09	33,042	242.5	2.31	0.94	0.50	87.08	
2004	67,411	198.0	1.67	1.09	34,258	251.4	3.68	0.96	0.51	88.03	
2005	68,720	201.8	1.94	1.10	35,493	260.4	3.60	0.96	0.52	88.45	
2006	69,642	204.5	1.34	1.09	36,163	265.4	1.89	0.95	0.52	87.98	
2007	70,186	206.1	0.78	1.09	36,910	270.8	2.07	0.94	0.53	88.07	
2008	70,769	207.8	0.83	1.08	36,576	268.4	-0.90	0.92	0.52	87.49	
2009	71,077	208.7	0.44	1.07	35,533	260.7	-2.85	0.93	0.50	88.02	
2010	71,533	210.1	0.64	1.06	34,874	255.9	-1.85	0.93	0.49	87.15	
2011	71,814	210.9	0.39	1.05	34,680	254.5	-0.56	0.91	0.48	85.33	
2012	71,863	211.1	0.07	1.04	34,899	256.1	0.63	0.90	0.49	84.88	

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.

N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.

³¹ http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_1

TABLE C-4Selected Economic Indicators: Clallam County, 1969-2012³²

Part II, Total Personal Income and Per Capita Income

Year	Total Personal Income					Per Capita Income					
	Current Dollars (1000s)	2009 Dollars ² (1000s)	Index ¹	Percent Change ² (2009 \$s)	Percent of Statewide Total	Current Dollars	2009 Dollars ²	Index ¹	Percent Change ² (2009 \$s)	Percent of Statewide Average	Percent of U.S. Average
1969	114,381	536,672	100.0	N	0.84	3,359	15,761	100.0	N	82.23	87.58
1970	128,184	574,558	107.1	7.06	0.90	3,663	16,416	104.2	4.16	87.43	89.69
1971	138,998	597,610	111.4	4.01	0.92	3,850	16,553	105.0	0.83	88.29	88.71
1972	158,756	659,998	123.0	10.44	0.98	4,338	18,033	114.4	8.94	92.03	91.96
1973	189,316	746,750	139.1	13.14	1.03	4,851	19,133	121.4	6.10	91.80	92.74
1974	218,909	782,069	145.7	4.73	1.05	5,378	19,213	121.9	0.42	91.27	94.22
1975	244,257	805,358	150.1	2.98	1.03	5,921	19,523	123.9	1.61	90.61	95.94
1976	288,728	902,472	168.2	12.06	1.09	6,585	20,582	130.6	5.42	91.91	97.50
1977	330,042	968,547	180.5	7.32	1.12	7,305	21,437	136.0	4.15	93.69	98.69
1978	372,749	1,022,266	190.5	5.55	1.09	7,869	21,582	136.9	0.68	89.22	95.46
1979	439,877	1,108,114	206.5	8.40	1.11	8,803	22,176	140.7	2.75	89.40	96.34
1980	482,606	1,097,880	204.6	-0.92	1.07	9,334	21,234	134.7	-4.25	86.35	92.50
1981	517,866	1,082,722	201.7	-1.38	1.03	9,993	20,892	132.6	-1.61	84.44	89.15
1982	540,083	1,069,916	199.4	-1.18	1.02	10,545	20,890	132.5	-0.01	84.80	88.61
1983	590,455	1,121,408	209.0	4.81	1.04	11,541	21,919	139.1	4.93	87.81	91.72
1984	643,587	1,177,760	219.5	5.03	1.06	12,466	22,812	144.7	4.08	89.22	90.28
1985	683,961	1,208,817	225.2	2.64	1.06	13,136	23,216	147.3	1.77	89.86	89.74
1986	718,549	1,243,057	231.6	2.83	1.05	13,638	23,593	149.7	1.62	88.43	88.92
1987	747,198	1,252,658	233.4	0.77	1.02	13,889	23,285	147.7	-1.31	86.32	86.07
1988	809,057	1,305,499	243.3	4.22	1.02	14,866	23,987	152.2	3.02	87.16	86.21
1989	900,407	1,392,956	259.6	6.70	1.03	16,300	25,216	160.0	5.12	88.56	88.57
1990	975,561	1,446,583	269.5	3.85	1.01	17,259	25,592	162.4	1.49	87.89	89.17
1991	1,039,590	1,492,570	278.1	3.18	1.01	17,947	25,767	163.5	0.68	87.19	90.56
1992	1,094,840	1,531,395	285.3	2.60	0.98	18,403	25,740	163.3	-0.10	85.27	88.48
1993	1,141,472	1,557,728	290.3	1.72	0.98	18,823	25,687	163.0	-0.21	85.02	88.02
1994	1,189,844	1,590,658	296.4	2.11	0.96	19,352	25,871	164.1	0.72	84.21	86.79
1995	1,242,528	1,627,325	303.2	2.31	0.95	20,006	26,202	166.2	1.28	84.14	86.00
1996	1,321,516	1,694,686	315.8	4.14	0.94	21,004	26,936	170.9	2.80	83.09	85.94
1997	1,416,772	1,786,012	332.8	5.39	0.93	22,354	28,179	178.8	4.62	83.57	87.14
1998	1,480,252	1,851,843	345.1	3.69	0.89	23,130	28,936	183.6	2.68	80.25	84.85
1999	1,519,867	1,873,857	349.2	1.19	0.85	23,655	29,164	185.0	0.79	77.50	83.49
2000	1,598,970	1,923,504	358.4	2.65	0.83	24,879	29,929	189.9	2.62	76.76	82.06
2001	1,769,183	2,088,000	389.1	8.55	0.89	27,321	32,244	204.6	7.74	82.21	86.67
2002	1,813,305	2,111,637	393.5	1.13	0.89	27,567	32,103	203.7	-0.44	82.16	86.69
2003	1,955,431	2,232,915	416.1	5.74	0.93	29,493	33,678	213.7	4.91	85.19	90.26
2004	2,037,589	2,271,484	423.3	1.73	0.90	30,226	33,696	213.8	0.05	82.33	88.12
2005	2,122,846	2,300,939	428.7	1.30	0.90	30,891	33,483	212.4	-0.63	82.05	86.08
2006	2,304,153	2,432,389	453.2	5.71	0.90	33,086	34,927	221.6	4.31	82.43	86.78
2007	2,493,177	2,567,665	478.4	5.56	0.90	35,522	36,584	232.1	4.74	82.91	89.24
2008	2,675,749	2,674,064	498.3	4.14	0.92	37,810	37,786	239.7	3.29	85.62	92.50
2009	2,575,502	2,575,502	479.9	-3.69	0.92	36,235	36,235	229.9	-4.10	86.05	92.07
2010	2,568,964	2,527,165	470.9	-1.88	0.90	35,913	35,329	224.1	-2.50	84.46	89.42
2011	2,687,527	2,582,025	481.1	2.17	0.89	37,423	35,954	228.1	1.77	84.25	88.48
2012	2,769,966	2,612,954	486.9	1.20	0.87	38,545	36,360	230.7	1.13	83.71	88.13

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.² 2009 constant dollar estimates determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).

N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.

³² http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_2

TABLE C-5

Selected Economic Indicators: Clallam County, 1969-2012³³
 Part III, Total Industry Earnings and Average Earnings per Job

Year	Total Industry Earnings					Average Earnings Per Job					
	Current Dollars (1000s)	2009 Dollars ² (1000s)	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Total	Current Dollars	2009 Dollars ²	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Average	Percent of U.S. Average
1969	90,701	425,567	100.0	N	0.78	6,655	31,227	100.0	N	88.62	93.43
1970	98,242	440,350	103.5	3.47	0.84	7,056	31,627	101.3	1.28	89.86	93.47
1971	104,210	448,042	105.3	1.75	0.86	7,377	31,715	101.6	0.28	88.73	91.64
1972	121,551	505,326	118.7	12.79	0.92	7,997	33,245	106.5	4.82	89.78	92.51
1973	146,843	579,217	136.1	14.62	0.97	8,804	34,727	111.2	4.46	90.89	94.26
1974	165,566	591,497	139.0	2.12	0.97	9,474	33,846	108.4	-2.54	90.00	94.97
1975	175,735	579,429	136.2	-2.04	0.92	9,975	32,890	105.3	-2.82	86.92	92.81
1976	214,626	670,853	157.6	15.78	1.00	11,214	35,052	112.2	6.57	90.60	96.09
1977	245,655	720,903	169.4	7.46	1.02	11,974	35,140	112.5	0.25	89.82	95.30
1978	274,957	754,071	177.2	4.60	0.96	13,031	35,738	114.4	1.70	88.46	95.54
1979	323,451	814,820	191.5	8.06	0.98	14,785	37,246	119.3	4.22	92.25	100.11
1980	325,851	741,278	174.2	-9.03	0.90	14,996	34,115	109.2	-8.41	86.86	94.36
1981	320,018	669,074	157.2	-9.74	0.81	15,193	31,765	101.7	-6.89	81.31	87.74
1982	317,885	629,737	148.0	-5.88	0.78	15,552	30,809	98.7	-3.01	79.53	85.21
1983	349,224	663,256	155.9	5.32	0.81	16,681	31,680	101.4	2.83	82.55	87.07
1984	379,482	694,450	163.2	4.70	0.82	17,816	32,603	104.4	2.91	85.49	87.13
1985	397,353	702,273	165.0	1.13	0.81	18,210	32,185	103.1	-1.28	85.01	85.29
1986	420,243	727,001	170.8	3.52	0.80	19,016	32,897	105.3	2.21	85.23	85.54
1987	439,411	736,661	173.1	1.33	0.78	19,189	32,170	103.0	-2.21	84.36	82.46
1988	481,945	777,669	182.7	5.57	0.78	19,939	32,174	103.0	0.01	84.33	81.36
1989	507,696	785,421	184.6	1.00	0.76	20,353	31,487	100.8	-2.13	82.66	79.95
1990	556,878	825,751	194.0	5.13	0.75	21,123	31,321	100.3	-0.53	80.71	79.51
1991	580,329	833,196	195.8	0.90	0.73	21,609	31,025	99.4	-0.95	77.69	78.52
1992	613,520	858,154	201.6	3.00	0.70	22,230	31,094	99.6	0.22	74.02	75.85
1993	637,400	869,838	204.4	1.36	0.70	22,973	31,350	100.4	0.82	74.20	76.45
1994	652,117	871,791	204.9	0.22	0.68	22,769	30,439	97.5	-2.91	72.93	73.66
1995	678,188	888,215	208.7	1.88	0.68	23,671	31,001	99.3	1.85	73.42	74.69
1996	700,093	897,785	211.0	1.08	0.65	23,982	30,753	98.5	-0.80	71.25	72.98
1997	748,009	942,956	221.6	5.03	0.64	24,833	31,306	100.3	1.80	70.43	72.55
1998	772,788	966,783	227.2	2.53	0.60	24,901	31,151	99.8	-0.49	65.47	69.18
1999	797,421	983,147	231.0	1.69	0.57	25,451	31,378	100.5	0.73	62.53	67.51
2000	825,720	993,312	233.4	1.03	0.55	25,785	31,019	99.3	-1.15	60.58	64.60
2001	889,321	1,049,582	246.6	5.66	0.59	27,885	32,910	105.4	6.10	64.52	67.10
2002	916,245	1,066,989	250.7	1.66	0.59	28,369	33,037	105.8	0.38	63.90	66.85
2003	987,494	1,127,624	265.0	5.68	0.62	29,886	34,127	109.3	3.30	65.63	68.38
2004	1,070,236	1,193,088	280.4	5.81	0.64	31,240	34,827	111.5	2.05	66.42	68.62
2005	1,146,036	1,242,181	291.9	4.11	0.65	32,289	34,998	112.1	0.49	67.11	69.12
2006	1,207,944	1,275,171	299.6	2.66	0.64	33,403	35,262	112.9	0.75	66.84	68.86
2007	1,249,778	1,287,117	302.4	0.94	0.62	33,860	34,872	111.7	-1.11	65.87	68.65
2008	1,239,186	1,238,406	291.0	-3.78	0.60	33,880	33,858	108.4	-2.91	64.43	66.86
2009	1,220,992	1,220,992	286.9	-1.41	0.61	34,362	34,362	110.0	1.49	65.18	68.41
2010	1,258,712	1,238,232	291.0	1.41	0.61	36,093	35,506	113.7	3.33	65.75	69.49
2011	1,279,184	1,228,968	288.8	-0.75	0.59	36,885	35,437	113.5	-0.19	64.91	69.04
2012	1,298,977	1,225,346	287.9	-0.29	0.57	37,221	35,111	112.4	-0.92	63.80	68.07

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.

² 2009 constant dollar estimates determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).

N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.

³³ http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_3

TABLE C-6Selected Economic Indicators: Jefferson County, 1969-2012³⁴*Part I, Population and Total Employment*

Year	Population				Total Employment						
	Population	Index ¹	Percent Change	Percent of Statewide Total	Jobs	Index ¹	Percent Change	Percent of Statewide Total	Job Ratio: Jobs ÷ Population	Job Ratio: Percent of U.S. Avg.	
1969	10,038	100.0	N	0.30	3,804	100.0	N	0.25	0.38	83.78	
1970	10,624	105.8	5.84	0.31	3,733	98.1	-1.87	0.25	0.35	78.45	
1971	10,452	104.1	-1.62	0.30	3,667	96.4	-1.77	0.25	0.35	79.23	
1972	10,638	106.0	1.78	0.31	3,859	101.4	5.24	0.26	0.36	80.49	
1973	10,984	109.4	3.25	0.32	4,097	107.7	6.17	0.26	0.37	80.09	
1974	11,718	116.7	6.68	0.33	4,306	113.2	5.10	0.27	0.37	78.31	
1975	11,979	119.3	2.23	0.33	4,555	119.7	5.78	0.27	0.38	82.84	
1976	12,595	125.5	5.14	0.34	4,887	128.5	7.29	0.28	0.39	83.09	
1977	13,464	134.1	6.90	0.36	5,288	139.0	8.21	0.29	0.39	82.17	
1978	14,301	142.5	6.22	0.37	5,514	145.0	4.27	0.28	0.39	78.07	
1979	15,125	150.7	5.76	0.38	6,014	158.1	9.07	0.29	0.40	78.92	
1980	16,105	160.4	6.48	0.39	6,316	166.0	5.02	0.30	0.39	78.18	
1981	16,637	165.7	3.30	0.39	6,301	165.6	-0.24	0.30	0.38	75.63	
1982	16,794	167.3	0.94	0.39	6,439	169.3	2.19	0.31	0.38	77.80	
1983	16,810	167.5	0.10	0.39	6,856	180.2	6.48	0.32	0.41	82.45	
1984	17,034	169.7	1.33	0.39	7,040	185.1	2.68	0.32	0.41	80.86	
1985	17,443	173.8	2.40	0.40	7,014	184.4	-0.37	0.31	0.40	77.28	
1986	18,065	180.0	3.57	0.41	7,432	195.4	5.96	0.32	0.41	78.26	
1987	18,395	183.3	1.83	0.41	7,719	202.9	3.86	0.31	0.42	78.48	
1988	18,689	186.2	1.60	0.40	8,096	212.8	4.88	0.31	0.43	79.30	
1989	19,273	192.0	3.12	0.41	8,551	224.8	5.62	0.31	0.44	80.42	
1990	20,659	205.8	7.19	0.42	9,262	243.5	8.31	0.33	0.45	80.90	
1991	21,451	213.7	3.83	0.43	9,596	252.3	3.61	0.33	0.45	82.24	
1992	22,272	221.9	3.83	0.43	9,890	260.0	3.06	0.34	0.44	82.44	
1993	23,042	229.5	3.46	0.44	10,234	269.0	3.48	0.35	0.44	82.00	
1994	23,607	235.2	2.45	0.44	10,868	285.7	6.20	0.36	0.46	84.01	
1995	24,377	242.8	3.26	0.44	11,152	293.2	2.61	0.36	0.46	82.36	
1996	24,721	246.3	1.41	0.44	11,375	299.0	2.00	0.36	0.46	82.06	
1997	24,898	248.0	0.72	0.44	11,754	309.0	3.33	0.36	0.47	83.29	
1998	25,328	252.3	1.73	0.44	12,129	318.8	3.19	0.36	0.48	83.35	
1999	25,646	255.5	1.26	0.44	12,746	335.1	5.09	0.37	0.50	85.85	
2000	26,414	263.1	2.99	0.45	13,195	346.9	3.52	0.37	0.50	85.23	
2001	26,845	267.4	1.63	0.45	13,386	351.9	1.45	0.38	0.50	85.85	
2002	27,201	271.0	1.33	0.45	13,231	347.8	-1.16	0.38	0.49	84.71	
2003	27,588	274.8	1.42	0.45	13,475	354.2	1.84	0.38	0.49	85.35	
2004	27,949	278.4	1.31	0.45	14,042	369.1	4.21	0.39	0.50	87.03	
2005	28,506	284.0	1.99	0.46	14,253	374.7	1.50	0.39	0.50	85.63	
2006	29,239	291.3	2.57	0.46	14,518	381.7	1.86	0.38	0.50	84.12	
2007	29,346	292.3	0.37	0.45	14,718	386.9	1.38	0.38	0.50	83.99	
2008	29,648	295.4	1.03	0.45	14,626	384.5	-0.63	0.37	0.49	83.51	
2009	29,714	296.0	0.22	0.45	14,068	369.8	-3.82	0.37	0.47	83.36	
2010	29,921	298.1	0.70	0.44	13,918	365.9	-1.07	0.37	0.47	83.15	
2011	29,875	297.6	-0.15	0.44	13,689	359.9	-1.65	0.36	0.46	80.96	
2012	29,854	297.4	-0.07	0.43	13,728	360.9	0.28	0.35	0.46	80.37	

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.
N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.

³⁴ http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_1

TABLE C-7Selected Economic Indicators: Jefferson County, 1969-2012³⁵

Part II, Total Personal Income and Per Capita Income

Year	Total Personal Income					Per Capita Income					
	Current Dollars (1000s)	2009 Dollars ² (1000s)	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Total	Current Dollars	2009 Dollars ²	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Average	Percent of U.S. Average
1969	36,106	169,408	100.0	N	0.26	3,597	16,877	100.0	N	88.05	93.78
1970	39,320	176,244	104.0	4.03	0.27	3,701	16,589	98.3	-1.70	88.35	90.63
1971	42,663	183,426	108.3	4.07	0.28	4,082	17,549	104.0	5.79	93.60	94.05
1972	46,926	195,086	115.2	6.36	0.29	4,411	18,339	108.7	4.50	93.59	93.52
1973	54,613	215,419	127.2	10.42	0.30	4,972	19,612	116.2	6.94	94.09	95.06
1974	62,593	223,618	132.0	3.81	0.30	5,342	19,083	113.1	-2.70	90.66	93.58
1975	70,782	233,381	137.8	4.37	0.30	5,909	19,482	115.4	2.09	90.42	95.74
1976	83,230	260,151	153.6	11.47	0.31	6,608	20,655	122.4	6.02	92.23	97.84
1977	95,506	280,274	165.4	7.74	0.32	7,093	20,817	123.3	0.78	90.98	95.83
1978	108,219	296,791	175.2	5.89	0.32	7,567	20,753	123.0	-0.30	85.80	91.80
1979	132,595	334,026	197.2	12.55	0.34	8,767	22,084	130.9	6.41	89.03	95.94
1980	153,199	348,512	205.7	4.34	0.34	9,513	21,640	128.2	-2.01	88.00	94.27
1981	171,608	358,787	211.8	2.95	0.34	10,315	21,566	127.8	-0.34	87.16	92.02
1982	183,592	363,700	214.7	1.37	0.35	10,932	21,657	128.3	0.42	87.92	91.86
1983	203,723	386,916	228.4	6.38	0.36	12,119	23,017	136.4	6.28	92.20	96.31
1984	224,890	411,547	242.9	6.37	0.37	13,202	24,160	143.2	4.97	94.49	95.62
1985	232,677	411,228	242.7	-0.08	0.36	13,339	23,576	139.7	-2.42	91.25	91.13
1986	250,246	432,914	255.5	5.27	0.36	13,853	23,964	142.0	1.65	89.82	90.32
1987	261,208	437,908	258.5	1.15	0.36	14,200	23,806	141.1	-0.66	88.25	88.00
1988	290,843	469,306	277.0	7.17	0.37	15,562	25,111	148.8	5.48	91.25	90.25
1989	317,303	490,877	289.8	4.60	0.36	16,464	25,470	150.9	1.43	89.45	89.47
1990	362,672	537,778	317.4	9.55	0.38	17,555	26,031	154.2	2.20	89.40	90.70
1991	406,476	583,590	344.5	8.52	0.39	18,949	27,206	161.2	4.51	92.06	95.62
1992	440,261	615,810	363.5	5.52	0.40	19,767	27,650	163.8	1.63	91.60	95.04
1993	469,686	640,965	378.4	4.08	0.40	20,384	27,817	164.8	0.61	92.07	95.32
1994	505,164	675,335	398.6	5.36	0.41	21,399	28,607	169.5	2.84	93.11	95.97
1995	528,109	691,659	408.3	2.42	0.41	21,664	28,373	168.1	-0.82	91.11	93.13
1996	572,079	733,623	433.0	6.07	0.41	23,141	29,676	175.8	4.59	91.54	94.68
1997	615,941	776,468	458.3	5.84	0.41	24,739	31,186	184.8	5.09	92.48	96.43
1998	675,052	844,512	498.5	8.76	0.41	26,652	33,343	197.6	6.92	92.47	97.78
1999	715,696	882,388	520.9	4.48	0.40	27,907	34,406	203.9	3.19	91.44	98.49
2000	759,014	913,067	539.0	3.48	0.40	28,735	34,568	204.8	0.47	88.66	94.78
2001	829,537	979,024	577.9	7.22	0.42	30,901	36,470	216.1	5.50	92.98	98.02
2002	848,718	988,352	583.4	0.95	0.42	31,202	36,335	215.3	-0.37	92.99	98.12
2003	902,292	1,030,331	608.2	4.25	0.43	32,706	37,347	221.3	2.78	94.47	100.09
2004	991,638	1,105,468	652.5	7.29	0.44	35,480	39,553	234.4	5.91	96.64	103.44
2005	1,052,840	1,141,166	673.6	3.23	0.45	36,934	40,032	237.2	1.21	98.10	102.91
2006	1,166,709	1,231,641	727.0	7.93	0.46	39,902	42,123	249.6	5.22	99.41	104.66
2007	1,266,272	1,304,104	769.8	5.88	0.46	43,150	44,439	263.3	5.50	100.71	108.41
2008	1,327,387	1,326,551	783.0	1.72	0.46	44,772	44,743	265.1	0.69	101.38	109.54
2009	1,254,344	1,254,344	740.4	-5.44	0.45	42,214	42,214	250.1	-5.65	100.24	107.26
2010	1,232,072	1,212,025	715.4	-3.37	0.43	41,178	40,508	240.0	-4.04	96.84	102.53
2011	1,296,705	1,245,802	735.4	2.79	0.43	43,404	41,700	247.1	2.95	97.71	102.62
2012	1,341,817	1,265,758	747.2	1.60	0.42	44,946	42,398	251.2	1.67	97.61	102.77

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.² 2009 constant dollar estimates determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).

N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.

³⁵ http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_2

TABLE C-8Selected Economic Indicators: Jefferson County, 1969-2012³⁶

Part III, Total Industry Earnings and Average Earnings Per Job

Year	Total Industry Earnings					Average Earnings Per Job					
	Current Dollars (1000s)	2009 Dollars ² (1000s)	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Total	Current Dollars	2009 Dollars ²	Index ¹	Percent Change ² (2009 \$)	Percent of Statewide Average	Percent of U.S. Average
1969	25,594	120,086	100.0	N	0.22	6,728	31,568	100.0	N	89.59	94.45
1970	26,189	117,387	97.8	-2.25	0.22	7,016	31,446	99.6	-0.39	89.34	92.93
1971	27,200	116,944	97.4	-0.38	0.22	7,418	31,891	101.0	1.42	89.23	92.15
1972	29,682	123,397	102.8	5.52	0.23	7,692	31,977	101.3	0.27	86.36	88.98
1973	34,777	137,177	114.2	11.17	0.23	8,488	33,482	106.1	4.71	87.63	90.88
1974	38,027	135,854	113.1	-0.96	0.22	8,831	31,550	99.9	-5.77	83.89	88.53
1975	41,689	137,456	114.5	1.18	0.22	9,152	30,177	95.6	-4.35	79.75	85.16
1976	49,897	155,962	129.9	13.46	0.23	10,210	31,914	101.1	5.76	82.49	87.49
1977	57,317	168,203	140.1	7.85	0.24	10,839	31,809	100.8	-0.33	81.31	86.26
1978	62,815	172,271	143.5	2.42	0.22	11,392	31,242	99.0	-1.78	77.33	83.53
1979	77,105	194,239	161.7	12.75	0.23	12,821	32,298	102.3	3.38	79.99	86.81
1980	85,382	194,235	161.7	-0.00	0.23	13,518	30,753	97.4	-4.78	78.30	85.06
1981	88,865	185,793	154.7	-4.35	0.22	14,103	29,486	93.4	-4.12	75.48	81.45
1982	89,029	176,368	146.9	-5.07	0.22	13,827	27,391	86.8	-7.11	70.71	75.76
1983	99,075	188,166	156.7	6.69	0.23	14,451	27,445	86.9	0.20	71.51	75.43
1984	108,217	198,036	164.9	5.25	0.23	15,372	28,130	89.1	2.49	73.76	75.18
1985	102,285	180,776	150.5	-8.72	0.21	14,583	25,774	81.6	-8.38	68.07	68.30
1986	109,978	190,257	158.4	5.24	0.21	14,798	25,600	81.1	-0.67	66.32	66.56
1987	114,891	192,612	160.4	1.24	0.20	14,884	24,953	79.0	-2.53	65.44	63.96
1988	128,248	206,942	172.3	7.44	0.21	15,841	25,561	81.0	2.44	67.00	64.64
1989	141,035	218,185	181.7	5.43	0.21	16,493	25,516	80.8	-0.18	66.98	64.79
1990	161,013	238,754	198.8	9.43	0.22	17,384	25,778	81.7	1.03	66.43	65.44
1991	171,831	246,703	205.4	3.33	0.21	17,907	25,709	81.4	-0.27	64.38	65.07
1992	187,189	261,828	218.0	6.13	0.21	18,927	26,474	83.9	2.98	63.02	64.58
1993	204,370	278,897	232.2	6.52	0.22	19,970	27,252	86.3	2.94	64.50	66.46
1994	210,821	281,839	234.7	1.05	0.22	19,398	25,933	82.1	-4.84	62.13	62.75
1995	218,472	286,130	238.3	1.52	0.22	19,590	25,657	81.3	-1.06	60.77	61.82
1996	229,316	294,070	244.9	2.77	0.21	20,160	25,852	81.9	0.76	59.90	61.35
1997	242,822	306,106	254.9	4.09	0.21	20,659	26,043	82.5	0.74	58.59	60.35
1998	260,810	326,282	271.7	6.59	0.20	21,503	26,901	85.2	3.30	56.53	59.74
1999	289,764	357,253	297.5	9.49	0.21	22,734	28,029	88.8	4.19	55.85	60.30
2000	302,700	364,137	303.2	1.93	0.20	22,941	27,597	87.4	-1.54	53.90	57.47
2001	322,572	380,701	317.0	4.55	0.21	24,098	28,440	90.1	3.06	55.75	57.99
2002	336,241	391,561	326.1	2.85	0.22	25,413	29,594	93.7	4.06	57.24	59.88
2003	357,310	408,014	339.8	4.20	0.22	26,517	30,279	95.9	2.32	58.23	60.67
2004	392,282	437,312	364.2	7.18	0.23	27,936	31,143	98.7	2.85	59.40	61.36
2005	413,213	447,879	373.0	2.42	0.23	28,991	31,423	99.5	0.90	60.26	62.06
2006	431,733	455,761	379.5	1.76	0.23	29,738	31,393	99.4	-0.10	59.51	61.31
2007	428,998	441,815	367.9	-3.06	0.21	29,148	30,019	95.1	-4.38	56.70	59.09
2008	433,930	433,657	361.1	-1.85	0.21	29,668	29,650	93.9	-1.23	56.42	58.55
2009	422,898	422,898	352.2	-2.48	0.21	30,061	30,061	95.2	1.39	57.02	59.85
2010	423,380	416,491	346.8	-1.51	0.20	30,420	29,925	94.8	-0.45	55.42	58.57
2011	418,288	401,868	334.6	-3.51	0.19	30,557	29,357	93.0	-1.90	53.77	57.19
2012	426,126	401,972	334.7	0.03	0.19	31,041	29,281	92.8	-0.26	53.21	56.77

¹ Values are expressed as 100 percent for 1969 (2009 dollars) and as a percent of 1969 for the following years.² 2009 constant dollar estimates determined using the Chain-Weight Implicit Price Deflator for Personal Consumption (2009=1.00).

N = Data not available for this year or not meaningful.

Source: Calculations by the Washington Regional Economic Analysis Project (WA-REAP) with data provided by the U.S. Department of Commerce, Bureau of Economic Analysis, May 2014.³⁶ http://washington.reaproject.org/data-tables/selected-indicators/tools/530009/#page_3

APPENDIX D

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