

A Report on the
Operations of the
North Carolina
**COMMON FOLLOW-UP
SYSTEM**

**May
2015**

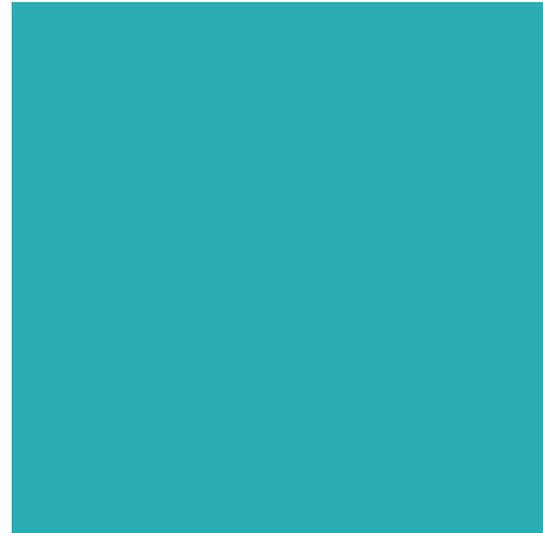
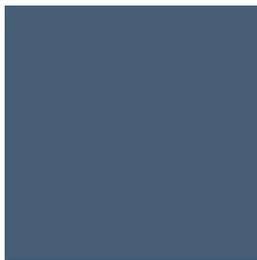
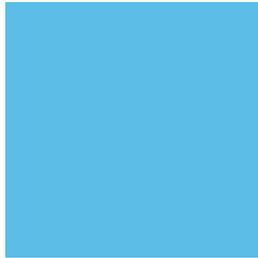
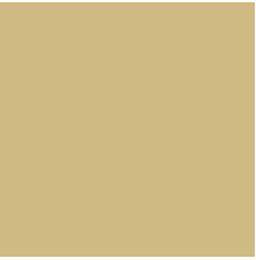


TABLE OF CONTENTS

| | |
|---|-----------|
| THE PURPOSE OF THE COMMON FOLLOW-UP SYSTEM | 1 |
| WHY A COMMON FOLLOW-UP SYSTEM | 1 |
| HISTORY OF THE COMMON FOLLOW-UP SYSTEM | 1 |
| CFS YEARS 1992-1995 | 2 |
| CFS YEARS 1996-2013 | 3 |
| CFS YEAR 2013-2014 | 4 |
| ENHANCING TECHNOLOGY PROCESSES | 5 |
| ENSURING DATA INTEGRITY AND UPDATING SYSTEM DOCUMENTATION | 5 |
| EXPANDING DATA COVERAGE | 6 |
| ENHANCING SYSTEM OUTPUTS | 6 |
| HOW IS THE COMMON FOLLOW-UP SYSTEM OPERATED? | 9 |
| HOW ARE CFS DATA PROCESSED? | 10 |
| IS THE CFS COST EFFECTIVE? | 10 |
| WHAT ARE THE STRENGTHS AND LIMITATIONS OF CFS DATA? | 11 |
| PARTICIPATION SUMMARY ACROSS THE YEARS | 12 |
| ANALYSES OF INDIVIDUALS SERVED BY EACH AGENCY OVER TIME | 14 |
| INTERRELATIONSHIPS AMONG AGENCIES IN THE PROVISION OF SERVICES | 15 |
| RELATIONSHIP OF INDIVIDUALS SERVED TO THE NORTH CAROLINA ECONOMY | 20 |
| CONCLUSION | 23 |

LIST OF TABLES

| | | |
|-----------------|--|-----------|
| TABLE 1. | INFORMATION REGARDING THE NUMBER OF INDIVIDUALS CONTAINED IN THE COMMON FOLLOW-UP SYSTEM (CFS) 2004 – 2005 PROGRAM YEAR THROUGH THE 2013 – 2014 PROGRAM YEAR..... | 12 |
| TABLE 2. | NUMBER AND PERCENTAGE OF RECORDS AND INDIVIDUALS PROCESSED SINCE INCEPTION BY PARTICIPATING AGENCY AND SYSTEM WIDE | 14 |
| TABLE 3. | UNIQUE NUMBER OF INDIVIDUALS BY AGENCY AND SYSTEM WIDE ACROSS THE 10-YEAR TIME PERIOD JULY 1, 2004 THROUGH JUNE 30, 2014 | 16 |
| TABLE 4. | NUMBER OF INDIVIDUALS BY PARTICIPATING AGENCY CFS YEARS: 2004 – 2005 THROUGH 2013 – 2014..... | 17 |
| TABLE 5. | NUMBER OF INDIVIDUALS SERVED BY EACH AGENCY AND THE NUMBER AND PERCENT OF INDIVIDUALS IN COMMON AMONG AGENCIES CFS YEAR: 2013 – 2014 | 18 |
| TABLE 6. | NUMBER OF INDIVIDUALS SERVED BY EACH AGENCY AND THE NUMBER AND PERCENT OF INDIVIDUALS IN COMMON AMONG AGENCIES CFS YEARS: 2004-2005 THROUGH 2013 – 2014 | 19 |

LIST OF FIGURES

| | | |
|------------------|---|-----------|
| FIGURE 1. | RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGE EARNERS AND TO ALL WAGES PAID DURING THE 2013-2014 PROGRAM YEAR | 20 |
| FIGURE 2. | RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGE EARNERS AND TO ALL WAGES PAID DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR..... | 21 |
| FIGURE 3. | RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGE EARNERS DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR..... | 22 |
| FIGURE 4. | RATIO OF WAGES PAID TO PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGES PAID DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR | 23 |

***A REPORT ON THE OPERATIONS OF
THE NORTH CAROLINA COMMON FOLLOW-UP SYSTEM (CFS)
MAY 1, 2015***

THE PURPOSE OF THE COMMON FOLLOW-UP SYSTEM

The purpose of the Common Follow-up System (CFS) is to provide information on the educational and employment outcomes of participants in publicly supported educational, employment and training programs for use in planning, policy-making, program evaluation, resource allocation and career planning.

WHY A COMMON FOLLOW-UP SYSTEM?

CFS grew out of the recognition by a group of state agencies that quality outcome information was needed on the participants of educational, employment and training programs. This data was essential for program planning, evaluation and resource management. Although each of the agencies conducted independent follow-up studies to fulfill specific programmatic, regulatory or other requirements, information content and collection procedures were specific to each agency. Existing collection methods often were expensive and no mechanism was available for the sharing of information among agencies. No process existed to review outcomes across programs and agencies, to study the relationships among programs and agencies, or to examine results for the system as a whole. In short, there was no consistent method that allowed for the examination of the education, employment and training community. The CFS was developed as a cost-effective response to these limitations.

HISTORY OF THE COMMON FOLLOW-UP SYSTEM

The CFS was developed in 1992 as a cooperative venture of the participating agencies under the auspices of the North Carolina State Occupational Information Coordinating Committee (NCSOICC). The original participating agencies were:

- **the University of North Carolina, General Administration (UNC);**
- **the North Carolina Community College System (NCCCS);**
- **the North Carolina Department of Public Instruction (DPI), Workforce Development Education;**
- **the Employment Security Commission (ESC) of North Carolina;**
- **the Division of Employment and Training (DET);**
- **the North Carolina Department of Human Resources, Division of Vocational Rehabilitation Services (DVR); and**
- **the North Carolina Department of Labor (DOL).**

The participating agencies chose the former Employment Security Commission as the system operator, due to its expertise with large data sets and its responsibility for the Unemployment Insurance wage file. In the initial year, a prototype matching system was developed. This matching system provided a mechanism whereby data submitted by each of the participating agencies were matched to data submitted by each of the other agencies and to employment and wage information in the Unemployment Insurance wage file.

CFS YEARS 1992-1995

Over the first four years of operation, the CFS evolved in terms of processing procedures and system expansion. The system was converted from a single year matching system to a longitudinal database. The longitudinal database structure allowed the tracking of an individual's progress through the workforce system across time, in addition to supporting comparisons at specific intervals or points in time. This conversion also provided the opportunity to study the long-term impact of programs, to examine the interrelationships among agencies in the overall provision of services and to gain a better understanding of the paths individuals follow while utilizing these services. The system grew in terms of both records and individuals processed. The number of individuals processed increased from 674,305 in 1992 to over 2 million in 1995, while the number of agencies grew from 6 to 8 over the same time period.

During the 1995 session, the General Assembly initiated a new chapter in the history of the CFS by enacting legislation that placed new requirements on the system. Chapter 96 of the North Carolina General Statutes was amended to:

- **establish the CFS by statute;**
- **define system participation;**
- **establish operational responsibility with the ESC;**
- **establish programmatic evaluative responsibility with the Office of State Budget and Management (OSBM);**
- **mandate data integrity and confidentiality; and**
- **outline reporting and schedules.**

The ESC was designated as the host agency for the system with the following responsibilities:

- **collection of the required data;**
- **operation, update and maintenance of the system;**
- **provision of assistance to participating entities with the development of seed files and analysis of the enhanced records;**
- **determination, in cooperation with OSBM, of any additional state agencies and other entities not currently participating in the system and a time frame for their inclusion;**
- **determination, in cooperation with OSBM, of any additional data elements required for the system; and**
- **delivery of a system status and operations report to the legislature on or before May 1 each year.**

The North Carolina OSBM was charged with using system outputs in the evaluation of agencies and programs receiving state or federal funds in support of education, employment and training activities. In addition to the changes mandated by the new legislation, the ESC began work with other groups interested in incorporating CFS information into their program evaluation efforts.

CFS YEARS 1996-2013

Over the next several years, there was increased interest in the data contained in the CFS. Several groups turned to the CFS as a valuable source of quality outcome information for education, employment and training programs. The increased interest was due to initiatives at both the state and national levels regarding the collection, calculation and reporting of performance information throughout the education, employment and training system. These initiatives included the development of reports for the Commission on Workforce Development, SOICC and Work First Business Council.

The Workforce Investment Act (WIA) of 1998 stimulated further interest and attention to the data contained in CFS. WIA mandated the collection, calculation and reporting of performance and accountability measures for workforce training programs operated throughout the state. ESC worked in collaboration with the Division of Workforce Development (DWD) on the development of procedures for the processing, calculation and reporting of the state's WIA program performance measures as well as the development of the state's eligible training provider system. Information from the CFS along with information from other administrative systems was utilized to help meet the informational, reporting and accountability requirements that were the keystone of the Act.

These initiatives led to continued expansion and refinement of the CFS data collection procedures. System refinement included the initiation of a biannual data collection cycle and system expansion in terms of data elements, system participation, individuals processed, as well as program and service coverage for existing entities. In order to help meet the reporting requirements for WIA, additional data elements were added to the CFS. These new data elements were added to aid in the calculation of performance data required under WIA. During the 2001 Legislative Session the North Carolina General Assembly transferred the evaluative responsibility previously housed in the OSBM to ESC.

In July 2003, North Carolina experienced the largest mass layoff event in the state's history when Pillowtex Corporation closed. Information from the CFS, have been utilized to follow the re-employment and provision of education, employment and training services to former Pillowtex workers. This information was helpful in responding to informational requests from the Governor's office, North Carolina General Assembly and other stakeholders.

In July of 2011, the North Carolina General Assembly enacted legislation that transferred the Employment Security Commission of North Carolina to the North Carolina Department of Commerce. The law became effective November 1, 2011. As such, responsibility for the CFS was transferred to the Department of Commerce's Labor and Economic Analysis Division (LEAD).

In 2012, the North Carolina Department of Public Instruction was awarded a grant from the U.S. Department of Education to build a State Longitudinal Data System (SLDS). While NCDPI is the lead on the SLDS grant, the project is a collaborative effort of several entities including: the NCDPI, the North Carolina Community College System (NCCCS), the University of North Carolina General Administration (UNC GA), the North Carolina Independent Colleges and Universities (NCICU), and the North Carolina Department of Commerce (NCDOC). One of the goals of the grant is to establish a link between the proposed SLDS to the employment related data utilized to support the CFS.

During the 2012 Session the North Carolina Legislature enacted Session Law 2012-131: which focused on reforming the state's workforce development laws. Part of the law called for the Department of Commerce to improve and strengthen the CFS and to work in collaboration with the Commission on Workforce Development to utilize data from CFS in the development of performance measures for North Carolina's Workforce Development System.

As part of its efforts to improve and strengthen the CFS, the North Carolina Department of Commerce began several initiatives. These included enhancing the technology processes for system processing and storage, enhancing data integrity, updating system documentation regarding agency and programmatic information, and enhancing system outputs.

The Department of Commerce began work on a system upgrade focused on enhancing the system capacity by migrating CFS data from its current mainframe computing environment to a server base platform. The goal for the new technology infrastructure is to help provide the core mechanisms for storing, updating, securing, maintaining, processing, analyzing, and reporting effectively and efficiently from the CFS.

As part of its efforts to improve the CFS, the Department of Commerce applied for a competitive grant with the U.S. Department of Labor's Employment and Training Administration through their Workforce Data Quality Initiative (WDQI). The Department received notification in June of 2013 that North Carolina had been awarded a WDQI grant. The grant covers a three year period ending in June 2016. Grant funds are being utilized to further strengthen and enhance the CFS.

In addition to the CFS enhancements, information from the system continued to assist agency partners in meeting several state and federal performance and evaluation initiatives. Several of the participating agencies utilized data from the CFS to follow the employment and provision of services to former participants of education, employment and training programs.

CFS YEAR 2013-2014

Processing of data for the 2013-2014 CFS year included the addition of over 6.2 million program records for over 1.8 million individuals. This increased the total number of individuals in the system to over 9 million and the total number of program records to over 213 million.

During the 2014 Session the North Carolina Legislature enacted Session Law 2014-100 which required the Department of Commerce to develop a plan for the transfer of the information and

capabilities of the CFS to the Government Data Analytics Center (GDAC) within the Office of Information Technology Services. As such the Department of Commerce began work with the GDAC to move the CFS information and capabilities into the GDAC environment and developed a high level plan which documented the approach for the transfer of the system and information as well as the enhancement of the system that will be utilized in the new GDAC environment. The plan was submitted to the North Carolina General Assembly in February of 2015.

Over the past year, the Department of Commerce has undertaken several efforts to improve the CFS. This has included continued focused on enhancing the technology processes utilized for system processing and storage, enhancing data integrity, updating system documentation regarding agency and programmatic information, expanding data coverage, enhancing collaboration with the participating agencies and stakeholders and enhancing system outputs.

Enhancing Technology Processes

The Department continued working on the enhancement of the technology processes that are utilized to support the CFS. The technology solution offered within the GDAC environment will enable the Department of Commerce to fulfill both statutory and grant objectives in an efficient and effective manner. Work on the business and system requirements for a new relational database structure within the GDAC environment have been initiated. This new technology infrastructure will provide the core mechanisms for effectively and efficiently storing, updating, securing, maintaining, processing, analyzing, and reporting from CFS.

Furthermore, the technology and information resources within the GDAC will help to improve the capacity of the system to match data across agencies and programs. Up to this point the CFS has relied on the use of SSNs for data matching. The GDAC resources will help to improve the capacity of the system to carry out record matching by utilizing alternative matching approaches and resources that will lead to enhanced system capacity and enhanced system outputs.

Ensuring Data Integrity and Updating System Documentation

Staff has taken several steps to enhance data integrity. This included a review of existing data submissions and development of system documentation regarding both data structure and content. Staff continued working with the participating agencies to identify and clarify existing data structures and agency specific information and codes. Staff continued work on the development of a data dictionary that describes all of the data contained in CFS and documents allowable values for each field contained within the system. LEAD staff has shared the information from the enhanced system documentation efforts with the GDAC staff to assist in the development of the system technological requirements.

Work has been initiated to develop the requirements for an enhanced data validation process within the GDAC environment including the development of new edit reports and enhanced processing. This process will validate agency data submissions dynamically by comparing the data submissions from the agencies to the data structures and definitions in the dictionary. This

new process will facilitate the validation of data, assist in the loading of new data from the agencies and help to ensure data integrity.

Expanding Data Coverage

While the CFS contains a wealth of information regarding North Carolina's education, employment and training programs and employment and wage information, data expansion, efforts are underway to enhance the system. This has included working with agencies to revise previous data submittals, to expand current data submittals from existing entities and to include information from education and workforce development programs not previously reported to the CFS. This work has included a series of meetings with the participating agencies including meetings with the agency representatives, Commerce staff and GDAC staff.

In addition to the expansion of programmatic and system matching capacity, the Department of Commerce is working to expand the employment and wage information that is available through the CFS. The Unemployment Insurance employment wage information that has been utilized to support the CFS has included only those wages paid by employers who are subject to North Carolina's UI laws. It does not include information regarding the self-employed, those employed in other states or wages paid by federal employers. In order to expand the employment and wage coverage in the CFS, the Department of Commerce has executed an agreement through the U.S. Department of Labor for the exchange of out of state wages through a voluntary data sharing system called the Wage Record Interchange System 2 (WRIS2). In addition, the Department of Commerce is working in collaboration with the North Carolina Attorney General's Office to execute an agreement that will allow for the integration of employment and wage information from the Federal Data Exchange System (FEDES). This will provide access to employment and wage information from the U.S. Postal Service, U.S. Department of Defense and U.S. Office of Personnel Management.

Collaboration with Stakeholders and Enhancing System Outputs

The Department of Commerce has been continuing its work on enhancing system outputs from the CFS. These efforts have focused on a variety of research, evaluation and performance initiatives utilizing the CFS including: the development of the North Carolina Tool for Online Workforce and Education Reporting NCTOWER (nctower.com), continued collaboration with the NCWorks Commission in the development of performance measures for North Carolina's workforce development system and programs, work on the development of a talent supply and demand dashboard and as a mechanism for the assessment and evaluation of program performance.

NCTOWER.com is a web-based tool for the delivery and display of program performance information. The Department of Commerce worked in collaboration with the North Carolina Community College System, the University of North Carolina General Administration and the Office of Information Technology Services on the development of the NC TOWER. This new data

delivery tool facilitates the use and delivery of information from CFS and helps in achieving the goal of enhanced system outputs.

NCTOWER.com provides a mechanism for the electronic delivery and display of performance measures for a variety of education and workforce programs. Staff completed 10 years of analysis on the post completion employment and wage outcomes for educational programs for each of the University of North Carolina's 16 campuses and for all Curriculum programs at each of the 58 colleges of the North Carolina Community College System. Available measures for each program include employment rates, average wages and median wages, employment and wage measures by industrial sector of employment as well as measures of post enrollment in public higher education in North Carolina. Information can be queried and displayed for each college/university, degree type, and academic subject area.

LEAD staff worked in collaboration with staff from UNC General Administration (UNC GA) and the North Carolina Community College System (NCCCS) to develop and refine the reporting tool and to establish the performance information. Staff from UNC GA and NCCCS provided input and feedback regarding the system design, system display, system testing, refinement and the development of the outcome measures. In addition to the work of staff from both UNC GA and NCCCS, staff from several partner agencies and stakeholders participated in system testing. This included staff from the following entities: Department of Commerce, North Carolina Department of Public Instruction (NC DPI), North Carolina Department of Health and Human Services (NC DHHS), North Carolina Department of Public Safety (NC DPS), North Carolina Office of State Budget and Management (NC OSBM), North Carolina General Assembly's Fiscal Research Division and the North Carolina General Assembly's Program Evaluation Division.

LEAD staff worked in conjunction with staff from the Office of Information Technology Services to complete system development requirements. The project was registered in the ITS' project portfolio management (PPM) application and was approved for deployment by the ITS Enterprise Project Management Office (EPMO). The nctower.com website was officially launched in July 2014.

In addition to the development of the NC TOWER, the CFS was utilized by the NCWorks Commission in the development of performance measures for North Carolina's Workforce Development System. The NCWorks Commission's Evaluation and Performance Task Force and Advisory Group is comprised of Commission members and representatives from North Carolina's workforce agencies and is charged with assisting the Commission with the development of the performance system. In collaboration with the Task Force and Advisory Group members, LEAD staff completed analyses in support of the Commission's performance measures project. This work resulted in the development of a set of state wide and program based performance measures. These measures include employment, wages, and subsequent enrollment in education and workforce development programs. The Division of Workforce Solutions delivered the first report to the North Carolina General Assembly, "Measuring the Performance of North Carolina's Workforce Development System: A First Look" in January of

2014 and a second report “Measuring the Performance of North Carolina’s Workforce Development System” which included measures for several workforce development programs was completed and delivered to the North Carolina General Assembly in January 2015.

In July 2014, North Carolina submitted an application to the National Governor’s Association (NGA) Policy Academy for Aligning the Education and Training Pipeline to the Needs of the Economy. The state received notification in August 2014 that its application was successful. This initiative is a collaboration of the Office of the Governor, the Department of Commerce, the North Carolina Community College System, the Department of Public Instruction and the NCWorks Commission. This effort will assist the state in aligning its education and workforce resources, strengthening its services to citizens and businesses, connecting talent to jobs and growing North Carolina’s economy. An integral part of this effort is the integration and use of education and workforce data to inform policy, track progress and measure success. Information from the Common Follow-up System is being utilized as an integral component in these efforts. The North Carolina Department of Commerce in collaboration with its education and workforce partners has initiated work in the development of a web-based supply and demand dashboard that will help in providing critical information regarding the state’s success in talent development.

LEAD completed an evaluation report which included the assessment of several of the programs included in the CFS. The report included an overview of each program; analyses of longitudinal employment and wage outcomes and subsequent enrollment in additional education, employment and training. Results from the analyses and recommendations from the evaluation were included in a report “The Common Follow-up System Evaluation Report 2015” that was submitted to the North Carolina General Assembly. The report included the assessment of the following programs:

THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

- **Division of Social Services**
 1. **Work First – Temporary Assistance for Needy Families (TANF)**
- **Division of Vocational Rehabilitation Services**
 2. **Rehabilitation Services**
- **Division of Services for the Blind**
 3. **Rehabilitation Services**

THE DEPARTMENT OF COMMERCE

- **Division of Workforce Solutions**
 4. **Wagner Peyser Program**
 5. **Workforce Investment Act (WIA) Title I Adult Program**
 6. **Workforce Investment Act (WIA) Title I Dislocated Worker Program**
 7. **Workforce Investment Act (WIA) Title I Youth Program**

THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

- 8. Career and Technical Education Programs**
- 9. Workforce Continuing Education Training**
- 10. Small Business Center**
- 11. Human Resources Development Program**
- 12. Basic Skills Programs**

HOW IS THE COMMON FOLLOW-UP SYSTEM OPERATED?

Each year participating entities supply biannual data files, which encompass the most current CFS year. For example, for the 2013-2014 CFS year, each entity submitted data files covering the time periods of July 1 through December 31, 2013 and January 1 through June 30, 2014. These formatted input files were created from existing administrative records and contain demographic data, program enrollment information, and completion information for individuals participating in education, employment and training programs operated by each of the entities.

The records from each entity were matched against data from:

- **all participating entities;**
- **Unemployment Insurance wage records; and**
- **Unemployment Insurance files.**

HOW ARE CFS DATA PROCESSED?

Each year CFS staff issue a request for data to each of the participating entities. The entities submit data files containing the following information:

- **agency identification (e.g., UNC, DPI, etc.);**
- **institution identification and name (e.g., the name of the Community College attended);**
- **Social Security Number, name, sex, race, date of birth, educational attainment, veteran status;**
- **program code and name (e.g., course of study number, course of study name);**
- **program entry and program exit date;**
- **termination status (e.g., completer, non-completer);**
- **enrollment status (e.g., continuing enrollment, new enrollment);**
- **special status (e.g., transferred, dropped out, deceased, etc.);**
- **classification of instructional program code;**
- **WIA participant indicator; and**
- **provider type.**

After the files have been submitted, the data are put through a series of edit checks to ensure compatibility and accuracy. After the edit checking process is completed, the data are loaded to the system data files. Following the completion of the data loading process, CFS staff analyzes

the data, and the resulting analyses are utilized in the development and production of reports and files.

The confidential nature of information contained in the CFS mandates the use of strict safeguards in the collection, storage and use of the data. CFS data are stored on the Information Technology Systems (ITS) mainframe and Commerce's Local Area Network (LAN). Mainframe access is subject to Resource Access Control Facility (RACF) security protocols and LAN security requires individual user data access profiles, as well as individual user ID's and passwords. At the time of system enrollment and with every data release, participants are informed of the confidential nature of the data and the legal restrictions on its use.

IS THE CFS COST-EFFECTIVE?

The CFS is an efficient and cost-effective method for collecting follow-up information for education, employment and training program participants. The extensive use of administrative records and computerized matching systems allows the costs to be held below that of systems that rely upon phone or mail surveys to collect similar data. The cost-effectiveness of the CFS can also be evaluated in terms of the benefit that the data provide to the participating entities. The system provides for the generation of employment and wage data without the use of telephone or mail surveys. Benefits include time saved not having to produce mail and analyze responses from program participants, making the return on investment invaluable.

Several of the participating agencies have utilized information available through CFS to help meet state and federal performance, policy and evaluation initiatives. The North Carolina Community College System has utilized information to help in meeting federal performance requirements for the U.S. Department of Education's National Reporting System for Adult Education programs and the Perkins Career and Technical Education core indicators. In addition, the NCCCS has been utilizing information from CFS in the development of performance measures for North Carolina's 58 Community Colleges. Data from CFS will be utilized as part of performance system and help to establish employment and wage goals for each college.

The University of North Carolina is utilizing the information from CFS to help complete internal analyses, help in strategic planning and to provide relevant information to the UNC Board of Governors (UNC BOG). The information is being utilized by the UNC BOG to develop an improved process for program approval and termination. Additionally the UNC BOG has utilized available employment and wage information in helping to guide policy recommendations regarding tuition standards. UNC recently released a web based electronic dashboard that contains a variety of enrollment and graduation statistics along with a link to the NC TOWER. Information from the NC TOWER provides a critical resource in individual decision-making, career planning, and programmatic policy review by providing a variety of longitudinal employment and wage outcomes.

The Department of Public Safety has utilized information from CFS to help in the several evaluations of programs offered to individuals in prison. These have included evaluations of the

Prisoner Education program, B.R.I.D.G.E, Correction Enterprises and Incarcerated Individuals program. This information has helped the agency's planning efforts towards interventions that demonstrate positive outcomes for participants. In addition, it has also facilitated the agency's ability to fulfill federal grant reporting requirements.

The Department of Commerce has utilized the information to assist in meeting several U.S. Department of Labor reporting requirements including those required under the Workforce Investment Act and the Trade Act programs. CFS information was utilized in the development of required performance information for eligible training providers as required under the WIA.

In addition, several of the agencies have utilized the information to respond to legislative inquiries regarding education, workforce development, and economic development initiatives. These inquiries have included requests for information regarding educational and workforce development programmatic outcomes as well as other executive, administrative and legislative inquiries.

WHAT ARE THE STRENGTHS AND LIMITATIONS OF CFS DATA?

The scope of the CFS is extensive in terms of the number of entities and individuals as well as the breadth of program and service coverage. Review of similar systems in other states reveals that North Carolina's CFS offers the most comprehensive coverage in terms of tracking duration and breadth of information. Many states and governmental entities with similar missions and mandates view the CFS as a model for delivering follow-up information. Many of these entities have sought the advice of agency staff on implementing similar systems in their jurisdictions. The CFS is an efficient and cost-effective tool for long-term follow-up. This is due to the reliance on automated matching of administrative records. However, since much of the data utilized in the CFS were originally gathered for different purposes, the resultant output possesses both inherent strengths and limitations. Several of the most significant are described below:

Wage information includes information on individuals:

- **working in jobs covered under North Carolina Unemployment Insurance;**

Available employment-related data includes:

- **the employment status of the individual;**
- **the size of the employing firm; and**
- **the North American Industry Classification System (NAICS) code of the firm.**

Wage information reflects total quarterly earnings; hourly or weekly wages are not available.

Wage information is not available for individuals who:

- **work outside of North Carolina, or**
- **are employed in North Carolina, but not covered by unemployment insurance (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers).**

Employment related data which cannot be determined includes:

- the entry-on-duty date of employment for the individual;
- the employment type (i.e., permanent, temporary, part- or full-time);
- whether the person worked at all during the quarter;
- the number of hours worked for the quarter; and
- the person's occupation.

PARTICIPATION SUMMARY ACROSS THE YEARS

Since its inception, the system has experienced tremendous growth. CFS staff and the participating entities have made concerted efforts to incorporate information regarding additional programs and individuals from existing entities and to solicit the participation of other entities. The analyses that are included in the following sections reflect data supplied by the participating entities for services that were provided through June 2014.

The CFS has expanded dramatically since its inception in the early 1990's. Table 1 provides a summary of the number of individuals contained in the system from 2004 through 2014. The system currently contains information on over 9 million individuals. Since the system's inception, the number of individuals has dramatically increased.

| TABLE 1. INFORMATION REGARDING THE NUMBER OF INDIVIDUALS CONTAINED IN THE COMMON FOLLOW-UP SYSTEM (CFS) 2004 – 2005 PROGRAM YEAR THROUGH THE 2013 – 2014 PROGRAM YEAR | |
|--|--------------------|
| Year | Individuals |
| 2005 | 6,391,214 |
| 2006 | 6,736,374 |
| 2007 | 7,079,373 |
| 2008 | 7,382,619 |
| 2009 | 7,740,594 |
| 2010 | 8,049,441 |
| 2011 | 8,328,398 |
| 2012 | 8,592,028 |
| 2013 | 8,830,118 |
| 2014 | 9,044,703 |

In November of 2011, the Employment Security Commission (ESC) merged with the Department of Commerce. This included the merger of the former Employment Services Division from ESC with the Division of Workforce Development (DWD) from the Department of Commerce. The staff, resources and functions of the two divisions resulted in the creation of the Division of Workforce Solutions (DWS). This merger initiated the integration of the information systems previously operated by the separate divisions under DWS. In addition, in January of 2014, the Department of Labor's Apprenticeship program was transferred to the Division of Workforce Solutions. Information and analyses in the following sections reflect the combined organizational structure of DWS. Information previously reported separately under the Department of Labor, DWD, ESC and the JobLink system are now reported under DWS.

During the 2013-2014 CFS Year, the following entities provided data to the system:

- **The North Carolina Department of Public Safety's**
 - **Division of Adult Correction (DAC);**
- **The North Carolina Department of Public Instruction (DPI);**
- **The North Carolina Department of Commerce's**
 - **Division of Workforce Solutions (DWS);**
- **The North Carolina Department of Health and Human Services'**
 - **Division of Services for the Blind (DSB);**
 - **Division of Social Services (DSS);**
 - **Division of Vocational Rehabilitation Services (DVR);**
- **The North Carolina Community College System (NCCCS); and**
- **The University of North Carolina (UNC)**

Analyses of historical data contained in CFS provide an understanding of the scope of the system. Table 2 presents the cumulative number of records and individuals processed by the CFS as well as the number of entities participating in CFS. During the 2013-2014 CFS year the number of unique individuals included in the system increased to 9,044,703.

| TABLE 2. NUMBER AND PERCENTAGE OF RECORDS AND INDIVIDUALS PROCESSED SINCE INCEPTION BY PARTICIPATING AGENCY AND SYSTEM WIDE | | | | |
|--|--------------------------|------------------------------------|------------------------------|--|
| AGENCY | Number of Records | Percentage of Total Records | Number of Individuals | Percentage of Total Individuals |
| DIVISION OF ADULT CORRECTION | 14,278,341 | 6.7% | 870,496 | 9.6% |
| DEPARTMENT OF PUBLIC INSTRUCTION | 6,796,328 | 3.2% | 2,235,677 | 24.7% |
| DIVISION OF SERVICES FOR THE BLIND | 99,056 | <0.1% | 18,262 | 0.2% |
| DIVISION OF SOCIAL SERVICES | 7,452,366 | 3.5% | 1,399,251 | 15.5% |
| DIVISION OF VOCATIONAL REHABILITATION SERVICES | 3,219,537 | 1.5% | 373,572 | 4.1% |
| DIVISION OF WORKFORCE SOLUTIONS | 148,732,559 | 69.6% | 5,012,895 | 55.4% |
| NORTH CAROLINA COMMUNITY COLLEGE SYSTEM | 24,498,215 | 11.5% | 5,386,053 | 59.5% |
| UNIVERSITY OF NORTH CAROLINA | 8,657,685 | 4.1% | 1,365,908 | 15.1% |
| INDEPENDENT COLLEGES ¹ | 13,106 | <0.1% | 8,842 | <0.1% |
| TOTAL | 213,747,193 | 100.0% | 9,044,703 | 100.0% |

¹ During the 1992-1993 CFS Year, four Independent Colleges participated in the CFS.

ANALYSES OF INDIVIDUALS SERVED BY EACH AGENCY OVER TIME

The numbers of individuals served by each agency and across all agencies over the past 10 program years are displayed in Table 3 and Table 4. The number of individuals was obtained by performing a unique count of the Social Security Numbers (SSNs) submitted by each agency. The unique number of individuals across all agencies was obtained by performing a total unique count of the SSNs contained in the system across all agencies by CFS year. Analyses of data by CFS year indicate that the number of individuals who received services through the participating entities ranged from 2.2 million in CFS Year 2004-2005 to almost 2.6 million in CFS Year 2009-2010 and 1.8 million in CFS Year 2013-2014.

Over the 10 Year period July 1, 2004 through June 30, 2014 over 6.2 million individuals received services through the participating agencies. This includes almost 3.3 million individuals who received a variety of workforce services through the Division of Workforce Solutions and over 3.3 million who participated in education and training programs through the North Carolina Community College System. While DWS and NCCCS provide services to large numbers of individuals, North Carolina's public school system provides the building blocks upon which other education, employment and training services rely. Over the 10-year time period North Carolina's public high schools provided information on 1.3 million individuals. UNC is the state's publicly supported university system. Over the 10-year time period, UNC provided educational programs to more than 780,000 individuals.

Several agencies provide services to very specific sub-populations. The DSS provided employment and supportive services to 1,103,635 Work First and Food Stamp Employment Program participants, while DAC provided services to 613,578 offenders who were in prison, on probation or parole. The DVR provided rehabilitation services to 203,684 individuals with physical and mental disabilities, and DSB provided vocational rehabilitation services to more than 11,000 blind, visually-impaired and multi-handicapped individuals.

It is important to keep in mind that some entities are authorized to provide services to large segments of the population (e.g., DWS and NCCCS), while others are authorized to provide services to very specific sub-populations based on stringent eligibility criteria including occupational goal, income, disability type, severity of disability and educational criteria (e.g., DSS, DVR, DSB and UNC).

INTERRELATIONSHIPS AMONG AGENCIES IN THE PROVISION OF SERVICES

A significant feature of the CFS is its longitudinal structure, which fosters the examination of the interrelationships among entities in the overall provision of services and an understanding of the paths individuals follow while utilizing these services. Several initiatives at both the State and National level have called for the coordination, collaboration and integration of services to individuals across education, employment and training programs. These initiatives have included the NCWorks Career Center System, Workforce Investment Act (WIA), North Carolina's welfare reform legislation, as well as attention from the education, employment and training agencies themselves.

In order to provide an understanding of the interrelationships among entities in the provision of services data were analyzed both within and across the last 10 program years (July 1, 2004 through June 30, 2014). Data from the participating agencies were utilized in these analyses. These agencies vary in terms of their organizational structure. That is, some of the agencies encompass several divisions within a given agency, others encompass a single division within a given agency and others encompass the combined work of staff across multiple agencies and programs. The data provided by each of these agencies includes information regarding one to several programs and/or services.

Analyses focused on determining the unique number of individuals who received services through each agency, the unique number of individuals who received services across agencies, the number of agencies from which individuals received services and the number of individuals found in common among the agencies. This analysis is presented in Tables 5 and 6.

| TABLE 3: UNIQUE NUMBER OF INDIVIDUALS BY AGENCY AND SYSTEM WIDE ACROSS THE 10-YEAR TIME PERIOD JULY 1, 2004 THROUGH JUNE 30, 2014 | |
|--|---|
| AGENCY | Number of Individuals Across the 10 Year Time Period |
| DIVISION OF ADULT CORRECTION | 613,578 |
| DEPARTMENT OF PUBLIC INSTRUCTION | 1,256,662 |
| DIVISION OF SERVICES FOR THE BLIND | 11,041 |
| DIVISION OF SOCIAL SERVICES | 1,103,635 |
| DIVISION OF VOCATIONAL REHABILITATION SERVICES | 203,684 |
| DIVISION OF WORKFORCE SOLUTIONS | 3,289,290 |
| NORTH CAROLINA COMMUNITY COLLEGE SYSTEM | 3,327,950 |
| UNIVERSITY OF NORTH CAROLINA | 781,202 |
| TOTAL | 6,235,320 |

TABLE 4. NUMBER OF INDIVIDUALS BY PARTICIPATING AGENCY CFS YEARS: 2004 – 2005 THROUGH 2013 – 2014

| AGENCY | CFS YEAR | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 |
| DIVISION OF ADULT CORRECTION | 207,701 | 214,791 | 220,454 | 226,368 | 224,311 | 236,242 | 230,126 | 216,063 | 183,614 | 191,292 |
| DEPARTMENT OF PUBLIC INSTRUCTION | 350,848 | 364,797 | 406,522 | 332,133 | 365,196 | 346,328 | 309,093 | 290,835 | 240,739 | 200,104 |
| DIVISION OF SERVICES FOR THE BLIND | 3,044 | 3,151 | 3,118 | 3,073 | 3,207 | 3,441 | 3,479 | 3,581 | 3,737 | 3,656 |
| DIVISION OF SOCIAL SERVICES | 168,935 | 150,541 | 176,230 | 194,708 | 242,369 | 235,823 | 268,394 | 309,691 | 345,523 | 290,035 |
| DIVISION OF VOCATIONAL REHABILITATION SERVICES | 57,382 | 65,164 | 50,077 | 48,282 | 52,598 | 57,473 | 60,421 | 61,207 | 60,105 | 57,854 |
| DIVISION OF WORKFORCE SOLUTIONS | 907,788 | 962,214 | 875,661 | 911,089 | 1,080,310 | 1,175,807 | 1,044,628 | 1,013,587 | 986,408 | 422,222 |
| NORTH CAROLINA COMMUNITY COLLEGE SYSTEM | 856,905 | 861,880 | 852,384 | 856,629 | 881,906 | 868,563 | 858,305 | 835,416 | 819,156 | 776,587 |
| UNIVERSITY OF NORTH CAROLINA | 217,509 | 220,331 | 225,477 | 230,759 | 235,431 | 239,812 | 240,236 | 238,348 | 236,332 | 233,399 |
| UNIQUE INDIVIDUALS ACROSS ALL AGENCIES | 2,206,530 | 2,278,625 | 2,258,395 | 2,244,749 | 2,466,956 | 2,550,160 | 2,437,054 | 2,398,400 | 2,325,350 | 1,802,056 |

TABLE 5. NUMBER OF INDIVIDUALS SERVED BY EACH AGENCY AND THE NUMBER AND PERCENT OF INDIVIDUALS IN COMMON AMONG AGENCIES CFS YEAR: 2013 – 2014

| AGENCY | TOTAL | DAC | DPI | DSB | DSS | DVR | DWS | NCCCS | UNC |
|--|---------|---------|---------|--------|---------|--------|---------|---------|---------|
| DIVISION OF ADULT CORRECTION | 191,292 | 191,292 | 987 | 82 | 27,064 | 4,443 | 25,921 | 38,133 | 924 |
| | | 100.0% | 0.5% | 0.0% | 14.1% | 2.3% | 13.6% | 19.9% | 0.5% |
| DEPARTMENT OF PUBLIC INSTRUCTION | 200,104 | 987 | 200,104 | 48 | 3,680 | 3,277 | 3,432 | 21,690 | 522 |
| | | 0.5% | 100.0% | 0.0% | 1.8% | 1.6% | 1.7% | 10.8% | 0.3% |
| DIVISION OF SERVICES FOR THE BLIND | 3,656 | 82 | 48 | 3,656 | 277 | 89 | 367 | 401 | 122 |
| | | 2.2% | 1.3% | 100.0% | 7.6% | 2.4% | 10.0% | 11.0% | 3.3% |
| DIVISION OF SOCIAL SERVICES | 290,035 | 27,064 | 3,680 | 277 | 290,035 | 7,619 | 69,218 | 52,041 | 3,802 |
| | | 9.3% | 1.3% | 0.1% | 100.0% | 2.6% | 23.9% | 17.9% | 1.3% |
| DIVISION OF VOCATIONAL REHABILITATION SERVICES | 57,854 | 4,443 | 3,277 | 89 | 7,619 | 57,854 | 11,116 | 12,338 | 831 |
| | | 7.7% | 5.7% | 0.2% | 13.2% | 100.0% | 19.2% | 21.3% | 1.4% |
| DIVISION OF WORKFORCE SOLUTIONS | 422,222 | 25,921 | 3,432 | 367 | 69,218 | 11,116 | 422,222 | 109,143 | 6,731 |
| | | 6.1% | 0.8% | 0.1% | 16.4% | 2.6% | 100.0% | 25.8% | 1.6% |
| NORTH CAROLINA COMMUNITY COLLEGE SYSTEM | 776,587 | 38,133 | 21,690 | 401 | 52,041 | 12,338 | 109,143 | 776,587 | 25,440 |
| | | 4.9% | 2.8% | 0.1% | 6.7% | 1.6% | 14.1% | 100.0% | 3.3% |
| UNIVERSITY OF NORTH CAROLINA | 233,399 | 924 | 522 | 122 | 3,802 | 831 | 6,731 | 25,440 | 233,399 |
| | | 0.4% | 0.2% | 0.1% | 1.6% | 0.4% | 2.9% | 10.9% | 100.0% |

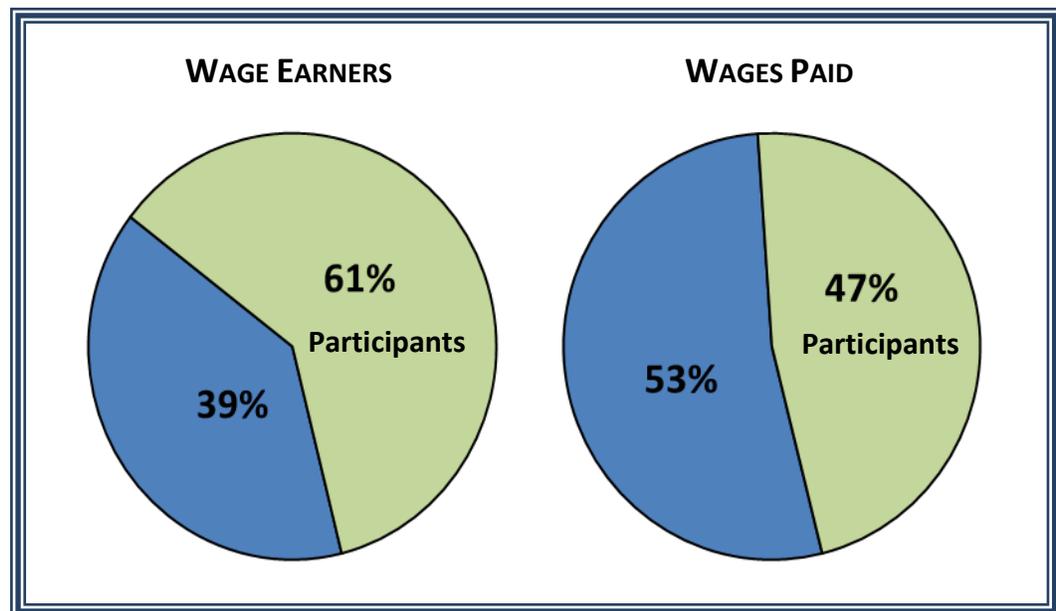
| TABLE 6. NUMBER OF INDIVIDUALS SERVED BY EACH AGENCY AND THE NUMBER AND PERCENT OF INDIVIDUALS IN COMMON AMONG AGENCIES CFS YEARS: 2004 – 2005 THROUGH 2013 – 2014 | | | | | | | | | |
|---|--------------|------------|------------|------------|------------|------------|------------|--------------|------------|
| AGENCY | TOTAL | DAC | DPI | DSB | DSS | DVR | DWS | NCCCS | UNC |
| DIVISION OF ADULT CORRECTION | 613,578 | 613,578 | 81,552 | 999 | 245,291 | 45,458 | 380,028 | 321,160 | 18,157 |
| | | 100.0% | 13.3% | 0.2% | 40.0% | 7.4% | 61.9% | 52.3% | 3.0% |
| DEPARTMENT OF PUBLIC INSTRUCTION | 1,256,662 | 81,552 | 1,256,662 | 675 | 182,745 | 43,150 | 335,453 | 587,246 | 240,864 |
| | | 6.5% | 100.0% | 0.1% | 14.5% | 3.4% | 26.7% | 46.7% | 19.2% |
| DIVISION OF SERVICES FOR THE BLIND | 11,041 | 999 | 675 | 11,041 | 2,674 | 798 | 6,187 | 3,969 | 519 |
| | | 9.0% | 6.1% | 100.0% | 24.2% | 7.2% | 56.0% | 35.9% | 4.7% |
| DIVISION OF SOCIAL SERVICES | 1,103,635 | 245,291 | 182,745 | 2,674 | 1,103,635 | 77,637 | 831,291 | 583,578 | 41,253 |
| | | 22.2% | 16.6% | 0.2% | 100.0% | 7.0% | 75.3% | 52.9% | 3.7% |
| DIVISION OF VOCATIONAL REHABILITATION SERVICES | 203,684 | 45,458 | 43,150 | 798 | 77,637 | 203,684 | 131,672 | 111,368 | 8,114 |
| | | 22.3% | 21.2% | 0.4% | 38.1% | 100.0% | 64.6% | 54.7% | 4.0% |
| DIVISION OF WORKFORCE SOLUTIONS | 3,289,290 | 380,028 | 335,453 | 6,187 | 831,291 | 131,672 | 3,289,290 | 1,554,514 | 196,497 |
| | | 11.6% | 10.2% | 0.2% | 25.3% | 4.0% | 100.0% | 47.3% | 6.0% |
| NORTH CAROLINA COMMUNITY COLLEGE SYSTEM | 3,327,950 | 321,160 | 587,246 | 3,969 | 583,578 | 111,368 | 1,554,514 | 3,327,950 | 340,174 |
| | | 9.7% | 17.6% | 0.1% | 17.5% | 3.3% | 46.7% | 100.0% | 10.2% |
| UNIVERSITY OF NORTH CAROLINA | 781,202 | 18,157 | 240,864 | 519 | 41,253 | 8,114 | 196,497 | 340,174 | 781,202 |
| | | 2.3% | 30.8% | 0.1% | 5.3% | 1.0% | 25.2% | 43.5% | 100.0% |

RELATIONSHIP OF INDIVIDUALS SERVED TO THE NORTH CAROLINA ECONOMY

In addition to providing valuable information regarding the number of participants served by each agency, information from CFS may also be utilized to provide an understanding of the relationship between participants of the state’s education, employment and training programs and the overall economy.

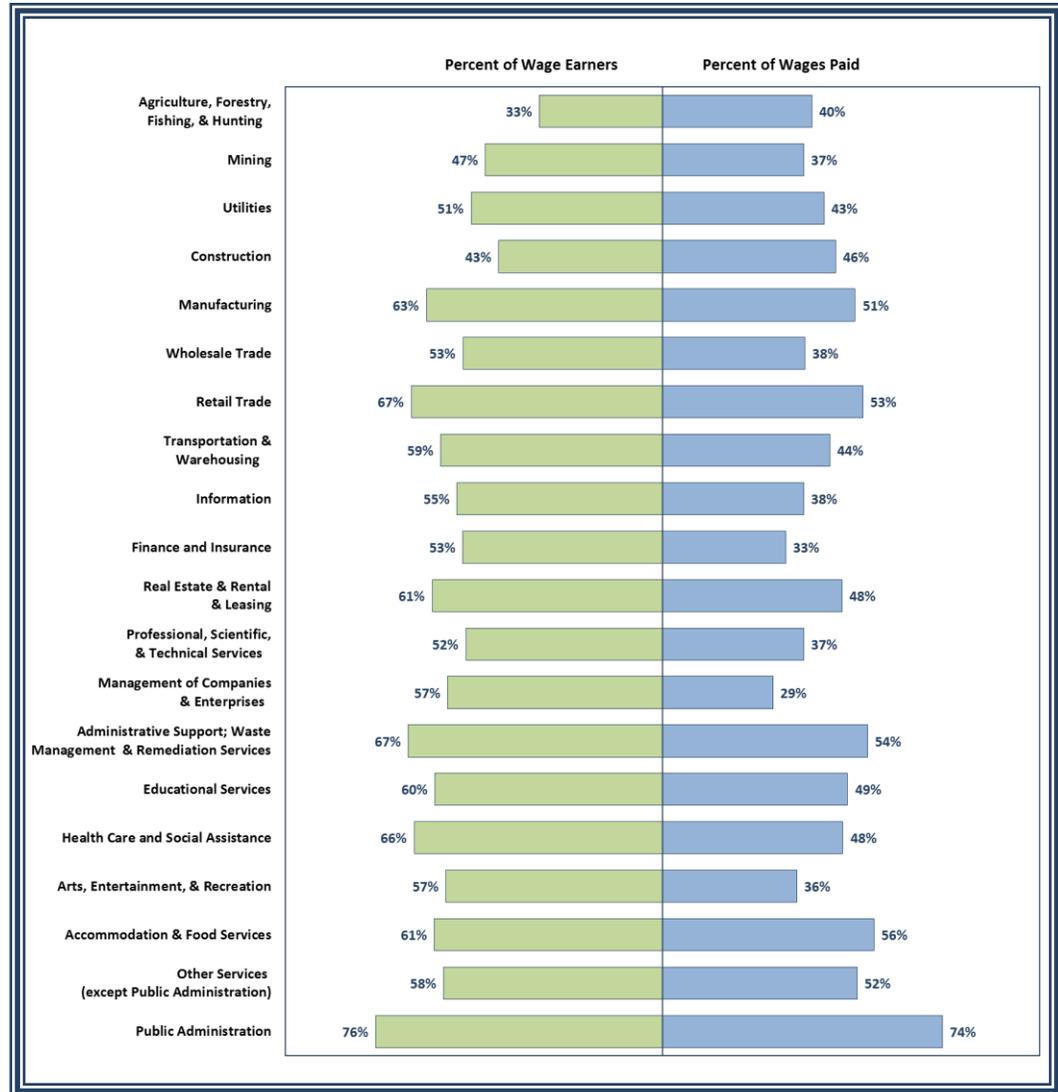
Over the ten-year period July 1, 2004 to June 30, 2014, over 6.2 million unique individuals participated in educational, employment and training programs through the participating agencies. During the 2013-2014 program year (2013 Q3, 2013 Q4, 2014 Q1 and 2014 Q2), there were almost 4.9 million unique individuals with wages reported to the Division of Employment Security. These 4.9 million individuals earned \$175.5 Billion in total wages. Analyses of the information supplied by the participating agencies to CFS demonstrate that of the 4.9 million wage earners, 2.9 million (or 61%) participated in education, employment and training programs through one of the participating agencies during the 10-year period (July 1, 2004 – June 30, 2014). These individuals earned \$82.8 Billion in total wages or 47% of all wages paid in the year.

FIGURE 1. RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004– JUNE 30, 2014 TO ALL WAGE EARNERS AND WAGES PAID DURING THE 2013-2014 PROGRAM YEAR



These results indicate that more than 6 out every 10 individuals employed in jobs covered by the State’s Unemployment Insurance Laws during the 2013-2014 program year received services through one of the participating agencies in last 10 years. In addition, almost half of all wages paid in the state were paid to individuals who received services through one of the participating agencies in last 10 years.

FIGURE 2. RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGE EARNERS AND TO ALL WAGES PAID DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR



Further analyses by industrial sector demonstrate that at least a third of all individuals employed in each of the state’s major industrial sectors participated in programs and services through one of the participating agencies in the last 10 years. In addition, approximately 6 out of every 10 individuals employed in the following major industrial sectors: Manufacturing; Retail Trade; Transportation and Warehousing; Real Estate and Rental and Leasing; Administrative and Support and Waste Management and Remediation Services; Educational Services; Health Care and Social Assistance; Accommodation and Food Services, Other Services and Public Administration have been participants of these agencies in the last 10 years.

Analyses of the wages paid in each industry revealed that more than a quarter of the wages paid in each major industrial sector were paid to individuals who had participated in programs and services through one of the participating agencies in the last 10 years. In addition, at least 40% of the wages paid in thirteen of the major industrial sectors had been paid to participants. These results clearly demonstrate the connection between education, employment and training programs and the state’s economy and the need for continued coordination and enhancement of North Carolina’s education, workforce development and economic development.

FIGURE 3. RATIO OF PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGE EARNERS DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR

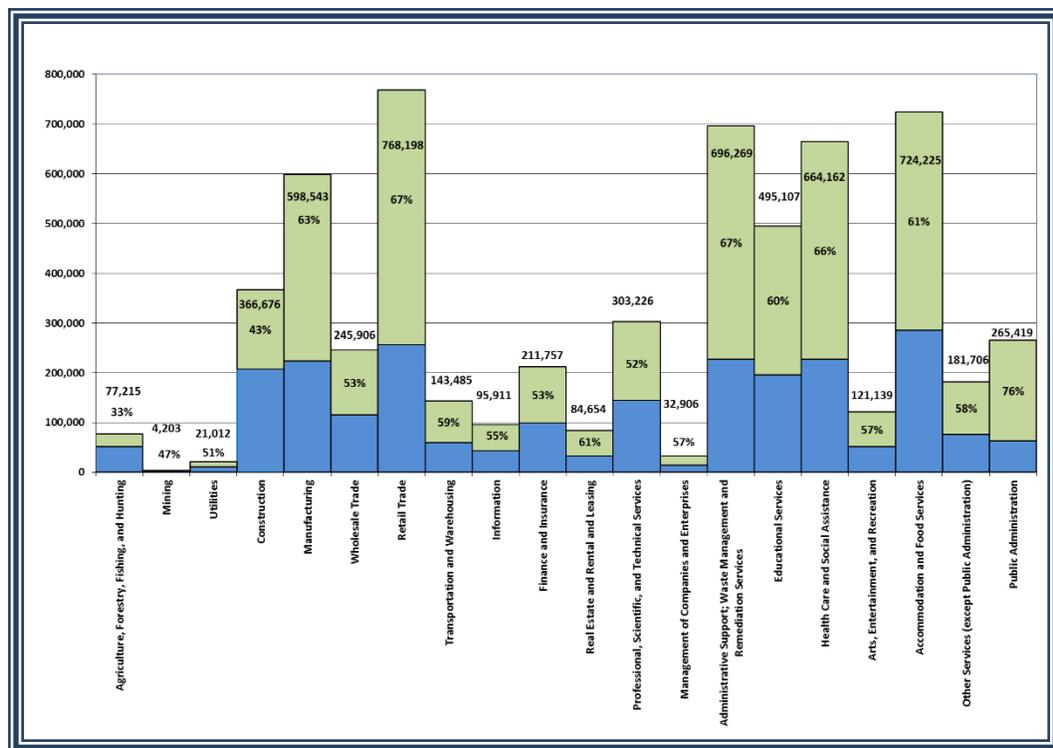
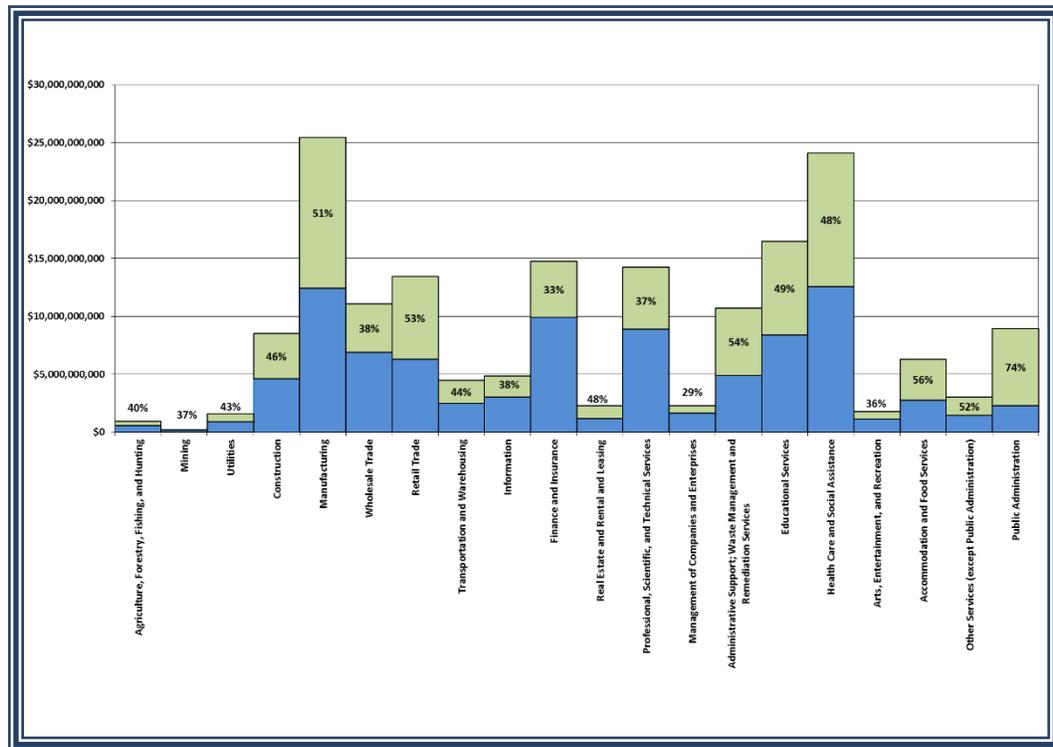


FIGURE 4. RATIO OF WAGES PAID TO PARTICIPANTS OF NORTH CAROLINA’S EDUCATION, EMPLOYMENT AND TRAINING PROGRAMS JULY 1, 2004 – JUNE 30, 2014 TO ALL WAGES PAID DURING THE 2013-2014 PROGRAM YEAR BY INDUSTRIAL SECTOR



CONCLUSION

The *Common Follow-up System (CFS)* is an effective mechanism for providing information regarding the agencies, programs and participants that comprise North Carolina’s education, employment and training system. The CFS provides a valuable resource for understanding the educational and employment outcomes of individuals who participate in services as well as an understanding of the paths individuals follow while utilizing these services.

Over the last program year extensive efforts have been undertaken to improve and enhance the CFS. This has included collaboration with the Government Data Analytics Center to move the information and technology resources into the GDAC environment as well as the continued enhancement by the Department of Commerce, participating agencies and system stakeholders to improve the system processing, data storage, system operations and system outputs.

The scope of the CFS is extensive in terms of the number of entities and individuals processed as well as the breadth of program and service coverage. Analyses of data

from the CFS indicate that *over the 10-year time period, July 1, 2004 through June 30, 2014 over 6.2 million individuals received services through the participating agencies.*

Over the 10-year time period the North Carolina Community College System provided services to 3.3 million individuals, while the Division of Workforce Solutions provided services to 3.3 million individuals. These numbers indicate that *over the 10-year time period approximately 1 out of every 3 North Carolinians were enrolled in education and training programs through the North Carolina Community College System and approximately 1 out of every 3 North Carolinians received employment and training services through the North Carolina Department of Commerce's Division of Workforce Solutions.*

Further interpretation of the data presented in this report indicates that there is substantial coordination and collaboration among agencies in the overall provision of education, employment and training services. *Over the 10-year time period, more than 1.5 million North Carolinians received both education and training services through the North Carolina Community College System and employment and training services through the Division of Workforce Solutions.* In addition, these two agencies provided services to large percentages of individuals from each of the other participating agencies.

While NCCCS and DWS form the cornerstone of North Carolina's education, employment and training system, each of the participating entities plays a fundamental role in the overall mission of preparing, developing and promoting a highly skilled workforce, improving the quality of life for North Carolinians and developing and sustaining a world class economy for the state and its communities.

There is a significant relationship between the individuals receiving services through the state's education and workforce entities and the North Carolina economy. Almost two thirds of all wage earners in the state during the 2013-2014 program year received services through the participating agencies during the previous 10 program years. In addition, these individuals earned more than 47% of all wages paid during the time period. These findings help demonstrate the integral relationship that exists between the services provided by the state's education and workforce partners and the state's economy and the continued need for coordination among education, workforce development and economic development efforts.



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