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Training

In the summer of 2016, the ARC hosted training for DBAs in St. Paul. Following that training, we made these training materials available on the ARC website.

We have recently re-vamped the training material – removing outdated information, and adding new information.

The new WID Resource and Training Guide is a self-paced slide show that starts with the basics - such as what is the WID, and how it is used, and then moves into more technical information – including load order, triggers, and data visualization. This training guide can be found on the ARC website in the [Learning Center/Training](#).

We welcome your feedback, and if you find that you have questions that are not addressed in this resource guide, please [let us know](#).

Crosswalk Taxonomy

A crosswalk is a way of relating data of one type to another. The WID structure contains a number of crosswalk tables. Older versions of the WID had single-use tables such as oesxcens and matxsoc, but these have been largely replaced by the combined crosswalk tables indxind and occxocc and most are not core tables, so states may not have populated them. There are exceptions – licxocc, which crosswalks occupational licenses to occupations, and the Matrix codes from projections have their own crosswalk to standard coding systems. These are also the only core crosswalk tables.

You might need a crosswalk if you display OES data alongside CES data, to relate NAICS codes to CES codes. You might need one if you are using an historical series – where codes have changed and you need to crosswalk older codes to newer ones to have comparable series. Chances are, even if there is no crosswalk populated in the WID, analysts in the LMI offices use them for other purposes.

What kind of crosswalks are there?

Crosswalk is a general term that simply refers to a table that relates other tables to one another. Within that broad sense, there are several different kinds of crosswalks.

- Different versions of the same coding system, e.g. SOC 2000-SOC 2010
- Different systems of the same type, e.g. SOC-ONET
- Different types, e.g. SOC-CIP
- Geographic, e.g. SUBGEOG table

Where do they come from?

When a new version of SOC or NAICS is put out, the differences are detailed in the supporting documentation and can that can be used as a crosswalk. The Census Bureau puts out similar documentation for coding and [geographies](#). With crosswalks of definitions there tends to be a single source of the file.

The ARC also stores and shares a number of [crosswalks](#). Sometimes they're a little hard to find so if you're looking for something specific let us know.

CareerOneStop's Skills Matcher
Helping job seekers identify career options

Career explorers can map their current skills to a range of career possibilities by answering 40 quick questions using CareerOneStop's new Skills Matcher. The Skills Matcher is online and free of charge at www.careeronestop.org/SkillsMatcher for anybody seeking to start, change, or advance on their career path.

Web users rate their skill levels in 40 key areas and get immediate results: a list of careers that are good matches for their skill sets. The career list includes details to help people decide at a glance if a career might be a good fit for them by comparing average pay, typical education needed, and the outlook for job opportunities. For any careers of interest, users can continue researching by viewing a full career profile, including links to local training programs and job postings. They can also create a downloadable list of skills which can be used in resumes and other job search materials.

Skill	Beginner	Basic	Skilled	Advanced	Expert
1. Administration and Management How much do you know about business planning and leadership?	Complete a timesheet	●	Monitor project progress to complete it on time		Manage a $10m company
2. Biology How much do you know about plant, animal and cell functions?	● Care for a pet		Investigate effects of pollution on plants		Identify a new virus
3. Body Coordination How well can you coordinate moving your arms, legs, and torso together?	Get in and out of a truck	●	Swim one pool length, or play a ball sport		Perform ballet choreography

Your Match	Career	Annual Wages	Education	Outlook
1	Directors, Religious Activities and Education	$38,610	Bachelor's degree	Average
2	Librarians	$57,680	Master's degree	Average
3	Training and Development Specialists	$59,020	Bachelor's degree	Bright

The Skills Matcher is based on O*NET knowledge, skill, and ability (KSA) data. It uses a statistical formula to compare users' ratings to ratings associated with more than 900 O*NET occupations. The career details are based on authoritative occupation and labor market information from the U.S. Department of Labor's Bureau of Labor Statistics (BLS) and O*NET.

The Skills Matcher is a valuable addition to CareerOneStop's comprehensive suite of career, training, and job search web products. Sponsored by the U.S. Department of Labor's Employment and Training Administration, CareerOneStop provides free employment and career resources to job seekers, students, employers, and workforce professionals throughout the United States. CareerOneStop resources are available in English or Spanish and can be used by individuals alone or with workforce professionals using desktop computers, tablets, and smartphones.

Please contact CareerOneStop with your feedback or questions.

How to Use & Where to Find: ACS Data – Populatn & Demog

Many states are moving toward dashboard-type displays of labor market information, where several metrics of interest to their audience can be presented alongside one another. Take the example of a community profile – QCEW employment, industry mix, and LAUS unemployment might all be relevant to people interested in everything there is to know about a county, but other information like typical income, population, or demographic makeup may also be important to the users. All of that and many more variables can be obtained from the Census Bureau and stored in the WID for web display or for use in documents and reports.

Why store Census data in the WID?

States may already have a process in place for obtaining and sharing Census data, but there are a number of advantages to putting it in the central database:

- Efficiency: Because it's easy to go out to the FactFinder website and pull down any file you're looking for, different people in the same office may be getting, formatting, and storing the same files. This takes staff time and it takes storage space.
- Consistency: Sometimes there are subtle differences between Census tables. If different tables are used from year to year or between users, your office may be putting out different data described in the same way.
- Area Comparability: Although BLS programs produce data for areas defined by the Census, they use different codes to describe them. If Census codes are mapped to WID codes to import data then that complex and sometimes error-prone step is eliminated.

In short, deciding what Census data is needed and setting a process to update it once a year when new data comes out saves time and helps ensure a consistent and accurate message from the office.

How do you store Census data in the WID?

There is so much Census data and so many options for downloading it that starting the process of integrating it with the WID can seem overwhelming. Fortunately, the WID structure already accommodates Census data of some types: there are three tables in the WID that house Census data and for which the ARC provides content:

Populatn: This table contains population data. It allows for multiple data sources but the linked download file contains only Census data. If desired, BEA population can be obtained from the BEA2526.txt file in the state folder, which is in the income table format. It contains states and counties.

Income: This table is similar to populatn in that it allows for both BEA and Census values. It also allows for types of income measures. It's available for states and counties in individual state folders. CenInc2526.txt is from the Census Bureau, Bea2526.txt is from the BEA.

Demographics: This table contains population broken out by age, race, and ethnicity, in a variety of brackets. There are a number of geography types for all states. You can also get the 2015 data.

These files are already in WID-format and can be loaded directly into the database. Populatn and Demographics both contain data for all states, and demographics contains some smaller geography data, which may mean that you need to remove data you don't want or add areas and areatypes to other tables or the import will violate foreign keys.

Crosswalk Taxonomy

How do you pick the right one?

When comparing between two systems there may not be any "official" crosswalk. Sometimes you'll find that different organizations may put out different crosswalks. A lot of this has to do with the different purposes they're designed for. A particularly notable example is SOC-CIP. CIP is a structure that identifies courses of study and degrees, while SOC is an occupational coding structure. While the two are related and some occupations require a particular educational qualification, the relationship between education and work is not set in stone. If the goal is to identify the pool of qualified candidates for occupations, then looking at job listings and identifying what kinds of degrees employers ask for may be the best way to crosswalk the two coding structures. However, if the goal is to know what kind of return on investment students get for degrees, the better source for a crosswalk might be to look at the actual qualifications of people in their current jobs. The results of each method have limitations and advantages, but "best" is dependent on the end use.

Another factor to consider when evaluating a crosswalk is how it's designed. A match can be broadly defined or narrowly defined. Take the LICXOCC table, for example – it crosswalks licenses and occupations. Sometimes an activity that doesn't encompass a whole occupation is licensed – perhaps Asbestos handling.

Where to Find

What if I want other data elements?

Identify them, organize by topic, and create a table patterned on the income, demographics, or populatn tables. You'll want to be sure to have both primary keys and foreign keys to ensure data integrity. Let us know – if several states want the same thing, it might make sense to have a table structure or data.

You can get the data from the Census Bureau – Factfinder is the first stop, but you may look for bulk downloads in the Download Center to avoid having to pull several different tables.

Announcements:

Military Exits data: In past we put out content for the supply table based on military exits. The process for obtaining this data has gotten much more cumbersome and for the foreseeable future we won't have access to that data. The old files will remain on the server.

Changes to the core tables: At our last meeting the ARC committee decided to remove INCOME and POPULATN from the (required) Core Tables. We will still provide the content for these tables and if you use them nothing changes, but if you don't have a need to maintain them in your WID then it should slightly reduce your workload.

Answer our survey: Along with this newsletter a link to a survey is going out. We want to make sure we're providing the content and assistance you need and the only way to know that is to get feedback. Please take the time to weigh in and let us know if there's anything we can do to better support you.

New subgeog content for WDBs: We have new experimental content available. Every state has workforce development boards used for economic development and reporting purposes. Most are comprised of counties, though sometimes cities or other areas may be their own WDB. They're also not static, though changes are infrequent. To help states keep track of these changes, we now have subgeog content (the crosswalk between geographies of different types) for WDBs nationally. You're welcome to use this content, though loading it may require additions to your areatype and geog tables. Feel free to reach out if you need assistance.

Empdb: Some people ran into foreign key problems when loading the most recent version of the EmpDb. There's a document out summarizing the changes.

NAICS 2017

The United Census Bureau introduced the 2017 North American Industry Classification System (NAICS) structure this year, as is done every five years. The structure used by several countries, states and counties provides a consistent standard for the collection, tabulation and analysis of the economy. NAICS allows for one to one comparison of industry information. The NAICS classification provides a hierarchy of broad classifications (2-digit) to more specific classification at the six-digit level.

The 2017 NAICS structure release includes 99 Subsectors (3-digit), 311 Industry Groups (4-digit), NAICS Industries (5-digit) and 1,057 Industries (6-digit). NAICS code crosswalks and other information can be found on the [Census](#) website. When looking at changes occurring in North Carolina, there are several worth noting.

A few changes occurred to existing industries in North Carolina with the release of the 2017 NAICS codes which were implemented with the Q1 2017 QCEW data. These changes will affect how historical series are pulled for certain Industries but will only be seen at the more specific four-digit level and below. Industry changes occurring in North Carolina data from 2012 to 2017 are shown in the table below.

2012 NAICS	2017 NAICS
4521 Department Stores	4522 Department Stores
4529 Other General Merchandise Stores	4523 General Merchandise Stores, including Warehouse Clubs and Supercenters
5172 Wireless Telecommunications Carriers (except Satellite)	5173 Wired and Wireless Telecommunications Carriers **(absorbed 5172 and 5171)**
5171 Wired Telecommunications Carriers	

Source: North American Industry Classification System, US Department of Census

Changes in the Information (51) Sector were a little more complicated. Two NAICS codes previously reporting under 5171(Wired Telecommunications Carriers) and 5172(Wireless Telecommunications Carriers (except Satellite)) were combined and now appear in the 2017 NAICS code, 5173(Wired and Wireless Telecommunications Carriers).

NAICS code 5173 although new in 2017, this code existed previously in the 2002 NAICS release. If you were to look at the historical data, you would see data for years 2002-2006. With the implementation of the 2007 NAICS codes, 5173 was then absorbed by 5179 Other Telecommunications, this is where data are located for years 2007-2016. With the implementation of the 2017 NAICS data moved from 5179 Telecommunications back to 5173 Wired and Wireless Telecommunications Carriers which also absorbed 5172 and 5171 from 2012 NAICS.

In the Spotlight

Christopher Robison
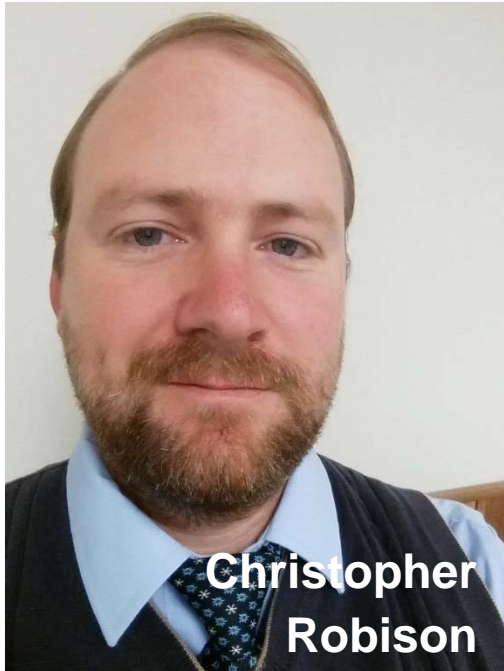
Christopher works for the Nevada Department of Employment & Training, and is a member of the Analyst Resource Center Consortium.

How long have you been involved in the world of LMI? About 6 and a half years. I started out as an analyst for the Local Area Unemployment Statistics (LAUS) Program. Since then, I have worked on most BLS programs, among other things.

What is your current job title? I am an Economist III. In my current position, I supervise the Labor Market Information unit. In this capacity, I am responsible for the LAUS and CES programs, industry projections, data publications covering all BLS programs, Workforce Information Database (WID) and LMI information websites. I also do public presentations and training.

Are you originally from Nevada? I was born in Bend Oregon, but have spent the greater part of my life in Nevada. I have actually lived in Washington, Oregon, California, Nevada, and Utah.

What is the most rewarding aspect of your job? I think the most rewarding part of my job is feeling like I am making a meaningful contribution by providing decision makers with the information they need to make good/well informed decisions. Whether is talking to students who are planning their careers, providing non-profits with data needed to secure grants, local governments preparing their regional plans, or companies needing information when considering a move to our area, knowing that we have done what we can to help them each succeed is part of what makes this job great.

What is the most frustrating or challenging aspect of your job? One of the most frustrating parts of this job is never having enough data. People are always requesting information that we do not have and it is a struggle to try and help them out with their issues when no one has the information that they need.
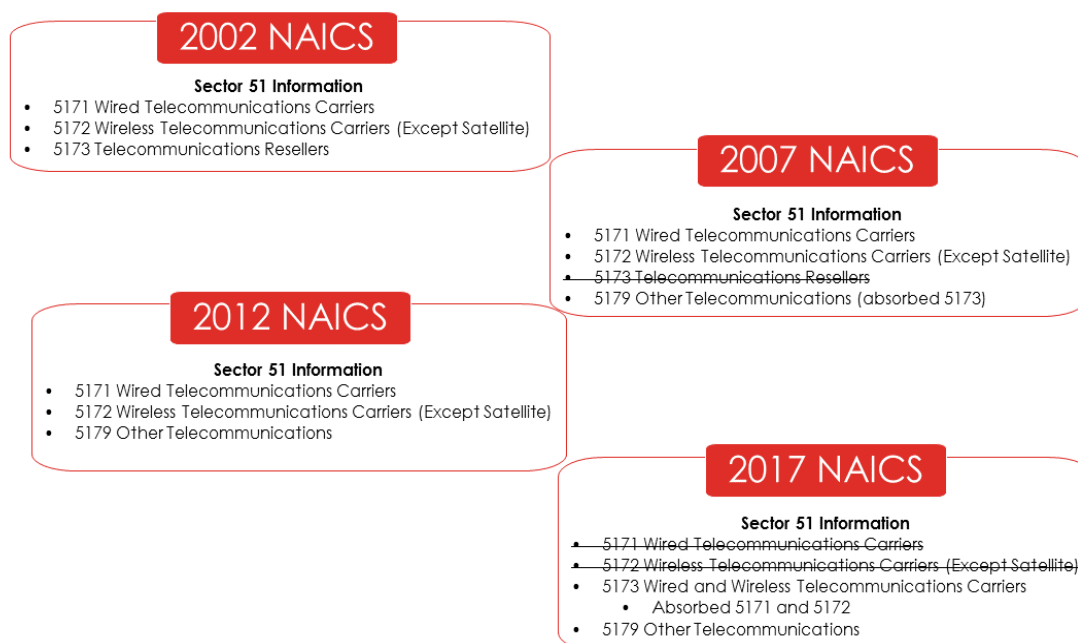
What is the most interesting or awe-inspiring place you have been to? I love to travel. I have visited over 40 US states and 6 countries (soon to be 12) ranging from Costa Rica to Thailand. One of the most interesting places I have been was Thailand. The country is full of ancient cities and gold or ceramic covered temples, great scuba diving, and amazing food. However, the most inspiring part of the trip was the lantern festival where they send up thousands of candle lanterns into the sky and float candles on elaborate little boats down the river. The three top places to visit on my bucket list are an African photo safari, backpacking in Australia and diving the Great Barrier Reef, and visiting Jordan to see Petra (city carved into a cliff wall) and dive in the Red Sea.

What are your interest outside of work? I really enjoy traveling and outdoor recreation- everything from climbing mountain peaks and kayaking on the many lakes in our region to scuba diving in cenotes in the Yucatan. The longest backpacking trip I have done to date was hiking the Tahoe Rim Trail (about 30K feet of elevation gain/loss over 186 miles of trail). I also really enjoy photography and cooking.

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The chart below shows the progression of code changes from 2002 – 2007

2002 NAICS

Sector 51 Information
- 5171 Wired Telecommunications Carriers
- 5172 Wireless Telecommunications Carriers (Except Satellite)
- 5173 Telecommunications Resellers

2007 NAICS

Sector 51 Information
- 5171 Wired Telecommunications Carriers
- 5172 Wireless Telecommunications Carriers (Except Satellite)
- ~~5173 Telecommunications Resellers~~
- 5179 Other Telecommunications (absorbed 5173)

2012 NAICS

Sector 51 Information
- 5171 Wired Telecommunications Carriers
- 5172 Wireless Telecommunications Carriers (Except Satellite)
- 5179 Other Telecommunications

2017 NAICS

Sector 51 Information
- ~~5171 Wired Telecommunications Carriers~~
- ~~5172 Wireless Telecommunications Carriers (Except Satellite)~~
- 5173 Wired and Wireless Telecommunications Carriers
  - Absorbed 5171 and 5172
- 5179 Other Telecommunications

What's the difference between NAICS codes that have the same name as Department Stores 4522 and 4521? Too see the difference you would have to view the data at the five or six-digit level. North Carolina's Labor and Economic Analysis Division (LEAD) only publishes data down to the four-digit NAICS code in its applications like Demand Driven Data Delivery (D4) or AccessNC, the Bureau of Labor Statistics (BLS), however, does publish North Carolina data to the six-digit level. Why the difference? BLS does not disclose their detailed methodology for suppression to the states, so it would be virtually impossible to reproduce. Suppression and confidentiality of the data are our main priority; LEAD has made the decision to only publish down to the four-digit level to protect the data. You can access the BLS data at the six-digit level here [BLS QCEW](#).

The breakout for NAICS 4529 and NAICS 4523 are below to show the specificity of the breakout NAICS series.

2012 NAICS Definitions	2017 NAICS Definitions
4529 Other General Merchandise Stores	4523 General Merchandise Stores, including Warehouse Clubs and Supercenters
45291 Warehouse Clubs and Supercenters	45231 General Merchandise Stores, including Warehouse Clubs and Supercenters
452910 Warehouse Clubs and Supercenters	452311 Warehouse Clubs and Supercenters
45299 All Other General Merchandise Stores	452319 All Other General Merchandise Stores
452990 All Other General Merchandise Stores	

Source: North American Industry Classification System, US Department of Census

NAIC 2017 continued from page 7

The breakout for NAICS 4521 and NAICS 4522 are below to show the specificity of the breakout NAICS series.

2012 NAICS Definitions	2017 NAICS Definitions
4521 Department Stores	4522 Department Stores
45211 Department Stores	45221 Department Stores
452111 Department Stores (except Discount Department Stores)	452210 Department Stores
452112 Discount Department Stores	

Source: North American Industry Classification System, US Department of Census

2012 NAICS	2017 NAICS
45211 Department Stores	45221 Department Stores
452111 Department Stores (except Discount Department Stores)	452210 Department Stores
452112 Discount Department Stores	

Source: North American Industry Classification System, US Department of Census

2012 NAICS Definitions	2017 NAICS Definitions
4529 Other General Merchandise Stores	4523 General Merchandise Stores, including Warehouse Clubs and Supercenters
45291 Warehouse Clubs and Supercenters	45231 General Merchandise Stores, including Warehouse Cubs and Superstores.
452910 Warehouse Clubs and Supercenters	452311 Warehouse Clubs and Supercenters
45299 All Other General Merchandise Stores	452319 All Other General Merchandise Stores
452990 All Other General Merchandise Stores	

Source: North American Industry Classification System, US Department of Census

Spotlight continued from page 6

What is the strangest/interesting job you have ever had?   I have had a lot of jobs over the years, but one of the most interesting was being a horse trainer. I grew up on a ranch and my favorite part was working with the horses. We trained a variety of breeds, but some of the best to work with were the Percherons (large draft horses) that we trained to draw wagons/buggies. They had such easygoing personalities and were playful yet calm and even headed (unlike the high-strung Arabian we use to have). We use to laugh till our sides hurt when Bear (our Burmese Mountain Dog), and Patch (my favorite Percheron) would go thundering across the pasture together carrying sticks (more like small logs) in their mouths or rolling in the dirt in their favorite spots, almost always right after getting a bath of course.

What about your family?   I grew up in a family of 4 siblings (all boys). My mother is a surgery tech and my dad worked in sales. My older brothers are wildlife biologists and my younger brother is an industrial maintenance technician. I also have an ever growing extended family in the area and all over the west coast. We love to get together for game nights or plan camping trips to interesting places in the region.

Read any good books lately (personal or work related) that you would recommend to others?   Admittedly, I do most of my "reading" via audiobooks these days (with two hours of commuting every day, I go through a lot of books), although I do enjoy sitting down with a real book once in a while. Recently I finished with Venomous by Christie Wilcox - an exciting read about venomous animals and natural biochemistry, Life on Air - a professional biography of David Attenborough (best known for narrating the Planet Earth and Blue Planet nature documentary series), Oathbringer - third book in the Stormlight Archives by Brandon Sanderson, Ireland - a novel dealing with Irish folk tales by Frank Delaney, and Whatever You Do, Don't Run - stories of an African safari guide's adventures by Peter Allison.

What is your role on the ARC? I serve on the policy and education committees.

You could apply that license to those occupations for which it is most likely to be needed, or you could apply to every construction occupation, or to any occupation that may ever need it. More abstractly, the crosswalk could be set up with a one-to-one relationship – where each item on one side has exactly one match – or it could be set up as a one-to-many or many-to-many relationship where each item can have multiple matches. In that case, care needs to be taken as the end user to ensure that totals add up and that you don't lose information from a type that has no match or duplicate it where it has many matches.

The Workforce Information Database is a normalized, relational database structure developed for the storage and maintenance of labor market, economic, demographic and occupational information. The Analyst Resource Center is responsible for the structure development, update, and maintenance of the Workforce Information Database. Current members include representatives: Minnesota (lead), Connecticut, Florida, Iowa, Michigan, Montana, Nevada, North Carolina, Oregon, Utah, Virginia and Wisconsin.