

**County/ZIP Code Business Patterns  
Draft WID Table Structures, May 2016**

**Data Tables:**

| <b>bptotals</b> Business patterns data: employment, payroll for counties, ZIP codes and other area types                                    |             |                   |  |
|---|-------------|-------------------|--|
| <b>Column</b>   | <b>Type</b> | <b>Constraint</b> | <b>Description</b>   |
| stfips  | char(2)     | Primary Key<br>1  | State FIPS code.   |
| areatype  | char(2)     | Primary Key<br>1  | Code describing type of geographic area: e.g. county, service delivery area, MSA. (Set to '41' for ZIP codes while table is non-standard.) |
| area  | char(6)     | Primary Key<br>1  | Six digit code assigned to represent a geographic area. Front fill with zeroes.  |
| periodyear  | char(4)     | Primary Key<br>2  | Character representation of calendar year (e.g. 2013).   |
| periodtype  | char(2)     | Primary Key<br>2  | Code describing type of period (e.g. annual, quarterly, monthly, etc.) .   |
| period  | char(2)     | Primary Key<br>2  | Period Code. Will be set to '00' where periodtype is annual.   |
| emprange  | char(1)     | 3                 | Denotes employment size class for data withheld to avoid disclosure or withheld because data do not meet publication standards             |
| empflag   | char(1)     | 4                 | Degree of noise infusion in variable <i>emp</i> estimates*   |
| emp   | numeric(10) |                   | Total mid-march employees with noise.  |
| qp1flag   | char(1)     | 5                 | Degree of noise infusion in variable <i>qp1</i> estimates*   |
| qp1   | numeric(10) |                   | Total first quarter payroll (\$1,000) with noise.  |
| apflag  | char(1)     | 6                 | Degree of noise infusion in variable <i>ap</i> estimates*  |
| ap  | numeric(12) |                   | Total annual payroll (\$1,000) with noise.   |
| est   | numeric(10) |                   | Total number of establishments   |
| <b>Constraint Information</b>   |             |                   |  |
| 1. Foreign Key (bptotals.stfips, bptotals.areatype, bptotals.area) references (geog.stfips, geog.areatype, geog.area)                       |             |                   |  |
| 2. Foreign Key (bptotals.periodyear, bptotals.periodtype, bptotals.period) references (period.periodyear, period.periodtype, period.period) |             |                   |  |
| 3 Foreign Key (bptotals.emprange) references (bpemprange.emprange)  |             |                   |  |
| 4 Foreign Key (bptotals.empflag) references (bpflags.bpflag)  |             |                   |  |
| 5 Foreign Key (bptotals.qp1flag) references (bpflags.bpflag)  |             |                   |  |
| 6 Foreign Key (bptotals.apflag) references (bpflags.bpflag)   |             |                   |  |

| <b>bpdetails</b> Business patterns data: employment by industry by size class counties, ZIP codes and other area types |             |                   |  |
|--|-------------|-------------------|--|
| <b>Column</b>  | <b>Type</b> | <b>Constraint</b> | <b>Description</b>   |
| stfips   | char(2)     | Primary Key<br>1  | State FIPS code.   |
| areatype   | char(2)     | Primary Key<br>1  | Code describing type of geographic area: e.g. county, service delivery area, MSA. (Set to '41' for ZIP codes while table is non-standard.) |
| area   | char(6)     | Primary Key<br>1  | Six digit code assigned to represent a geographic area. Front fill with zeroes.  |
| periodyear   | char(4)     | Primary Key<br>2  | Character representation of calendar year (e.g. 2013).   |
| periodtype   | char(2)     | Primary Key<br>2  | Code describing type of period (e.g. annual, quarterly, monthly, etc.) .   |
| period   | char(2)     | Primary Key<br>2  | Period Code. Will be set to '00' where periodtype is annual.   |

| <b>bpdetails</b> Business patterns data: employment by industry by size class counties, ZIP codes and other area types                      |            |                  |   |
|---|------------|------------------|---|
| Column  | Type       | Constraint       | Description   |
| indcodetyp  | char(2)    | Primary Key<br>3 | Code describing the indcode type.   |
| indcode**   | char(6)    | Primary Key<br>3 | A code used in the classification of establishments by type of activity in which they are engaged. For codes not six characters in length, left justify and blank (ASC(II32) fill. Either SIC or NAICS codes can be used. |
| est   | numeric(8) |                  | Total number of establishments  |
| n1_4  | numeric(8) |                  | Number of establishments: 1-4 employees   |
| n5_9  | numeric(8) |                  | Number of establishments: 5-9 employees   |
| n10_19  | numeric(8) |                  | Number of establishments: 10-19 employees   |
| n20_49  | numeric(8) |                  | Number of establishments: 20-49 employees   |
| n50_99  | numeric(8) |                  | Number of establishments: 50-99 employees   |
| n100_249  | numeric(8) |                  | Number of establishments: 100-249 employees   |
| n250_499  | numeric(8) |                  | Number of establishments: 250-499 employees   |
| n500_999  | numeric(8) |                  | Number of establishments: 500-999 employees   |
| n1000   | numeric(8) |                  | Number of establishments: 1,000 or more employees   |
| Constraint Information  |            |                  |   |
| 1. Foreign Key (bpdetail.stfips, bpdetail.areatype, bpdetail.area) references (geog.stfips, geog.areatype, geog.area)                       |            |                  |   |
| 2. Foreign Key (bpdetail.periodyear, bpdetail.periodtype, bpdetail.period) references (period.periodyear, period.periodtype, period.period) |            |                  |   |
| 3 Foreign Key (bpdetail.stfips, bpdetail.indcodetyp, bpdetail.indcode) references (indcodes.stfips, indcodes codetype, indcodes.code))      |            |                  |   |

### Lookup Tables:

| <b>bpemprange</b> Table of business pattern employment ranges for data withheld from publication. |          |                  |                                       |
|---|----------|------------------|---------------------------------------|
| Column  | Type     | Constraint       | Description                           |
| emprange  | char(1)  | Primary Key<br>1 | Number of employees in withheld data. |
| empflagdesc   | char(20) |                  | Listing of employment ranges.         |
| Constraint Information  |          |                  |                                       |
| N/A   |          |                  |                                       |

| <b>bpflags</b> Table of values representing noise infusion or explanation of reason for suppression. |           |                  |  |
|--|-----------|------------------|--|
| Column   | Type      | Constraint       | Description  |
| bpflag   | char(1)   | Primary Key<br>1 | Representation of the degree of noise infusion or explanation of reason for suppression. |
| bpflagdesc   | char(200) |                  | Description of noise infusion or suppression flags.                                      |
| Constraint Information   |           |                  |  |
| N/A  |           |                  |  |

**Standard Variable Values:**

|                 |  |                 |
|-----------------|--|-----------------|
| <b>emprange</b> | <p>. = Not Applicable<br/> <b>A = 0-19</b><br/> <b>B = 20-99</b><br/> <b>C = 100-249</b><br/> <b>E = 250-499</b><br/> <b>F = 500-999</b><br/> <b>G = 1,000-2,499</b><br/> <b>H = 2,500-4,999</b><br/> <b>I = 5,000-9,999</b><br/> <b>J = 10,000-24,999</b><br/> <b>K = 25,000-49,999</b><br/> <b>L = 50,000-99,999</b><br/> <b>M = 100,000 or More</b></p> | <b>bptotals</b> |
|-----------------|--|-----------------|

|                |   |                 |
|----------------|---|-----------------|
| <b>bpflags</b> | <p><b>G = 0 to &lt; 2% noise (low noise)</b><br/> <b>H = 2 to &lt;5% noise (medium noise)</b><br/> <b>D = Withheld to avoid disclosing data for individual companies; data are included in higher level totals. Employment or payroll field set to zero.</b><br/> <b>S = Withheld because estimate did not meet publication standards. Employment or payroll field set to zero.</b></p> | <b>bptotals</b> |
|----------------|---|-----------------|

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**\* Noise Infusion**

County Business Patterns continues to apply the Noise Infusion method of data protection that began in 2007. Noise infusion is a method of disclosure avoidance in which values for each establishment are perturbed prior to table creation by applying a random noise multiplier to the magnitude data (i.e., characteristics such as first-quarter payroll, annual payroll, and number of employees) for each company. Disclosure protection is accomplished in a manner that results in a relatively small change in the vast majority of cell values. Each published cell value has an associated noise flag, indicating the relative amount of distortion in the cell value resulting from the perturbation of the data for the contributors to the cell. The flag for 'low noise' (G) indicates the cell value was changed by less than 2 percent with the application of noise, and the flag for 'moderate noise' (H) indicates the value was changed by 2 percent or more but less than 5 percent. Cells that have been changed by 5 percent or more are suppressed from the published tables. Additionally, other cells in the table may be suppressed for additional protection from disclosure or because the quality of the data does not meet publication standards. Though some of these suppressed cells may be derived by subtraction, the results are not official and may differ substantially from the true estimate.

Source: <http://www.census.gov/econ/cbp/methodology.htm>

**\*\* Records for the following industries** must be added to the NAICCODE table and, via trigger, to INDCODES.

- 31 -- Manufacturing
- 44 -- Retail Trade
- 48 -- Transportation and Warehousing
- 99 -- Other/unknown