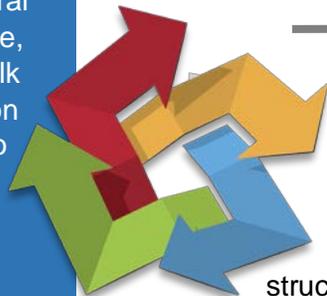


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Keep Up-to-Date

For many years, database administrators would receive regular updates from Steve Rosenow at the National Crosswalk Service Center. These emails would let users know when new information had been uploaded to the Crosswalk website. With Steve's retirement in the summer of 2017, several changes were made. For one, there is no longer a Crosswalk website. Relevant information from this site was migrated to WIDCenter.org. In addition, Amanda Rohrer with the Minnesota Department of Employment and Economic Development (DEED) has taken on the role of keeping us up-to-date with notices of new information. If you are not currently getting updates from DEED ARC, or would like other's in your area added to the mailing list, please let Amanda know by emailing her at ARC.DEED@state.mn.us



Workforce Information Database (WID) Future Direction

by Steve Hine, Dana Placzek and Annette Miller

Recent discussions among LMI Directors have raised questions regarding the continued requirement that state LMI Offices populate the Workforce Information Database (WID). These questions include:

- Why maintain a full WID relational database when alternate structures are often preferred for more efficient delivery of data on web sites?
- What is the continued purpose of the WID in light of new data portal technologies?
- Are there technologies that states can use to share data instead of having to store each other's data in the WID?
- Should we broaden the discussion around future LMI data needs and their implications for the WID as we strive to keep it relevant to changing technologies?

The Analyst Resource Center (ARC), through its grant from the Employment & Training Administration, is responsible for maintaining the WID and supporting WID related activities. At our regular meetings, the ARC and its WID Structure Subcommittee discuss WID needs, including necessary structure improvements, how to integrate the data structures with data portals, data analytics and presentation graphics. The ARC also has conducted seminars on these topics in the LMI and WID DBA forums. *Continued on page 3*

Projections

by Amanda Rohrer

New 2016-2026 National projections are out! The IOMATRIX table had the most significant changes to structure in WID 2.7 reflecting changes in methodology that makes the contents of some fields conceptually different than their prior versions and not comparable. Because projections are published at different times and some states keep historic versions of projections, the old fields haven't been removed. The IOMATRIX table is also used both for publication data (the fields the public wants to see) and certain variables that are used internally for the components of change. Although ProjectionsSuite puts out tables in the WID format for states, nationally the available data sources are different and may not include all of those variables for all matrix entries. As a result, the new national projections data has a lot of null values in its fields.



CareerOneStop Update

Videos

CareerOneStop has developed more than 250 new career videos covering 357 O*NET Occupations. All of the updated videos are available for you to link to or embed in your website. You will find everything you need in one file at [CareerOneStop's Data Downloads](#). From there, download the New Career Videos spreadsheet which contains:

- Links to the videos
- Crosswalk information linking each video file to one or more O*NET codes
- HTML code to enable you to easily embed career videos in your website

Embed or Link

Want to embed or link to more CareerOneStop data? Check out our [Web API](#) offerings or learn how to [Link to Us](#).

Occupation Profile

The new [Occupation Profile](#) is mobile friendly and offers key LMI and other career data in a graphical, customizable format.

Career Reports

Updated to be mobile friendly, CareerOneStop offers the following career reports:

- [Fastest-Growing Careers](#)
- [Careers with the Most Openings](#)
- [Careers with the Largest Employment](#)
- [Careers with Declining Employment](#)
- [Highest-Paying Careers](#)

Industry Reports

Also updated to be mobile friendly, CareerOneStop offers these industry reports:

- [Fastest Growing](#)
- [Highest Paying](#)
- [Declining Employment](#)
- [Largest Employment](#)

Upcoming SOC Changes

by Nicole Kennedy

It's that time of year when Workforce Information Database (WID) Administrators begin preparing for changes to codes, benchmarking and geographies. The Office of Management and Budget (OMB) recently published a Federal Register notice detailing the final decisions for the 2018 SOC, including the final 2018 SOC codes, titles, and definitions for implementation in reference year 2018.

It is important to note that the SOC 2018 changes will not be seen in Occupational Employment Statistics (OES) until the 2019 release or in the next round of Projections data.

What will you see in both OES and Projections this upcoming year?

The North American Industry Classification System (NAICS) 2017 and SOC changes made in 2017 will be seen in both programs next release. That's right, there were SOC 2017 changes. BLS made changes that will affect both OES and projections releases in 2018.

Overview of changes this year:

1. Ten new aggregations replacing 12 detailed occupations
2. Selected 4- and 5-digit NAICS industries previously published by OES will no longer be published separately.
3. Of those 4-digit NAICS industries that are no longer being published separately, they will be replaced with OES-specific 4-digit industry aggregations.
4. SOC detailed occupations will be aggregated to the SOC broad occupation level.
5. Remaining aggregations will be combinations of detailed occupations that do not correspond to existing SOC broad occupations. These aggregations will use OES-specific codes and titles.

Continued on page 7

WID - Future Direction *(continued from page 1)*

What are the advantages to having a standardized database structure like the WID?

Defining Critical Components of LMI

The WID structure identifies and describes the important elements of LMI data. These elements, described in the structure as tables with data fields, define what LMI is and how it is used.

Enables Sharable Application Development

WID plays an important role in many Web and other applications. It enables applications to be developed around a standard. Not only does it provide a repository of data for the application, but also a common LMI data model applications can use.

Allows Third-party Development

This common model and repository allows the construction of third party applications for multi-state projects (e.g., Geographic Solutions, LMIInformer) and the sharing of data between states that would be difficult without using a common structure. This common structure, provided by the WID data dictionary, ties all state LMI data efforts together, while providing some flexibility for state specific data.

Facilitates Technical Support to States

Without a common platform, states would be on their own in solving technical database issues as they arise. Having a common platform provides expertise across the states that others can turn to when staff turnover or new requirements precludes an in-house solution.

Data Sharing

The WID was designed to store data from multiple states as well as national data. However, there are ways that users and applications can access other state's data without storing it in their database. Web services allow the transmission of data across the internet using the same http protocol that web pages do. The data is generally formatted in a way that software programs can understand, either in XML (a markup language like HTML that is designed for data representation rather than display) and JSON (JavaScript object Notation) that programs written in JavaScript and other languages can easily use. ARC is currently experimenting with this technology to enable sharing WID data without having to store it locally. All of this is possible because of the common data structure that ARC provides with the WID.

Data issues vs. structure issues

All data has issues: breaks in code, breaks in collection, other data cleaning. No structure can fix this; one does need to know the data to use it. We do think some sort of documentation of code changes, geography changes, etc., could be useful. To that end, we intend to come up with a metadata table or tables for the WID that will accomplish this.

Data structure vs display structures

Any structure used for storing data in a logical and efficient manner, such as the WID, is not always the most user-friendly way to display it. One needs to do some work on any data extract to make it usable for a specific purpose, a specific tool. This will be true regardless of the structure.

Other Initiatives

We are in the process of creating a "sandbox" comprised of sample applications, code snippets and other tools that WID administrators and users may find useful (e.g., data loaders, web service and display tools.)

Summary

For the past 20+ years, the Workforce Information Database (WID), and its predecessor America's Labor Market Information Database (ALMIS), has played a catalytic role in improving and modernizing the way states use and distribute Labor Market Information. Before the advent of these common national structures, each state had its own structure and limited distribution mechanisms. For the reasons identified here, we believe the requirement that all states adhere to a common structure is of significant benefit to the LMI Community at large.

Licensing Push

by Amanda Rohrer

Did you know twelve states license Craft Artists? And one state licenses Dishwashers, but nearly half license Umpires and Referees? This is the kind of information jobseekers need to know. This is the kind of information analysts can use to interpret labor market trends either across states or within them. As a requirement of the TEGL, states submit their license data to the ARC so that we can maintain a central database of licensed occupations. [CareerOneStop](#) makes it available to jobseekers and occasionally researchers will request it. Those requests are getting more and more frequent as this topic is gaining national attention. Even though our database is the only central source of licenses, it's not as current as we would like. Only thirty of the states have submitted in the last two years as required by the TEGL. Fourteen of you have submitted so far this year – Thank you! This is a tough task – a lot of states don't have a central collection of state-issued licenses or licensed occupations and LMI offices wind up having to do a lot of work to collect it from each agency themselves. If you don't know when your state last submitted or who performed this task, let me know. Some of the origins of older data wasn't well-recorded, but for the most part I can give you an idea of when and who submitted data. Sometimes large attachments don't go through email – you're always welcome to confirm that I received your submission.

And as always – if you have questions, ask! ARC.DEED@state.mn.us



How to Use & Where to Find

Navigating Our New Website

In July our National Crosswalk Service Center (NCSC) and ARC websites were replaced with a new website: www.widcenter.org. It's a work in progress and we've had a few hiccups, but we're hoping we've gotten to a point where the site is meeting your needs.

All of the files that were on the old site are still there, but old versions are harder to find. There are also fewer connections from the website itself to file downloads, although the files are still accessible through the ftp site.

We're no longer redirecting the old sites to the new one, so if you've got bookmarks or links it's time to update them.

The [core tables page](#) has been reconfigured to be your one-stop-shop for data needs. We've also added a data visualization showcase and some subject-specific content pages. Look for additional changes in the coming months – we want to make this a genuine resource to help you accomplish your goals.

When to Convert?

The ARC Structure Committee released version 2.7 this spring. There's been some confusion about when states should convert to WID 2.7. Please update by the June 30, 2018.

PY 17 TEGL Released

The Employment and Training Administration recently released the Training & Employment Guidance Letter (TEGL) for program year 17 – TEGL 4-17. The TEGL defines what products and core services each state is required to deliver. Visit the WIDCenter.org for more information.

Showcase on SQL

Converting between date and periodyear/period fields

by Amanda Rohrer

A number of applications require the use of date fields rather than the text fields we use for discrete periodyear/period combinations. Conceptually, those don't make a lot of sense for our data – because it's already aggregated and published for a particular period of time, representing it as a date (with a year, a month, a day and often a time) is misleading. However, there are reasons to do it. Tableau won't make a line chart without a date field, and other off-the-shelf data visualization software has the same sort of requirements. While you can often convert field types while developing the viz, sometimes it's more controlled or expedient to do that while creating a view or exporting data. Fortunately we've got the SQL to do that!

In the examples below, I query the tables LABFORCE and INDUSTRY in WID 2.7. If your tables are in WID 2.7 format you should be able to run these queries as written, unless you're using MS Access. I've noted variations you would have to make to use Access below the queries.

In LABFORCE data is monthly or annual. I've excluded the annual data because data visualization software usually assumes there is only one date type. You may also want to limit it to the max benchmark if you keep prior vintages in the table. In this case – converting a year and a month to a date – the SQL is just a cast function applied to the appended text fields. Because the cast function expects a day, though, you have to put one in. I used 15, but any day of the month (less than 28, so it's a valid day for every month) could work. Most of the time, dates can be formatted to not show the day of the month.

```
SELECT [stfips]
      ,[areatype]
      ,[area]
      ,[periodyear]
      ,[periodtype]
      ,[period]
      ,cast(period+'-15-'+periodyear as date) as DateConvert
      ,[adjusted]
      ,[prelim]
      ,[benchmark]
      ,[laborforce]
      ,[emplab]
      ,[unemp]
      ,[unemprate]
      ,[clfprate]
      ,[emppopratio]
FROM [labforce]
where periodtype='03'
```

In Access, you can't use the cast function. Instead, you use a conversion function that specifies the type directly in it – in this case, CDATE. The line above would be:

```
cdate(period+'-15-'+periodyear) as DateConvert
```

Converting quarters to days is a little more complicated. In this case, I'm using the INDUSTRY table and I again exclude the annual data. There are two ways I've done it below. The first (DateConvert1) is a case statement that applies the first day of the quarter ('01-01-' or '04-01-', etc) based on the period. Because there are only four options, this is a pretty manageable and readable solution. The second way (DateConvert2) casts the quarter as an integer, multiplies by 3 and then plugs in a day of the month. Because there are three months in each quarter, multiplying by 3 ensures that the month is always the last month of the quarter. This is less readable, but case statements can only be used in the select part of a function – if you need to put it in the where clause or another part of the query, there might be a reason to use the method in DateConvert2. *Continued on page 10*



Annette works for the Montana Department of Labor & Industry, and is a member of the Analyst Resource Center Consortium.

How long have you been involved in the world of LMI? 24 years. I started working for the Research & Analysis Bureau in 1993. My “toe in the door” first job was backup receptionist. By 1996 I was the director of the State Occupational Information Coordinating Committee (SOICC) and the Montana Career Information System. The SOICC at that time was responsible for the ALMIS database, the precursor to the WID.

Are you originally from Montana? No, I was born and raised in Webster City, Iowa. I lived on a farm with my parents and 3 siblings. I left Iowa after marrying my husband, who is a 5th generation Montanan. We moved back here in 1993 and I can't imagine living anywhere else. The climate is more moderate here than it was in Iowa or Oklahoma and I'm surrounded by beautiful mountains.

What is your educational background? I have a bachelor's degree in mathematics from the University of Central Oklahoma in Edmond, OK.

What is the most rewarding aspect of your job? I am passionate about providing people with the best information and tools to make career decisions. As a graduating college senior, no one could tell me what kind of jobs a mathematician could pursue. It was so frustrating. I went to college on the JTPA program and the same lack of career counseling kept me from making an informed decision on my potential college path. I was just plain lucky that I found my niche in the Research & Analysis Bureau. I am proud of the multiple ways we can help students and job seekers make better informed career plans with our products and services.

I also manage the LMInformer Consortium. The LMInformer Consortium built a new LMI delivery platform that looks beautiful and saved each of our member states tens of thousands of dollars. It also gives us back control of our individual websites in a way that you don't have when you use a vendor. Building a consortium and an LMI delivery system from scratch was a huge challenge, but the result was well worth the effort and time it took to make it happen.

What is the most frustrating or challenging aspect of your job? Funding is always the most frustrating part of the job closely followed by the glacial speed that things change. We are so fortunate to have an excellent staff who do great work and are highly productive. Without them it would be a struggle to meet our federal deliverables.

What is the most interesting or awe-inspiring place you have been to? Glacier National Park. We kayaked on Lake McDonald on one of our trips to Glacier which was amazing. The lake is so clear you can see almost to the bottom. The day we went the water was like glass, with the mountains perfectly reflected on the water. With the clear water and reflection of the mountains it felt like our kayaks were suspended in mid-air.

What is your role on the ARC? I am the co-chair of the Education and Communication Committee. Our committee puts together the training materials for WID DBAs, prepares the newsletter, and manages the website.

What about your family? I'm married and have two grown sons. We have two dogs, Ace, a blue heeler (my husband's), and Bailee, a pug Shih Tzu mix who is my little baby. The rest of my family is still around the Midwest. My dad lives in Kansas, my sister in Iowa, and my brother lives in Indiana. Unfortunately, my little sister passed away in 1998 and my mom in 2011.

SOC Changes *(continued from page 2)*

The new occupational aggregations are combinations of SOC occupations that are similar and where the survey does not have the information needed to distinguish between the occupations for accurate coding.

You can find the detailed aggregation lists on the BLS website: <https://www.bls.gov/soc/2018/home.htm>

Table 1 New OES occupational aggregations

Beginning with the May 2017 OES estimates, the occupations in bold will replace the SOC 2010 detailed occupations listed below them.

| | |
|----------------|---|
| 13-1020 | Buyers and purchasing agents (SOC broad occupation) |
| | 13-1021 Buyers and purchasing agents, farm products |
| | 13-1022 Wholesale and retail buyers, except farm products |
| | 13-1023 Purchasing agents, except wholesale, retail, and farm products |
| 15-2090 | Miscellaneous mathematical science occupations (SOC broad occupation) |
| | 15-2091 Mathematical technicians |
| | 15-2099 Mathematical science occupations, all other |
| 21-1018 | Substance abuse, behavioral disorder, and mental health counselors (OES-specific code and title) |
| | 21-1011 Substance abuse and behavioral disorder counselors |
| | 21-1014 Mental health counselors |
| 29-2010 | Clinical laboratory technologists and technicians (SOC broad occupation) |
| | 29-2011 Medical and clinical laboratory technologists |
| | 29-2012 Medical and clinical laboratory technicians |
| 39-1010 | First-line supervisors of gaming workers (SOC broad occupation) |
| | 39-1011 Gaming supervisors |
| | 39-1012 Slot supervisors |
| 39-7010 | Tour and travel guides (SOC broad occupation) |
| | 39-7011 Tour guides and escorts |
| | 39-7012 Travel guides |
| 47-4090 | Miscellaneous construction and related workers (SOC broad occupation) |
| | 47-4091 Segmental pavers |
| | 47-4099 Construction and related workers, all other |
| 51-2028 | Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers (OES-specific code and title) |
| | 51-2022 Electrical and electronic equipment assemblers |
| | 51-2023 Electromechanical equipment assemblers |
| 51-2098 | Assemblers and fabricators, all other, including team assemblers (OES-specific code and title) |
| | 51-2092 Team assemblers |
| | 51-2099 Assemblers and fabricators, all other |
| 53-1048 | First-line supervisors of transportation and material moving workers, except aircraft cargo handling supervisors (OES-specific code and title) |
| | 53-1021 First-line supervisors of helpers, laborers, and material movers, hand |
| | 53-1031 First-line supervisors of transportation and material-moving machine and vehicle operators |

Continued on page 8

SOC Changes *(continued from page 7)*

Table 2

Industries that will no longer be published at the 4-digit NAICS level starting with the 2017 OES estimates. These industries will be published as part of the 3-digit NAICS. All industries are listed with their 2017 NAICS codes and titles.

| | |
|------------|--|
| 327 | Nonmetallic mineral product manufacturing |
| | 3271 Clay product and refractory manufacturing |
| | 3272 Glass and glass product manufacturing |
| | 3273 Cement and concrete product manufacturing |
| | 3274 Lime and gypsum product manufacturing |
| | 3279 Other nonmetallic mineral product manufacturing |
| 452 | General merchandise stores |
| | 4522 Department stores |
| | 4523 General merchandise stores, including warehouse clubs and supercenters |
| 484 | Truck transportation |
| | 4841 General freight trucking |
| | 4842 Specialized freight trucking |
| 517 | Telecommunications |
| | 5173 Wired and wireless telecommunications carriers |
| | 5174 Satellite telecommunications |
| | 5179 Other telecommunications |
| 523 | Securities, commodity contracts, and other financial investments and related activities |
| | 5231 Securities and commodity contracts intermediation and brokerage |
| | 5232 Securities and commodity exchanges |
| | 5239 Other financial investment activities |
| 531 | Real estate |
| | 5311 Lessors of real estate |
| | 5312 Offices of real estate agents and brokers |
| | 5313 Activities related to real estate |

Table 3

Industries that will no longer be published at the 5-digit NAICS level starting with the 2017 OES estimates. These industries will be published as part of the 4-digit NAICS or as part of an OES-specific 4-digit industry aggregation.

| | |
|---------------|---|
| 3370A1 | Furniture and related product manufacturing (3371 and 3372 only) |
| | 33711 Wood kitchen cabinet and countertop manufacturing |
| | 33712 Household and institutional furniture manufacturing |
| 5614 | Business support services |
| | 56142 Telephone call centers |
| 5615 | Travel Arrangement and Reservation Services |
| | 56151 Travel agencies |

Continued on page 9

SOC Changes *(continued from page 8)*

Table 4. New OES industry aggregations

Beginning with the May 2017 OES estimates, the industries shown in bold will contain one or more aggregations of the detailed industries listed below them. For industries with more than one aggregation, each aggregation is listed separately.

| | |
|---------------|---|
| 3250A1 | Chemical manufacturing (3251, 3252, 3253, and 3259 only) |
| | 3251 Basic chemical manufacturing |
| | 3252 Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing |
| | 3253 Pesticide, fertilizer, and other agricultural chemical manufacturing |
| | 3259 Other chemical product and preparation manufacturing |
| 3250A2 | Chemical manufacturing (3255 and 3256 only) |
| | 3255 Paint, coating, and adhesive manufacturing |
| | 3256 Soap, cleaning compound, and toilet preparation manufacturing |
| 3320A1 | Fabricated metal product manufacturing (3321, 3322, 3325, 3326, and 3329 only) |
| | 3321 Forging and stamping |
| | 3322 Cutlery and handtool manufacturing |
| | 3325 Hardware manufacturing |
| | 3326 Spring and wire product manufacturing |
| | 3329 Other fabricated metal product manufacturing |
| 3320A2 | Fabricated metal product manufacturing (3323 and 3324 only) |
| | 3323 Architectural and structural metals manufacturing |
| | 3324 Boiler, tank, and shipping container manufacturing |
| 3330A1 | Machinery manufacturing (3331, 3332, 3334, and 3339 only) |
| | 3331 Agriculture, construction, and mining machinery manufacturing |
| | 3332 Industrial machinery manufacturing |
| | 3334 Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing |
| | 3339 Other general purpose machinery manufacturing |
| 3370A1 | Furniture and related product manufacturing (3371 and 3372 only) |
| | 3371 Household and institutional furniture and kitchen cabinet manufacturing |
| | 3372 Office furniture (including fixtures) manufacturing |
| 4230A1 | Merchant wholesalers, durable goods (4232, 4233, 4235, 4236, 4237, and 4239 only) |
| | 4232 Furniture and home furnishing merchant wholesalers |
| | 4233 Lumber and other construction materials merchant wholesalers |
| | 4235 Metal and mineral (except petroleum) merchant wholesalers |
| | 4236 Household appliances and electrical and electronic goods merchant wholesalers |
| | 4237 Hardware, and plumbing and heating equipment and supplies merchant wholesalers |
| | 4239 Miscellaneous durable goods merchant wholesalers |
| | 4246 Chemical and allied products merchant wholesalers |

Continued on page 11

Showcase on SQL – (continued from page 5)

```

SELECT [stfips]
      ,[areatype]
      ,[area]
      ,[periodyear]
      ,[periodtype]
      ,[period]
      ,case when period='01' then cast('01-01-'+periodyear as date)
            when period='02' then cast('04-01-'+periodyear as date)
            when period='03' then cast('07-01-'+periodyear as date)
            when period='04' then cast('10-01-'+periodyear as date)
            end as DateConvert1,
      ,cast(cast(cast(period as int)*3 as varchar)+'-28-'+periodyear as date) as
      DateConvert2
      ,[indcodty]
      ,[indcode]
      ,[ownership]
      ,[prelim]
      ,[firms]
FROM [industry]
where periodtype='02'

```

Again, Access is a special case. It does not use case statements so you'd have to rewrite it as a nested if statement.

Sometimes you might have to go the other way and convert a date to a periodyear and period. This is Transact-SQL (Microsoft specific SQL), but it's a way to extract the periodyear and period from various dates. The first two lines are fairly straightforward – they take the literal month and year out of a date field. The case statement converts a month to a quarter by specifying which months fall within each quarter.

```

select year('2017-11-28') as periodyear,
       month('2017-11-28') as periodmonth,
       case when month('2017-11-28') in ('1','2','3') then '01'
            when month('2017-11-28') in ('4','5','6') then '02'
            when month('2017-11-28') in ('7','8','9') then '03'
            when month('2017-11-28') in ('10','11','12') then '04'
            end as periodquarter,
       right('00'+cast(month('2017-03-05') as varchar),2) as FormattedMonth,
       month('2017-03-05') as UnformattedMonth

```

One challenge we've got working with text fields for our dates is that the length of them matters. In the final two rows of the query above we look at what happens when the number of the month only has one digit – in this example, March. Just using T-SQL's month function (like in the last row – UnformattedMonth) pulls that out as a number with no leading zeroes and if you try to insert that into a table it will likely fail as a foreign key violation with table PERIOD. In the row above that – FormattedMonth – we cast the month as text, then append it to leading zeroes and select only the last two digits. In this way, we always get a two-digit text field for the month.

SOC Changes – (continued from page 9)

| | |
|---------------|---|
| 4240A1 | Merchant wholesalers, nondurable goods (4244 and 4248 only) |
| | 4244 Grocery and related product merchant wholesalers |
| | 4248 Beer, wine, and distilled alcoholic beverage merchant wholesalers |
| 4240A2 | Merchant wholesalers, nondurable goods (4242 and 4246 only) |
| | 4242 Drugs and druggists' sundries merchant wholesalers |
| | 4246 Chemical and allied products merchant wholesalers |
| 4240A3 | Merchant wholesalers, nondurable goods (4241, 4247, and 4249 only) |
| | 4241 Paper and paper product merchant wholesalers |
| | 4247 Petroleum and petroleum products merchant wholesalers |
| | 4249 Miscellaneous nondurable goods merchant wholesalers |
| 4450A1 | Food and beverage stores (4451 and 4452 only) |
| | 4451 Grocery stores |
| | 4452 Specialty food stores |
| 4530A1 | Miscellaneous store retailers (4532 and 4533 only) |
| | 4532 Office supplies, stationery, and gift stores |
| | 4533 Used merchandise stores |
| 5220A1 | Credit intermediation and related activities (5221 and 5223 only) |
| | 5221 Depository credit intermediation |
| | 5223 Activities related to credit intermediation |
| 5320A1 | Rental and leasing services (5322, 5323, and 5324 only) |
| | 5322 Consumer goods rental |
| | 5323 General rental centers |
| | 5324 Commercial and industrial machinery and equipment rental and leasing |

ARC Newsletter

Editor: Barbara Ledvina

Thank you to Amanda Rohrer, Minnesota; Annette Miller, Montana; Nicole Kennedy, North Carolina; Dana Placzek, Connecticut; Steve Hine, Minnesota; and Bill McMahon, CareerOneStop for their contributions to this edition.

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, Montana, Nevada, North Carolina, Oregon, Virginia and Wisconsin