

Labor Market and Economic Analysis, PO Box 9046, Olympia, WA 98507-9046

## **ANNUAL WORKFORCE INFORMATION GRANT PERFORMANCE REPORT PY 2011**

October 19, 2012

Washington state is submitting its summary performance report for Program Year (PY) 2011, as required of Workforce Information grantees by 29 CFR 97.40(b)(1). It summarizes accomplishments and the results of assessments of customer satisfaction with the state's workforce information products and services, and recommendations for improvement to workforce information and services.

As agreed to in the Statement of Work Deliverables, Washington state has produced five deliverables in PY 2011. The deliverables include populating and maintaining the Workforce Information Database (WIDb) with state and local data; producing industry and occupational employment projections; conducting and publishing relevant economic analyses, special workforce information, and/or economic studies determined to be of benefit to the governor and state and local workforce investment boards (WIB); posting products, information, and reports on the Internet; and partnering and consulting on a continuing basis with WIBs and other key workforce and economic development partners and stakeholders.

### **A. Accomplishment of deliverables**

#### **I. Populate and maintain the Workforce Information Database (WIDb) with state and local data**

*States are required to implement and maintain the most current version of the WIDb and populate all tables designated as core tables in accordance with guidelines issued by the Analyst Resource Center (ARC) site.*

- *Database content must be updated timely in order to be as current as the state's most recent publications and data releases. Information and technical support are provided on the ARC Website at <http://www.workforceinfodb.org/>.*

- *States are required to populate the database with the license.dbf and licauth.dbf licensing files. Licensing data must be updated every two years. States are required to submit licensing data through the National Licensing Crosswalk Service Center (NCSC) for inclusion on <http://www.CareerInfoNet.org>.*
- *States are expected to avail themselves of ARC training and support and to use WI grant program funds to do so.*

## **A. Accomplishments**

*States must provide a concise summary of 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 deliverables.*

### **1. Outcomes achieved**

Throughout the year, Washington state's Labor Market and Economic Analysis (LMEA) branch continued to populate and maintain all database tables designated as core tables in accordance with guidelines issued by the Analyst Resource Center (ARC).

#### **Data updates**

- Monthly updates of Current Employment Statistics estimates at the state and county level;
- Monthly updates of Local Area Unemployment Statistics at the state and county level;
- Annual updates of occupational wages at the state, Workforce Development Area (WDA) and metropolitan statistical area (MSA) level;
- Annual updates of short-term and long-term industry and occupational employment projections at the state and WDA level;
- Semiannual updates of the employer database as they are received from Infogroup®;
- Quarterly updates of the Quarterly Census of Employment and Wages at the state and county level;
- Monthly updates to unemployment-insurance claimant information at the state and county level; and
- Annual updates to population estimates.

Access to the database was available to users through Washington’s labor market information website—the [Economic and Employment Information](#) website. The backup procedures and hosting safeguards allowed virtually uninterrupted access to this data throughout the year.

This database also serves as the data source for other applications, such as [Learn about an Occupation](#), [Labor Area Summaries](#), [Local Employment Dynamics](#) (LED), Economic and Industry dashboards and the Unemployment Insurance Adjudicator Assistant, as well as advanced analytical tools for Quarterly Census of Employment and Wages (QCEW) and Current Employment Statistics (CES).

## **2. Deliverables schedule**

*States must provide a concise summary of 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 deliverables were completed as required.

## **3. Aggregate expenditures**

*States must provide a concise summary of the actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures.*

Actual expenditures were consistent with estimated expenditures.

## **II. Produce industry and occupational employment projections**

### **A. Accomplishments**

*States must provide a concise summary of 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.*

## 1. Outcomes achieved

LMEA produced and distributed industry and occupational [Employment Projections](#) for Washington state and 12 local Workforce Development Areas (WDAs) in May 2012. LMEA used a North American Industry Classification System (NAICS)-based historical industry employment time series from January 1990 to September 2011 for this project. NAICS-based staffing patterns were constructed using information from the Occupational Employment Statistics (OES) survey.

Washington state used the same methodology proposed by the Projections Workgroup and Managing Partnership, but implemented the methodology internally using the SAS (statistical software) forecasting system and leading economic indicators from IHS Global Insights, rather than consortium software tools.

Past experience indicates that customers expect both accurate and timely industry and occupational employment projections. In this round of projections, significant attention was paid to the ability of the models to predict recovery of state and local-area employment trends. LMEA also partially incorporated change factors in occupational forecasts, which were based on detailed analyses of the consistency of national change factors with local trends. Only a very limited number of factors were finally selected. LMEA started with aggregated levels of projections, and then used the Global Insight Model and inputs from forecasting staff from the Washington State Economic and Revenue Forecast Council and the Washington State Office of Financial Management. The SAS advanced forecasting system was used to select the best model or combination of models. The system includes 42 default auto regression models, supplemented with a few customized models with independent variables. LMEA's two main independent variables (regressors) were:

1. Industry employment forecasts for the industries in the Global Insight Model; and
2. The forecast of total nonfarm employment for the state, using the SAS forecasting system and the Global Insight forecast of national total nonfarm employment.

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

The goal of “fitting” in a forecasting system is to build the model that will help predict the future. The main criteria used to select such models are based on different types of prediction errors (the SAS Time Series Forecasting System includes 13 criteria from which to choose) in and out of the sample.<sup>1</sup> LMEA mainly used the Mean Absolute Percent Error (MAPE) as its criterion. The final forecast often can 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 disaggregation. In this step, LMEA first used “proc model” in SAS software, which significantly increased the speed of the process. To smooth the results, LMEA used the basic 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 state uses the projected outcomes and system impacts for policy decisions, program administration and curriculum development.

## **2. Deliverables schedule**

*States must provide a concise summary of 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 deliverables were completed as required. Both the short-term and long-term projections were completed in the fourth quarter of PY 2011, and the results became available to the public in electronic form, in May 2012. The specific milestones were as follows:

- Refined NAICS-based historical industry employment database - December 2011
- Prepared NAICS-based short-term and long-term industry projections - March 2012
- Prepared screened NAICS-based staffing pattern from OES survey data - April 2012

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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, and then make forecasts and calculate errors for observations that are available, but are not included in the sample.



- Prepared short-, medium- and long-term occupational projections - May 2012
- Populated the Workforce Information (formerly ALMIS) Database and the Employment and Economic Information website with state and WDA projections – May 2012
- LMEA transmitted files as required as soon as directions from the Projections Workgroup became available – June 2011.

Washington state law (RCW 50.38) 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 state funding 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 than it could have without using these funds in an integrated manner.

### **3. Aggregate expenditures**

*States must provide a concise summary of the actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures.*

Actual expenditures were consistent with estimated expenditures.

## **III. Conduct and publish relevant economic analyses, special workforce information, and/or economic studies determined to be of benefit to the governor and the state and local WIBs**

### **A. Accomplishments**

*States must provide a concise summary of 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.*

#### **1. Outcomes achieved**

LMEA 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 Workforce Investment Board (WIB, known as the Workforce Training and Education Coordinating Board), local WIBs (known as Workforce Development Councils), Workforce Innovation in Regional Economic Development (WIRED) regions, state legislators, as well as other partners including community and technical colleges, economic development organizations and other talent-development stakeholders.

The [2011 Annual Labor Market and Economic Report](#) is an overview of Washington state's economy. It includes analyses of employment conditions and trends, unemployment, wages, income and employment projections. The report also devotes greater detail on the seasonal, structural and cyclical aspects of employment, occupations after the Great Recession, and economic comparisons with other states.

Throughout the year, LMEA staff conducted special studies and economic analyses in addition to the extensive surveys of job vacancies, employee benefits and seasonal agricultural employment; annual occupational employment and wage report; and other local and statewide studies. These reports are available on [Washington state's labor market information website](#).

### **Economic publications**

- Special Reports
  - [Workforce Effects of Biomass and Solar Generations, June 2012](#)
  - [2011 Green-Economy Jobs Report, June 2012](#)
  - [2012 Net-Impact Analysis on Before-Tax Annual Earnings for the Training Benefits Program 2002-2008, February 2012](#)
  - [2011 Training Benefits Program Annual Report, December 2011](#)
  - [2011 Self-employment Assistance Program Report, December 2011](#)
- Monthly
  - [Agricultural Employment and Wages Report](#)
  - [Around the State](#) (employment-related news around the state from public sources)
  - [Current Employment Statistics](#) / [Local Unemployment Statistics](#)



- [Labor Area Summaries](#) (at the MSA and county level)
- [Monthly Employment Report](#)
- Quarterly
  - [Business Employment Dynamics](#)
  - [County Data Tables as useful links in each of the County Profiles](#)
  - [Quarterly Census of Employment and Wages](#)
- Bi-Annual
  - [Job Vacancy Survey Report, Spring 2011](#)
- Annual
  - [2010 Annual Agricultural Workforce Report, July 2011](#)
  - [County Profiles](#)
  - [Occupational Employment and Wage Estimates](#) (at the state, WDA and MSA level), June 2012
  - [2011 Annual Labor Market and Economic Report, May 2012](#)
  - [2011 Employee Benefits Survey Report, May 2012](#)

## 2. Deliverables schedule

*States must provide a concise summary of 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 deliverables were completed as required.

### 1. Aggregate expenditures

*States must provide a concise summary of the actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures.*

Actual expenditures were consistent with estimated expenditures.

## IV. Post products, information and reports on the Internet



## **A. Accomplishments**

*States must provide a concise summary of 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.*

### **1. Outcomes achieved**

[Washington state's labor market information website](#), in combination with LMEA's out-stationed regional and central office labor economists, continued to provide local-area support to Washington state's job seekers, employers, One-Stop System (WorkSource Centers), local workforce investment boards (Workforce Development Councils), economic development councils, legislative policymakers and other customers.

As demonstrated by the hyperlinks to the Employment and Economic Information site throughout this report, LMEA fully utilizes the state's labor market information website to disseminate data, analysis, reports and other work products to its full range of customers.

### **2. Delivery Schedule**

*States must provide a concise summary of 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 deliverables were completed as required.

### **3. Aggregate expenditures**

*States must provide a concise summary of the actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures.*

Actual expenditures were consistent with estimated expenditures.

**V. Partner and consult on a continuing basis with workforce investment boards and other key workforce and economic development partners and stakeholders**

**A. Accomplishments**

*States must provide a concise summary of 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.*

**1. Outcomes achieved**

LMEA's Regional Labor Economists continued to work with local partners, including workforce investment boards (Workforce Development Councils), economic development councils, WorkSource Centers and legislative entities, to better understand local labor markets and effectively communicate that information to customers with varying degrees of knowledge and expertise. The Regional Labor Economists worked throughout the year with these local partners to identify their specific needs and tailor information and services to meet those needs. The services included periodic economic briefings on changes in local labor market conditions and training on occupational and career information and tools.

*Economic symposiums*

LMEA held two regional and one statewide annual economic symposium over the program year to disseminate labor market information and provide a critical forum for networking among local and statewide workforce and economic development partners. These symposiums featured presentations by LMEA economists, local partners and other experts on the national, state and local economies, and topics relevant to the current labor market and economy. The Employment and Economic Information website was used to register attendees for the symposiums and provide symposium presentation materials to anyone accessing the site.

1. [17<sup>th</sup> Annual Statewide Economic Symposium in Olympia](#) (November 18, 2011) with a theme: "Connecting the Dots with Labor Market Information" – attendance 236



2. [2012 Spokane County Economic Symposium](#) (May 18, 2012) with a theme: “*The Spokane Region After the Great Recession: Prospects for the Long Run*” – attendance 73
3. [2012 Yakima County and Central Washington Economic Symposium](#) (July 16, 2012) with a theme: “*The Road to Recovery: Slow but Sure*” – attendance 78

#### *Occupations in demand*

On an annual basis, LMEA and the local Workforce Development Councils (WDC) have continued to partner on an [Occupations in Demand list](#), which is used for determining individuals’ eligibility for a variety of training and support programs. LMEA initiates the annual process by distinguishing among occupations that are “in demand,” “balanced,” and “not in demand” on the state and WDA level using factors such as occupational projections, unemployment-insurance claims and job vacancies. The WDCs then review, adjust and approve that initial list on the basis of their local, on-the-ground experience. As changes in economic conditions effected occupational demand, the LMEA economists and WDC staff worked together to update the list to reflect current occupational demand and supply conditions. In accordance with state law, the WDCs are responsible for changes to the list throughout the year, with which LMEA’s Regional Labor Economists provide technical assistance as requested. The list is maintained through LMEA’s Economic and Employment Information website.

#### *Website enhancements*

Based on feedback received from partners and customers, LMEA completed enhancements on Washington state’s labor-market information website, relaunched as the [Economic and Employment Information](#) website. (Discussed in more detail below.)

## **2. Delivery Schedule**

*States must provide a concise summary of 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 deliverables were completed as required.

## **3. Aggregate expenditures**

*States must provide a concise summary of the actual aggregate expenditures and an explanation for any significant variance from estimated aggregate expenditures.*

Actual expenditures were consistent with estimated expenditures.

## **B. Customer consultations**

*States must provide a concise summary of the methods used for consulting with customers and customize requirements. States must provide a concise summary of activities to be undertaken to add customer value to the deliverables, where needs for improvement are identified based on customer feedback.*

LMEA has maintained systematic methods of collecting feedback from customers regarding their use of, and satisfaction with, LMEA's labor market products and services. The results of these feedback measures play a critical role in LMEA's performance measurement, which is a reporting system directly linked to its project and operational plans. Methods for collecting data on customers' use of labor market products and services include web analytics and automated tracking of ad hoc requests.

A customer service survey is used to collect feedback on satisfaction with responses to ad hoc requests, specifically asking whether a response answered the request and how understandable the response was. When customers provide dissatisfied feedback, LMEA staff follow up with the customer to find out how they can better assist them. This follow up improves customer relations, and allows LMEA to provide improved customer service.

LMEA held various information-gathering meetings involving customer groups to help determine usability needs and data gaps.

LMEA uses customer feedback, as described above, to improve both its deliverables and its delivery system. To assist customers in accessing and understanding labor market information posted on its [labor market information website](#), LMEA branch maintains a Labor Market Information Center

with a statewide toll-free number. Trained individuals staffing that center can take a client through the website to the appropriate information and answer questions about that information. In that process, the staff member also looks for ways to best present the ever-increasing quantity of information on the website.

LMEA solicits input from WorkSource and WDC managers and other customers on the Regional Labor Economists' performance of their responsibilities. That feedback is taken into account in agency wide performance reporting, as well as individuals' performance evaluations. This sets up the clear expectation that the Regional Labor Economists are responsive to their customer base.

### **C. Partnerships and collaborations**

LMEA drew upon its partners and customers to design and complete enhancements on Washington state's labor market information website, relaunched as the [Economic and Employment Information](#) site. The new site made the following improvements on the preceding one:

- Navigation - clearer and more coherent page display and consistent navigation across the various sections of the site now connects customers to the information they seek with fewer clicks, guided by simple, easy-to-follow steps.
- Persona-based reports and publications filtering - organized by customer categories - make it easier to find and retrieve documents and information.
- Search - replaced ineffective search engine with one that is more robust, combined with rich document categorization, returning highly relevant results to users in less time.
- Effective document management system - archiving documents older than three years to reduce clutter on the site.

The [new site](#) provides easy access to information about the job market and the economy to help [job seekers](#) look for work and [employers](#) hire capable staff and prepare business plans.

The site features a tool to help customers [learn which occupations have more job opportunities](#), what they pay, and what training is required. It offers detailed local information about the economic conditions in each of [Washington's counties](#) and home-page access to local, statewide and national [unemployment data](#). Additional emphasis was put on making it easier for users to find “green-economy” labor market information, as defined by the U.S. Department of Labor’s Occupation Information Network (O\*NET), in accordance with state-level initiatives.

The site also offers a library of [reports, data and tools](#), including economic, industry, occupation, green-economy, and regional information. The new site meets federal requirements for accessibility by customers who are vision-impaired or have other disabilities. The new application supports Washington’s economy through streamlined and increased access to economic information and analysis for job seekers, employers, researchers, and policy makers.

#### **D. Recommendations for improvement or changes to the deliverables**

*States may base their recommendations for improvement or changes to the deliverables based on accomplishments.*

Washington state’s Employment Security Department released an [enhanced labor market information website](#) during the program year. This new site is integrated with the agency’s main website, [www.esd.wa.gov](http://www.esd.wa.gov) and with the state’s on-line employment website [www.go2worksource.com](http://www.go2worksource.com). This approach is important to ensure that labor market information is fully integrated into workforce development programs and services.

*States may base their recommendations for improvement or changes to the deliverables based on consultation with customers.*

ESD is working to continuously improve the new labor market information website, based on customer feedback. Current projects include increasing the usability of the [Learn about an Occupation](#) tool, which is used widely by WorkSource system staff, and increasing the efficiency of posting monthly employment numbers.