



# Employment Security Department

WASHINGTON STATE

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## ANNUAL PERFORMANCE REPORT

September 25, 2008

As required in Training and Employment Guidance Letter No. 29-06 the following is a summary of Washington State's performance in PY 2007. It summarizes accomplishments, the results of assessments of customer satisfaction with state's workforce information products and services, and recommendations for improvement to workforce information and services.

### **Accomplishments:**

#### **A. Continue to Populate the Workforce Information Database with State and Local Data:**

*The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.*

Throughout the year, Washington State's labor market and Economic Analysis Branch (LMEA) continued to populate and maintain all database tables designated as core tables in accordance with guidelines issued by the Database Consortium. In addition to the designated core tables, Washington also updated the tables associated with local employment dynamics

Of the data updates, several required monthly updates and an increasing number of geographies. The highlights included:

- Monthly updates of current industry estimates at county level
- Monthly updates to current labor force and unemployment rates by county
- Annual updates of occupational wages for metropolitan and workforce areas
- Annual updates of short and long-term occupational employment estimates for Workforce Development Areas (WDA)
- Annual updates of short & long term industry employment estimates by county
- Semi-annual update of Employer Database (InfoUSA)
- Quarterly Updates of Census of Employment and Wages for counties
- Update of training programs, providers, and completers
- Annual updates to population estimates
- Updates of occupational licensing tables

Access to the database was available to our users through the Workforce Explorer - our main labor market information delivery system. The backup procedures and hosting safeguards allowed virtually uninterrupted access to this data throughout the year. This database also provides data for other applications such as “Career Clusters”, Local Employment Dynamics (LED), County Dashboard, Adjudicator Assistant, and advanced analytical tools for Quarterly Census of Employment and Wages (QCEW) and Current Employment Statistics (CES.)

***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All milestones were completed as planned.

***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

Actual expenditures were below estimated expenditures as we were able to use other state resources for some of this work. Resources not spent on populating the Workforce Information Data were used to develop data and produce and disseminate occupational projections and wages.

## **B. Produce and Disseminate Industry and Occupational Employment Projections:**

***The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.***

As planned, LMEA produced and distributed industry and occupational employment projections for Washington State and 12 local Workforce Development Areas (WDA) in June 2008. A North American Industry Classification System (NAICS) based historical industry employment time series from January 1990 to June 2007 was utilized for this project. NAICS based staffing patterns were constructed using information from the Occupational Employment Statistics (OES) survey.

The standard software tools sponsored by the Projections Workgroup and Projections Managing Partnership have not been very useful for our state and have produced neither reliable industry projections nor occupational projections that satisfied our customer needs. A particular problem with these tools is that they are based on a “black box” approach that does not allow the level of flexibility we need to best serve our customers. Washington State used the same methodology proposed by the Projections Workgroup and Managing Partnership, but implemented the methodology internally SAS forecasting system and leading economic indicators from the Global Insights Company, rather than consortium software tools.

Past experience indicates that customers expect both accurate and timely industry and occupational employment projections. Thus, in PY 2007 industry and occupation projections included several enhancements. We started with aggregated levels of projections and used Global Insight Model and inputs from the State Forecast Council and the Office of Financial Management's forecasting staff. Advanced forecasting system (from SAS) was used to select the best model or combination of the model. This system includes 42 default auto regression models and can easily be supplemented by other custom built models, including models with independent variables. Our two main independent variables (regressors) were:

- industry employment forecast for the same national industry from Global Insight Model
- forecast of total nonfarm employment for the State (using SAS forecasting system and Global Insight Forecast of the national total nonfarm employment).

The selection of the regression model (or few models), to add to the forecasting system for each industry, was based on standard regression statistics for the parameters. The custom built models are added to the default models in the system.

The goal of fitting in a forecasting system is to build the model which will help to predict the future. The main criteria used to select such models are based on different types of prediction errors (SAS Time Series Forecasting System includes 13 criteria to choose from) in and out of the sample<sup>1</sup>. We mainly used Mean Absolute Percent Error (MAPE) as criteria. The final forecast can often be improved by combining a few forecasting models. The SAS forecasting system includes a sophisticated tool for combining such forecasts, which is based on optimization of weights of the selection. The selected models (or combination of the models) are used to produce initial forecasts.

The aggregated projections, were used in a step-down approach for industry and sub-state desegregation. To smooth the result we used the basic ideas of stability controls for dynamic systems. Having flexible software and models permits estimation of the employment impacts of major labor market disruptions such as plant closings or new plant openings. The projected outcomes and system impact was the availability of critical information needed in the state for policy decisions, program administration, and curriculum development.

***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All activities conformed to planned milestones. As indicated in our plan, work on the projections continued throughout the program year. Both the short-term and long-term projections were completed in the 4<sup>th</sup> quarter of PY 2007 and the results became

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<sup>1</sup> The technique called *ex-post* projections, or *hold-out-sample* (in SAS), is used to estimate out-of-sample errors. The idea of this approach is to estimate a model on a sample shorter than the available observations. Then, make forecasts and calculate errors for observations which are available, but not included in the sample.

available to the public, in electronic form, starting with June 2008. The specific milestones were as follows:

Refinement of NAICS based historical industry employment database - December 2007.  
Preparation of NAICS based short-term and long-term industry projections - March 2008.  
Preparation of screened NAICS based staffing pattern from OES survey data - April 2008.  
Preparation of short, medium, and long term occupational projections - May 2008.  
Population of the Workforce Information (formerly ALMIS) Database and the "Workforce Explorer" home page with state and area projections - June 2008.  
Transmit required projections to the Projections Workgroup for further public dissemination - June 2008.

Washington State law (RCW 50.38) also requires five-year employment projections by industry and occupation, in addition to the two year and ten year projections required by this grant. For this purpose, LMEA received funding from the state through ESD Client Placement Program (CPP) to provide this and other specified labor market information. By leveraging these resources with funding under this grant, LMEA was able to provide Washington's labor market information customers with a higher level of service of enhanced quality that would be impossible if we did not use these funds in an integrated manner. This approach permitted Washington to be among the national leaders in the development and dissemination of labor market information products.

***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

Actual expenditures for producing the projections were below estimated expenditures primarily because we had other fund sources to support part of this activity.

**C. Publish an Annual Economic Analysis Report for the Governor and the state WIB.**

***The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.***

The Labor Market and Economic Analysis Branch published a detailed annual economic analysis report to provide statewide information for economic policy development, training program planning, and resource allocation by the governor, the state WIB, local WIBs, WIRED regions, state legislators, as well as other partners including community colleges, economic development organizations, and other talent development stakeholders. The annual report included an overview of the national and state economy, unemployment and its dimensions, demographics of the labor force, employment projections, wage and income information. Greater detail was focused this year on the seasonal, structural and cyclical aspects of employment. The report titled

“2007 Washington State Labor Market and Economic Report” can be accessed at the following web site:

[http://www.workforceexplorer.com/admin/uploadedPublications/8670\\_2007\\_Annual\\_ReportWex.pdf](http://www.workforceexplorer.com/admin/uploadedPublications/8670_2007_Annual_ReportWex.pdf)

***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All planned milestones in the preparation of the annual report were completed successfully on time and the report was published in December 2007. Hard copy publications were distributed to the governor’s staff and the Legislators prior to the 2008 Legislative session. Additional copies were provided to the WDC staffs. The electronic “pdf” version is currently available to everyone who can access the internet.

***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

Actual expenditures were in line with estimated expenditures for this work and involved a number of staff members from several units to develop the data and prepare the narratives for the various chapters.

#### **D. Post Products, Information, and Reports on the Internet.**

***The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.***

The web based Workforce Explorer LMI delivery system, in combination with the out-stationed and central office economists, continued to provide local area support to Washington State’s WorkSource Centers, Workforce Development Councils (WDC) and other data users. The tool continues to be the portal for key career and economic information used to make important program and life-changing decisions. In addition to the basic LMI such as employment estimates, wages and occupational information, all major studies and special reports were posted on the Workforce Explorer. The Workforce Explorer was also used to announce new data sets, job opportunities in LMEA, and presentations such as the annual Economic Symposiums.

Beyond Workforce Explorer, LMEA also provide information for our Workforce system through out “County Economic Dashboard”. This tool contains nine economic indicators in a graphical format, with the ability to compare and extract data. It has been well received as a tool to simplify and combine key economic indicators for our local areas.

Finally, we enhanced access to local employment dynamics information through an award-winning tool designed to view, map and compare key workforce indicators by areas, time, industry, age, and gender.

Along with information through our site, we also have created a live connection through “web services” to provide our data directly to the state workforce agency. They now have a live feed of data being displayed on their website. As our data is updated, their site will pull the updated data. This reduced their maintenance, and increases the availability of information throughout the workforce system.

These improvements were based on input from staff in the workforce system that volunteered to provide input on our tools and their work activities.

***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All planned milestones were completed in various ways. However, the service provided in each Workforce Development Area was not uniform and depended in part on the marketing skills and efforts of the local economists, and the level of LMI interest shown by local clients. During this reporting period, LMEA has made significant progress in building closer working relationships with staff in the WorkSource Centers and Workforce Development Councils. LMEA has been represented in more local planning meetings and has been making an increasing number of presentations to staff both inside and outside ESD. On November 8, 2007, LMEA put on its 13<sup>th</sup> Annual Economic Symposium in the Olympia area. On May 23, 2008 it conducted its fourth Economic Symposium in Spokane to reaching clients in eastern Washington and on June 20, 2008 held its second symposium in Yakima to reach clients in central Washington counties.

***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

Actual expenditures were in line with estimated expenditures for this work and involved a number of staff members developing the data, reviewing reports and preparing them for posting on the internet.

## **E. Partner and Consult on a Continuing Basis with Workforce Investment Boards and Key Talent Development Partners and Stakeholders.**

***The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.***

LMEA continued to provide service to Washington's WIRED recipient, Pacific Mountain Workforce Development Council. We provided key data to feed their consultant to create the initial "state of the region" report, and also generated a presentation for their kickoff meeting.

Along with helping locally, we have worked with our counterparts in Oregon to establish a report for a WIRED region that crosses state boundaries. We provided key data, necessary to create a "combined" area, instead of a Washington section and an Oregon section.

LMEA also assisted other states by participating in the bi-regional WIRED conference. We presented two sessions and participated in a panel discussion. Overall, the feedback was excellent, and all materials were distributed through ETA.

Coordinated training on occupational and career information amongst several providers also continued. Other areas of focus included training on ONET coding system, using automated coding tools to improve efficiency, identify ways for various products and systems to interact more effectively. We have also developed a "self paced training" curriculum addressed for workforce staff.

Area economists gave periodic economic briefings to WorkSource (WS) and Workforce Development Council (WDC) members in order to keep them current on changes in local labor market conditions. These economists worked with local planners and program administrators to identify their needs and to provide the necessary information. Their main responsibility was to know the local labor market and to be able to speak, write, and answer questions about it.

Since each area has its own distinct way of achieving its employment and workforce development goals, LMEA does not have a blanket strategy for meeting local LMI needs. What it does is to provide the out-stationed economists with general guidelines and list of expectations in their job descriptions for serving local needs. During the past year, each Regional Labor Economist performed this task in response to WS and WDC requests, and the needs that each of them was able to identify. This included preparing special local reports, assisting individuals with information on the Workforce Explorer, giving presentations, writing county profiles, interpreting the employment situation, and providing technical assistance.

As part of the agency's over all accountability strategy, LMEA economists tracked their public contacts on an electronic Client Tracking System and reported the results along with other indicators such as the percent of deadlines met to the Commissioner on a regularly scheduled "Government, Management, Accountability Performance" (GMAP) reporting sessions.

One of the cooperative efforts of LMEA and the WDCs during this reporting period was the updating and maintenance of the occupational "Demand and Decline" list. LMEA

created that list using factors such as the population of the occupation, the expected growth rate and the occupational unemployment rate. Then it was reviewed, adjusted, and approved by the WDCs. As economic conditions changed affecting occupational demand, the LMEA economists and WDC staff worked together to update that list to reflect current occupational demand and supply conditions. The WDC staff is responsible for changes to that list but they are generally reluctant to do so without substantiating data from the regional economists. The “Demand and Decline” list of occupations is used in all WorkSource Service Centers to administer the state’s Training Benefits Program and it is maintained on an LMEA server.

LMEA produced and delivered, to the WorkSource Centers and the Workforce Development Councils, two additional customer driven products during this reporting period. One was the “Job Vacancy Survey,” which was completed in April 2008. That survey produced information, which combined with the short-term occupational projections, provided Workforce Investment implementation staff with insight into the occupational employment hiring needs of local employers. The other product was the “Benefits Survey” report. That report was published in March 2008. It provided useful “benefits” information on jobs for both employers as well as job seekers.

At the beginning of 2008, LMEA was also able to hire two additional Regional Labor Economists with funding provided by the State’s Legislature to enhance our support of the State’s WIA system. With that addition we now have a regional economist for each of the State’s twelve workforce development areas and greater capacity to serve the LMI needs of each area.

***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All of the general milestones that could be envisioned at the start of the year were accomplished. Three feedback collection mechanisms were implemented (comprehensive user survey, article rating, identify agency liaisons to assist in needs identification) were utilized throughout the year. There were about 1,141,700 sessions logged into the site over the year. Enhancements are now being driven, prioritized, and validated by customer input and testing along the way.

***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

We estimate that actual expenditures exceeded planned expenditures for this deliverable. However, those expenditures were covered by resources saved in other areas. Most of the over-expenditure could be attributed to the time spent for activity tracking and accountability measurement required by GMAP.

**F. Conduct Special Studies and Economic Analyses.**

***The outcomes achieved and an analysis that explains the cause of any significant variance from the Grant Certification. Describe any actions required to accomplish the required deliverable.***

Throughout the year LMEA staff was engaged in special studies and economic analysis. In addition to the extensive surveys of job vacancies and benefits, LMEA staff worked on special industry worker age distribution studies using LED data, in-season agricultural employment surveys, a wage distribution report and various manufacturing industry studies. A listing of the reports that are available on the Workforce Explorer follows: LMEA is also in the process of conducting its first “Green Jobs Survey” and should have a summary report ready for the state Legislature by December 2008.

### Special Reports

Date	Title
July, 2007	National Employment Conditions Enter the Summer on a Strong Note
July, 2007	Consumer Price Index
July, 2007	Health and Allied Services Industry Overview
August, 2007	Wood Product Manufacturing Industry Overview
August, 2007	Grapes Add Taste to State Economy
August, 2007	Washington's Economy Soaring on the Wings of the 787
August, 2007	Washington State Hops Dominate World Production
August, 2007	Occupational Employment and Wage Estimates
August, 2007	Updated LAUS historical
August, 2007	Labor Day Report 2007
August, 2007	Grant County Retail Trade, August 2007
September, 2007	Washington State Business Employment Dynamics (BED)
November, 2007	Holiday Hiring Outlook
November, 2007	Seasonality in Employment Time Series
December, 2007	Deadliest Jobs
January, 2008	The Stellar Growth of Sequim
February, 2008	Employment Agencies in Washington
February, 2008	Recent Changes in States' Productivity
February, 2008	Recession Indicators for Washington
February, 2008	Washington Wage and Income Report, 2006
February, 2008	Impact of the December 2007 Storms
March, 2008	National Update
March, 2008	What is in Store for the Construction Industry?
March, 2008	2007 Washington State Employee Benefits Report
March, 2008	Key Industries in Northwest Washington
May, 2008	Targeted Employment Areas List for 2008
May, 2008	Washington's Rural and Urban Workforce Demographics
May, 2008	Washington State Business Employment Dynamics (BED), May 2008
May, 2008	Snohomish Count and the 787 Streamliner
June, 2008	Summer Job Outlook for Teenagers
June, 2008	Occupational Employment & Wage Estimates, March 2008
June, 2008	Average Annual Wage for UI Benefits Calculation
June, 2008	Introduction to Employment Projections



## Employment Security Department

WASHINGTON STATE

June, 2008

Will the Real Tri-Cities Please Stand Up?

July, 2008

Agricultural Employment & Wages

### ***The extent to which the activity has conformed to the deliverables schedule, including an explanation for the cause of any significant variance from the schedule.***

All planned milestones were met. In addition LMEA was able to provide special LED training to other states in a training session held in March 2008 in Washington DC.

### ***Actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures:***

Actual expenditures were above estimated expenditures as we were able to use some state funding and savings from other deliverables.

### **Customer Satisfaction Assessment:**

- **The methods used for consulting with customers and significant customer feedback.**

Throughout the year, LMEA has utilized several systematic methods of collecting information about report timeliness customer satisfaction and usage. These include training and presentation participant evaluations, ratings of analysis articles on our website, and various information gathering meetings involving customer groups to help determine usability needs and data gaps. Along with these measures data is collected and analyzed around usage of products and services including web log analysis, request tracking, and various other automated activity capture tools. Many of these are done continually, and others are done randomly based on specific needs or issues as they arise.

At the start of her administration, Governor Christine Gregoire initiated a comprehensive accountability system called Government, Management, Accountability and Performance (GMAP) program. It involves continuous performance tracking and monthly progress reports to senior leadership. The LMEA branch is actively implementing that system by tracking a variety of performance measures and communicating its progress through a “dashboard” reporting system linked directly to our project and operational plans.

The overall assessment from the satisfaction measuring tools we use has been very high. Consistently, the ratings from presentations have been between 4 and 5 on a scale where 1 represented “poor” and 5 represented “excellent.” Throughout the year LMEA has also received feedback from clients who have received an LMI product or have been given an LMI presentation. Such notes of appreciation are retained in a

three-ring binder as an additional indication that what LMEA does has value to individuals and is appreciated by the public.

The main distribution channel for the industry and occupational employment projections, as well as most of LMEA products, has been the Workforce Explorer. It provided a count of “visits” and an opportunity for clients to indicate their level of satisfaction with the information provided. The results, which are not scientific, change daily. But they indicate what information is being accessed the most.

We also have created steering committees for key customer groups. Here, we not only collect input, but use their networking to validate and create an open dialogue which continues to work very well.

The vast majority of the feedback has been very positive. However, we continue to receive comments from clients indicating that they are having difficulty finding specific information and then when they find it they would like additional help in understanding it.

- **Activities to be undertaken to add customer value to the deliverables, where needs for improvement are identified through customer feedback.**

To assist clients in accessing and understanding LMI products posted on the Workforce Explorer, the LMEA branch maintains a “Labor Market Information Center” with a statewide “800” number. A professional economist staffing that center can take a client through the web site to the appropriate information and answer questions about that information. In that process the economist also looks for ways how best to present the ever increasing quantity of information on our website. In addition, in order to assist WorkSource Center staff with LMI the branch trainer conducted 36 training sessions for about 1,909 individuals.

### **Recommendations for Improvement or Changes to the Deliverables.**

- **Recommendations based on accomplishments.**

In Washington State the LMEA branch accomplished all six deliverables successfully and they were well received by the intended clients. However, training was not a priority since it was not one of the deliverables. The experience gained during the year indicated that such LMI training is an integral part of the delivery system and should again be one of the core products. It is good to make LMI available to everyone through the web, but unless it is understood and used the effort is less than successful.

- **Recommendations based on consultation with customers.**

The strategic plan of the LMEA branch specifies that one of its primary goals is to integrate labor market information thoroughly into the Workforce Development System.

Unfortunately, WorkSource Center staff has never been required to take any comprehensive LMI training. Consequently, many service delivery staff members cannot understand much of the information that is provided. Employment databases have been reconfigured to take advantage of computers. New economic models have been created to display employment patterns, by occupation, by industry group, by geographic region, and/or over time. And this labor market information is accessible to the public via free, on-line websites that are available on a constant basis. However, it must be understood and used to be of significant value to the Workforce Development System. The challenge is to let the public know that all of the data is “out there” and that all of the data has “real-life” relevancy.

In instance after instance, when the public finds out about Workforce Explorer website, their first reaction is “Wow, I didn’t know this information existed!” and their second reaction is “It’s overwhelming - how can I use it?” The answer is TRAINING. Training in navigating around the website; training in interpreting the data, and training in applying the data to successful employment strategies.

Thus, we would recommend that TRAINING be added to the suite of core products.