## FALL SURVEY OF THE EASTERN POPULATION OF GREATER SANDHILL CRANES 2020 FINAL REPORT



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This report contains data tables and charts that may be large and complex. Readers that may need help reading and interpreting the data, or that may need data presented in an alternative format to facilitate reading and interpretation, should contact the U.S. Fish and Wildlife Service's Mississippi Flyway Representatives office (612/713-5411).

## **INTRODUCTION**

The fall survey of Eastern Population (hereafter EP) of greater sandhill crane (*Grus canadensis tabida*) staging areas has been conducted throughout the Mississippi and Atlantic Flyways since 1979. The fall survey traditionally occurs during the last week of October under the assumption that the majority of EP sandhill cranes that breed in Canada have migrated to staging areas in the United States. The survey is a collaborative effort by state and federal agencies as well as citizen scientists.

We ask volunteers to visit recommended sites or sites in which cranes have been observed in previous years. Observation methods include roadside counts or point estimates (i.e., cranes departing from or arriving to a roost). Observers record date, start and stop times, location information, weather, and the number of cranes observed for each site.

This survey is not a complete census of EP sandhill cranes, but instead serves as an index of abundance. Over the past decade, EP Sandhill Cranes have expanded in both size and geographic range. The information collected allows the Service and Flyway Councils to quantify estimates and trends of EP sandhill cranes in an attempt to better manage this species.

In 2019, the Service launched the EP sandhill crane fall survey data portal (<a href="https://www.fws.gov/epsandhill/">https://www.fws.gov/epsandhill/</a>). This online platform was designed to improve survey coordination, enhance communication, reduce the burden of data entry, and provide precise information about where roosting and foraging locations occur each year. This platform provides both volunteers and the Service more refined information about habitat use and selection, as well as population distribution across the Midwest landscape and has significantly reduced the time required to coordinate the survey and analyze the data.

## **RESULTS OF SURVEY**

- In 2020, volunteers in ten states and the Province of Ontario conducted the fall EP sandhill crane survey. This year, the Service was pleased to bring Iowa in to the survey (Table 1).
- The total number of EP sandhill cranes counted across the region for the 2020 survey was 94,879 (Figure 1). This was a +6% change from the previous years' count of 89,504. The largest percentage of birds were counted in Wisconsin (52%) followed by Michigan (17%), Minnesota (12%), and Indiana (11%). Despite the Covid pandemic, the effort among states was comparable to previous survey efforts.
- Weather for the first week of the survey (October 26 31) was reported as relatively mild with average high temperatures across the surveyed region at 45 °F (7 °C) and the average low temperatures at 34 °F degrees (1 °C). There was little to no precipitation and average winds were reported as mild. However, during the following week of the survey (November 1 4), the reported average high temperatures increased to 61°F degrees (16 °C) and the average lows

were 39 °F degrees (4 °C). Again, there was little precipitation, except for trace amounts reported in portions of Indiana and Ohio and the average wind speeds were fairly mild throughout the region. This may explain the increase in observations for northern regions.

Figure 1. Total number of Eastern Population sandhill cranes counted, 1979 – 2020.

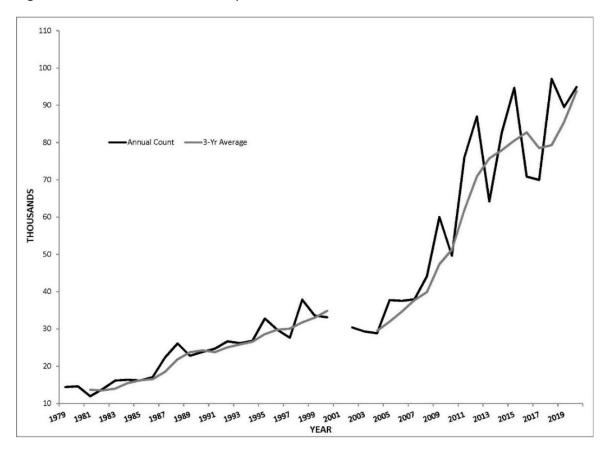


Figure 2. Total number of Eastern Population sandhill cranes counted by State, 2017 - 2020.

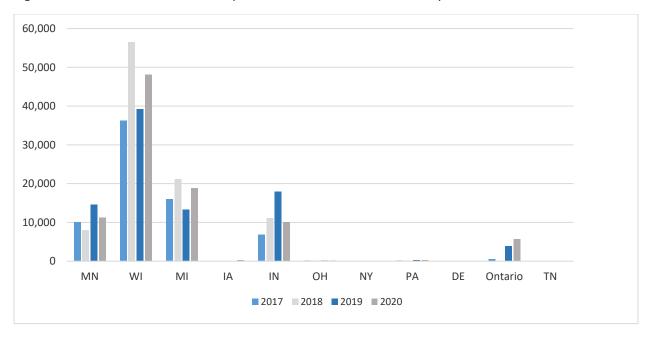
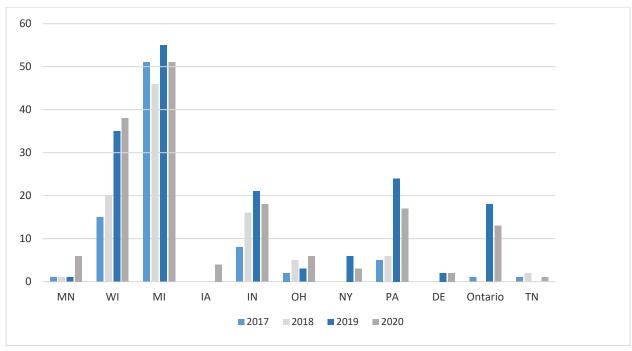
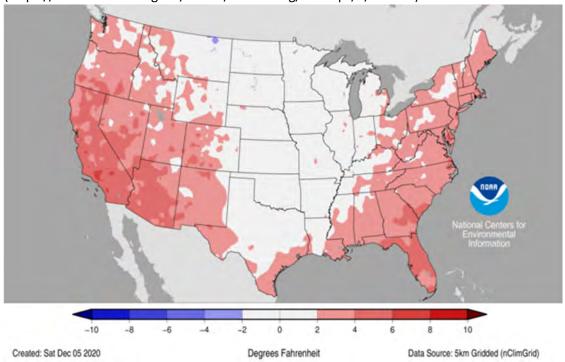


Figure 3. Total number of sites surveyed in each State, 2017 - 2020.



In 2020, please note that multiple observers may have been recorded for a single flock, which will inflate the estimate slightly.

**Figure 4.** Mean temperature departures from average for September – November 2020 (https://www.ncei.noaa.gove/access/monitoring/us-maps/3/202210).



**Figure 5.** Percent of average precipitation for September – November 2020 (https://www.ncei.noaa.gove/access/monitoring/us-maps/3/202210).

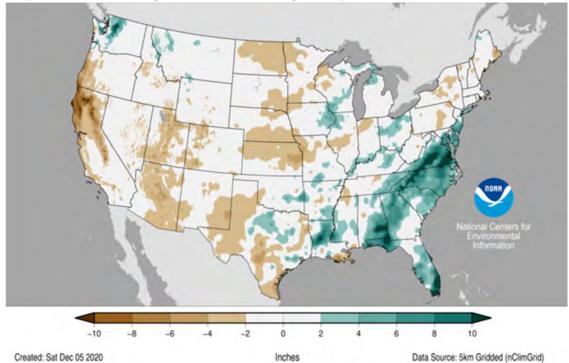


Table 1. Ten-year estimates of Eastern Population of greater sandhill cranes.

|                  |                           | 20        | 2011   |             | 2012  |            | 2013   |             | 2014   |             | 2015   |             | 2016   |            | 2017   |              | 2018   |             | 2019       |             | 2020   |  |  |
|------------------|---------------------------|-----------|--------|-------------|-------|------------|--------|-------------|--------|-------------|--------|-------------|--------|------------|--------|--------------|--------|-------------|------------|-------------|--------|--|--|
|                  | COUNTY /                  | 20        | # of   | # of        |       | # of       |        | # of        |        | # of        |        | # of        |        | # of       |        | 201          | # of   | 20          | 19<br># of | 202         | # of   |  |  |
| STATE / PROVINCE | MUNICIPALITY              | Count     | Sites  | Count       | Sites | Count      | Sites  | Count       | Sites  | Count       | Sites  | Count       | Sites  | Count      | Sites  | Count        | Sites  | Count       | Sites      | Count       | Sites  |  |  |
| Deleware         | New Castle                |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        | 10          | 1          | 16          | 2      |  |  |
| Deleware Total   |                           |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        | 10          | 1          | 16          | 2      |  |  |
| Georgia          | Jasper                    | 0         | 1      |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            |             |        |  |  |
|                  | Ware                      | 85        | 1      | 48          | 1     | 45         | 1      |             |        |             |        |             |        |            |        |              |        |             |            |             |        |  |  |
| Georgia Total    |                           | 85        | 2      | 48          | 1     | 45         | 1      |             |        |             |        |             |        |            |        |              |        |             |            |             |        |  |  |
| Indiana          | Brown                     |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 0           | 1      |  |  |
|                  | Decatur                   | 400       |        |             |       |            |        | _           |        |             |        | 400         |        |            |        |              |        | 9           | 1          |             |        |  |  |
|                  | Elkhart<br>Franklin       | 100       | 1      |             |       |            |        | 5           | 1      | 90          | 1      | 180         | 1      | 66         | 1      | 66           | 1      | 135         | 1          | 357<br>0    | 1<br>1 |  |  |
|                  | Greene                    | 1         | 1      | 9           | 1     |            |        |             |        |             |        | 2           | 1      | 2          | 1      | 0            | 1      | 9           | 1          | 0           | 1      |  |  |
|                  | Jackson                   | l '       |        | J           |       |            |        | 96          | 1      |             |        | _           |        | _          | •      | 0            | 1      | 6           | 1          | 0           | 2      |  |  |
|                  | Jasper                    | 6607      | 1      | 9602        | 1     | 8445       | 1      | 5950        | 1      | 8526        | 1      | 9966        | 1      | 5768       | 1      | 7334         | 1      | 9302        | 1          | 6983        | 3      |  |  |
|                  | Jennings                  | 4         | 1      |             |       |            |        |             |        |             |        | 4           | 1      |            |        |              |        |             |            |             |        |  |  |
|                  | Johnson                   |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 0           | 1      |  |  |
|                  | Kosciusko                 | 2         | 1      |             |       |            |        |             |        | 34          | 1      | 9           | 1      |            |        | 67           | 1      | 39          | 1          | 78          | 2      |  |  |
|                  | LaPorte                   | 427       | 1      | 525         | 1     | 545        | 1      | 656         | 1      | 1200        | 1      | 1305        | 1      | 765        | 1      | 2383         | 1      | 7500        | 1          | 1365        | 2      |  |  |
|                  | Monroe                    |           |        | 40          |       |            |        |             |        |             |        | _           |        | 0          |        | 47           | 0      | 0           | 1          | 0           | 1      |  |  |
|                  | Newton                    |           |        | 12          | 1     | 6          | 1      | 1           | 1      | 6           | 1      | 5           | 1      | 8          | 1      | 17           | 0      | 4           | 1          | 2           | 1      |  |  |
|                  | Noble<br>Steuben          | 278       | 1      | 978         | 1     | 20<br>687  | 1<br>1 | 526         | 1      | 287         | 1      | 964         | 1      | 201        | 1      | 1210         | 1      | 960         | 1          | 1200        | 1<br>1 |  |  |
|                  | Union                     | 1 -10     |        | 0,0         |       | 55,        |        | 520         |        | 231         |        | 554         | •      | 231        |        | 0            | 1      | 1           | 1          | 45          | 1      |  |  |
|                  | Whitley                   | 8         | 1      |             |       |            |        |             |        |             |        |             |        | 13         | 1      |              |        |             |            |             |        |  |  |
| Indiana Total    | •                         | 7427      | 8      | 11126       | 5     | 9703       | 5      | 7234        | 6      | 10143       | 6      | 12435       | 8      | 6823       | 7      | 11077        | 8      | 17965       | 11         | 10030       | 18     |  |  |
| lowa             | Bremer                    | T         |        | T           |       |            |        |             |        | T           |        |             |        |            |        |              |        |             |            | 75          | 1      |  |  |
|                  | Butler                    |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 5           | 1      |  |  |
|                  | Jackson                   |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 8           | 1      |  |  |
|                  | Tama                      |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 150         | 1      |  |  |
| Iowa Total       |                           |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            | 238         | 4      |  |  |
| Michigan         | Allegan                   | 572       | 1      | 197         | 1     | 64         | 1      | 428         | 1      | 465         | 1      | 1391        | 1      | 1287       | 1      | 1140         | 1      | 0           | 1          |             |        |  |  |
|                  | Barry                     | 1683      | 1      | 436         | 1     | 662        | 1      | 1010        | 1      | 930         | 1      | 203         | 1      | 127        | 1      | 70           | 1      |             |            |             |        |  |  |
|                  | Branch                    | 138       | 1      | 121         | 1     | 61         | 1      | 68          | 1      | 158         | 1      | 114         | 1      | 150        | 1      | 176          | 1      |             |            |             |        |  |  |
|                  | Calhoun                   | 6790      | 1      | 9378        | 1     | 5310       | 1      | 5732        | 1      | 4028        | 1      | 2570        | 1      | 1548       | 1      | 6928         | 1      | 2378        | 1          | 3403        | 1      |  |  |
|                  | Cass                      | 588       | 1      | 1469        | 1     | 755        | 1      |             |        | 2157        | 1      | 150         | 4      |            |        |              |        |             |            |             |        |  |  |
|                  | Charlevoix<br>Cheboygan   |           |        |             |       |            |        | 39          | 1      | 84          | 1      | 150<br>7    | 1<br>1 | 26         | 1      | 4            | 1      |             |            | 0           | 1      |  |  |
|                  | Chippewa                  |           |        |             |       | 200        | 1      | 00          | •      | 04          | •      | l '         |        | 20         | •      | -            |        |             |            | Ů           | •      |  |  |
|                  | Clinton                   | 113       | 1      |             |       | 226        | 1      | 226         | 1      | 4           | 1      |             |        |            |        |              |        |             |            |             |        |  |  |
|                  | Eaton                     |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        | 72          | 1          |             |        |  |  |
|                  | Genesee                   | 162       | 1      | 178         | 1     | 156        | 1      |             |        |             |        |             |        | 260        | 1      | 370          | 1      | 365         | 1          | 260         | 3      |  |  |
|                  | Hillsdale                 | 30        | 1      | 37          | 1     |            |        | 33          | 1      | 12          | 1      |             |        |            |        | 30           | 1      |             |            |             |        |  |  |
|                  | Ingham                    | 169       | 1      |             |       | 6          | 1      | 22          | 1      | 77          | 1      | 38          | 1      | 21         | 1      |              |        | 72          | 1          | 74          | 1      |  |  |
|                  | Ionia                     | 4         | 1      |             |       |            |        |             |        |             |        |             |        |            |        | l            |        |             |            |             |        |  |  |
|                  | losco                     | 0         | 1      | 55          | 1     | 68         | 1      | 36          | 1      | 40.40       |        | 38          | 1      | 30         | 1      | 14           | 1      | 4000        |            |             |        |  |  |
|                  | Jackson                   | 3942      | 1      | 6469        | 1     | 2921       | 1<br>1 | 3328        | 1      | 4240        | 1      | 2793        | 1      | 3266       | 1      | 3130         | 1      | 1889        | 1          | 3337        | 11     |  |  |
|                  | Kalamazoo                 | 976<br>36 | 1<br>1 | 2322<br>137 | 1     | 2289<br>72 | 1      | 2246<br>186 | 1<br>1 | 3599<br>175 | 1<br>1 | 5820<br>116 | 1<br>1 | 3223<br>17 | 1<br>1 | 2606<br>68   | 1      | 3640<br>191 | 1<br>1     | 3966<br>24  | 2      |  |  |
|                  | Lapeer<br>Lenawee         | 37        | 1      | 2           | 1     | 9          | 1      | 23          | 1      | 4           | 1      | 110         | '      | 47         | 1      | 25           | 1      | 131         | 1          | 68          | 3      |  |  |
|                  | Livingston                | 1002      | 1      | 1184        | 1     | 1261       | 1      | 757         | 1      | 295         | 1      | 905         | 1      | 917        | 1      | 308          | 1      | 1059        | 1          | 684         | 3      |  |  |
|                  | Mason                     |           |        |             |       | 40         | 1      | 33          | 1      | 80          | 1      | 318         | 1      | 418        | 1      | 554          | 1      | 434         | 1          | 214         | 12     |  |  |
|                  | Menominee                 | 107       | 1      | 297         | 1     | 198        | 1      | 2           | 1      | 197         | 1      | 103         | 1      | 192        | 1      | 42           | 1      | 181         | 1          | 62          | 2      |  |  |
|                  | Missaukee                 | 2324      | 1      | 0           | 1     | 520        | 1      | 785         | 1      | 530         | 1      |             |        |            |        |              |        |             |            |             |        |  |  |
|                  | Montcalm                  | 110       | 1      | 75          | 1     | 185        | 1      | 90          | 1      |             |        |             |        |            |        |              |        |             |            |             |        |  |  |
|                  | Muskegon                  |           |        | 34          | 1     | 2          | 1      |             |        |             |        |             |        |            |        |              |        |             |            |             |        |  |  |
|                  | Oakland                   |           |        | 69          | 1     | 98         | 1      | 76          | 1      | 165         | 1      |             |        |            |        | 74           | 1      | 106         | 1          | 196         | 1      |  |  |
|                  | Ogemaw                    | 507       | 1      | 1008        | 1     | 1400       | 1      | 1315        | 1      | 2488        | 1      | 1260        | 1      | 894        | 1      | 1027         | 1      | 1463        | 1          | 1144        | 1      |  |  |
|                  | Ottawa                    |           |        |             |       | Ī          |        |             |        | 2           | 4      |             |        | 1281       | 1      |              |        |             |            |             |        |  |  |
|                  | Presque Isle<br>Roscommon |           |        | 0           | 1     | Ī          |        |             |        | 2           | 1      |             |        | 1705       | 1      | 2210         | 1      | 990         | 1          | 572         | 1      |  |  |
|                  | Roscommon<br>Saginaw      |           |        | 206         | 1     | 586        | 1      | 569         | 1      | 768         | 1      | 679         | 1      | 1705       | 1      | 2310<br>1520 | 1<br>1 | 990         | 1          | 573<br>1933 | 1<br>2 |  |  |
|                  | Schoolcraft               |           |        | 200         | '     | 300        | '      | 508         |        | 2           | 1      | 0/9         | '      | 2          | 1      | 0            | 1      | 0           | 1          | 0           | 2      |  |  |
|                  | Shiawassee                | 379       | 1      | 626         | 1     | 812        | 1      | 1141        | 1      | 1881        | 1      | 2156        | 1      | 265        | 1      | 486          | 1      | 73          | 1          | 2936        | 3      |  |  |
|                  | St. Joseph                |           |        | 364         | 1     | 324        | 1      | 500         | 1      | 193         | 1      |             |        |            |        |              |        | 283         | 1          |             |        |  |  |
|                  | Washtenaw                 | 193       | 1      | 121         | 1     | 90         | 1      | 310         | 1      | 531         | 1      | 195         | 1      | 352        | 1      | 245          | 1      | 25          | 1          |             |        |  |  |
| Michigan Total   |                           | 19862     | 22     | 24785       | 24    | 18315      | 26     | 18955       | 24     | 23065       | 25     | 18856       | 18     | 16028      | 21     | 21127        | 22     | 13352       | 19         | 18874       | 51     |  |  |
| Minnesota        | Sherburne                 | 5352      | 1      | 4600        | 1     | 5918       | 1      | 8600        | 1      | 11331       | 1      | 7091        | 1      | 10026      | 1      | 8028         | 1      | 14578       | 1          | 11244       | 1      |  |  |
| Minnesota Total  |                           | 5352      | 1      | 4600        | 1     | 5918       | 1      | 8600        | 1      | 11331       | 1      | 7091        | 1      | 10026      | 1      | 8028         | 1      | 14578       | 1          | 11244       | 1      |  |  |
| New York         | Cayuga                    |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        | 0           | 1          |             |        |  |  |
|                  | Seneca                    |           |        |             |       | I          |        |             |        |             |        |             |        |            |        |              |        | 71          | 1          | 34          | 1      |  |  |
|                  | Wayne                     | 1         |        | I           |       | I          |        |             |        |             |        | I           |        |            |        | I            |        | 0           | 1          | 71          | 2      |  |  |
|                  | •                         |           |        |             |       |            |        |             |        |             |        |             |        |            |        |              |        |             |            |             |        |  |  |

Table 1. Ten-year estimates of Eastern Population of greater sandhill cranes.

|                    |                              | 20:           | 2011   |               | 2012   |       | 2013   |               | 2014   |               | 2015   |       | 2016  |               | 2017   |              | 2018   |               | 2019   |               | 20     |
|--------------------|------------------------------|---------------|--------|---------------|--------|-------|--------|---------------|--------|---------------|--------|-------|-------|---------------|--------|--------------|--------|---------------|--------|---------------|--------|
|                    | COUNTY /                     |               | # of   |               | # of   |       | # of   |               | # of   |               | # of   |       | # of  |               | # of   |              | # of   |               | # of   |               | # of   |
| STATE / PROVINCE   | MUNICIPALITY                 | Count         | Sites  | Count         | Sites  | Count | Sites  | Count         | Sites  | Count         | Sites  | Count | Sites | Count         | Sites  | Count        | Sites  | Count         | Sites  | Count         | Sites  |
| Ohio               | Lucas                        |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        |               |        | 12            | 1      |
|                    | Ottawa                       |               |        |               |        |       |        |               |        |               |        |       |       |               |        | 0            | 1      | 4             | 1      | 10            | 1      |
|                    | Trumbull                     |               |        | l             |        |       |        |               |        |               |        |       |       |               |        | 41           | 1      |               |        |               |        |
|                    | Wayne                        | 89            | 1      | 47            | 1      | 47    | 1      | 105           | 1      | 78            | 1      | 110   | 1     | 165           | 1      | 137          | 1      | 212           | 1      | 45            | 1      |
|                    | Williams                     |               |        |               |        |       |        |               |        |               |        |       |       |               |        | 0            | 1      |               |        | 140           | 2      |
|                    | Wyandot                      |               |        |               |        |       |        |               |        |               |        |       |       |               |        | 0            | 1      |               |        | 0             | 1      |
| Ohio Total         |                              | 89            | 1      | 47            | 11     | 47    | 1      | 105           | 1      | 78            | 1      | 110   | 1     | 165           | 1      | 178          | 5      | 216           | 2      | 207           | 6      |
| Ontario            | Algoma District              |               |        |               |        |       |        |               |        |               |        |       |       | 563           | 1      |              |        |               |        |               |        |
|                    | Dufferin                     |               |        |               |        |       |        |               |        |               |        | 004   |       |               |        |              |        | 543           | 1<br>1 | 000           |        |
|                    | Haldimand-Norfolk<br>Renfrew |               |        |               |        |       |        |               |        |               |        | 224   | 1     |               |        |              |        | 64            | 1      | 262<br>1027   | 1<br>6 |
|                    | Simcoe                       |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 1517          | 1      | 1348          | 2      |
|                    | Victoria                     |               |        |               |        |       |        |               |        |               |        | 298   | 1     |               |        |              |        | 1732          | 1      | 2500          | 3      |
|                    | Wellington                   |               |        |               |        |       |        |               |        |               |        | 200   | ·     |               |        |              |        |               | ·      | 527           | 1      |
| Ontario Total      | . 5                          |               |        |               |        |       |        |               |        |               |        | 522   | 2     | 563           | 1      |              |        | 3856          | 4      | 5664          | 13     |
| Pennsylvania       | Berks                        |               |        |               |        |       |        |               |        |               |        | ULL   |       | 500           | •      |              |        | 0000          |        | 6             | 1      |
|                    | Bradford                     |               |        |               |        | 7     | 1      | 17            | 1      | 29            | 1      |       |       |               |        | 4            | 1      | 0             | 1      | 7             | 2      |
|                    | Crawford                     |               |        |               |        | 71    | 1      | 67            | 1      | 84            | 1      | 96    | 1     | 76            | 1      | 71           | 1      | 195           | 1      | 77            | 5      |
|                    | Erie                         |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 5             | 1      |               |        |
|                    | Lackawanna                   |               |        |               |        |       |        |               |        |               |        |       |       | 6             | 1      | 3            | 1      | 4             | 1      | 3             | 1      |
|                    | Lancaster                    |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 1             | 1      |               |        |
|                    | Lawrence                     |               |        |               |        | 17    | 1      | 4             | 1      | 26            | 1      | 37    | 1     | 58            | 1      | 20           | 1      | 56            | 1      | 139           | 3      |
|                    | Mercer                       |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 9             | 1      | 20            | 2      |
|                    | Pike                         |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 0             | 1      |               |        |
|                    | Somerset                     |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 0             | 1      |               |        |
|                    | Sullivan                     |               |        |               |        | 3     | 1      | 3             | 1      | 2             | 1      | 7     | 1     | 30            | 1      | 5            | 1      | 4             | 1      | 11            | 2      |
|                    | Susquehanna                  |               |        |               |        |       |        | 2             | 1      |               |        |       |       |               |        |              |        | _             |        |               |        |
|                    | Tioga                        |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              |        | 0             | 1      |               |        |
|                    | Wayne<br>Wyoming             |               |        |               |        |       |        |               |        |               |        |       |       |               |        | 3            | 1      | 0<br>4        | 1      | 2             | 1      |
|                    | vvyoning                     |               |        |               |        |       |        |               | _      |               |        |       | _     | 4=0           |        |              |        |               | •      |               |        |
| Pennsylvania Total | Maine                        | 07            |        | 554           |        | 98    | 4      | 93            | 5      | 141           | 4      | 140   | 3     | 170           | 4      | 106          | 6      | 278           | 13     | 265           | 17     |
| Tennessee          | Meigs                        | 87            | 1      | 551           | 1      | 48    | 1      | 175           | 1      |               |        | 22    | 1     | 0             | 1      | 0            | 1      |               |        | 67            |        |
|                    | Obion                        |               |        |               |        |       |        |               |        |               |        |       |       |               |        |              | 1      |               |        |               | 1      |
| Tennessee Total    |                              | 87            | 1      | 551           | 1      | 48    | 1      | 175           | 1      |               |        | 22    | 1     | 0             | 1      | 0            | 2      |               |        | 67            | 1      |
| Wisconsin          | Adams                        | 706           | 1      | 40040         |        | 13327 |        | 04000         |        | 455           | 1      | 44070 |       | 405           | 1      | 0000         |        | 4.45.40       | 1      | 347           | 1<br>9 |
|                    | Burnett<br>Columbia          | 12957<br>2368 | 1<br>1 | 12016<br>4438 | 1<br>1 | 2263  | 1<br>1 | 21222<br>3928 | 1<br>1 | 11352<br>5068 | 1<br>1 | 11279 | 1     | 10929<br>2962 | 1<br>1 | 9022<br>7222 | 1<br>1 | 14543<br>2498 | 1      | 10935<br>6731 | 6      |
|                    | Dodge                        | 5267          | 1      | 5465          | 1      | 593   | 1      | 120           | 1      | 0             | 1      |       |       | 2814          | 1      | 2152         | 1      | 7324          | 1      | 7490          | 1      |
|                    | Fond du Lac                  | 3207          | '      | 0             | 1      | 0     | 1      | 120           | '      | Ů             | '      |       |       | 2014          |        | 2132         |        | 7324          |        | 7430          |        |
|                    | lowa                         |               |        | 2539          | 1      | 1733  | 1      |               |        | 2131          | 1      |       |       |               |        |              |        |               |        | 172           | 1      |
|                    | Juneau                       |               |        | 2518          | 1      | 1940  | 1      | 1111          | 1      | 1227          | 1      |       |       |               |        | 2085         | 1      | 1881          | 1      | 90            | 1      |
|                    | Kenosha                      |               |        | 451           | 1      | 4     | 1      | 296           | 1      | 112           | 1      | 0     | 1     | 467           | 1      | 0            | 1      | 4             | 1      | 498           | 1      |
|                    | Marathon                     |               |        | 2101          | 1      | 1949  | 1      | 3105          | 1      | 1210          | 1      | 2152  | 1     | 3569          | 1      | 2321         | 1      | 2697          | 1      | 1663          | 1      |
|                    | Marquette                    | 1832          | 1      | 1436          | 1      | 1501  | 1      | 1421          | 1      | 1081          | 1      |       |       |               |        |              |        | 685           | 1      |               |        |
|                    | Oconto                       |               |        |               |        |       |        |               |        |               |        |       |       |               |        | 765          | 1      | 807           | 1      | 1360          | 5      |
|                    | Outagamie                    | 558           | 1      |               |        | 19    | 1      | 622           | 1      |               |        | 107   | 1     | 2987          | 1      | 6275         | 1      | 1015          | 1      | 4572          | 1      |
|                    | Sauk                         | 1479          | 1      |               |        |       |        | 2452          | 1      |               |        |       |       | 1922          | 1      | 1900         | 1      | 2424          | 1      | 1830          | 6      |
|                    | Shawano                      | 6088          | 1      | 9333          | 1      | 1909  | 1      | 7301          | 1      | 20626         | 1      | 12525 | 1     | 8812          | 1      | 15870        | 1      | 4124          | 1      | 3680          | 1      |
|                    | Walworth                     | 641           | 1      | 1484          | 1      | 2323  | 1      |               |        | 156           | 1      | 20    | 1     | 280           | 1      |              |        |               |        | 472           | 1      |
|                    | Waupaca                      | 2017          | 1      | 532           | 1      | 421   | 1      | 2761          | 1      | 786           | 1      | 385   | 1     | 1067          | 1      | 905          | 1      | 653           | 1      | 659           | 1      |
|                    | Waushara                     | 7225          | 1      | 1969          | 1      | 00==  |        | 0400          | ,      | 555           | 1      | 5011  | ,     |               |        | 2366         | 1      | 500           |        | 257           | 1      |
|                    | Wood                         | 1988          | 1      | 1550          | 1      | 2057  | 1      | 3193          | 1      | 5159          | 1      | 5214  | 1     |               |        | 5674         | 1      | 523           | 1      | 7413          | 1      |
| Wisconsin Total    |                              | 43126         | 12     | 45832         | 14     | 30039 | 14     | 47532         | 12     | 49918         | 14     | 31682 | 8     | 36214         | 11     | 56557        | 13     | 39178         | 13     | 48169         | 38     |
| Grand Total        |                              | 76028         | 47     | 86989         | 47     | 64213 | 53     | 82694         | 50     | 94676         | 51     | 70858 | 42    | 69989         | 47     | 97073        | 57     | 89504         | 67     | 94879         | 154    |