

State of Utah

PY 2011 Workforce Information Core Products and Services

Annual Performance Report

This report is a description of the activities conducted by Utah's Workforce Research and Analysis Division (WRA) during PY2011 for each of ETA's core products. The goal of these activities was not only to meet the requirements of the PY2011 TEGL 4-11, but to also deliver superior customer service through the production and dissemination of labor market information. As demonstrated in this report, WRA has set high standards in this endeavor. This program year was unique in that WRA was able to fund the vast majority of our work with the Workforce Information Grant Funds. Due to high levels of rollover money from the previous program years which were supplemented by ARRA grants, PY2011 expenditures were \$676,666 (this includes one-, two-, and three-year money).

Core Product A: Populate the Workforce Information Database (WID) with State and Local Data

PY2011 Expenditures: \$79,200

WRA is currently operating the latest version of WIDb software, including all the core tables as prescribed by ETA. During PY2011, all of the core tables were populated with current data. The core tables were populated in accordance with guidelines issued by the Database Consortium. In addition, Utah also populated six non-standard WID tables—mostly geared toward O*NET and skills. Additionally, eight Utah-specific WID tables were populated and updated. WRA updated the content of the database in a timely manner. Utah maintained the occupational licensing data and updated all required files.

One large project taken on by WRA was to update the WIDb and all State Workforce Agency downstream systems with the 2010 SOC structure. Due to the complexities of operating under a “hybrid” structure while the three-year data accumulates, this task was a major undertaking and required the majority of our WIDb resources for the year. Three WIDb tools were affected by the change: the Occupational Explorer, the Occupational Wage module, and the Transferrable Skills tool. Additionally, two administrative systems were affected by the changes to the SOC structure and dependent upon the WIDb administrator updating and recreating crosswalks that tie the systems into the WIDb. These include our agency's labor exchange system and the online unemployment insurance/job search system.

One additional accomplishment for WRA was to use the WIDb tables and confidentiality algorithms to produce tables that were then used for a new internal product developed for State Workforce Agency directors called the High-level Economic Analysis Tool

(HEAT). Through participation in strategic planning for our agency to identify employer needs, WRA was able to meet the demands of directors in the Workforce Development Division (WDD) by providing more intricately detailed LMI for many of their workforce and economic development activities. To that end, the tool was designed to deliver tailored LMI and couple the data with administrative data that can deliver a real-time picture of the labor market. The resulting tool is a geographically-specific dashboard of data driven by the specialized tables created by the WIDb administrator and administrative data stored in our agency's data warehouse. In the spirit of collaboration to deliver products in the most useful formats possible and for resource leveraging, the dashboard is powered by an administrative database management tool called Cognos. Since WDD directors already access this system to download other administrative reports, WRA decided to house the dashboard in this system as well. Directors are able to download the dashboard of data to be used for things such as identifying key industry targets, examine industry- and location-specific occupational wages, and real-time labor market information on occupational supply and demand from the agency's labor exchange system.

Feedback from key partners in the realm of career and workforce counseling revealed the need to enhance our occupational wages module of the Utah Economic Data Viewer (UEDV). As this was the first module written in Utah at the inception of the ALMIS system, WRA agreed with users that it was time to use today's technology to enhance the user's experience and expand the usage. To this end, a focus group was created to get feedback on initial ideas for enhancements. The result was a wage module replacement called the Wages and Occupational Openings Data (WOOD) tool. The focus group included agency users of the tool ranging in job title from eligibility specialist, workforce development specialist, employment counselor, and training program specialist. With the focus group's input (detailed in the feedback section of this report), a business plan was created and presented to the IT team and WIDb manager. Major enhancements include an occupational dashboard approach and an advanced search that essentially operates as an online report-building tool where the user is able to specify certain attributes and is returned a list of occupations (and the relevant LMI for said occupations) fitting those attributes. The report-building capability will also allow users who are involved in workforce development to build lists of occupations relating to analysis from the HEAT tool, so that the workforce development projects can be coordinated from the director level on down to line staff. Development for the tool is currently in process and scheduled to be available online in PY2012. A statewide training and marketing initiative will be carried out by WRA staff to ensure all users are able to employ the tool to its fullest.

Core Product B: Produce and Disseminate Industry and Occupational Employment Projections

PY2011 Expenditures: \$169,505

WRA developed and disseminated long- and short-term industry and occupational employment projections, using the methodology, software tools, and guidelines developed by the Projections Consortium and the Projections Managing Partnership

(PMP). Utah successfully developed and published statewide short-term projections for the 2011-2013 period and statewide long-term projections for the 2010-2020 period. This data was used to update the WIDb and was also submitted to the national projections group for review and public dissemination.

Because WRA now has two research economists on staff, time and resources were devoted in this latest round of projections to improve the overall quality and accuracy of the projections. Projections (along with wage information) are some of the most highly demanded LMI, and the economic downturn has increased the challenge in predicting future demand for occupations while at the same time intensifying the demand for accurate forecasts. Therefore the projections process was given heightened importance in WRA and more resources were given toward the development of the estimates.

In this round of long term industry projections, projections were performed at a much finer level of detail than in the past. Previously, projections were estimated for approximately 100 industries. In the current round of projections, estimates were generated for 144 separate industries. Furthermore, the overall methodology was refined to take into account more relevant economic information when generating estimates. Previous projections only used population and personal income as independent variables in the time series models. In this round, 14 independent variables based on statewide data were used, including population, real and nominal GDP, real and nominal personal income, real and nominal disposable income, and residential and non-residential construction data among others. To be used as independent variables in the modeling of industry employment, the 10-year forecasts had to be produced for each of these predictor variables and a variety of ARIMA and Holt-Winters models were estimated and considered to determine the best forecasts. The industry employment projections were generated within the PMP Projections Suite software. But prior to choosing a model in the Projections Suite software, the "leaps and bounds" method of exhaustive model selection was used to produce a set of the best-fitting models for consideration. Additionally, the method for estimating self-employment and unpaid family workers was adjusted to more closely reflect the methodology employed by BLS. As a last step, these models were entered into the Projections Suite software and the best final models were determined.

Both long and short-term occupation projections were presented to Utah's customers in many formats including the UEDV, a full-listing spreadsheet on the state website and on the utahfutures.org website which is the state's latest career information delivery system, and many articles in Utah's *Trendlines* magazine. Additionally, Utah's UWORKS system (our employment counselors' client career planning tool) links directly to the appropriate occupational information in the Workforce Information Database. This makes it easier for employment counselors to use the projections to help their customers make informed career decisions. In addition, in order to continually educate our customers, we are evaluating and developing tools and trainings that will provide explanation and guidance on the new products and the occupational outlook information.

WRA is now in the process of developing a methodology to produce county- and/or WIB-level short-term projections (in addition to the ETA-required substate long-term projections). With the acquisition of staff with post-secondary degrees in statistics, the knowledge and skill base is now available to fill this long-standing need with our industry partners. Only initial steps have been taken in this project, which may take more than a program year to implement. Tentative plans are to publish this information in our new quarterly regional newsletter (described in Core Product 5 below).

Core Product C: Conduct and Publish Relevant Economic Analyses, Special Workforce Information, and/or Economic Studies Determined to be of Benefit to the Governor and State and Local WIBs

PY2011 Expenditures: \$168,420

WRA participates yearly in writing an annual economic analysis report for Governor Herbert. This report, which has been produced yearly for at least the last two decades, is led by the Department of Economic Analysis (DEA) within the Governor's Office of Planning and Budget (GOPB). DEA compiles the census data (as the state's Census program managing agency) and writes the overarching analysis. For the economic sector-specific analysis (e.g. labor market, tax revenues, industry analysis, etc.) the DEA turns to the Governor's Council of Economic Advisors (CEA). This is a group of statewide economists who together provide the governor with counsel regarding pertinent economic issues for the state of Utah. Our Chief Economist is a primary member of the CEA and it is through him that we contribute the labor market and industry analysis for the annual Economic Report to the Governor (ERG). In PY 2011, two ERG products were produced: the 2011 ERG and the 2012 Outlook. Because the annual data takes well over 6 months to be collected, the annual reports are published about nine-months after the end of the year. To fill in the gap of time, DEA worked with the CEA to publish the ERG Outlook in January of 2012.

WRA also provided written economic analysis for all eight of our state workforce agency's Economic Service Areas (ESA). The ESA directors used the labor market data and analysis to justify their decisions and strategic plans for the upcoming calendar year. Written analysis and appropriate information in tables and graphs were provided at the county level for each area. In addition, regional economists followed up with each director to ensure they had the information they needed for their specific plan in their areas, assisted them in utilizing the data in the plan, and answered any questions. This information was compiled into a single report entitled "Counties in Review" for other users who may want to refer to this local analysis provided to the ESAs.

Two additional products developed out of the ESA strategic plans were the lists of Occupations for Training and identification of industries that play a significant role in the ESA economies. Development of these products enabled the regional economists to work closely with ESA directors and gain a better understanding of their needs and objectives. It also provided an opportunity to contribute significantly to the DWS planning process.

WRA continues to receive requests for economic analysis to feed the Targeted Employment Areas (TEA) program led by the United States Customs and Immigration Services agency. WRA staff continue to devote time and resources to the identification and certification of TEAs for local private entities seeking the designation. Members of the WRA staff met with many different TEA designation seekers. Through outreach to BLS national office and other states' LAUS programs, WRA then obtained official clearance through the governor's office to provide LMI for TEA proposals. WRA then created an informational website to help economic developers and investors interested in participating in the program. The website is updated on a regular basis and includes contact information for those wanting to connect with WRA staff in developing their TEA proposals. WRA has also consulted with legislators in the state who have shown interest in supporting the TEA program.

WRA senior economists were given the opportunity in PY2011 to participate in a workgroup for the agency focused on strategic planning to identify employer needs. The impetus for creating the workgroup derived from the agency's focus on operational excellence, a charge led by the agency's executive director. Many divisions within the agency were represented on the group; WRA's role was to represent the potential uses of LMI to identify employer needs. One major outcome from this workgroup was a statewide report using LMI to measure employer needs. This report served as the template for the ESA plans (described earlier in this section). Other major outcomes included the requests for the development of the HEAT tool for ESA directors and WOOD tool for line-workers and external customers (tools are described in Core Product A).

Another demand identified through participation on the strategic planning workgroup was for LMI to conduct another Job Vacancy Study (JVS). Due to lack of funding and interest, WRA has not conducted a JVS study since the fourth quarter of 2009. With increased demand on LMI to provide alternative ways to evaluate the state and local labor markets, it was clear to WRA that a JVS study would answer many of the questions. As such, the WRA economists teamed with state BLS program staff to conduct a second quarter 2012 JVS study. Funded by WIG grant monies from both PY2011 and PY2012, results of this study will be published on line and released to the press in the Fall of 2012.

WRA also generated several economic impact analyses for the state workforce agency. The purpose of these analyses was to use economic measures to express the impact of our agency's work in the different regions of the state. Calls for such measurement originated in the state legislature, where the role of our state agency was being debated. In the past, WRA has avoided questions of economic impact due to a lack of resources (both time and skills) to produce analyses such as these. However, now that WRA includes a research team which has access to software to produce such analyses, these sorts of measures are now part of the catalog of products offered by our division. Analyses for several regions across the state were performed in PY2011. In PY2012, the remaining regions not covered in PY2011 will be evaluated.

WRA staff members were asked to participate in a statewide initiative created by the

Utah's System of Higher Education (USHE) and the Board of Regents called Jobs for Utah's Future. The root of this project came from national discussions of the need to train people for the jobs of the future, and the potential skills gap looming from a lack of requisite educational attainment in the workforce. From these conversations came a call from our state's governor that Utah must raise its educational attainment levels such that 66 percent of the public would hold some sort of postsecondary credential by 2020. To kick off the initiative, USHE hosted a symposium and WRA helped to set the agenda of the event. National experts, including Dixie Somers from BLS presented methodologies to project future education demand. After the discussions from the symposium, the next step in the initiative was to create a report laying out the plan for increasing educational attainment in a way that would best address future labor market demands. WRA staff has contributed extensively to the report by analyzing Utah's occupational projections and American Community Survey data on educational attainment and occupational employment. WRA's contribution to the report was completed in PY2011, but the report will not be released by USHE until later in PY2012.

Collaboration with USHE on the Jobs for Utah's Future project included a discussion on how best to inject data and economic analysis to the question of whether Utah labor markets are challenged by gaps between the skills that job seekers possess and the aptitudes desired by Utah businesses. As an initial approach, WRA performed a case study analysis of the nursing occupation. Multiple sources of data were used to analyze supply and demand measures from both a stock and flow perspective. Results of the case study were presented to the SWIB, the Governor's Office of Economic Development, and USHE. In PY2012, WRA will work with state workforce agency business liaisons to identify other potential occupations for case study analyses.

One of the largest tasks taken on by WRA's research economists in PY2011 was to address the question of waivers and participation in the Temporary Assistance for Needy Families (TANF) program. Driven by a request from one of our state's senate members, researchers in WRA were asked to answer the national question of why states don't meet the required participation rate of 50 percent by examining historical demographic, economic, and programmatic data from past Utah recipients of TANF funds. A large portion of the research was performed in PY2011; the report is slated to be published in PY2012.

Core Product D: Post Products, Information, and Reports on the Internet

PY2011 Expenditures: \$90,591

In PY2011, WRA posted numerous workforce information tools on the Internet through several different modes, including publications in downloadable formats, data and statistics in the Utah Economic Data Viewer and in downloadable formats, press releases of the latest labor market information, and economic news directly within the web pages themselves. Users are alerted to the postings when they sign-up for our e-mail subscription service. Additionally, our web site is designed so that "headlines" rotate on our front page highlighting a new article or press release as they are published.

Trendlines, a quarterly publication devoted to current topics important to the Utah economy, was published four times during PY 2011 and made available to our customers on the web. The nine versions of our new quarterly publication, *Local Insights* (described in Core Product E below), were also posted to the web for WRA's LMI customers.

WRA also made available on its web site all reports, special studies, and associated publications as described in the other Core Products. This includes the Economic Report to the Governor (discussed in Core Product C above), the Counties in Review (discussed in Core Product C above), the occupational projections (discussed in Core Product B above), and the monthly employment report (discussed in Core Product E below). WRA is now also devoting resources toward making text versions of as many publications as possible, so as to accommodate readers of all unique abilities.

County-level data was also produced and made available on the web. These data were delivered in a few different formats, including county fact sheets, county economic and demographic profiles, and county largest employers lists (all of which are discussed in Core Product E below).

All web products are placed on the web within days of their production, and for some hard-copy publications, even before the publications are printed. WRA continually encourages our customers to go to the web to access our products and the latest labor market information. In our publications we often promote our web links, either in relation to an article or as a stand-alone advertisement. Web statistics show that WRA received more than 28,000 hits in PY2011 for the web products listed above.

WRA continues to expand its LMI web presence through the division's blog, which focuses on local economic events, economic and demographic data release announcements, marketing of our publications and web tools, and other information affecting the Utah economy. In PY2011 alone, the blog experienced almost 60,000 visits.

WRA's most significant undertaking for posting products on the web in PY2011 is the incorporation of Tableau into our web tools. Tableau is a data visualization tool that allows users the flexibility to customize their view of the data through filtering, timeline adjustments, and criteria adjustments. WRA has found this tool to be immensely helpful in the quest to meet all customers' needs in that the tool is dynamic in nature. Additional benefits are derived from the ability to quickly update a visualization by simply adding new data to the core table. Thus far, WRA has incorporated Tableau into the monthly employment report page, the home page, the county economic and demographic profiles, the county fact sheets, and the LMI blog. WRA will continue to expand the use of Tableau throughout PY2012.

Core Product E: Partner and Consult on a Continuing Basis with Workforce Investment Boards and Other Key Workforce and Economic Development Partners and Stakeholders

PY2011 Expenditures: \$168,950

WRA partnered on a continuing basis with the State Workforce Investment Board (SWIB) and the other workforce councils representing regions and industries across the state in program year 2011. The current state workforce agency structure has led WRA to partner with local economic development groups and key workforce stakeholders through our work with the Economic Service Area (ESA) directors. Our economists continue to support activities of ongoing regional councils and also the new industry and local business workgroups that have taken place of the councils in some ESAs.

WRA continues to use the concept of the LMI Analyst to coordinate the work of the economists with the needs of the ESAs in their workforce development endeavors. This work varies widely from one region to another, including data requests, participation in workgroups, providing analysis for economic development site selection projects, presentations of local economic information to various audiences, and local training.

In collaborating with the state and local councils to improve the products produced by WRA, feedback from employers led to a significant change in the way occupational star ratings are assigned. Employers felt that rating occupations within training groups could lead job seekers to misunderstand the true value of acquiring education and training. Therefore, a decision was made to rate all occupations together. Ratings were applied to the occupations based on the 2010-2020 projections and the latest wage data from OES. In PY2012, the economists and LMI analyst in WRA will connect with prominent customer groups for the data to provide training on the new ratings system.

Additionally, WRA successfully published the *Trendlines* magazine and posted local news and economic information to the blog in order to convey information to customers at the state and local levels. WRA's web products such as the county fact sheets, county job growth tables by industry, major employers lists, and occupations with training potential are all used extensively by Utah's WIBs for decision making and strategic planning. WIBs each had access to a Regional Economist assigned to their area that developed and produced information responsive to the needs of the particular region. The Regional Economists and the LMI Analyst worked closely with regional councils, employment centers, schools, and a wide variety of other local stakeholders and customers to develop and continually improve products and services to meet customer needs. To partner and serve the needs of the councils, our Regional Economists and LMI Analyst provide a range of services from data requests to economic reports to informational presentations. In fact, in PY2011, WRA staff gave a total of 53 presentations to state and local audiences on topics ranging from accessing LMI on the web to using BLS data to track local economic trends.

WRA's newest publication, *Local Insights*, was brought to fruition in PY2011 to further enhance partnerships with the WIBs and other customers throughout the state involved in economic and workforce development. In order to deliver labor market information tailored to the user who possesses some familiarity with economic data, but desires economic analysis and information that will more directly inform decision making, WRA developed a regionally based publication to provide such analyses. Driven by current "hot" topics relating to education, economic development, and/or workforce development, *Local Insights* provides specific analysis catered to the local region. Nine versions of the publication are published quarterly, one for each region and a statewide version. The first issue was produced in PY2011, and to educate the public about the publication, each regional economist made several visits to WIB meetings and other economic development meetings around the state to discuss the new publication. Thus far, WRA has received very positive feedback, including a specific request from the Governor that he receive two copies of each version to be used as references for updating himself on economic issues in the regions as he visits constituents throughout Utah.

WRA continued partnering with The Governor's Office of Economic Development (GOED) in updating the custom labor market information (in both table and map formats) for the NAICS defined economic clusters, and provided data for verification of minimum wage requirements GOED incentives recipients must meet. WRA provided verification that the requirement was met in over 150 instances during PY2010.

WRA also assisted the USTAR (Utah Science, Technology and Research) group, a GOED partner, by providing quarterly information on new establishments from the QCEW program for PY2010.

Feedback

WRA is keenly aware of the value that can be gleaned through effective feedback. Some of our most successful enhancements have been motivated through ongoing local input, collected both formally and informally. WRA has learned the value of partnering and has found that the strength of a partnership will bring about honest commentary on the performance and helpfulness of LMI, and unstructured feedback collection can create the best ideas for data dissemination enhancements.

Additionally, WRA held a focus group in PY2011 to gather feedback for the initial design proposal of the WOOD tool (described in Core Product A above) and to gather ideas for additional features. As noted above, the focus group was comprised of agency staff, ranging in job title from employment counselor to training manager. The following are notes and action items from the meeting:

- There is agency-wide interest for WOOD to offer user-friendly search criteria and retrieval to internal staff and job-seekers alike. Carrie asked the group if they have had to come up with a list of occupations based on some criteria when working with customers. The reply was that in the Step-Up Program (Food

Stamps), people searching for jobs need a range of pay to qualify and the wages which are listed are not what employers are really paying.

- The information we have available needs to be accurate and easily accessible.
- When looking for information on wages, the idea was suggested for an option of selecting either hourly or annual wages, with hourly as the default. Other options for searches may be education level, on-the-job training, (apprenticeships), and experience.
- Searching by interests would be very helpful. Job-seekers could find out what occupations are related to their interests (current job openings), as well as what the pay is and what experience is required. The individual could then rank their selection by the column most important to them.
- Different titles could be linked for a more intensive search. One occupation selected would bring up related occupations and also show comparable LMI. Having information related to geography would also be helpful. Mirror MyUI project.
- Geography defined by agency's Service Areas – basic search/advanced search; we don't have data by county. Label, so it translates to public language rather than internal. Making it so that when hovering over the city, the area comes up would be a consideration. Another idea was to have a picture of the map as part of the search, with cities and counties (either label counties or have a bubble). Another idea brought up was to have the system capable of collecting multiple areas.
- If the job-seeker could create his/her own occupational ranking system, that would be very useful. Put the ability in the hands of the user.
- The use of blurbs, giving a narrative to summarize the occupational information is another idea. Make it so they can summarize the overall outlook for one job: wage, growth, star rating.
- What data points are best to display? Trend up or down arrow for occupation – need something to connect occupations to industry employment trends. Staffing pattern – link, geographically specific. Rank list of industries by occupation employment share.
- Make a favorites profile – have the option to add job-seeker's selection(s) to their profile. Transferrable skills (default to state-wide) geographic – sort by education / job.
- One final suggestion: make sure users can go back to where they were. Also, a “Redesign My Search” button would be useful. Let them save their search and remind the user what they have previously searched.
- It was proposed to make our website more visually appealing. Use icons, pictures, move away from text-heavy pages.

As stated earlier in the report, ideas gathered in the focus group session have become part of the design of the WOOD tool, which is currently being built. All participants' suggestions were noted, and WRA will work to accomplish as many of the requests as possible with limited resources and time. WRA has been, and will continue to work with the focus group participants throughout the development process and will ensure that prioritization to ensure that the most important requests are met.

Items of Note for PY2011

The following section is used to note significant changes or events affecting WRA over the last program year.

1. New staff: Due to retirements and career changes, WRA had significant staff changes over the program year. Currently, the WIG-funded staff of WRA is operating with four staff members who have less than one year of LMI experience. Due likely to current economic conditions, WRA was able to hire highly qualified staff in terms of educational attainment and general research and statistical experience. However, it has been a challenge, albeit minor, to train so many people on the specifics of the ETA and BLS programs. The benefits far outweigh any training costs; the new individuals usher in a refreshing outlook and enthusiasm for educating the public on local economic issues and conditions, and thus we expect our LMI division to thrive over time from this energy.
2. Funding challenges: The positive challenge of receiving additional funding from the LMI Improvement Grant has been more pronounced over the last year. The task of balancing our state agency budgeting requirements with ETA's request for Utah to spend down its WIG current and carryover funds presented a never before experienced challenge to our division. WRA continues to work with the agency's executive director's office and finance division to balance the needs of both the agency and ETA to ensure that all expectations are met.
3. Heightened agency role: Because of the interest of our agency's Executive Director in making sound decisions based on the best possible data, our division's internal role has gained prominence in her leadership. This heightened role reach a pinnacle in PY2011 as the data, analysis, and policy recommendations showed a direct impact on the strategic direction of our agency. Training funds were allocated based on occupational data as well as the results of the special study conducted by WRA in PY2010 on the economic impacts of DWS training services. We enthusiastically embrace this role, while at the same time must acknowledge the increased demand for our data and analysis as well as an increase in the complexity of the questions posed to us.