

# Industry Classification System Changes

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## SIC is dead! But NAICS isn't SIC at all!

**S**ince the 1930s, government statistical programs have published data based on the U.S. Standard Industrial Classification system (SIC). The Current Employment Statistics (CES) and Bureau of Labor Statistics (BLS) ES-202 data printed in *Alaska Economic Trends* are among the reports based on the SIC. This era is coming to an end, and a new industry classification system is at hand. In January 2003, the Alaska Department of Labor and Workforce Development (AKDOL) will complete its transition to the North American Industrial Classification System (NAICS). While this change may initially cause some problems for both the public and the department, NAICS is expected to provide a better analytic tool in the long run.

### How NAICS came to be

The SIC system developed in the 1930s paid particular attention to manufacturing industries, as was appropriate for the economy of the time. Non-farm employment was closely tied to the output of steel, automobile production, construction and the other heavy industries that represented America's economic base. But as we all know, many changes have taken place since the Great Depression. The service sector of the economy has grown and diversified in a way unimagined in those days. As some industries faded in importance other entirely new technologies developed and grew. A few obvious examples include economic activities based on the innovations of television, the Internet,

microchips, computer software, jet aircraft and cellular electronics.

SIC defined industries in accordance with the composition and structure of the economy and was periodically updated to incorporate the changing elements of that economy. The latest revision was in 1987, when a number of new industries such as videotape rental stores and plastic bottle manufacturing were added to the system. Still, the SIC system focused on goods-producing industries and provided insufficient detail for the now dominant services area. Newly developed industries such as information services, health care delivery and high-tech manufacturing could not be adequately studied under the SIC system because they were not separately identified at the industry level.

In recent years, rapid changes in both the U.S. and world economies brought SIC under increasing criticism. In 1992, the Office of Management and Budget (OMB) established the Economic Classification Policy Committee (ECPC), chaired by the Bureau of Economic Analysis, with representatives from the Bureau of the Census and the Bureau of Labor Statistics. OMB charged this committee with conducting a "fresh slate" examination of economic classifications and with determining the desirability of developing a new industry classification system for the United States based on a single economic concept.

In 1993, Mexico, Canada and the United States

signed The North American Free Trade Association (NAFTA) treaty. The ECPC, Statistics Canada, and the Instituto Nacional de Estadística, Geografía e Informática began a collaboration to develop an industrial classification system that would bring all three nations into conformance. The three countries established the following four principles for developing NAICS:

1. NAICS is based upon a production oriented conceptual framework. This means that producing units using identical or similar production processes are grouped together.
2. The system gives special attention to developing production oriented classifications for

(a) new and emerging industries, (b) service industries in general, and (c) industries engaged in the production of advanced technologies.

3. Time series continuity will be maintained to the extent possible. Adjustments may be required for sectors where Canada, the United States and Mexico have had incompatible industry classification definitions. The intent is to produce a common industry classification system for all three North American countries.

4. The system strives for compatibility with the 2-digit level of the International Standard Classification of All Economic Activities (ISIC, Rev. 3) of the United Nations.

## Implementation Timetable for NAICS At the Bureau of Labor Statistics (BLS)



	Conversion reference period	Publication date
<b>Office of Employment and Unemployment Statistics</b>		
Current Employment Statistics	May 2003	June 2003
Mass Layoff Statistics	January 2002	March 2002
Current Population Survey	January 2003	February 2003
Occupational Employment Statistics	Fourth quarter 2002	January 2004
Covered Employment and Wages	2001	Fall 2002
Job Openings and Labor Turnover Survey *	To be announced	To be announced
<b>Office of Employment Projections</b>	2004-2014	November 2005
<b>Office of Productivity and Technology</b>		
Productivity measures for selected industries.	2001	Fourth quarter 2003
Foreign Labor Statistics	2003	Late 2004
<b>Office of Compensation and Working Conditions</b>		
National Compensation Survey		
Employment Cost Index	March 2005	April 2005
Employer Costs for Employee Compensation	March 2005	June 2005
Locality wage levels	Spring 2005	Spring 2005
National and census division publications	2004	Spring 2005
Integrated benefit provision product	2004	Spring 2005
Occupational Safety and Health Statistics		
Survey of Occupational Injuries and Illnesses	2003	December 2004
Census of Fatal Occupational Injuries	2003	
<b>Office of Prices and Living Conditions</b>		
Producer Price Indexes	January 2004	December 2004

\* Job Openings and Labor Turnover Survey (JOLTS) is currently under development. First release of information in early 2002 will be SIC based.  
NOTE: This timetable is subject to change.

Source: James A. Walker and John B. Murphy, *Monthly Labor Review*, Dec. 2001

OMB announced the adoption of NAICS in 1997, and in 2001 revised NAICS to a format that would be phased in through 2002. The Bureau of Labor Statistics has begun converting its Covered Employment and Wages (CEW) program, and in the fall of 2002 will release employment, wages, and establishment count data for 2001 based on NAICS. While the total conversion of all programs will take more time, (see Exhibit 1) the BLS data most familiar to users (CES and ES202) will be published using the new system beginning in January 2003.

### The conversion of covered employment and wages

All U.S. businesses and government establishments whose employees are covered by unemployment insurance file quarterly unemployment tax reports. These reports provide the raw data used by both BLS and AKDOL. These data are used to produce

BLS estimates and counts of monthly and quarterly employment, as well as for other less familiar programs. State employment agencies such as AKDOL work cooperatively with BLS to conduct CEW programs.

This universe of employment and earnings may be likened to a loaf of bread. While SIC cut a few thick slices, NAICS cuts the same loaf into many thinner slices. SIC allowed users to determine if the slice was white, whole wheat, or rye, but NAICS provides a full list of the ingredients contained in each slice. In addition, some slices have been rearranged in the breadbasket.

### What is NAICS and how is it different?

Unlike SIC, which was based upon what was produced, NAICS is designed to focus on how products and services are created. This results in major differences in industry groupings. Because

## 2 The New NAICS and the Retiring SIC Comparison of structures

NAICS sector	NAICS titles	SIC division	SIC titles
11	Agriculture, Forestry, Hunting and Fishing	A	Agriculture, Forestry, Hunting and Fishing
21	Mining	B	Mining
22	Utilities	C	Construction
23	Construction	D	Manufacturing
31-33	Manufacturing	E	Transportation, Communications, Utilities
42	Wholesale Trade	F	Wholesale Trade
44-45	Retail Trade	G	Retail Trade
48-49	Transportation and Warehousing	H	Finance, Insurance and Real Estate
51	Information	I	Services
52	Finance and Insurance	J	Public Administration
53	Real Estate, Rental and Leasing	K	Nonclassifiable establishments
54	Professional, Scientific, and Technical Services		
55	Management of Companies and Enterprises		
56	Administrative Support; Waste Management and Remediation Services		
61	Educational Services		
62	Health Care and Social Assistance		
71	Arts, Entertainment and Recreation		
72	Accommodation and Food Services		
81	Other Services (except Public Administration)		
92	Public Administration		

Source: James A. Walker and John B. Murphy, *Monthly Labor Review*, Dec. 2001

NAICS is not an update of SIC, but a completely new system, it establishes new categories that better reflect the structure of the modern economy. Unfortunately, this creates some problems in reconstructing time series data, since many industries will be grouped in different or entirely new categories.

Like SIC, NAICS categorizes employment into one of two domains, *goods-producing* or *service-providing*. NAICS divides these domains into 12 supersectors, which are then broken into 20 industry sectors, (designated by two digits), compared with the eleven alphabetically designated divisions of SIC. (See Exhibit 2). Some of the supersectors such as *manufacturing*, *construction* and *public administration* are similar to the SIC industry divisions, but while some titles remain the same, different industries are grouped in these categories. Many sectors are entirely new and are composed primarily of industries drawn from the old SIC *Services* division. By increasing the number of sectors, NAICS allows for greater precision in data assignment and analyses.

NAICS industries are designated by a six-digit code. The first two digits indicate the *sector*, the third establishes the *subsector*, the fourth maps to the *industry group* and the fifth indicates the *industry*. The international NAICS agreement fixes the first five digits. The last digit, when used, is designed to accommodate different user needs in each country. This means that Canadian, American and Mexican industries are standardized at the five-digit level, but may differ from counterparts at the sixth-digit level. *Domains* and *supersectors* can be used when sufficient data do not exist to publish at the sector level.

## What does this mean for Alaska?

The transition from SIC to NAICS will involve some dramatic changes, and will require a period of adjustment for both users and the department. Those accustomed to SIC divisions will suffer more confusion than novices whose perceptions remain unaffected by the discontinued system. Consider the following example:

Within the NAICS *goods-producing* domain, *Natural Resources and Mining* is the only new supersector. This includes the two sectors of *Mining* and *Agriculture, Forestry, Hunting and Fishing*. Logging has been moved from the old SIC industry of *Manufacturing* to the new NAICS sector of *Agriculture, Forestry, Hunting and Fishing*. Loggers, miners and oil field workers will now be broadly grouped as employment based on natural resource extraction. *Publishing* has also been removed from *Manufacturing*, and will be counted in the *service-providing* domain as part of the new *Information* supersector. Since both publishing and logging were major contributors to Alaska's SIC *Manufacturing* division, employment in the new NAICS supersector of *Manufacturing* will be considerably reduced. Of the three major industries that dominated this category, only *seafood processing* will remain in the NAICS grouping.

In an attempt to minimize the complexity of translating the now obsolete SIC divisions into the new NAICS sectors, a brief summary is presented below. While not inclusive, this outline presents an overview of some of the major changes. Exhibit 3 will be helpful in understanding this summary.

## Summary of important changes by supersector

### 1. Natural Resources and Mining

NAICS adds a new supersector to the goods-producing domain. As shown above, this supersector is labeled *Natural Resources and Mining*. It includes two sectors, *Agriculture, Forestry, Hunting, and Fishing*, and *Mining*. The former includes the industry of logging, which was transferred from the old SIC division of *Manufacturing* and such things as shellfish farming. Mining includes the traditional industries of mining and oil production.

### 2. Manufacturing

The rearrangement noted above will also affect the *Manufacturing* supersector. As mentioned, it

will no longer include logging. In addition, Publishing will move to the new supersector of *Information*, and be counted in the *Service-Providing* domain. While a few additional industries, such as bakeries that bake on premises, will be added to *Manufacturing*, the net result of the transfers will show far fewer workers in this category than in the old SIC division of *Manufacturing*.

### 3. Trade, Transportation, and Utilities

The most important change in this supersector involves NAICS' redefinition of the sectors of *Retail Trade* and *Wholesale Trade*.

The 1987 SIC defined retailers as establishments that sold primarily to consumers while wholesalers sold primarily to business customers. NAICS redefines the boundaries between *Retail* and *Wholesale Trade* and makes distinctions based upon what the establishment does rather than to whom it sells.

NAICS envisions retailers as selling untransformed merchandise and as having a selling place open to the public, merchandise on display or available through sales clerks, facilities for making cash or credit card transactions, and services provided to retail customers. Wholesale establishments, by contrast, are defined as primarily involved with the sale of goods for resale, capital or durable nonconsumer goods, and or raw materials for use in production. Wholesalers are further characterized as having little or no display of merchandise and as occupying premises not intended to attract the general public.

These altered definitions are expected to result in many more businesses being transferred to the retail sector. On the national level, 7 percent of computer wholesalers, 22 percent of office supply wholesalers, 35 percent of farm supply wholesalers and 57 percent of petroleum bulk stations are anticipated to move to retail.

Another major change to *Retail Trade* will result from the transfer of restaurants to a new NAICS sector called *Accommodations and food services* in the new supersector of *Leisure and Hospitality*.

On the national level, restaurants accounted for approximately 10 percent of retail trade as defined by the 1987 SIC.

### 4. Information

Included in this new category are 34 industries, 20 of which are entirely new. Establishments that create and distribute information or provide data processing services are represented in this sector. *Information* contains traditional industries such as newspaper, book and periodical publishers that were once counted in the SIC manufacturing division, as well as some industries such as broadcasting and telecommunications that were included in SIC's *Utilities* and *Transportation*. In addition, entirely new industries such as paging, satellite and cellular telecommunications have been added.

### 5. Financial Activities

This supersector includes two new sectors, *Finance and Insurance* and *Real Estate and Rental and Leasing*. The old SIC division of *Finance, Insurance and Real Estate* has been divided into two distinct NAICS sectors. In addition, some rental and leasing industries have been transferred from *Services, Transportation and Communications* to this more appropriate sector.

### 6. Professional and Business Services

This supersector contains three new sectors; *Professional, Scientific and Technical Services*, *Administrative and Support; Waste Management and Remediation Services*, and *Management of Companies and Enterprises*. The first includes those businesses whose major input is human capital as defined by expertise. Enterprises such as legal firms, engineering services, or veterinary services are included. The second includes industries that have been drawn from many of the old SIC divisions, whose establishments provide routine support for other organizations. Office administration, security services and waste disposal are a few examples. The sector of *Management of Companies and Enterprises*, seems self-explanatory, but is unique in its approach. Employment at head offices, subsidiary management offices or



# NAICS Aggregations

In descending order

# 3

DOMAIN	SUPERSECTOR	SECTOR	INDUSTRY (selected examples)
Goods-Producing	Natural Resources & Mining	Agriculture, Forestry Hunting and Fishing	Logging Shellfish Farming
		Mining	Oil Field Services Coal Mining Metalic Ore Extraction
	Construction	Construction	Residential Building Construction Specialty Trade Contractors Highway, Street and Bridge Constr.
	Manufacturing	Manufacturing (durable goods)	Sawmills and Wood Preservation Fabricated Metal Manufacturing Ship and Boat Building
		(non-durable goods)	Seafood Product Preparation Bakeries Petroleum and Coal Products
Service-Providing	Trade Transport & Utilities	Utilities	Electric Power Generationn Water, Sewage & Systems
		Transportation & Warehousing	Air Transportation Water Transportation
		Retail Trade	General Freight & Trucking Office Supplies and Stationary Automobile Dealers General Merchandise
			Merchant Wholesalers
	Leisure & Hospitality	Accommodation & Food Services	Hotels Full Service Restaurants
		Arts, Entertainment & Recreation	Amusement, Gambling and Recreation Performing Arts Companies
	Financial Activities	Finance & Insurance	Insurance Carriers Deposit Credit Intermediation (banks)
		Real Estate & Rental & Leasing	Real Estate Rental and Leasing Services
	Information	Information	Telecommunications Radio and Television Broadcasting
	Professional & Business Services	Professional, Scientific & Technical Services	Advertising and Related Services Scientific Research and Development
		Administrative Support; Waste Management & Remediation Services	Facilities Support Services Waste Treatment and Disposal Adminstrative and Support Services
		Management of Companies and Enterprises	Management of Companies Offices of Bank Holding Companies
	Educational and Health Services	Educational Services	Technical and Trade Schools
		Health Care & Social Assistance	General Medical Hospitals Nursing Care Facilities
	Other Services	Other Services	General Automotive Repair
	Public Administration	Public Administration	American Indian and Alaska Native Tribal Police Protection
	Unclassified	Unclassified	Unclassified

Based on David R.H. Hiles, Monthly Labor Review, Dec. 2001. Developed by Alaska Department of Labor and Workforce Development, Research and Analysis Section

regional offices whose primary purpose is administering or overseeing other establishments of the enterprise will not be included in the sector of the enterprise itself, but rather will be counted as part of the new *Management* sector.

## 7. Educational and Health Services

The new NAICS supersector of *Educational and Health Services*, contains the two new sectors of *Educational services* and *Health care and social assistance*. The latter grouping is based on the fact that the distinction between social assistance and health care is often blurred. There are 39 industries included, 27 of which are entirely new. Some examples are Care Retirement Communities, Family Planning Centers and HMO medical centers.

## 8. Leisure and Hospitality

Of considerable interest to Alaska, with tourism's growing importance, is the new NAICS supersector of *Leisure and Hospitality*. This super-sector contains the two sectors of *Accommodation and Food Services* and *Arts, Entertainment, and Recreation*. The former is largely made up of lodging, (transferred from *SIC Services*) and food services, (transferred from *Retail Trade*). *Arts, Entertainment and Recreation* includes 25 industries, 19 of which are new. Such diverse things as bowling centers, skiing facilities, performing arts and historical sites are included in this grouping. These new sectors are expected to allow AKDOL to better monitor elements of what is commonly referred to as "the tourist industry."

## NAICS allows better analysis

While the transition to NAICS will involve some difficulties, the new system will allow for far more detailed analyses. For example, under the old SIC, *eating and drinking establishments* were considered as a single industry. NAICS differentiates between full service (pay after eating) and

fast food (pay before eating) restaurants. Because SIC did not differentiate between these types of eating establishments, the effects of economic upswings or downturns on customer behavior were difficult to estimate.

Logic would seem to indicate that periods of high employment should correlate with increased spending at full service restaurants while economic downturns will lead to fewer customers. In times of economic stress, budget conscious consumers can be expected to alter their behavior by eating out less often. But it also seems possible that time-pressed consumers might simply eat at less expensive places. If this is the case, then economic downturns may actually lead to increased business at lower priced fast food outlets. NAICS, by differentiating between these types of eating establishments, allows for such analysis. The implications for business planning are obvious.

Because NAICS is an entirely new classification system, time series data will be interrupted. Such things as the NAICS *manufacturing* sector which excludes publishing and logging employment, cannot be directly compared with the SIC division of *Manufacturing* which included those industries. BLS is attempting to reconstruct a time series for industries and sectors based on the NAICS system, but has cautioned that some NAICS changes are so significant that reconstruction will be difficult or even impossible.

## Conclusion

As with any new product, a period of adjustment will be required. Initial problems may be irritating, but as users gain familiarity, the advantages of NAICS will become clear. Not only does NAICS provide a better and more detailed picture of the modern American economy, it captures new and emerging technologies and provides a uniform and comparable system. As Alaska enters the 21<sup>st</sup> century, the NAICS system will provide a statistical tool attuned to the new era, and will allow not only national, but international comparability.