# WETLAND WILDLIFE POPULATIONS 

Wetland Wildlife Populations and Research
102 23rd Street
Bemidji, MN 56601
(218) 308-2282

## 2020 WATERFOWL BREEDING POPULATION SURVEY MINNESOTA

Due to Covid-19 restrictions this survey was not conducted.

## WATERFOWL POPULATION STATUS, 2020.

Waterfowl information is taken from the U.S. Fish and Wildlife Service report Waterfowl Population Status, 2020 by Joshua Dooley and Nathan Zimpfer. The entire report is available on the Division of Migratory Bird Management website https://www.fws.gov/birds/surveys-and-data/reports-and-publiccations.php

Note: Due to the COVID-19 (SARS-CoV-2) pandemic, most migratory breeding surveys (e.g., the Breeding Waterfowl Population and Habitat Survey, Breeding Bird Survey, and others) conducted by the U.S. Fish and Wildlife Service, Canadian Wildlife Service, US Geological Survey, as well as state and provincial agencies were canceled in spring 2020. We therefore present no status information on any duck species as all the estimates or indices for ducks rely on these surveys. We refer the reader to the 2019 Waterfowl Status report for more detailed historical data.

## MOURNING DOVE POPULATION STATUS, 2020

Mourning dove information is taken from the U.S. Fish and Wildlife Service report by Seamans, M.E. 2020. Mourning dove population status, 2020. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. 23 pp. The entire report is available on the Division of Migratory Bird Management web site
(Mourning Dove Population Status 2020 (fws.gov)).


Figure

1. Breeding and wintering ranges of the mourning dove (adapted from Mirarchi and Baskett 1994). (From: Seamans, M.E. 2020. Mourning dove population status, 2020. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. 23 pp.)


Figure 2. Mourning dove management units with 2019-20 hunting and non-hunting states. (From: Seamans, M.E. 2020. Mourning dove population status, 2020. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. 23 pp.)

## CMU



Figure 3. Estimates and $95 \%$ confidence intervals of mourning dove absolute abundance by in the Central Management Unit (CMU), 2003-19. Estimates based on band recovery and harvest data. (From: Seamans, M.E. 2020. Mourning dove population status, 2020. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. 23 pp.)

Table 1. Preliminary estimates and $95 \%$ confidence intervals (Cl, expressed as the interval half width in percent) of mourning dove harvest and hunter activity for the Central management unit during the 2017, 2018 and 2019 seasons ${ }^{\text {a }}$. (From: Seamans, M.E. 2020. Mourning dove population status, 2020. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. 23 pp.)

| Management | Active Hunters |  |  | Hunter Days Afield |  |  | Total Harvest |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| CENTRAL | 332,200 ${ }^{\text {a }}$ | 332,900 | 337,700 ${ }^{\text {a }}$ | $\begin{array}{r} 1,058,800 \\ \pm 11 \end{array}$ | $\begin{aligned} & 852,100 \\ & \pm 53,100 \end{aligned}$ | $\begin{aligned} & \hline 986,800 \\ & \pm 50,800 \end{aligned}$ | $\begin{array}{r} \hline 5,462,800 \\ \pm 10 \end{array}$ | $\begin{array}{r} 4,749,100 \\ \pm 283,900 \end{array}$ | $\begin{aligned} & 5,266,400 \\ & \pm 335,500 \end{aligned}$ |
| AR | $\begin{array}{r} 16,200 \\ \pm 29 \\ \hline \end{array}$ | $\begin{aligned} & 12,400 \\ & \pm 2,700 \end{aligned}$ | $\begin{array}{r} 14,200 \\ \pm 2,200 \end{array}$ | $\begin{array}{r} 35,500 \\ \pm 30 \\ \hline \end{array}$ | $\begin{array}{r} 24,500 \\ \pm 5,200 \end{array}$ | $\begin{array}{r} 37,500 \\ \pm 7,100 \end{array}$ | $\begin{array}{r} 287,100 \\ \pm 35 \end{array}$ | $\begin{array}{r} 170,600 \\ \pm 44,700 \end{array}$ | $\begin{array}{r} \hline 328,100 \\ \pm 74,800 \end{array}$ |
| CO | $\begin{array}{r} 11,300 \\ \pm 19 \end{array}$ | $\begin{aligned} & 10,000 \\ & \pm 1,200 \end{aligned}$ | $\begin{array}{r} 10,700 \\ \pm 800 \end{array}$ | $\begin{array}{r} 24,100 \\ \pm 20 \end{array}$ | $\begin{aligned} & 20,200 \\ & \pm 2,700 \end{aligned}$ | $\begin{aligned} & 22,800 \\ & \pm 2,000 \end{aligned}$ | $\begin{array}{r} 117,600 \\ \pm 25 \end{array}$ | $\begin{array}{r} 121,500 \\ \pm 17,300 \end{array}$ | $\begin{array}{r} 106,300 \\ \pm 9,50 \end{array}$ |
| IA | $\begin{array}{r} 11,200 \\ \pm 13 \\ \hline \end{array}$ | $\begin{array}{r} 9,000 \\ \pm 1,000 \\ \hline \end{array}$ | $\begin{array}{r} 3,600 \\ \pm 400 \\ \hline \end{array}$ | $\begin{array}{r} 28,300 \\ \pm 17 \\ \hline \end{array}$ | $\begin{aligned} & 23,500 \\ & \pm 3,100 \end{aligned}$ | $\begin{array}{r} 11,000 \\ \pm 1,800 \\ \hline \end{array}$ | $\begin{array}{r} 134,900 \\ \pm 16 \end{array}$ | $\begin{aligned} & \hline 107,800 \\ & \pm 12,300 \end{aligned}$ | $\begin{array}{r} \hline 29,900 \\ \pm 4,700 \\ \hline \end{array}$ |
| KS | $\begin{array}{r} \hline 21,800 \\ \pm 24 \end{array}$ | $\begin{array}{r} 22,900 \\ \pm 4,100 \\ \hline \end{array}$ | $\begin{array}{r} 22,300 \\ \pm 1,900 \\ \hline \end{array}$ | $\begin{array}{r} 58,300 \\ \pm 35 \end{array}$ | $\begin{array}{r} 44,300 \\ \pm 7,800 \\ \hline \end{array}$ | $\begin{array}{r} 64,800 \\ \pm 8,500 \\ \hline \end{array}$ | $\begin{array}{r} 290,600 \\ \pm 34 \end{array}$ | $\begin{aligned} & 337,600 \\ & \pm 75,000 \end{aligned}$ | $\begin{aligned} & 389,800 \\ & \pm 64,200 \end{aligned}$ |
| MN | $\begin{array}{r} 6,800 \\ \pm 63 \\ \hline \end{array}$ | $\begin{array}{r} 7,100 \\ \pm 2,500 \\ \hline \end{array}$ | $\begin{array}{r} 3,900 \\ \pm 1,400 \\ \hline \end{array}$ | $\begin{array}{r} 16,200 \\ \pm 45 \\ \hline \end{array}$ | $\begin{array}{r} 16,900 \\ \pm 5,500 \\ \hline \end{array}$ | $\begin{array}{r} 9,400 \\ \pm 2,300 \\ \hline \end{array}$ | $\begin{array}{r} 39,100 \\ \pm 30 \\ \hline \end{array}$ | $\begin{array}{r} 55,300 \\ \pm 14,000 \\ \hline \end{array}$ | $\begin{array}{r} 40,200 \\ \pm 11,800 \\ \hline \end{array}$ |
| MO | $\begin{array}{r} 27,400 \\ \pm 13 \end{array}$ | $\begin{array}{r} 26,000 \\ \pm 2,300 \\ \hline \end{array}$ | $\begin{array}{r} 21,100 \\ \pm 1,500 \\ \hline \end{array}$ | $\begin{array}{r} 65,700 \\ \pm 16 \end{array}$ | $\begin{array}{r} 48,300 \\ \pm 4,400 \\ \hline \end{array}$ | $\begin{array}{r} 47,100 \\ \pm 3,800 \\ \hline \end{array}$ | $\begin{array}{r} 367,200 \\ \pm 18 \end{array}$ | $\begin{aligned} & 309,400 \\ & \pm 37,800 \end{aligned}$ | $\begin{aligned} & \hline 268,000 \\ & \pm 28,400 \end{aligned}$ |
| MT | $\begin{array}{r} 1,300 \\ \pm 57 \end{array}$ | $\begin{aligned} & 1,200 \\ & \pm 400 \end{aligned}$ | $\begin{aligned} & 1,600 \\ & \pm 400 \end{aligned}$ | $\begin{array}{r} 2,200 \\ \pm 63 \end{array}$ | $\begin{array}{r} 3,500 \\ \pm 1,100 \end{array}$ | $\begin{array}{r} 3,600 \\ \pm 800 \end{array}$ | $\begin{array}{r} 8,900 \\ \pm 45 \end{array}$ | $\begin{array}{r} 9,800 \\ \pm 2,200 \end{array}$ | $\begin{aligned} & 16,600 \\ & \pm 4,600 \end{aligned}$ |
| NE | $\begin{array}{r} 12,300 \\ \pm 16 \end{array}$ | $\begin{aligned} & 11,600 \\ & \pm 1,300 \end{aligned}$ | $\begin{array}{r} 10,700 \\ \pm 1,000 \\ \hline \end{array}$ | $\begin{array}{r} 31,000 \\ \pm 15 \end{array}$ | $\begin{array}{r} 33,700 \\ \pm 4,900 \\ \hline \end{array}$ | $\begin{array}{r} 24,500 \\ \pm 2,500 \\ \hline \end{array}$ | $\begin{array}{r} 177,900 \\ \pm 16 \end{array}$ | $\begin{array}{r} 189,100 \\ \pm 33,800 \end{array}$ | $\begin{array}{r} 137,700 \\ \pm 14,100 \end{array}$ |
| NM | $\begin{array}{r} 5,500 \\ \pm 57 \\ \hline \end{array}$ | $\begin{array}{r} 9,900 \\ \pm 1,000 \end{array}$ | $\begin{array}{r} 8,300 \\ \pm 700 \\ \hline \end{array}$ | $\begin{array}{r} 16,800 \\ \pm 70 \end{array}$ | $\begin{array}{r} 28,200 \\ \pm 3,400 \\ \hline \end{array}$ | $\begin{aligned} & 28,800 \\ & \pm 4,100 \end{aligned}$ | $\begin{array}{r} 73,900 \\ \pm 51 \end{array}$ | $\begin{array}{r} 126,900 \\ \pm 20,100 \end{array}$ | $\begin{aligned} & \hline 125,400 \\ & \pm 22,000 \end{aligned}$ |
| ND | $\begin{array}{r} 4,100 \\ \pm 26 \\ \hline \end{array}$ | $\begin{aligned} & 3,900 \\ & \pm 600 \end{aligned}$ | $\begin{array}{r} 4,100 \\ \pm 500 \end{array}$ | $\begin{array}{r} 11,400 \\ \pm 31 \end{array}$ | $\begin{array}{r} 11,800 \\ \pm 2,800 \\ \hline \end{array}$ | $\begin{array}{r} 11,900 \\ \pm 2,000 \\ \hline \end{array}$ | $\begin{array}{r} 59,400 \\ \pm 26 \end{array}$ | $\begin{array}{r} 65,200 \\ \pm 15,100 \end{array}$ | $\begin{array}{r} 75,000 \\ \pm 19,500 \end{array}$ |
| OK | $\begin{array}{r} 17,500 \\ \pm 16 \end{array}$ | $\begin{array}{r} 13,600 \\ \pm 2,100 \end{array}$ | $\begin{array}{r} 14,800 \\ \pm 1,200 \end{array}$ | $\begin{array}{r} 45,600 \\ \pm 24 \end{array}$ | $\begin{array}{r} 29,200 \\ \pm 4,600 \\ \hline \end{array}$ | $\begin{aligned} & 38,000 \\ & \pm 4,200 \end{aligned}$ | $\begin{array}{r} 315,600 \\ \pm 29 \\ \hline \end{array}$ | $\begin{array}{r} 181,300 \\ \pm 30,500 \end{array}$ | $\begin{aligned} & 247,900 \\ & \pm 26,700 \end{aligned}$ |
| SD | $\begin{array}{r} 5,700 \\ \pm 22 \\ \hline \end{array}$ | $\begin{array}{r} 4,900 \\ \pm 600 \\ \hline \end{array}$ | $\begin{array}{r} 4,700 \\ \pm 600 \\ \hline \end{array}$ | $\begin{array}{r} 18,400 \\ \pm 26 \\ \hline \end{array}$ | $\begin{array}{r} 11,500 \\ \pm 1,600 \\ \hline \end{array}$ | $\begin{array}{r} 15,500 \\ \pm 2,700 \\ \hline \end{array}$ | $\begin{array}{r} 111,600 \\ \pm 31 \end{array}$ | $\begin{array}{r} 69,400 \\ \pm 10,600 \\ \hline \end{array}$ | $\begin{array}{r} 103,300 \\ \pm 19,100 \end{array}$ |
| TX | $\begin{array}{r} 190,500 \\ \pm 13 \end{array}$ | $\begin{array}{r} 199,100 \\ \pm 18,100 \\ \hline \end{array}$ | $\begin{array}{r} 216,300 \\ \pm 13,100 \\ \hline \end{array}$ | $\begin{array}{r} 703,300 \\ \pm 17 \\ \hline \end{array}$ | $\begin{array}{r} 553,200 \\ \pm 51,000 \end{array}$ | $\begin{aligned} & \hline 669,000 \\ & \pm 48,800 \end{aligned}$ | $\begin{array}{r} 3,469,500 \\ \pm 14 \\ \hline \end{array}$ | $\begin{array}{r} 2,990,400 \\ \pm 260,900 \\ \hline \end{array}$ | $\begin{array}{r} 3,385,000 \\ \pm 315,600 \\ \hline \end{array}$ |
| WY | $\begin{aligned} & 700 \\ & \pm 42 \end{aligned}$ | $\begin{aligned} & 1,400 \\ & \pm 300 \end{aligned}$ | $\begin{aligned} & 1,300 \\ & \pm 200 \end{aligned}$ | $\begin{array}{r} 2,200 \\ \pm 84 \\ \hline \end{array}$ | $\begin{array}{r} 3,200 \\ \pm 700 \\ \hline \end{array}$ | $\begin{array}{r} 2,800 \\ \pm 500 \\ \hline \end{array}$ | $\begin{array}{r} 9,400 \\ \pm 57 \end{array}$ | $\begin{array}{r} 14,800 \\ \pm 3,100 \\ \hline \end{array}$ | $\begin{array}{r} 13,200 \\ \pm 2,200 \\ \hline \end{array}$ |

${ }^{\text {a }}$ Hunter number estimates at the Management Unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in $>1$ state. Variance is inestimable.
${ }^{b}$ No estimate available.

## AMERICAN WOODCOCK POPULATION STATUS, 2020

American Woodcock information is taken from the U.S. Fish and Wildlife Service report American Woodcock Population Status, 2020. Seamans, M.E. and R.D. Rau. U.S. Fish and Wildlife Service, Laurel, MD. 8 pp.
Note: Due to SARS-CoV-2 (i.e., coronavirus) related restrictions in Canada and the U.S. only a small portion of Singing-ground Survey routes were surveyed in 2020. The small and spatially uneven sample was not thought to be a representative sample, therefore no results from the 2020 survey are presented in this report.

The entire report is available on the Division of Migratory Bird Management home page U.S. Fish \& Wildlife Service - Migratory Bird Program | Conserving America's Birds (fws.gov)


Figure 1. Woodcock management regions, breeding range, singing-ground survey coverage. (from: Seamans, M.E. and R.D. Rau. 2020. American woodcock population status, 2020. U.S. Fish and Wildlife Service, Laurel, MD. 8 pp.).

Table 1. Short term (2018-19), 10 -year (2009-2019), and long-term (1968-2019) trends (\% change per year ${ }^{\text {a }}$ ) in the number of American woodcock heard during the Singing-ground Survey as determined by using the hierarchical log-linear modeling technique (Sauer et al. 2008) (from: Seamans, M.E. and R.D. Rau. 2019. American woodcock population status, 2019. U.S. Fish and Wildlife Service, Laurel, MD. 20 pp.).

| Management Unit/State | Number of Routes ${ }^{\text {b }}$ | $\mathrm{n}^{\text {c }}$ | 2018-19 |  |  | 2009-19 |  |  | 1968-19 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% Change | $95 \%$ Iower | $\mathrm{Cl}^{\mathrm{d}}$ upper | \% Change | $\begin{aligned} & 95 \\ & \text { lower } \end{aligned}$ | upper | \% Change | $\begin{gathered} 95 \% \\ \text { lower } \end{gathered}$ | upper |
| CENTRAL | 481 | 758 | 3.43 | -3.70 | 11.14 | -0.78 | -1.62 | 0.02 | -0.89 | -1.12 | -0.68 |
| IL | 27 | 47 | -1.65 | -67.59 | 203.75 | -1.51 | -11.05 | 9.26 | -1.09 | -3.69 | 1.66 |
| IN | 15 | 62 | -13.99 | -52.05 | 36.86 | -3.96 | -9.08 | 1.16 | -4.10 | -5.34 | -3.02 |
| MB ${ }^{\text {e }}$ | 19 | 30 | 5.33 | -21.14 | 43.99 | 0.65 | -2.56 | 4.18 | 0.18 | -1.35 | 1.65 |
| MI | 114 | 158 | 12.23 | -1.26 | 27.79 | -0.67 | -2.03 | 0.69 | -1.01 | -1.36 | -0.67 |
| MN | 87 | 124 | -6.43 | -20.03 | 9.72 | 0.43 | -1.22 | 2.15 | 0.49 | -0.06 | 1.07 |
| OH | 35 | 73 | 6.44 | -14.14 | 39.11 | -1.65 | -4.21 | 0.84 | -1.45 | -2.16 | -0.74 |
| ON | 87 | 166 | -3.32 | -17.62 | 12.65 | -2.24 | -4.17 | -0.37 | -1.32 | -1.77 | -0.88 |
| WI | 97 | 128 | 11.76 | -5.08 | 31.76 | -0.21 | -1.61 | 2.08 | -0.26 | -0.72 | 0.20 |

${ }^{a}$ Median of route trends estimated used hierarchical modeling. To estimate the total percent change over several years, use: 100(\% change $\left./ 100+1)^{y}\right)$ - 100 where $y$ is the number of years. Note: extrapolating the estimated trend statistic (\% change per year) over time (e.g., 30 years) may exaggerate the total change over the period.
${ }^{\text {b }}$ Total number of routes surveyed in 2019 for which data were received by 10 July, 2019.
${ }^{\text {c }}$ Number of routes with at least one year of non-zero data between 1968 and 2019.
${ }^{d} 95 \%$ credible interval, if the interval overlaps zero, the trend is considered non-significant.
${ }^{e}$ Manitoba began participating in the Singing-ground survey in 1992.


Figure 2. Annual indices of the number of woodcock heard on the Singing-ground Survey, 1968-2019. The dashed lines represent the 95 \% credible interval. (from: Seamans, M.E. and R.D. Rau. 2019. American woodcock population status, 2019. U.S. Fish and Wildlife Service, Laurel, MD. 20 pp.).


Figure 3. Weighted annual indices of American woodcock recruitment, 1963-2018. Dashed line is the 1963-2018 average. (from: Seamans, M.E. and R.D. Rau. 2020. American woodcock population status, 2020. U.S. Fish and Wildlife Service, Laurel, MD. 8 pp .).

Table 2. Preliminary estimates of woodcock hunter numbers, days afield, and harvest for selected states, from the 2016-17, 201718, 2018-19 and 2019-20 Harvest Information Program surveys. (from: Seamans, M.E. and R.D. Rau. 2020. American woodcock population status, 2020. U.S. Fish and Wildlife Service, Laurel, MD. 8 pp.).

| Management | Active woodcock hunters ( ${ }^{\text {a }}$ ) |  |  |  | Days afield ( ${ }^{\text {a c }}$ ) |  |  |  | Harvest ( ${ }^{\text {a }, \mathrm{c}}$ ) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
| Central Region | n.a. ${ }^{\text {b }}$ | n.a. ${ }^{\text {b }}$ | n.a. ${ }^{\text {b }}$ | n.a. ${ }^{\text {b }}$ | $\begin{aligned} & 300,200 \\ & \pm 32,500 \end{aligned}$ | $\begin{aligned} & 272,400 \\ & \pm 22,800 \end{aligned}$ | $\begin{aligned} & 246,000 \\ & \pm 35,800 \end{aligned}$ | $\begin{aligned} & 216,600 \\ & \pm 24,500 \end{aligned}$ | $\begin{array}{r} 158,000 \\ \pm 16,300 \end{array}$ | $\begin{array}{r} 140,900 \\ \pm 15,500 \end{array}$ | $\begin{array}{r} 130,600 \\ \pm 16,400 \end{array}$ | $\begin{array}{r} 136,000 \\ \pm 18,900 \end{array}$ |
| IL | $\begin{array}{r} 1,500 \\ \pm 1,000 \end{array}$ | $\begin{array}{r} 100 \\ <100 \end{array}$ | $\begin{aligned} & <100 \\ & <100 \end{aligned}$ | $\begin{array}{r} 2,300 \\ \pm 1,600 \end{array}$ | $\begin{array}{r} 13,200 \\ \pm 11,000 \end{array}$ | $\begin{array}{r} 300 \\ \pm 100 \end{array}$ | $\begin{array}{r} 100 \\ \pm 100 \end{array}$ | $\begin{aligned} & 11,300 \\ & \pm 9,300 \end{aligned}$ | $\begin{array}{r} 1,600 \\ \pm 1,400 \end{array}$ | $\begin{array}{r} 400 \\ \pm 300 \end{array}$ | $0$ | $\begin{array}{r} 3,400 \\ \pm 3,400 \end{array}$ |
| IN | $\begin{array}{r} 300 \\ \pm 200 \end{array}$ | $\begin{aligned} & 1,100 \\ & \pm 400 \end{aligned}$ | $\begin{array}{r} 100 \\ <100 \end{array}$ | $\begin{array}{r} 500 \\ \pm 300 \end{array}$ | $\begin{aligned} & 1,300 \\ & \pm 500 \end{aligned}$ | $\begin{array}{r} 2,900 \\ \pm 1,000 \end{array}$ | $\begin{array}{r} 200 \\ \pm 100 \end{array}$ | $\begin{aligned} & 1,100 \\ & \pm 500 \end{aligned}$ | $\begin{array}{r} 900 \\ \pm 200 \end{array}$ | $\begin{array}{r} 1,500 \\ \pm 1,100 \end{array}$ | $\begin{array}{r} 200 \\ \pm 100 \end{array}$ | $\begin{array}{r} 400 \\ \pm 100 \end{array}$ |
| MI | $\begin{aligned} & 24,100 \\ & \pm 2,300 \end{aligned}$ | $\begin{aligned} & 24,100 \\ & \pm 2,300 \end{aligned}$ | $\begin{aligned} & 29,300 \\ & \pm 3,700 \end{aligned}$ | $\begin{aligned} & 19,100 \\ & \pm 2,400 \end{aligned}$ | $\begin{aligned} & 107,100 \\ & \pm 11,600 \end{aligned}$ | $\begin{array}{r} 122,800 \\ \pm 15,200 \end{array}$ | $\begin{array}{r} 135,800 \\ \pm 31,900 \end{array}$ | $\begin{array}{r} 86,100 \\ \pm 12,600 \end{array}$ | $\begin{aligned} & 64,900 \\ & \pm 8,600 \end{aligned}$ | $\begin{array}{r} 66,100 \\ \pm 10,300 \end{array}$ | $\begin{array}{r} 59,600 \\ \pm 10,400 \end{array}$ | $\begin{array}{r} 64,500 \\ \pm 15,200 \end{array}$ |
| MN | $\begin{aligned} & 13,500 \\ & \pm 2,300 \end{aligned}$ | $\begin{aligned} & 11,900 \\ & \pm 2,100 \end{aligned}$ | $\begin{aligned} & 10,400 \\ & \pm 2,100 \end{aligned}$ | $\begin{array}{r} 8,700 \\ \pm 1,900 \end{array}$ | $\begin{aligned} & 46,000 \\ & \pm 8,200 \end{aligned}$ | $\begin{aligned} & 45,700 \\ & \pm 8,200 \end{aligned}$ | $\begin{aligned} & 41,500 \\ & \pm 9,700 \end{aligned}$ | $\begin{aligned} & 29,300 \\ & \pm 5,700 \end{aligned}$ | $\begin{aligned} & 25,900 \\ & \pm 4,700 \end{aligned}$ | $\begin{aligned} & 26,700 \\ & \pm 5,000 \end{aligned}$ | $\begin{aligned} & 22,500 \\ & \pm 3,900 \end{aligned}$ | $\begin{aligned} & 20,800 \\ & \pm 4,500 \end{aligned}$ |
| OH | $\begin{array}{r} 2,600 \\ \pm 900 \end{array}$ | $\begin{gathered} 1,900 \\ \pm 800 \end{gathered}$ | $\begin{array}{r} 500 \\ \pm 100 \end{array}$ | $\begin{aligned} & 1,100 \\ & \pm 900 \end{aligned}$ | $\begin{array}{r} 8,200 \\ \pm 3,700 \end{array}$ | $\begin{array}{r} 5,000 \\ \pm 1,800 \end{array}$ | $\begin{array}{r} 800 \\ \pm 300 \end{array}$ | $\begin{array}{r} 2,400 \\ \pm 1,000 \end{array}$ | $\begin{array}{r} 3,200 \\ \pm 1,300 \end{array}$ | $\begin{array}{r} 400 \\ \pm 200 \end{array}$ | $\begin{array}{r} 600 \\ \pm 400 \end{array}$ | $\begin{array}{r} 700 \\ \pm 300 \end{array}$ |
| WI | $\begin{gathered} 11,700 \\ \pm 1700 \end{gathered}$ | $\begin{aligned} & 11,700 \\ & \pm 1,800 \end{aligned}$ | $\begin{aligned} & 10,800 \\ & \pm 2,100 \end{aligned}$ | $\begin{array}{r} 9,500 \\ \pm 1,700 \end{array}$ | $\begin{aligned} & 55,100 \\ & \pm 8,900 \end{aligned}$ | $\begin{aligned} & 52,400 \\ & \pm 7,700 \end{aligned}$ | $\begin{aligned} & 45,900 \\ & \pm 9,300 \end{aligned}$ | $\begin{aligned} & 47,000 \\ & \pm 9,400 \end{aligned}$ | $\begin{aligned} & 35,100 \\ & \pm 4,400 \end{aligned}$ | $\begin{aligned} & 31,100 \\ & \pm 4,600 \end{aligned}$ | $\begin{aligned} & 25,500 \\ & \pm 4,300 \end{aligned}$ | $\begin{aligned} & 26,800 \\ & \pm 5,300 \end{aligned}$ |

a All 95\% Confidence Intervals are expressed as a \% of the point estimate.
${ }^{\text {b }}$. Regional estimates of hunter numbers cannot be obtained due to the occurrence of individual hunters being registered in the Harvest Information Program in more than one state.
${ }^{\text {c }}$. Days afield and Harvest estimates are for the entire 18 state Central Region.


Figure 4. Ten-year trends in number of American woodcock heard on the Singingground Survey; 2009-19, as determined by the hierarchical modeling method. A significant trend (S) does not include zero in the $95 \%$ credible interval, while a nonsignificant (NS) trend does include zero. (from: Seamans, M.E. and R.D. Rau. 2019. American woodcock population status, 2019. U.S. Fish and Wildlife Service, Laurel, MD. 20 pp .).


Figure 5. Long-term trends in number of American woodcock heard on the Singingground Survey; 1968-2019, as determined by the hierarchical modeling method. A significant trend (S) does not include zero in the $95 \%$ credible interval, while a nonsignificant (NS) trend does include zero. (from: Seamans, M.E. and R.D. Rau. 2019. American woodcock population status, 2019. U.S. Fish and Wildlife Service, Laurel, MD. 20 pp .).

