U.S. Fish & Wildlife Service

# Mourning Dove

*Population Status, 2011*

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U.S. Fish and Wildlife Service
Division of Migratory Bird Management
Population and Habitat Assessment Branch
11510 American Holly Drive
Laurel, MD 20708-4002

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# MOURNING DOVE POPULATION STATUS, 2011

**MARK E. SEAMANS, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Patuxent Wildlife Research Center, 11510 American Holly Drive, Laurel, MD 20708-4002**

**KERI PARKER, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Patuxent Wildlife Research Center, 11510 American Holly Drive, Laurel, MD 20708-4002**

**TODD A. SANDERS, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, 911 NE 11th Avenue, Portland, OR 97232-4181**

*Abstract*: This report summarizes information on abundance and harvest of mourning doves collected annually in the United States. For abundance, we report primarily on trends in the number of doves heard per route from the Mourning Dove Call-count Survey (CCS), but also include trends in doves seen per route from the CCS and birds heard and seen per route from the all-bird Breeding Bird Survey (BBS). Harvest and hunter participation are estimated from the Migratory Bird Harvest Information Program (HIP). The CCS-heard data provided evidence that abundance of doves decreased in all three dove management units (Eastern [EMU], Central [CMU], and Western [WMU]) during the long term (1966–2011); within the EMU, however, there is evidence that abundance decreased in hunt states but increased in nonhunt states. In the recent 10 years there was no evidence for a change in mourning dove abundance in the EMU, but there was evidence of a decline in the CMU and WMU. There was evidence for a decline in the CMU over the most recent two years, but no evidence of change in the EMU or WMU. Over the long term, trends based on CCS-heard and CCS-seen data were consistent in the WMU, but inconsistent in the EMU and CMU; based on CCS-seen data there is evidence that abundance increased in the EMU but remained unchanged in the CMU. BBS data provided evidence that the abundance of mourning doves over the long-term increased in the EMU and decreased in the CMU and WMU. Thus, over the long term, the three data sets provided consistent results only in the WMU. Current (2010) HIP estimates for mourning dove total harvest, active hunters, and total days afield in the U.S. were 17,230,400 ± 451,176 (estimate ± SE) birds, 959,900 hunters, and 3,024,200 ± 73,896 days afield. Harvest and hunter participation at the unit level were: EMU, 7,473,500 ± 256,534 birds, 403,200 hunters, and 1,167,100 ± 39,176 days afield; CMU, 7,194,900 ± 351,947 birds, 406,100 hunters, and 1,362,300 ± 58,690 days afield; and WMU, 2,562,000 ± 117,828 birds, 150,600 hunters, and 494,800 ± 21,941 days afield.

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The mourning dove (*Zenaida macroura*) is one of the most abundant bird species in urban and rural areas of North America, and is familiar to millions of people. Authority and responsibility for management of this species in the United States is vested in the Secretary of the Interior. This responsibility is conferred by the Migratory Bird Treaty Act of 1918 which, as amended, implements migratory bird treaties between the United States and other countries. Mourning doves are included in the treaties with Great Britain (for Canada) and Mexico (U.S. Department of the Interior 1988). These treaties recognize sport hunting as a legitimate use of a renewable migratory bird resource.

The annual dove harvest is estimated to be between 5 and 10% of the population (Otis et al. 2008a). Maintenance of dove populations in a healthy, productive state is a primary management goal. Management activities include population assessment, harvest regulation, and habitat management. Each year, counts of mourning doves heard and seen are conducted by state, federal, tribal, and other biologists in the 48 conterminous states to monitor mourning dove populations. The resulting information is used by wildlife administrators in setting annual hunting regulations. A history of dove hunting regulations is provided in Appendix A.

The primary purpose of this report is to facilitate the prompt distribution of timely information. Results are preliminary and may change with the inclusion of additional data.

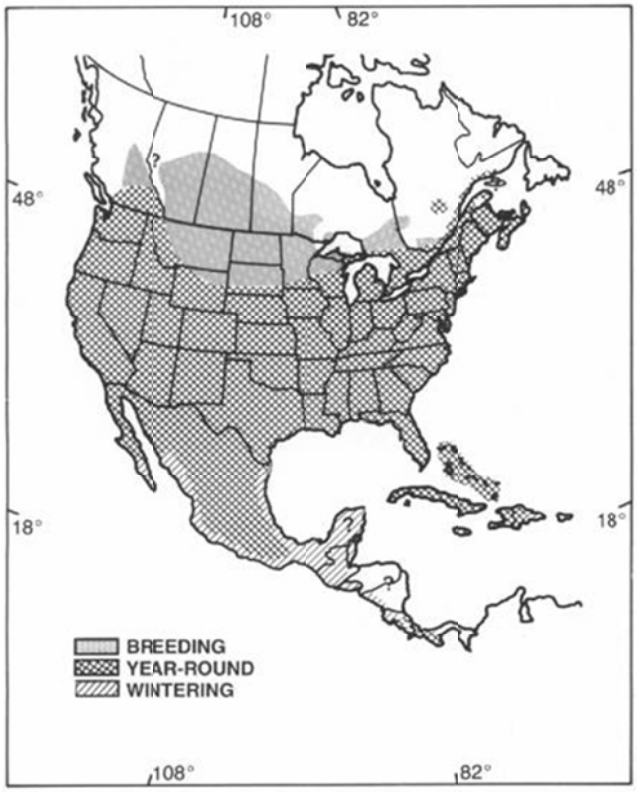


***Figure 1.*** Breeding and wintering ranges of the mourning dove (adapted from Mirarchi and Baskett 1994).

## DISTRIBUTION AND ABUNDANCE

The mourning dove is one of the most widely distributed and abundant birds in North America (Peterjohn et al. 1994, Fig. 1). The fall population for the United States was recently estimated to be about 350 million (Otis et al. 2008b). Mourning doves breed from southern Canada throughout the United States into Mexico, Bermuda, the Bahamas and Greater Antilles, and in scattered locations in Central America (Fig. 1). While mourning doves winter throughout much of the breeding range, the majority winter in the southern United States, Mexico, and south through Central America to western Panama (Aldrich 1993, Mirarchi and Baskett 1994).

## POPULATION MONITORING

### Call-count Survey

The Mourning Dove Call-count Survey (CCS) was developed to provide an annual index of abundance specifically for mourning doves (Dolton 1993). This survey is based on work by McClure (1939) in Iowa. In the United States, the survey currently includes more than 1,000 randomly selected routes, stratified by Bird Conservation Regions (Dolton 1993, Sauer et al. 2010).

CCS routes are located on secondary roads and have 20 listening stations spaced at 1-mile intervals. At each stop, the number of individual doves heard calling, the number of doves seen, and the level of disturbance (noise) that impairs the observer's ability to hear doves are recorded. Observers also record the number of doves seen while driving between stops.

Counts begin one-half hour before sunrise and take about 2 hours to complete. Routes are run once between 20 May and 5 June. Surveys are not conducted when wind velocities exceed 12 miles per hour or when it is raining or snowing.

The number of doves heard and seen during the CCS are recorded and analyzed separately. The total number of doves heard on each route is used to determine annual indices of abundance during the breeding season. Subsequently, trends in abundance over time are determined from these annual indices. A similar assessment is completed based on doves seen and results are also presented in this report, but only as supplemental information for comparison with indices and trends of doves heard.

Within the United States, there are three zones that contain mourning dove populations that are largely independent of each other (Kiel 1959). These zones encompass the principal breeding, migration, and U.S. wintering areas for each population. As suggested by Kiel (1959), these three areas were established as separate management units in 1960 (Kiel 1961). Since that time, management decisions have been made within the boundaries of the Eastern (EMU), Central (CMU), and Western (WMU) Management Units (Fig. 2). The EMU was further divided into two groups of states for analyses. States permitting dove hunting were combined into one group (hunt) and those prohibiting dove hunting into another (nonhunt). Wisconsin became a hunt state for the first time in 2003 while Minnesota became a hunt state in 2004. Additionally, some states were grouped to increase sample sizes. Maryland and Delaware were combined; Vermont, New Hampshire, Maine,

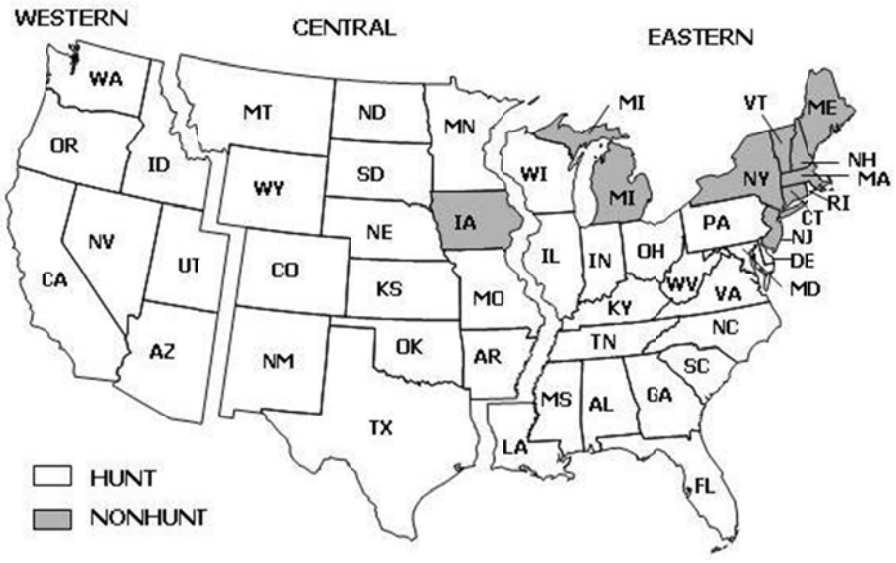


***Figure 2***. Mourning dove management units with 2010 hunt and nonhunt states.

Massachusetts, Connecticut, and Rhode Island were combined to form a New England group. Due to its small size, Rhode Island, which is a hunt state, was included in this nonhunt group of states for analysis.

## Breeding Bird Survey

The North American Breeding Bird Survey (BBS) is completed in June and is based on routes that are 24.5 miles long. Each route consists of 50 stops or point count locations at 0.5-mile intervals. At each stop, a 3-minute count is conducted whereby every bird seen within a 0.25-mile (400 m) radius or heard is recorded. Surveys start one-half hour before local sunrise and take about 5 hours to complete. Data for birds heard and seen at stops are combined for BBS analyses (doves heard and seen are analyzed separately for the CCS).

There has been considerable discussion about utilizing the BBS as a measure of mourning dove abundance. Consequently, we are including 1966–2010 BBS trend information in this report. Currently available BBS data is one year behind CCS data. Sauer et al. (1994) discussed the differences in the methodology of the two surveys. Current year BBS data are not available in time for use in regulations development during the same year. Research is currently underway to evaluate the causes of differences in estimated trends between the CCS and BBS results (e.g., Sauer et al. 2010).

## Harvest Survey

Wildlife professionals have long recognized that reliable harvest estimates are needed to monitor the impact of hunting. In the past, the USFWS estimated harvest of mourning doves from the Mail Questionnaire Survey (Martin and Carney 1977, Martin 1979). However, the sampling frame was primarily waterfowl hunters because it included only those people who bought Duck Stamps. The estimate of harvest from this survey was not the total estimate of dove harvest but rather the total estimate of dove harvest by hunters who purchased Duck Stamps. Therefore, it underestimated total dove harvest and dove hunter activity. Some states conducted dove harvest surveys, but the usefulness of these surveys in estimating dove harvest at larger scales was limited because of partial geographic coverage, the lack of consistent survey methodology, and an inability to compare survey results among states.

To remedy the limitations associated with the Mail Questionnaire Survey and using the results of state surveys, the U.S. Fish and Wildlife Service initiated the Migratory Bird Harvest Information Program (HIP). The program was established in 1992 and became fully operational on a national scale in 1999. HIP is designed to enable the U.S. Fish and Wildlife Service to conduct nationwide surveys that provide reliable annual estimates of the harvest of mourning doves and other migratory game bird species on state,

management unit, and national levels. Under HIP, states provide the U.S. Fish and Wildlife Service with the names and addresses of all licensed migratory bird hunters each year and then surveys are conducted to estimate harvest and hunter participation (total harvest, number of active hunters, total days afield, and seasonal harvest per hunter) in each state. All states except Hawaii are participating in the program.

# METHODS

## Estimation of Trends in Abundance

CCS and BBS trends were estimated using a log-linear hierarchical model and Bayesian analytical framework (Sauer et al. 2008, Sauer et al. 2010). Prior to 2010 trends were estimated using a route regression approach (Link and Sauer 1994). Both methods provide trend and annual index values that are generally comparable. The hierarchical model, however, has a more rigorous and realistic theoretical basis than the weightings used in the route regression approach, and the indices and trends are directly comparable as trends are calculated directly from the indices unlike the former assessment.

With the hierarchical model, the log of the expected value of the counts is modeled as a linear combination of strata-specific intercepts and trends, a random effect for each unique combination of route and observer, a year effect, a start-up effect on the route for first year counts of new observers, and over-dispersion. Most of the parameters of interest are treated as random effects and some parameters are hierarchical in that they are assumed to follow distributions that are governed by additional parameters. The model is fit using Bayesian methods. Markov-chain Monte Carlo methods are used to iteratively produce sequences of parameter estimates which can be used to describe the distribution of the parameters of interest. Once the sequences converge, medians and credible intervals (CI, Bayesian confidence intervals) for the parameters are determined from the subsequent replicates. Annual indices are defined as exponentiated year and trend effects, and trends are defined as ratios of the year effects at the start and end of the interval of interest, taken to the appropriate power to estimate a yearly change (Sauer et al. 2008). Trend estimates are expressed as the average percent change per year over a given time period, while indices are expressed as the number of doves heard, seen, or both heard and seen (BBS) per route.

Annual indices were calculated at the state, region (group of states), and dove management unit level. Short- (recent 2-year period), intermediate- (recent 10-year period) and long-term (all years with data) trends were evaluated for each area. We present the median and 95th percentile credible intervals for estimates. The extent to which trend credible intervals exclude zero can be interpreted as the strength of evidence for an increasing or decreasing trend. Thus, there is evidence of a positive trend if the CI > 0 and there is evidence of negative trend if the CI < 0. If the CI contains 0, then there is inconclusive evidence about trend in abundance. The reported sample sizes are the number of routes or sites on which trend estimates are based, which includes any route on which mourning doves were ever encountered in the region. For the CCS-heard data, we estimated the trend, or average annual change, in dove abundance for each area over the last 2 and 10 years and for all 46 years since survey implementation in 1966 (Table 1). Also we estimated the trend in dove abundance for each area from CCS-seen data over the same time periods, and present these as supplemental information for comparison with CCS-heard results (Table 2).

For the BBS, trends were calculated over the recent 10 years and for all 45 years since survey implementation in 1966. Current year BBS data are not available at the time of publication of this report and consequently these data are one year behind the CCS data. BBS results are presented in Table 3.

We present estimated annual indices of mourning dove abundance during 1966–2011 for management units and states based on CCS-heard data (Table 4) and CCS-seen data (Table 5). From these data, trend (point estimate) in dove abundance can be calculated for any time interval within this time period based on the ratio of the index values in the first and last year of the interval of interest. For graphical presentation we considered a trend estimate of zero (e.g., 10-year trend for Indiana; Table 1) as increasing (e.g., see Indiana in Fig. 4).


***Figure 3.*** Mourning dove abundance in the Eastern Management Unit based on the mean of the 2 CCS-heard index values from the last 2 years (2010–2011).

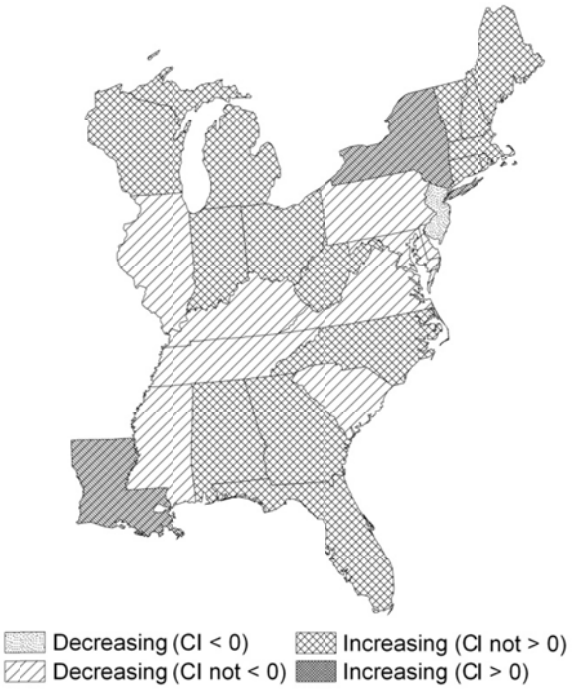


***Figure 4.*** Trend in mourning dove abundance by state in the Eastern Management Unit over the last 10 years (2002–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

# CALL-COUNT SURVEY RESULTS

## Eastern Management Unit

The EMU includes 27 states comprising 30% of the land area of the contiguous United States. Dove hunting is permitted in 19 states, representing 80% of the land area of the unit (Fig. 2).

*Abundance Indices: 2 year*.— Based on the mean of the 2 CCS-heard index values from the last 2 years, North Carolina had the highest annual count in the EMU with a mean of 41 doves per route (Fig. 3). Alabama, Georgia, Illinois, Indiana, Kentucky, Ohio, South Carolina, and Wisconsin all had 20–30 doves. The rest of the EMU states had 10–20 doves, with the exception of West Virginia, which had < 10 doves per route.

*Abundance Trends: 2 year*.— Based on CCS-heard data, there was no evidence that dove abundance changed in the EMU or in EMU hunt and nonhunt states during the recent 2 year interval (Table 1). At the state-level, there was no evidence of change in any EMU states, but the precision of trend estimates was not great during the short 2-year time period (Table 1).

*Abundance Trends: 10 and 46 year*.— According to CCS-heard data, there was no evidence of change in dove abundance in the EMU, the EMU nonhunt states, or the EMU hunt states over the last 10 years (Table 1). The only EMU states that had evidence of a change in dove abundance during the 10-year time period were Louisiana, New York and New Jersey (Table 1, Fig. 4). The trend was negative in New Jersey and positive in Louisiana and New York.

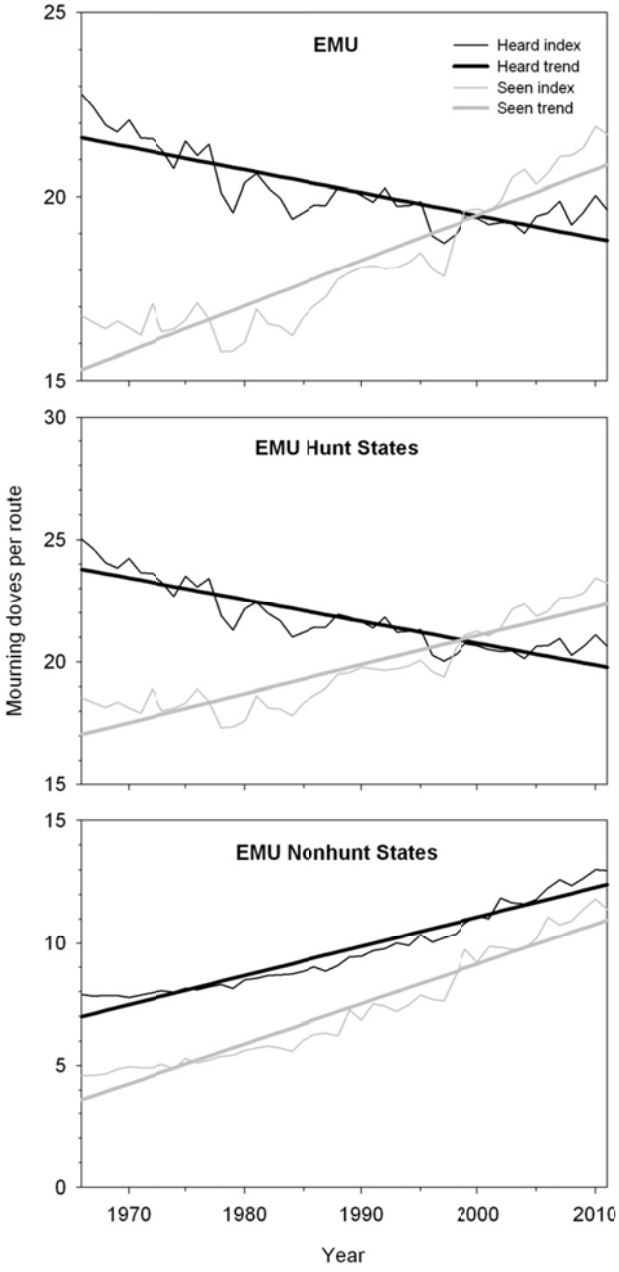


***Figure 5.*** Mourning dove abundance indices and predicted trends in the Eastern Management Unit (EMU), EMU hunt states, and EMU nonhunt states based on CCS data, 1966–2011. Trend lines are exponentiated predicted values from fitting a regression line through the log transformed annual indices.

Considering a 46-year time period, there was evidence that dove abundance decreased in the EMU and in EMU hunt states, but increased in EMU nonhunt states (Table 1, Fig. 5). At the state-level, there was evidence that doves in Louisiana, Michigan, New York, and West Virginia all increased in abundance while doves in Delaware-Maryland, Indiana, Mississippi, New Jersey, Tennessee, and Virginia all decreased in abundance during the 46-year time period (Table 1, Fig. 6). There was no evidence of a trend in dove abundance in any of the other EMU states.

Trends in dove abundance from CCS-heard and CCS-seen data were somewhat different in both the EMU and EMU hunt states during the last 10 years; CCS-heard indicated no change in abundance whereas CCS-seen indicated an increase in abundance. Trends from CCS-heard and CCS-seen data were opposite during the last 46 years for both the EMU and EMU hunt states (Tables 1 and 2, Fig. 5). Results from the two data sets were similar for EMU nonhunt states during both the 10- and 46-year periods (Tables 1 and 2, Fig. 5).

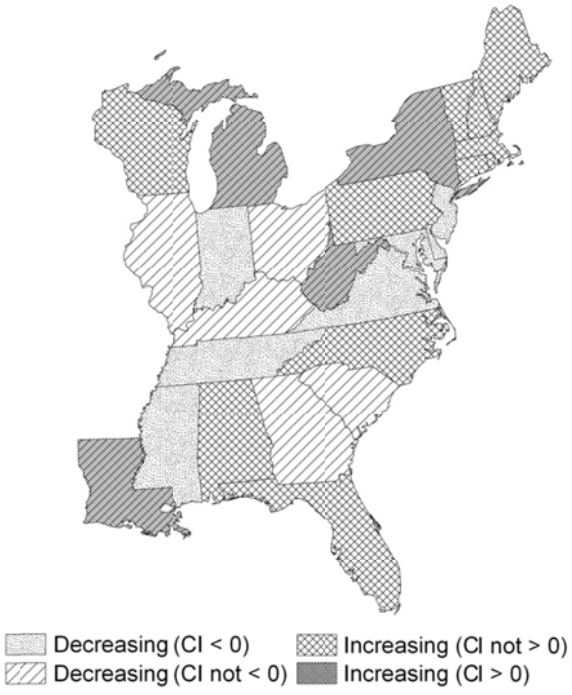


***Figure 6.*** Trend in mourning dove abundance by state in the Eastern Management Unit over the last 46 years (1966–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

## Central Management Unit

The CMU consists of 14 states, containing 46% of the land area of the contiguous United States. It has the highest population index of the 3 Units. Within the CMU, dove hunting is permitted in 13 states (Fig. 2). Iowa plans to allow hunting starting in 2011.

*Abundance Indices: 2 year*.— Kansas, Nebraska, North Dakota, and South Dakota had the most doves in the CMU based on the mean of the 2 CCS-heard index values from the last 2 years; values ranged from 40.4–49.9 doves per route (Fig. 7). Other states in the CMU were between 12.2 and 26.1 doves, with the exception of Wyoming, which was the only state in the CMU with less than 10 (6.9) doves per route.

*Abundance Trends: 2 year*.— Based on CCS-heard data there was evidence that dove abundance declined in the CMU over the last 2 years (Table 1). Declines were suggested in New Mexico, Oklahoma, and Texas, while no change was evident in other states (Table 1).

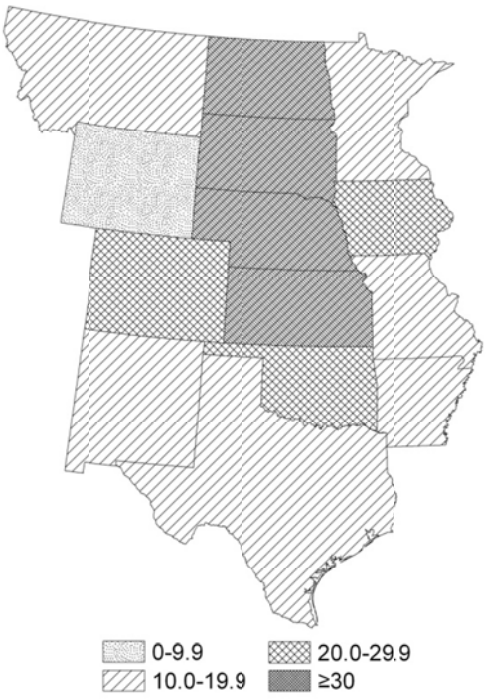


***Figure 7.*** Mourning dove abundance in the Central Management Unit based on the mean of the 2 CCS-heard index values from the last 2 years (2010–2011).

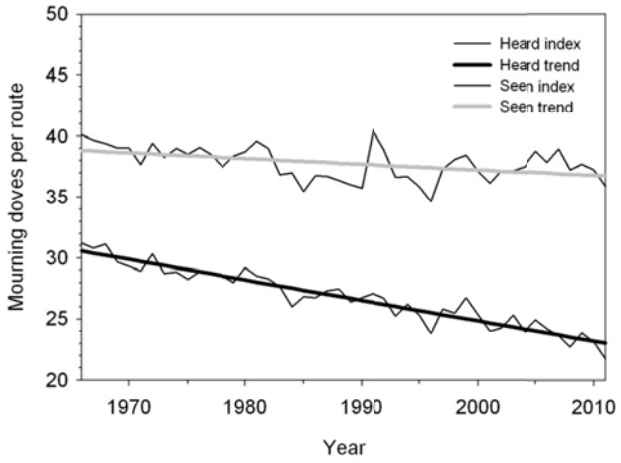


***Figure 8.*** Mourning dove abundance indices and predicted trends in the Central Management Unit based on CCS data, 1966–2011. Trend lines are exponentiated predicted values from fitting a regression line through the log transformed annual indices.

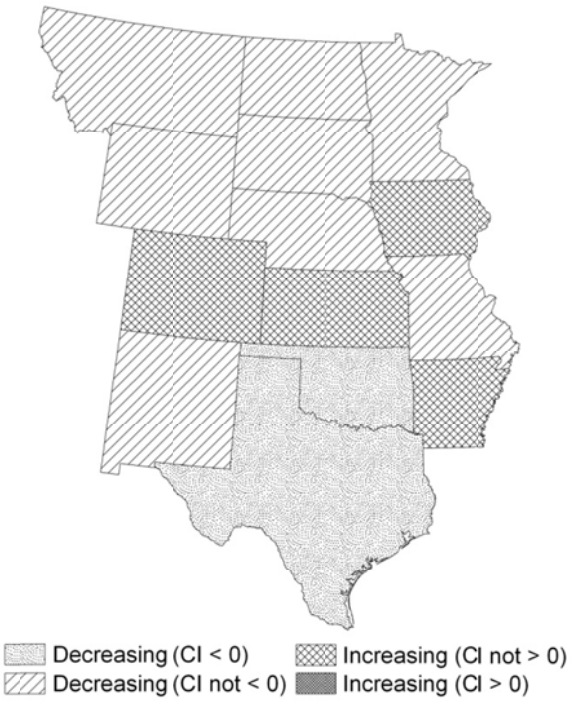


***Figure 9.*** Trend in mourning dove abundance by state in the Central Management Unit over the last 10 years (2002–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

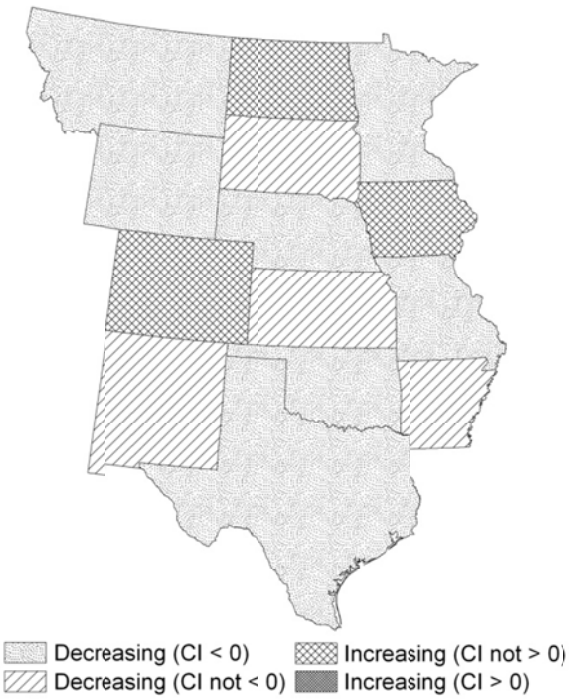


***Figure 10.*** Trend in mourning dove abundance by state in the Central Management Unit over the last 46 years (1966–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

*Abundance Trends: 10 and 46 year*.— According to CCS-heard data in the CMU, there was evidence that dove abundance declined over the last 10 years, and the last 46 years (Table 1, Fig. 8). The only states in the CMU with evidence of a change in the 10 year period were Oklahoma and Texas where dove abundance decreased (Table 1, Fig. 9). Considering the 46-year CCS-heard data, there was no evidence of an incease in abundance in any state (Table 1, Fig. 10). Seven states, Minnesota, Missouri, Montana, Nebraska, Oklahoma, Texas, and Wyoming had evidence for a decrease in dove abundance over the 46-year period (Table 1, Fig. 10). At the level of the CMU CCS-ssen data indicated no change in abundance over the last 10 or 46 years (Table 2).

## Western Management Unit

The WMU consists of 7 states and represents 24% of the land area of the contiguous United States. All states within the WMU permit mourning dove hunting (Fig. 2).


***Figure 11.*** Mourning dove abundance in the Western Management Unit based on the mean of the 2 CCS-heard index values from the last 2 years (2010–2011).

*Abundance Indices: 2 year*.— Based on the mean of the 2 CCS-heard index values from the last 2 years, Arizona had the highest number of doves per route in the WMU at 17.3 (Fig. 11). All other states in the WMU had less than 10, and values ranged from 4.5–9.7 doves per route.

*Abundance Trends: 2 year*.— There was no evidence of a change in dove abundance in the WMU, and only data from Arizona indicated a change in abundance (decline) during the last 2 years based on CCS-heard data (Table 1). The precision of trend estimates for last 2 years was not great for any state (Table 1).

*Abundance Trends: 10 and 46 year*.— Based on CCS-heard data, there was evidence that the abundance of doves declined in the WMU and in Arizona, California, and Oregon over the last 10 years (Table 1, Fig. 12). Over the last 46 years, there was also evidence that dove abundance decreased in the WMU (Table 1, Fig. 13). During this time period there was evidence of a decline in dove abundance in Arizona, California, Idaho, Oregon, and Utah (Fig. 14).

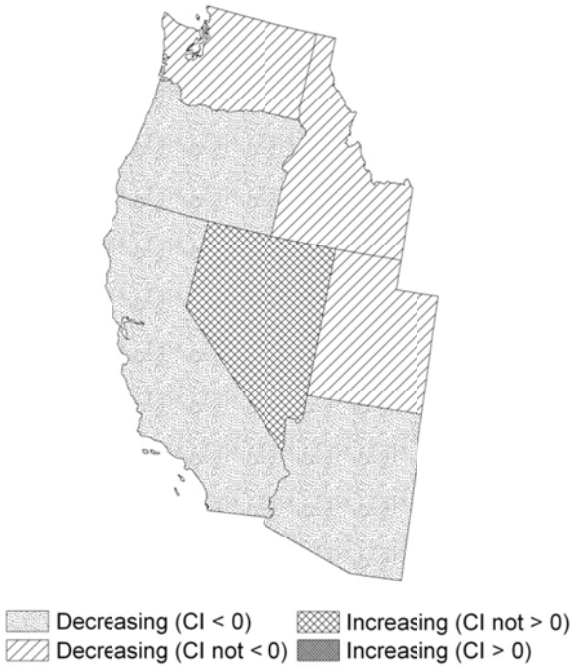


***Figure 12.*** Trend in mourning dove abundance by state in the Western Management Unit over the last 10 years (2002–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

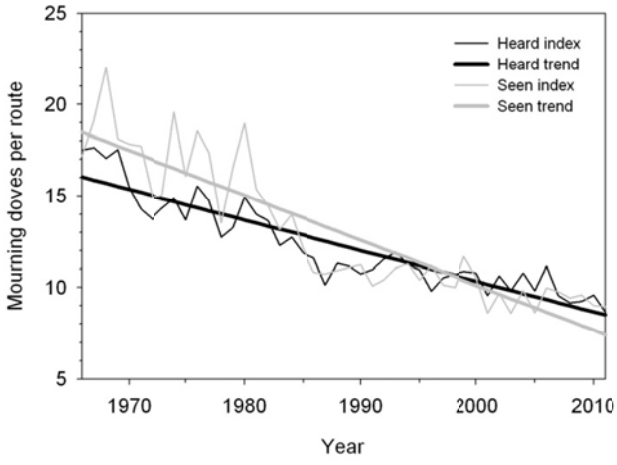


***Figure 13.*** Abundance indices and predicted trends of breeding mourning doves in the Western Management Unit, 1966–2011. Trend lines are exponentiated predicted values from fitting a regression line through the log transformed annual indices.

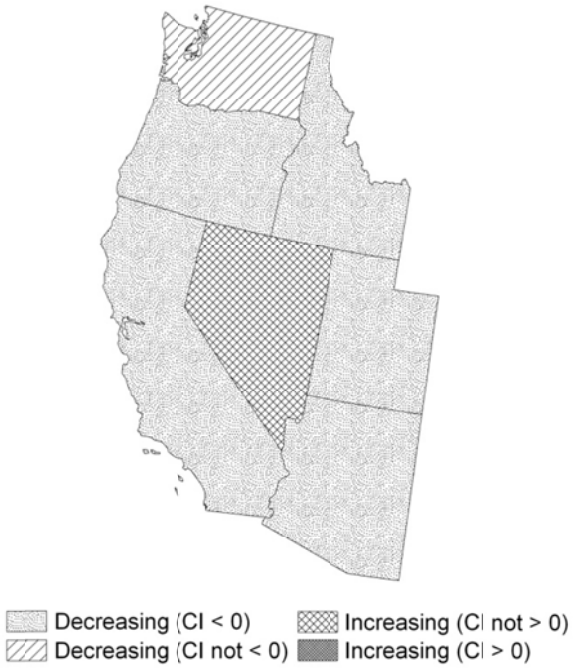


***Figure 14.*** Trend in mourning dove abundance by state in the Western Management Unit over the last 46 years (1966–2011) based on CCS-heard data. Credible intervals (CI, 95%) that exclude zero provide evidence for an increasing or decreasing trend.

At the WMU level, CCS trend results for doves heard and doves seen per route were similar during 46 year period but not the 10 year period; 10-year CCS-seen indicated no change in abundance (Tables 1 and 2).

## BREEDING BIRD SURVEY RESULTS

Here we compare 1966–2010 BBS (Table 3) and 1966–2011 CCS (Table 1, doves heard; and Table 2, doves seen) results presented in this report. The time period for these comparisons are off by 1 year, but this should be relatively inconsequential over long time periods (≥ 10 years), especially for time periods of 45 or 46 years where both intervals begin in 1966.

### Eastern Management Unit

The BBS provided evidence that dove abundance increased in the EMU and EMU hunt states during the last 10 and 45 years of available data (Table 3). Also, there was evidence that abundance in the EMU nonhunt states increased over the 45 years but there

was no evidence of change over the recent 10 years. Considering the last 10 years of available data, the BBS generally provided similar results to CCS-seen results but not to the CCS-heard results (Tables 1–3). However, over the last 45–46 years, BBS results were most consistent with CCS-seen results (Tables 2 and 3). BBS results were opposite CCS-heard in the EMU and EMU hunt states.

## Central Management Unit

In the CMU, the BBS provided evidence that doves decreased in abundance over the last 45 years, but provided no evidence that abundance changed over the last 10 years (Table 3). Over the short term, BBS results were consistent with CCS-seen, but over the long term, BBS results were most consistent with the CCS-heard (Tables 1–3).

## Western Management Unit

The BBS provided evidence that dove abundance decreased in the WMU during both the last 45 and 10 year intervals (Table 3). For the 45-year time period, BBS results are consistent with both the CCS-heard and CCS-seen results (Tables 1–3). For the 10-year time period, BBS results were inconsistent with CCS-seen results, but agreed with the CCS-heard results indicating a decline in dove abundance.

# HARVEST SURVEY ESTIMATES

Preliminary results of mourning dove harvest and hunter participation from HIP for the 2009 and 2010 hunting seasons are presented in Tables 6 and 7, respectively. Current (2010) HIP estimates indicate that in the U.S. about 17 million birds were harvested by about 1 million hunters that spent about 3 million days afield. The EMU and CMU total dove harvest represented 43% and 42% of the national harvest of doves while the WMU represented 15% (Table 7). Considering the precision of estimates, mourning dove harvest and hunter participation appeared similar during the 2009 and 2010 seasons (Tables 6 and 7).

Additional information about HIP, survey methodology, and results can be found in annual reports located at http://www.fws.gov/migratorybirds/newreportspublications/hip/hip.htm.

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***Table 1.*** Estimated trend[a] (percent change per year and lower and upper 95% credible intervals) in mourning dove abundance based on Call-count Survey **heard** data for management units and states during 46-year (1966–2011), 10-year (2002–2011), and 2-year (2010–2011) periods.

| Management Unit | 46 year | | | | 10 year | | | | 2 year | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| State | N | Trend | Lower | Upper | N | Trend | Lower | Upper | N | Trend | Lower | Upper |
| Eastern | 618 | -0.3 | -0.7 | -0.1 | 469 | 0.2 | -0.3 | 0.7 | 425 | -2.0 | -5.6 | 1.7 |
| Hunt states | 503 | -0.4 | -0.8 | -0.2 | 399 | 0.1 | -0.4 | 0.6 | 363 | -2.1 | -6.0 | 1.9 |
| AL | 47 | 0.2 | -0.4 | 0.7 | 31 | 0.3 | -1.0 | 1.8 | 28 | 1.9 | -8.1 | 14.6 |
| DE-MD | 21 | -1.1 | -2.0 | -0.1 | 16 | -0.1 | -2.3 | 2.3 | 14 | -3.4 | -20.5 | 16.1 |
| FL | 33 | 0.4 | -0.3 | 1.1 | 27 | 1.2 | -0.8 | 3.4 | 24 | 10.7 | -6.6 | 33.6 |
| GA | 33 | -0.8 | -1.5 | 0.0 | 24 | 0.9 | -1.3 | 3.7 | 22 | -0.4 | -17.2 | 20.1 |
| IL | 24 | -0.9 | -2.0 | 0.1 | 21 | -0.6 | -2.8 | 1.6 | 20 | -5.6 | -23.1 | 13.2 |
| IN | 18 | -1.1 | -1.7 | -0.5 | 15 | 0.0 | -1.7 | 2.2 | 15 | 0.1 | -14.4 | 17.1 |
| KY | 27 | -0.2 | -0.8 | 0.5 | 19 | -0.3 | -1.8 | 1.1 | 18 | -3.9 | -15.8 | 6.6 |
| LA | 25 | 1.7 | 1.0 | 2.5 | 21 | 2.0 | 0.2 | 3.7 | 19 | 0.6 | -11.7 | 13.1 |
| MS | 32 | -1.6 | -2.2 | -0.9 | 24 | -1.3 | -2.8 | 0.2 | 23 | -3.5 | -15.3 | 8.3 |
| NC | 25 | 0.3 | -0.2 | 0.8 | 22 | 0.4 | -0.8 | 1.6 | 21 | 1.8 | -7.1 | 14.0 |
| OH | 57 | -0.4 | -1.0 | 0.2 | 37 | 0.6 | -1.3 | 2.5 | 37 | -3.3 | -17.9 | 13.0 |
| PA | 20 | 0.0 | -1.0 | 0.9 | 20 | -1.8 | -5.2 | 1.1 | 17 | -19.6 | -40.5 | 3.1 |
| SC | 27 | -0.5 | -1.0 | 0.1 | 21 | -0.5 | -1.9 | 1.0 | 20 | -1.1 | -12.8 | 10.7 |
| TN | 23 | -1.8 | -2.5 | -1.1 | 15 | -1.2 | -2.9 | 0.9 | 13 | -1.3 | -15.5 | 15.3 |
| VA | 33 | -2.0 | -4.6 | -1.1 | 33 | -1.5 | -3.2 | 0.2 | 26 | -4.1 | -17.3 | 9.9 |
| WI | 23 | 0.5 | -0.3 | 1.3 | 22 | 0.7 | -2.1 | 3.5 | 17 | -13.8 | -32.8 | 9.4 |
| WV | 12 | 1.5 | 0.6 | 2.4 | 11 | 1.5 | -0.7 | 3.6 | 10 | 0.1 | -18.1 | 16.8 |
| Nonhunt states | 115 | 1.1 | 0.4 | 1.6 | 70 | 1.1 | -0.5 | 2.3 | 62 | -0.2 | -9.5 | 9.0 |
| MI | 23 | 1.1 | 0.5 | 1.7 | 20 | 0.9 | -1.0 | 2.5 | 19 | 1.9 | -11.2 | 17.8 |
| N. England[b] | 76 | 1.1 | -0.2 | 2.0 | 42 | 0.3 | -2.1 | 2.0 | 37 | 0.2 | -12.9 | 14.7 |
| NJ | 17 | -2.6 | -3.5 | -1.6 | 10 | -2.6 | -4.4 | -0.6 | 10 | -2.4 | -18.1 | 13.6 |
| NY | 22 | 2.1 | 1.4 | 2.9 | 18 | 2.3 | 0.1 | 3.9 | 15 | 0.0 | -14.9 | 12.8 |
| Central | 554 | -0.8 | -1.0 | -0.6 | 414 | -1.2 | -1.8 | -0.6 | 370 | -5.9 | -10.6 | -0.7 |
| AR | 21 | -0.6 | -1.4 | 0.2 | 18 | 0.0 | -1.7 | 2.0 | 15 | 2.2 | -11.1 | 20.5 |
| CO | 21 | 0.0 | -0.9 | 1.0 | 16 | 1.8 | -1.3 | 5.2 | 13 | 22.4 | -4.9 | 61.5 |
| IA | 19 | 0.0 | -0.7 | 0.7 | 17 | 0.6 | -1.5 | 2.8 | 16 | -4.1 | -21.0 | 13.8 |
| KS | 36 | -0.3 | -0.8 | 0.2 | 28 | 0.3 | -1.6 | 2.0 | 25 | 5.3 | -9.0 | 21.9 |
| MN | 14 | -1.4 | -2.2 | -0.6 | 13 | -1.6 | -3.7 | 0.3 | 9 | -2.7 | -17.8 | 12.8 |
| MO | 28 | -2.4 | -3.1 | -1.7 | 20 | -1.6 | -3.4 | 0.7 | 19 | -4.9 | -21.3 | 12.1 |
| MT | 32 | -1.1 | -2.2 | -0.1 | 24 | -1.9 | -5.8 | 2.0 | 17 | -8.6 | -36.6 | 31.3 |
| NE | 29 | -0.9 | -1.4 | -0.4 | 25 | -0.6 | -1.6 | 0.6 | 22 | -1.6 | -10.3 | 7.4 |
| NM | 31 | -0.7 | -1.5 | 0.1 | 28 | -0.8 | -3.7 | 2.1 | 25 | -22.1 | -39.7 | -0.7 |
| ND | 32 | 0.4 | -0.4 | 1.1 | 28 | -1.8 | -4.3 | 1.0 | 26 | -19.1 | -34.1 | 0.3 |
| OK | 25 | -1.6 | -2.5 | -0.7 | 16 | -4.0 | -7.2 | -1.1 | 16 | -28.7 | -46.7 | -7.0 |
| SD | 29 | -0.5 | -1.2 | 0.2 | 22 | -0.6 | -2.1 | 0.7 | 21 | 0.1 | -10.1 | 11.6 |
| TX | 209 | -1.2 | -1.6 | -0.8 | 138 | -4.3 | -5.4 | -3.1 | 130 | -16.7 | -24.7 | -7.9 |
| WY | 28 | -1.6 | -2.4 | -0.8 | 21 | -1.3 | -3.6 | 0.8 | 16 | -1.4 | -18.6 | 16.2 |
| Western | 286 | -1.5 | -1.8 | -1.2 | 205 | -2.3 | -3.4 | -1.1 | 155 | -9.9 | -18.7 | 0.6 |
| AZ | 72 | -1.2 | -1.8 | -0.7 | 54 | -3.3 | -5.4 | -1.0 | 38 | -28.5 | -40.6 | -13.9 |
| CA | 89 | -2.1 | -2.6 | -1.6 | 62 | -2.7 | -4.4 | -0.8 | 45 | -2.0 | -17.4 | 15.8 |
| ID | 29 | -1.6 | -2.5 | -0.8 | 23 | -2.6 | -5.5 | 0.2 | 19 | -13.7 | -34.2 | 13.8 |
| NV | 38 | 0.4 | -1.0 | 1.7 | 22 | 1.2 | -4.2 | 7.5 | 17 | 40.0 | -13.6 | 144.2 |
| OR | 26 | -2.0 | -3.0 | -1.1 | 22 | -3.7 | -7.3 | -0.7 | 16 | -8.4 | -31.8 | 21.3 |
| UT | 20 | -1.5 | -2.5 | -0.5 | 16 | -1.0 | -4.1 | 2.9 | 15 | 0.3 | -21.7 | 40.2 |
| WA | 12 | -0.6 | -2.2 | 1.0 | 6 | -0.3 | -4.2 | 3.5 | 5 | 1.4 | -26.3 | 45.0 |

[a] Trend estimated from annual indices derived from a log-linear hierarchical model fit using Bayesian methods. There is evidence of a positive trend if the CI > 0 and there is evidence of negative trend if the CI < 0. If the CI contains 0, then there is inconclusive evidence about trend in abundance.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 2.*** Estimated trend[a] (percent change per year and lower and upper 95% credible intervals) in mourning dove abundance based on Call-count Survey **seen** data for management units and states during 46-year (1966–2011), 10-year (2002–2011), and 2-year (2010–2011) periods.

| Management Unit | 46 year | | | | 10 year | | | | 2 year | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| State | N | Trend | Lower | Upper | N | Trend | Lower | Upper | N | Trend | Lower | Upper |
| Eastern | 617 | 0.6 | 0.3 | 0.8 | 468 | 1.0 | 0.4 | 1.6 | 418 | -1.1 | -5.7 | 4.0 |
| Hunt states | 502 | 0.5 | 0.2 | 0.7 | 398 | 0.9 | 0.3 | 1.5 | 361 | -0.9 | -5.9 | 4.3 |
| AL | 47 | 0.2 | -0.7 | 1.1 | 31 | 0.0 | -2.1 | 1.9 | 28 | -3.3 | -17.4 | 10.1 |
| DE-MD | 21 | 0.8 | -0.4 | 2.1 | 16 | 2.1 | -1.1 | 5.9 | 13 | -4.1 | -28.8 | 26.6 |
| FL | 33 | 3.2 | 2.3 | 4.1 | 27 | 3.9 | 0.7 | 7.1 | 23 | 16.6 | -9.2 | 53.6 |
| GA | 33 | -0.7 | -1.5 | 0.1 | 24 | -0.3 | -2.3 | 1.5 | 22 | 3.3 | -11.2 | 22.1 |
| IL | 24 | 0.2 | -1.3 | 1.5 | 21 | 0.1 | -3.0 | 3.1 | 20 | -6.1 | -28.9 | 20.5 |
| IN | 18 | -1.3 | -2.1 | -0.4 | 15 | -0.8 | -3.3 | 2.0 | 15 | -0.4 | -20.4 | 23.8 |
| KY | 26 | 0.9 | -0.1 | 1.8 | 19 | 1.1 | -1.3 | 3.5 | 18 | -0.7 | -19.9 | 20.4 |
| LA | 25 | 2.2 | 1.0 | 3.2 | 20 | 1.9 | -0.7 | 4.1 | 18 | 1.8 | -14.5 | 19.4 |
| MS | 32 | -1.4 | -2.3 | -0.5 | 24 | -1.0 | -3.2 | 1.2 | 23 | -0.6 | -17.3 | 17.8 |
| NC | 25 | 0.4 | -0.4 | 1.0 | 22 | 0.6 | -0.9 | 2.1 | 21 | 0.4 | -11.3 | 12.1 |
| OH | 57 | 1.2 | 0.4 | 2.0 | 37 | 0.5 | -1.9 | 3.0 | 37 | -10.9 | -27.6 | 9.7 |
| PA | 20 | 1.9 | 0.6 | 3.0 | 20 | 1.9 | -0.7 | 3.8 | 17 | -0.4 | -18.5 | 17.0 |
| SC | 27 | 0.8 | 0.0 | 1.6 | 21 | 0.7 | -1.2 | 2.5 | 20 | -1.0 | -16.4 | 14.5 |
| TN | 23 | 0.1 | -0.7 | 0.9 | 15 | 0.5 | -1.3 | 2.3 | 13 | -0.2 | -14.6 | 15.2 |
| VA | 33 | -0.1 | -1.3 | 0.9 | 33 | 0.3 | -2.2 | 2.7 | 27 | 5.2 | -10.3 | 25.6 |
| WI | 23 | 2.6 | 1.6 | 3.7 | 22 | 2.4 | -1.2 | 6.0 | 18 | -13.3 | -38.1 | 15.1 |
| WV | 12 | 2.7 | 1.1 | 4.1 | 11 | 2.3 | -2.8 | 6.8 | 9 | -1.3 | -34.6 | 44.1 |
| Nonhunt states | 115 | 2.0 | 0.6 | 2.8 | 70 | 1.7 | -0.6 | 3.7 | 57 | -2.6 | -20.4 | 13.7 |
| MI | 23 | 2.4 | 1.6 | 3.3 | 20 | 2.5 | 0.1 | 4.7 | 19 | 4.8 | -12.4 | 28.4 |
| N. England[b] | 76 | 1.5 | -0.6 | 2.6 | 42 | 1.8 | -0.8 | 3.8 | 32 | -3.0 | -22.1 | 12.7 |
| NJ | 17 | -0.6 | -2.0 | 0.8 | 10 | -0.7 | -3.2 | 1.8 | 10 | -0.8 | -18.2 | 19.9 |
| NY | 22 | 3.9 | 2.7 | 5.1 | 18 | 2.2 | -2.1 | 5.6 | 15 | -1.6 | -31.6 | 28.2 |
| Central | 553 | -0.3 | -0.5 | 0.0 | 414 | -0.4 | -1.0 | 0.3 | 371 | -3.5 | -8.7 | 1.6 |
| AR | 21 | -0.3 | -1.5 | 0.7 | 18 | 0.0 | -2.2 | 2.2 | 15 | -1.3 | -19.0 | 16.7 |
| CO | 21 | -0.3 | -1.3 | 0.7 | 16 | 0.1 | -2.3 | 3.2 | 14 | 8.3 | -10.9 | 40.2 |
| IA | 19 | 0.8 | 0.0 | 1.6 | 17 | 1.5 | -0.6 | 4.3 | 16 | 3.4 | -13.4 | 31.7 |
| KS | 36 | -0.2 | -0.8 | 0.6 | 28 | 0.5 | -1.0 | 2.1 | 25 | -0.8 | -14.2 | 11.8 |
| MN | 14 | -1.5 | -2.7 | -0.3 | 13 | -0.8 | -3.4 | 3.2 | 10 | -3.3 | -27.3 | 24.0 |
| MO | 28 | -1.8 | -2.6 | -1.1 | 20 | -1.8 | -3.5 | 0.1 | 20 | -1.9 | -15.0 | 13.7 |
| MT | 32 | 0.2 | -1.0 | 1.4 | 24 | -0.4 | -3.7 | 2.7 | 16 | 2.8 | -19.9 | 35.7 |
| NE | 29 | -0.1 | -0.7 | 0.6 | 25 | 0.3 | -1.3 | 2.0 | 23 | -2.2 | -16.1 | 10.3 |
| NM | 31 | -0.3 | -1.3 | 0.7 | 28 | 1.2 | -2.4 | 4.9 | 24 | -0.3 | -26.0 | 34.5 |
| ND | 32 | 0.1 | -0.8 | 1.2 | 28 | -1.1 | -4.1 | 1.6 | 26 | -9.1 | -29.2 | 16.3 |
| OK | 25 | -0.4 | -1.4 | 0.5 | 16 | -0.6 | -3.5 | 1.7 | 16 | -6.4 | -29.8 | 11.5 |
| SD | 29 | -0.2 | -0.9 | 0.6 | 22 | -0.6 | -2.7 | 1.2 | 21 | 0.1 | -14.2 | 16.0 |
| TX | 209 | 0.3 | -0.2 | 0.8 | 138 | -1.2 | -2.5 | 0.1 | 131 | -9.2 | -18.7 | 1.3 |
| WY | 27 | -3.7 | -5.3 | -2.4 | 21 | -5.1 | -9.9 | -1.0 | 14 | -4.5 | -34.3 | 35.1 |
| Western | 282 | -1.4 | -1.9 | -0.9 | 203 | -0.9 | -2.8 | 1.3 | 144 | -0.9 | -15.8 | 21.3 |
| AZ | 72 | -1.1 | -1.9 | -0.2 | 52 | 0.5 | -2.9 | 4.1 | 35 | -45.3 | -58.8 | -27.2 |
| CA | 88 | -2.3 | -3.0 | -1.6 | 61 | -3.1 | -5.3 | -0.9 | 45 | 8.9 | -11.0 | 35.0 |
| ID | 29 | -0.4 | -1.5 | 0.7 | 22 | 0.6 | -3.2 | 4.5 | 18 | -13.8 | -37.1 | 15.7 |
| NV | 37 | 1.1 | -1.2 | 3.2 | 24 | 2.2 | -6.9 | 13.2 | 18 | 76.8 | -25.1 | 340.2 |
| OR | 26 | -2.4 | -3.6 | -1.3 | 22 | -2.2 | -6.1 | 1.8 | 13 | -11.9 | -39.9 | 22.6 |
| UT | 20 | -1.2 | -2.7 | 0.5 | 16 | -1.3 | -7.1 | 4.8 | 12 | 124.3 | 30.1 | 292.2 |
| WA | 10 | 0.7 | -2.3 | 3.6 | 6 | 6.4 | -2.3 | 16.6 | 3 | 14.0 | -46.7 | 151.1 |

[a] Trend estimated from annual indices derived from a log-linear hierarchical model fit using Bayesian methods. There is evidence of a positive trend if the CI > 0 and there is evidence of negative trend if the CI < 0. If the CI contains 0, then there is inconclusive evidence about trend in abundance.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 3.*** Estimated trend[a] (percent change per year and lower and upper 95% credible intervals) in mourning dove abundance based on Breeding Bird Survey **heard and seen** data for management units and states during 45-year (1966–2010) and 10-year (2001–2010) periods.

| Management Unit | 45 year | | | | 10 year | | | |
|---|---|---|---|---|---|---|---|---|
| State | N | Trend | Lower | Upper | N | Trend | Lower | Upper |
| Eastern | 1,718 | 0.6 | 0.5 | 0.7 | 1,451 | 0.5 | 0.2 | 0.8 |
| Hunt states | 1,316 | 0.5 | 0.3 | 0.6 | 1,125 | 0.6 | 0.2 | 0.9 |
| AL | 105 | -0.8 | -1.2 | -0.4 | 93 | 0.0 | -1.4 | 1.3 |
| DE-MD | 81 | 0.3 | 0.0 | 0.5 | 69 | 0.1 | -1.0 | 1.0 |
| FL | 93 | 2.5 | 1.9 | 3.2 | 77 | 0.4 | -1.2 | 1.9 |
| GA | 86 | -0.6 | -1.0 | -0.2 | 75 | -0.4 | -1.4 | 0.8 |
| IL | 102 | 0.7 | 0.1 | 1.2 | 101 | 0.9 | -0.4 | 2.2 |
| IN | 63 | 0.1 | -0.4 | 0.5 | 57 | 1.0 | -0.4 | 2.6 |
| KY | 60 | 0.9 | 0.4 | 1.3 | 44 | 0.6 | -1.1 | 2.0 |
| LA | 88 | 2.4 | 1.7 | 3.0 | 65 | 2.3 | 0.7 | 3.9 |
| MS | 51 | -0.4 | -1.1 | 0.3 | 43 | 0.1 | -1.4 | 1.8 |
| NC | 92 | 0.4 | 0.0 | 0.8 | 79 | 0.7 | -0.2 | 1.7 |
| OH | 78 | 1.3 | 0.9 | 1.8 | 59 | 1.0 | -0.6 | 2.6 |
| PA | 127 | 1.5 | 1.0 | 1.9 | 102 | 0.2 | -0.9 | 1.3 |
| SC | 47 | -0.1 | -0.6 | 0.4 | 40 | -0.2 | -1.7 | 1.1 |
| TN | 31 | -0.2 | -0.8 | 0.3 | 27 | -0.3 | -1.7 | 0.9 |
| VA | 57 | -0.1 | -0.5 | 0.3 | 49 | 0.4 | -0.6 | 1.5 |
| WI | 97 | 1.8 | 1.3 | 2.2 | 94 | 2.5 | 1.1 | 4.0 |
| WV | 58 | 3.9 | 3.1 | 4.6 | 51 | -1.4 | -3.8 | 1.0 |
| Nonhunt states | 402 | 1.5 | 1.2 | 1.8 | 326 | 0.1 | -0.7 | 0.9 |
| MI | 87 | 1.3 | 0.8 | 1.7 | 69 | 0.0 | -1.5 | 1.4 |
| N. England[b] | 160 | 2.2 | 1.8 | 2.7 | 132 | -0.1 | -1.4 | 1.2 |
| NJ | 34 | 0.5 | -0.2 | 1.3 | 24 | 0.4 | -1.0 | 1.8 |
| NY | 121 | 1.6 | 1.2 | 2.0 | 101 | 0.5 | -1.0 | 1.9 |
| Central | 1,118 | -0.7 | -0.8 | -0.5 | 984 | 0.0 | -0.5 | 0.4 |
| AR | 46 | -0.1 | -0.8 | 0.5 | 41 | -0.9 | -3.1 | 1.3 |
| CO | 142 | -0.3 | -0.9 | 0.3 | 132 | -0.8 | -2.4 | 0.7 |
| IA | 39 | 0.2 | -0.4 | 0.7 | 33 | 0.4 | -1.2 | 2.1 |
| KS | 64 | -0.1 | -0.7 | 0.5 | 62 | 1.2 | -0.4 | 3.0 |
| MN | 76 | -0.9 | -1.4 | -0.4 | 66 | 0.0 | -1.4 | 1.8 |
| MO | 66 | -1.7 | -2.2 | -1.2 | 53 | -1.1 | -2.3 | 0.2 |
| MT | 56 | -0.9 | -1.5 | -0.3 | 53 | -0.9 | -2.8 | 0.9 |
| NE | 49 | -0.2 | -0.8 | 0.3 | 46 | 0.2 | -1.1 | 1.6 |
| NM | 81 | -0.8 | -1.6 | -0.1 | 64 | -1.1 | -2.9 | 0.8 |
| ND | 47 | 0.1 | -0.5 | 0.7 | 45 | 0.6 | -1.2 | 2.3 |
| OK | 62 | -1.5 | -2.0 | -1.0 | 54 | -0.9 | -2.3 | 0.9 |
| SD | 58 | -0.1 | -0.7 | 0.5 | 52 | 0.1 | -1.7 | 2.1 |
| TX | 216 | -1.1 | -1.4 | -0.7 | 193 | -0.3 | -1.3 | 0.7 |
| WY | 116 | -1.0 | -1.7 | -0.2 | 90 | 0.7 | -0.9 | 2.4 |
| Western | 648 | -1.3 | -1.7 | -0.9 | 519 | -1.4 | -2.5 | -0.3 |
| AZ | 82 | -1.0 | -1.8 | -0.2 | 63 | -0.9 | -2.9 | 1.1 |
| CA | 241 | -0.9 | -1.5 | -0.4 | 180 | -0.7 | -2.3 | 1.1 |
| ID | 46 | -1.9 | -2.9 | -0.9 | 40 | -3.6 | -6.4 | -0.7 |
| NV | 42 | -2.0 | -3.1 | -0.8 | 31 | -3.7 | -7.7 | 0.6 |
| OR | 112 | -1.2 | -2.2 | -0.3 | 89 | 3.3 | 0.4 | 6.2 |
| UT | 100 | -2.1 | -3.1 | -1.3 | 92 | -3.9 | -5.8 | -1.9 |
| WA | 25 | 0.0 | -1.5 | 1.4 | 24 | 2.1 | -1.2 | 5.8 |

[a] Trend estimated from annual indices derived from a log-linear hierarchical model fit using Bayesian methods. There is evidence of a positive trend if the CI > 0 and there is evidence of negative trend if the CI < 0. If the CI contains 0, then there is inconclusive evidence about trend in abundance.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 4.*** Estimated annual abundance indices[a] of mourning doves based on Call-count Survey **heard** data for management units and states, 1966–2011.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 |
| Eastern | 22.8 | 22.4 | 21.9 | 21.8 | 22.1 | 21.6 | 21.6 | 21.3 | 20.8 | 21.5 |
| Hunt states | 25.0 | 24.6 | 24.1 | 23.9 | 24.3 | 23.7 | 23.6 | 23.3 | 22.7 | 23.5 |
| AL | 24.6 | 24.7 | 23.6 | 24.1 | 24.1 | 23.3 | 24.5 | 24.2 | 23.1 | 24.6 |
| DE-MD | 23.3 | 23.5 | 20.2 | 20.4 | 21.2 | 21.4 | 20.6 | 20.7 | 21.6 | 19.1 |
| FL | 10.7 | 10.8 | 10.4 | 10.4 | 11.7 | 10.4 | 11.3 | 11.5 | 11.3 | 12.4 |
| GA | 30.8 | 31.1 | 29.3 | 31.0 | 33.0 | 29.3 | 28.7 | 30.4 | 29.9 | 31.1 |
| IL | 35.1 | 33.0 | 34.7 | 32.4 | 32.9 | 31.4 | 31.3 | 30.1 | 28.4 | 31.5 |
| IN | 43.9 | 42.5 | 42.1 | 41.2 | 40.3 | 42.8 | 41.7 | 41.0 | 39.8 | 39.0 |
| KY | 28.2 | 27.5 | 27.4 | 27.6 | 27.9 | 27.8 | 27.5 | 27.4 | 28.2 | 27.2 |
| LA | 5.8 | 5.8 | 5.6 | 5.9 | 5.8 | 6.0 | 6.0 | 6.0 | 6.2 | 6.4 |
| MS | 39.9 | 37.9 | 36.7 | 36.6 | 35.8 | 35.7 | 35.9 | 34.7 | 32.1 | 32.7 |
| NC | 36.3 | 35.5 | 35.7 | 35.6 | 35.8 | 35.6 | 35.3 | 36.3 | 35.3 | 35.0 |
| OH | 25.6 | 24.1 | 23.8 | 24.7 | 28.8 | 26.6 | 26.2 | 22.5 | 23.7 | 30.8 |
| PA | 9.6 | 10.2 | 9.6 | 9.4 | 8.2 | 8.4 | 8.8 | 8.0 | 8.4 | 8.2 |
| SC | 34.9 | 35.0 | 34.8 | 34.8 | 34.3 | 33.8 | 33.0 | 33.3 | 32.7 | 32.5 |
| TN | 35.8 | 33.7 | 33.1 | 32.3 | 33.5 | 30.2 | 33.0 | 30.0 | 29.0 | 27.8 |
| VA | 33.9 | 31.6 | 31.2 | 29.6 | 30.1 | 28.6 | 25.7 | 26.3 | 27.1 | 26.9 |
| WI | 15.0 | 18.1 | 16.9 | 15.1 | 14.3 | 16.3 | 17.2 | 17.2 | 15.1 | 16.4 |
| WV | 3.9 | 3.9 | 3.9 | 4.0 | 4.1 | 4.1 | 4.2 | 4.2 | 4.2 | 4.3 |
| Nonhunt states | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.9 | 8.0 | 8.0 | 8.0 | 8.1 |
| MI | 11.5 | 11.7 | 11.0 | 11.5 | 11.5 | 12.2 | 12.2 | 11.9 | 12.0 | 12.2 |
| N. England[b] | 6.4 | 6.4 | 6.5 | 6.5 | 6.2 | 6.4 | 6.7 | 6.7 | 6.6 | 6.7 |
| NJ | 34.3 | 32.8 | 32.7 | 31.6 | 31.3 | 30.4 | 29.8 | 28.9 | 28.0 | 26.9 |
| NY | 6.1 | 6.2 | 6.3 | 6.4 | 6.6 | 6.6 | 6.7 | 6.9 | 7.0 | 7.5 |
| Central | 31.2 | 30.8 | 31.1 | 29.7 | 29.3 | 28.9 | 30.3 | 28.7 | 28.8 | 28.3 |
| AR | 20.5 | 20.3 | 20.2 | 20.1 | 19.8 | 19.9 | 19.9 | 19.7 | 19.5 | 19.3 |
| CO | 28.1 | 30.8 | 27.8 | 28.7 | 29.6 | 26.2 | 28.8 | 26.3 | 27.2 | 24.6 |
| IA | 25.1 | 25.4 | 25.0 | 23.8 | 21.5 | 23.3 | 24.9 | 24.9 | 22.3 | 23.1 |
| KS | 59.4 | 59.9 | 59.5 | 59.0 | 59.1 | 57.8 | 59.0 | 57.9 | 56.7 | 54.7 |
| MN | 28.1 | 27.8 | 27.5 | 26.2 | 25.3 | 26.1 | 25.8 | 24.7 | 24.8 | 24.9 |
| MO | 44.5 | 42.4 | 43.4 | 37.0 | 38.6 | 37.5 | 40.6 | 36.2 | 32.5 | 33.8 |
| MT | 20.1 | 20.7 | 17.6 | 19.6 | 17.3 | 19.0 | 17.8 | 14.3 | 15.6 | 18.0 |
| NE | 63.7 | 62.7 | 63.3 | 62.5 | 61.7 | 60.9 | 59.9 | 59.2 | 58.9 | 58.0 |
| NM | 14.7 | 11.2 | 14.8 | 12.9 | 12.7 | 12.1 | 14.2 | 12.9 | 12.3 | 15.0 |
| ND | 30.6 | 32.7 | 38.4 | 32.1 | 30.8 | 31.9 | 32.7 | 36.6 | 36.5 | 33.7 |
| OK | 37.1 | 43.7 | 45.1 | 41.3 | 38.6 | 37.0 | 36.8 | 35.6 | 38.0 | 37.9 |
| SD | 53.5 | 50.4 | 51.9 | 50.8 | 51.2 | 50.2 | 50.1 | 50.6 | 51.8 | 50.8 |
| TX | 26.6 | 24.1 | 24.9 | 22.6 | 23.6 | 23.0 | 27.6 | 24.4 | 25.0 | 22.2 |
| WY | 14.5 | 14.2 | 13.1 | 13.4 | 13.1 | 12.6 | 12.5 | 12.3 | 12.5 | 12.1 |
| Western | 17.5 | 17.7 | 17.1 | 17.5 | 15.5 | 14.3 | 13.7 | 14.3 | 14.9 | 13.7 |
| AZ | 25.5 | 26.5 | 23.8 | 26.6 | 21.4 | 16.7 | 16.3 | 24.0 | 22.1 | 21.3 |
| CA | 25.7 | 25.3 | 23.1 | 24.8 | 23.5 | 22.3 | 22.1 | 21.5 | 22.8 | 19.7 |
| ID | 16.2 | 16.1 | 14.9 | 15.5 | 14.7 | 13.0 | 12.8 | 12.6 | 12.7 | 12.2 |
| NV | 4.5 | 4.5 | 12.3 | 8.8 | 7.0 | 4.2 | 5.5 | 3.0 | 5.2 | 3.7 |
| OR | 12.5 | 10.9 | 10.9 | 11.2 | 9.0 | 8.5 | 8.4 | 9.2 | 9.9 | 9.3 |
| UT | 18.3 | 21.0 | 15.1 | 15.6 | 14.2 | 19.7 | 14.9 | 12.9 | 13.7 | 14.3 |
| WA | 6.1 | 6.1 | 5.9 | 5.8 | 5.8 | 5.6 | 5.5 | 5.5 | 5.3 | 5.5 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 4.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
| Eastern | 21.1 | 21.4 | 20.1 | 19.6 | 20.4 | 20.6 | 20.2 | 20.0 | 19.4 | 19.6 |
| Hunt states | 23.1 | 23.4 | 21.9 | 21.3 | 22.2 | 22.5 | 22.0 | 21.7 | 21.0 | 21.2 |
| AL | 24.4 | 24.9 | 25.4 | 25.6 | 25.6 | 25.8 | 25.9 | 26.4 | 24.7 | 26.4 |
| DE-MD | 19.6 | 21.0 | 19.6 | 19.6 | 20.2 | 20.1 | 20.1 | 17.9 | 18.2 | 19.2 |
| FL | 11.6 | 12.5 | 11.4 | 10.9 | 10.5 | 10.7 | 11.6 | 11.5 | 10.0 | 10.9 |
| GA | 27.1 | 27.5 | 28.0 | 26.8 | 28.1 | 28.6 | 28.5 | 27.6 | 27.0 | 27.4 |
| IL | 31.5 | 31.6 | 28.0 | 26.5 | 26.7 | 28.2 | 28.3 | 28.9 | 26.0 | 25.8 |
| IN | 40.0 | 39.9 | 33.3 | 33.0 | 35.4 | 36.2 | 34.5 | 31.5 | 32.0 | 30.6 |
| KY | 26.8 | 27.4 | 27.3 | 26.8 | 26.1 | 27.0 | 27.2 | 26.8 | 26.9 | 27.0 |
| LA | 6.5 | 6.4 | 6.8 | 6.6 | 7.2 | 7.3 | 7.3 | 7.4 | 7.5 | 7.3 |
| MS | 32.7 | 32.3 | 33.0 | 31.5 | 31.3 | 30.5 | 31.6 | 30.2 | 27.8 | 29.1 |
| NC | 35.2 | 37.1 | 35.9 | 36.2 | 36.7 | 36.1 | 36.6 | 36.3 | 36.8 | 36.8 |
| OH | 28.0 | 27.3 | 16.4 | 17.2 | 18.5 | 19.0 | 19.8 | 20.2 | 20.9 | 19.8 |
| PA | 8.0 | 8.0 | 8.1 | 8.4 | 8.7 | 9.4 | 9.4 | 9.1 | 9.0 | 9.4 |
| SC | 32.2 | 32.1 | 32.5 | 31.9 | 32.9 | 32.6 | 33.0 | 32.2 | 31.3 | 31.2 |
| TN | 28.2 | 28.4 | 28.4 | 25.8 | 26.0 | 25.1 | 25.7 | 24.1 | 23.4 | 23.9 |
| VA | 25.7 | 27.1 | 24.9 | 23.8 | 23.0 | 22.4 | 21.6 | 21.6 | 21.0 | 20.6 |
| WI | 18.1 | 18.3 | 14.8 | 13.7 | 20.3 | 21.6 | 13.6 | 15.0 | 14.0 | 13.9 |
| WV | 4.4 | 4.5 | 4.7 | 4.7 | 4.8 | 4.8 | 4.9 | 4.9 | 5.1 | 5.2 |
| Nonhunt states | 8.1 | 8.2 | 8.3 | 8.1 | 8.5 | 8.6 | 8.7 | 8.7 | 8.7 | 8.8 |
| MI | 12.4 | 12.4 | 12.6 | 12.3 | 13.1 | 13.3 | 13.1 | 13.1 | 13.4 | 13.5 |
| N. England[b] | 6.7 | 7.0 | 7.1 | 6.9 | 7.3 | 7.4 | 7.5 | 7.3 | 7.6 | 7.7 |
| NJ | 26.5 | 26.0 | 25.0 | 24.6 | 23.8 | 22.6 | 22.4 | 22.6 | 20.5 | 20.3 |
| NY | 7.4 | 7.5 | 7.7 | 7.7 | 8.0 | 8.2 | 8.4 | 8.7 | 8.7 | 8.9 |
| Central | 28.9 | 28.8 | 28.6 | 28.0 | 29.2 | 28.5 | 28.3 | 27.7 | 26.0 | 26.8 |
| AR | 19.6 | 18.7 | 18.2 | 17.7 | 18.4 | 18.5 | 18.7 | 17.8 | 17.2 | 16.9 |
| CO | 26.6 | 27.5 | 31.1 | 28.1 | 30.8 | 30.1 | 30.1 | 23.3 | 26.4 | 26.8 |
| IA | 24.1 | 23.7 | 24.7 | 22.2 | 25.2 | 25.8 | 23.2 | 21.3 | 22.9 | 24.0 |
| KS | 56.9 | 55.5 | 53.5 | 57.1 | 58.0 | 58.2 | 56.8 | 57.2 | 54.2 | 57.3 |
| MN | 24.4 | 24.6 | 24.0 | 23.8 | 23.7 | 23.4 | 22.7 | 22.3 | 21.1 | 21.0 |
| MO | 32.8 | 32.9 | 30.3 | 28.6 | 31.5 | 28.9 | 27.9 | 27.8 | 26.2 | 24.5 |
| MT | 14.6 | 17.7 | 16.6 | 16.0 | 15.9 | 16.1 | 18.0 | 20.2 | 15.2 | 15.8 |
| NE | 58.3 | 57.7 | 56.5 | 55.7 | 56.9 | 56.3 | 54.9 | 54.3 | 53.8 | 53.5 |
| NM | 13.9 | 13.5 | 13.7 | 10.3 | 12.8 | 13.4 | 10.5 | 13.6 | 14.9 | 13.9 |
| ND | 46.9 | 41.0 | 44.2 | 41.5 | 46.4 | 46.5 | 46.1 | 44.2 | 34.7 | 43.9 |
| OK | 38.5 | 48.0 | 40.0 | 32.0 | 33.3 | 31.1 | 37.4 | 37.1 | 29.3 | 29.6 |
| SD | 50.4 | 49.5 | 50.0 | 49.6 | 49.5 | 48.5 | 49.7 | 48.9 | 49.0 | 48.2 |
| TX | 22.9 | 20.9 | 21.7 | 25.0 | 25.4 | 23.4 | 22.4 | 21.0 | 19.8 | 21.2 |
| WY | 11.7 | 11.1 | 11.1 | 10.9 | 10.6 | 10.7 | 10.6 | 10.2 | 9.9 | 9.9 |
| Western | 15.5 | 14.7 | 12.7 | 13.3 | 14.9 | 14.0 | 13.7 | 12.3 | 12.7 | 11.9 |
| AZ | 24.3 | 19.6 | 22.7 | 26.3 | 22.7 | 23.1 | 23.6 | 23.5 | 23.1 | 22.8 |
| CA | 22.2 | 20.2 | 18.9 | 16.7 | 20.2 | 18.7 | 20.5 | 15.8 | 17.1 | 15.0 |
| ID | 13.3 | 15.7 | 10.9 | 11.0 | 12.0 | 11.9 | 11.9 | 10.8 | 11.5 | 11.0 |
| NV | 7.0 | 7.7 | 3.9 | 4.9 | 11.5 | 6.0 | 4.3 | 3.7 | 2.5 | 3.6 |
| OR | 9.0 | 9.4 | 6.9 | 6.8 | 8.5 | 8.1 | 8.0 | 6.6 | 7.5 | 7.5 |
| UT | 15.2 | 15.0 | 10.1 | 12.3 | 12.0 | 14.9 | 10.6 | 11.9 | 13.6 | 10.0 |
| WA | 5.3 | 5.3 | 4.9 | 5.3 | 4.9 | 4.9 | 5.1 | 4.8 | 4.7 | 4.7 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 4.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Eastern | 19.8 | 19.8 | 20.2 | 20.2 | 20.0 | 19.9 | 20.2 | 19.8 | 19.8 | 19.9 |
| Hunt states | 21.4 | 21.4 | 21.9 | 21.8 | 21.6 | 21.4 | 21.8 | 21.2 | 21.3 | 21.3 |
| AL | 25.5 | 24.9 | 25.8 | 24.2 | 24.3 | 24.2 | 24.8 | 25.3 | 25.5 | 26.1 |
| DE-MD | 20.9 | 17.6 | 17.6 | 18.7 | 16.6 | 18.4 | 18.9 | 16.3 | 17.0 | 17.6 |
| FL | 11.4 | 11.0 | 11.7 | 11.7 | 12.6 | 11.8 | 12.4 | 11.2 | 11.0 | 11.8 |
| GA | 26.3 | 26.3 | 25.7 | 25.2 | 26.2 | 24.9 | 27.8 | 24.5 | 23.9 | 25.5 |
| IL | 27.7 | 28.6 | 29.2 | 28.6 | 29.2 | 28.3 | 28.5 | 27.1 | 27.6 | 29.1 |
| IN | 32.5 | 32.0 | 33.9 | 31.7 | 31.8 | 31.8 | 31.0 | 30.8 | 31.9 | 29.9 |
| KY | 26.5 | 27.0 | 26.9 | 28.0 | 26.8 | 26.7 | 26.3 | 26.8 | 26.7 | 26.5 |
| LA | 7.5 | 8.0 | 7.9 | 8.4 | 8.1 | 8.6 | 8.9 | 8.7 | 9.0 | 9.3 |
| MS | 28.9 | 27.6 | 28.4 | 27.9 | 26.6 | 25.1 | 26.4 | 26.6 | 25.5 | 25.1 |
| NC | 36.8 | 37.6 | 37.3 | 37.7 | 36.9 | 37.1 | 37.2 | 37.8 | 38.0 | 38.3 |
| OH | 20.4 | 21.3 | 23.3 | 23.3 | 23.4 | 24.3 | 24.2 | 21.8 | 24.6 | 22.6 |
| PA | 9.3 | 9.9 | 8.8 | 9.3 | 9.7 | 10.0 | 10.2 | 10.8 | 9.9 | 10.6 |
| SC | 30.4 | 32.1 | 30.8 | 31.0 | 31.2 | 30.2 | 30.0 | 29.6 | 29.9 | 28.8 |
| TN | 22.4 | 23.1 | 22.6 | 21.8 | 21.5 | 21.6 | 20.4 | 20.4 | 21.1 | 19.8 |
| VA | 19.8 | 19.8 | 19.0 | 18.9 | 17.7 | 17.7 | 17.1 | 17.1 | 16.9 | 17.1 |
| WI | 15.6 | 14.1 | 18.5 | 19.1 | 17.9 | 18.1 | 19.5 | 18.1 | 16.5 | 15.9 |
| WV | 5.2 | 5.3 | 5.5 | 5.6 | 5.8 | 5.9 | 5.8 | 5.9 | 6.0 | 6.1 |
| Nonhunt states | 9.0 | 8.8 | 9.1 | 9.4 | 9.5 | 9.7 | 9.8 | 10.0 | 9.9 | 10.3 |
| MI | 14.1 | 14.1 | 14.8 | 15.3 | 14.9 | 14.6 | 14.7 | 15.0 | 15.0 | 15.3 |
| N. England[b] | 7.9 | 7.5 | 7.9 | 8.2 | 8.3 | 8.4 | 8.6 | 8.9 | 8.6 | 9.1 |
| NJ | 20.4 | 19.6 | 19.1 | 18.8 | 18.1 | 17.9 | 16.9 | 17.1 | 16.5 | 16.0 |
| NY | 9.0 | 9.3 | 9.4 | 9.8 | 9.8 | 10.3 | 10.4 | 10.5 | 10.8 | 11.2 |
| Central | 26.8 | 27.3 | 27.5 | 26.4 | 26.8 | 27.1 | 26.7 | 25.3 | 26.2 | 25.3 |
| AR | 17.3 | 17.3 | 17.1 | 17.9 | 17.3 | 16.9 | 17.3 | 17.2 | 17.2 | 17.0 |
| CO | 24.0 | 30.1 | 28.5 | 27.9 | 27.9 | 25.4 | 25.6 | 23.9 | 28.8 | 27.7 |
| IA | 24.4 | 22.6 | 24.6 | 25.1 | 25.5 | 22.9 | 26.6 | 24.3 | 24.7 | 24.0 |
| KS | 51.1 | 52.9 | 55.2 | 52.8 | 51.8 | 56.0 | 54.4 | 48.9 | 52.4 | 55.6 |
| MN | 21.0 | 21.2 | 21.1 | 20.3 | 19.7 | 20.0 | 19.4 | 18.7 | 19.0 | 18.7 |
| MO | 25.2 | 24.2 | 25.3 | 24.9 | 23.8 | 22.7 | 23.1 | 21.8 | 22.9 | 21.7 |
| MT | 17.4 | 16.5 | 17.4 | 17.2 | 18.0 | 14.2 | 14.2 | 12.0 | 12.1 | 12.3 |
| NE | 51.9 | 51.2 | 51.5 | 50.7 | 50.6 | 50.2 | 50.0 | 49.3 | 48.6 | 49.1 |
| NM | 14.2 | 16.6 | 13.6 | 12.7 | 15.1 | 12.8 | 10.8 | 11.5 | 12.4 | 12.5 |
| ND | 45.6 | 50.9 | 47.8 | 51.2 | 48.3 | 52.9 | 51.8 | 47.2 | 42.6 | 42.4 |
| OK | 28.8 | 30.2 | 31.4 | 25.5 | 31.5 | 29.4 | 30.9 | 27.8 | 31.4 | 29.8 |
| SD | 47.4 | 46.3 | 47.3 | 47.8 | 47.8 | 47.5 | 46.7 | 45.9 | 45.8 | 45.8 |
| TX | 22.7 | 21.6 | 22.7 | 19.6 | 20.1 | 25.0 | 23.8 | 23.3 | 24.7 | 20.5 |
| WY | 10.0 | 9.6 | 9.1 | 9.1 | 9.0 | 8.9 | 8.9 | 8.5 | 8.6 | 8.3 |
| Western | 11.6 | 10.1 | 11.3 | 11.2 | 10.7 | 11.0 | 11.6 | 11.9 | 11.2 | 11.0 |
| AZ | 21.1 | 16.4 | 16.5 | 18.7 | 16.3 | 20.6 | 24.0 | 26.2 | 21.3 | 21.9 |
| CA | 15.5 | 13.4 | 15.0 | 14.0 | 14.9 | 13.3 | 13.8 | 14.2 | 13.7 | 12.8 |
| ID | 9.5 | 10.0 | 11.3 | 10.5 | 11.7 | 11.3 | 9.8 | 9.7 | 10.1 | 9.3 |
| NV | 2.7 | 2.8 | 5.2 | 4.1 | 2.2 | 3.1 | 3.2 | 2.8 | 2.9 | 4.7 |
| OR | 7.2 | 6.7 | 7.2 | 6.6 | 7.7 | 6.3 | 6.2 | 6.4 | 7.0 | 6.4 |
| UT | 12.1 | 11.0 | 12.0 | 12.6 | 10.8 | 10.6 | 11.4 | 10.9 | 11.9 | 9.3 |
| WA | 4.8 | 4.9 | 4.9 | 4.8 | 5.0 | 4.7 | 4.8 | 4.7 | 4.7 | 4.9 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 4.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| Eastern | 18.9 | 18.7 | 19.0 | 19.4 | 19.4 | 19.3 | 19.3 | 19.3 | 19.0 | 19.5 |
| Hunt states | 20.3 | 20.0 | 20.3 | 20.7 | 20.7 | 20.5 | 20.4 | 20.4 | 20.1 | 20.6 |
| AL | 24.5 | 24.4 | 24.9 | 24.7 | 25.2 | 24.9 | 25.7 | 24.6 | 24.9 | 25.2 |
| DE-MD | 16.0 | 14.9 | 16.1 | 14.9 | 14.6 | 14.7 | 14.3 | 15.0 | 15.4 | 14.9 |
| FL | 11.3 | 11.7 | 12.3 | 12.9 | 11.8 | 10.7 | 11.5 | 11.0 | 11.6 | 10.9 |
| GA | 22.9 | 22.1 | 21.5 | 22.1 | 20.5 | 23.3 | 19.8 | 21.6 | 20.6 | 21.8 |
| IL | 25.6 | 25.0 | 24.9 | 24.4 | 26.6 | 24.7 | 25.2 | 26.1 | 24.5 | 26.5 |
| IN | 29.1 | 28.5 | 28.1 | 28.2 | 27.8 | 27.7 | 26.3 | 26.6 | 26.5 | 27.5 |
| KY | 26.1 | 26.1 | 26.4 | 26.9 | 26.8 | 26.5 | 26.7 | 26.8 | 26.1 | 26.2 |
| LA | 9.3 | 9.5 | 10.0 | 10.2 | 10.6 | 11.0 | 10.8 | 11.3 | 11.2 | 11.6 |
| MS | 24.1 | 23.5 | 23.4 | 23.9 | 23.3 | 22.6 | 21.8 | 22.2 | 20.6 | 20.9 |
| NC | 38.8 | 38.2 | 38.5 | 38.9 | 39.1 | 39.5 | 40.1 | 39.1 | 39.2 | 39.2 |
| OH | 19.0 | 19.7 | 21.6 | 21.6 | 21.0 | 19.7 | 20.8 | 21.0 | 19.9 | 20.0 |
| PA | 10.6 | 9.8 | 10.3 | 9.9 | 11.0 | 10.7 | 11.2 | 10.1 | 10.2 | 10.4 |
| SC | 29.3 | 29.0 | 29.3 | 29.7 | 29.0 | 28.7 | 28.9 | 28.2 | 28.1 | 27.7 |
| TN | 19.2 | 19.1 | 18.7 | 18.6 | 18.3 | 17.2 | 17.0 | 17.0 | 16.6 | 15.9 |
| VA | 15.9 | 16.4 | 16.2 | 16.3 | 16.1 | 15.4 | 15.3 | 14.1 | 14.1 | 14.4 |
| WI | 15.0 | 14.2 | 14.0 | 18.1 | 17.4 | 18.4 | 17.8 | 18.9 | 19.2 | 21.2 |
| WV | 5.9 | 6.3 | 6.4 | 6.5 | 6.6 | 6.7 | 6.8 | 6.6 | 7.0 | 7.0 |
| Nonhunt states | 10.0 | 10.2 | 10.4 | 10.8 | 11.1 | 11.0 | 11.9 | 11.7 | 11.6 | 11.8 |
| MI | 15.3 | 15.4 | 16.0 | 16.5 | 16.7 | 16.2 | 17.6 | 17.0 | 16.8 | 17.8 |
| N. England[b] | 8.7 | 8.8 | 9.0 | 9.4 | 9.6 | 9.4 | 10.5 | 10.1 | 10.0 | 10.0 |
| NJ | 15.7 | 14.9 | 14.9 | 14.1 | 14.1 | 13.4 | 13.3 | 12.8 | 12.5 | 12.3 |
| NY | 11.2 | 11.5 | 11.7 | 12.4 | 12.8 | 12.9 | 13.4 | 13.6 | 13.7 | 14.3 |
| Central | 23.8 | 25.8 | 25.5 | 26.8 | 25.4 | 24.0 | 24.3 | 25.3 | 23.9 | 24.9 |
| AR | 16.9 | 17.1 | 16.8 | 16.9 | 16.3 | 16.3 | 15.7 | 16.4 | 15.9 | 16.1 |
| CO | 21.7 | 28.8 | 24.9 | 31.3 | 26.1 | 22.6 | 23.8 | 23.0 | 23.6 | 22.4 |
| IA | 27.9 | 25.5 | 25.5 | 24.7 | 25.2 | 24.0 | 24.1 | 27.2 | 26.2 | 25.9 |
| KS | 47.5 | 55.4 | 53.1 | 56.8 | 51.7 | 48.3 | 50.1 | 52.4 | 50.2 | 53.9 |
| MN | 18.3 | 18.5 | 17.8 | 17.4 | 17.3 | 16.7 | 17.1 | 16.2 | 16.4 | 15.9 |
| MO | 20.7 | 20.4 | 19.3 | 18.5 | 18.5 | 17.2 | 16.9 | 17.7 | 16.7 | 16.5 |
| MT | 13.0 | 13.6 | 14.9 | 16.4 | 16.2 | 11.9 | 14.1 | 14.1 | 14.4 | 12.9 |
| NE | 48.1 | 46.5 | 47.7 | 47.1 | 46.4 | 45.4 | 44.8 | 45.8 | 45.0 | 44.6 |
| NM | 10.5 | 14.1 | 12.3 | 13.8 | 12.9 | 13.9 | 11.5 | 13.0 | 11.8 | 13.3 |
| ND | 44.0 | 39.8 | 38.0 | 46.7 | 47.0 | 40.8 | 42.4 | 48.1 | 36.5 | 49.2 |
| OK | 26.6 | 27.3 | 32.7 | 32.1 | 28.0 | 27.6 | 26.1 | 30.8 | 32.2 | 31.3 |
| SD | 45.7 | 45.2 | 44.9 | 45.0 | 45.6 | 44.9 | 44.9 | 44.5 | 44.6 | 43.4 |
| TX | 18.4 | 23.3 | 23.4 | 23.2 | 21.4 | 22.0 | 22.2 | 23.1 | 20.0 | 22.2 |
| WY | 8.3 | 8.2 | 8.3 | 8.0 | 7.9 | 7.6 | 7.7 | 7.4 | 7.5 | 7.2 |
| Western | 9.8 | 10.5 | 10.7 | 10.9 | 10.8 | 9.6 | 10.6 | 9.8 | 10.8 | 9.8 |
| AZ | 13.8 | 18.8 | 22.9 | 21.5 | 20.4 | 18.7 | 19.5 | 17.5 | 19.4 | 20.7 |
| CA | 13.6 | 13.0 | 13.0 | 13.0 | 12.6 | 11.1 | 12.3 | 11.7 | 13.2 | 10.9 |
| ID | 8.9 | 10.0 | 8.4 | 9.3 | 9.0 | 8.4 | 9.8 | 8.7 | 9.9 | 8.2 |
| NV | 4.4 | 3.5 | 3.8 | 4.2 | 4.0 | 3.4 | 4.7 | 4.0 | 4.7 | 3.5 |
| OR | 6.5 | 6.4 | 5.6 | 5.8 | 6.6 | 6.2 | 6.9 | 6.8 | 6.5 | 5.9 |
| UT | 10.5 | 11.0 | 8.7 | 10.4 | 11.6 | 8.7 | 10.0 | 9.2 | 9.9 | 8.6 |
| WA | 4.4 | 4.5 | 4.7 | 4.4 | 4.5 | 4.7 | 4.8 | 5.4 | 4.8 | 5.4 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 4.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Eastern | 19.6 | 19.9 | 19.2 | 19.6 | 20.0 | 19.6 | | | | |
| Hunt states | 20.7 | 21.0 | 20.3 | 20.6 | 21.1 | 20.6 | | | | |
| AL | 25.2 | 25.2 | 25.8 | 25.6 | 25.9 | 26.5 | | | | |
| DE-MD | 14.6 | 15.1 | 14.9 | 15.7 | 14.7 | 14.1 | | | | |
| FL | 11.3 | 11.6 | 11.5 | 10.8 | 11.6 | 12.8 | | | | |
| GA | 20.9 | 19.1 | 21.1 | 23.1 | 21.5 | 21.4 | | | | |
| IL | 27.3 | 27.6 | 23.5 | 25.2 | 25.4 | 23.9 | | | | |
| IN | 25.9 | 26.8 | 26.0 | 26.6 | 26.3 | 26.4 | | | | |
| KY | 26.3 | 27.2 | 26.6 | 27.3 | 27.1 | 25.9 | | | | |
| LA | 11.3 | 12.3 | 11.8 | 12.6 | 12.7 | 12.8 | | | | |
| MS | 21.0 | 21.6 | 20.8 | 20.6 | 20.1 | 19.3 | | | | |
| NC | 40.4 | 40.5 | 40.8 | 40.9 | 40.7 | 41.5 | | | | |
| OH | 20.8 | 21.9 | 19.5 | 20.5 | 22.6 | 21.8 | | | | |
| PA | 12.0 | 12.0 | 10.8 | 11.7 | 11.8 | 9.4 | | | | |
| SC | 27.1 | 27.8 | 27.4 | 27.5 | 28.1 | 27.7 | | | | |
| TN | 16.1 | 15.9 | 15.6 | 15.9 | 15.5 | 15.3 | | | | |
| VA | 14.1 | 14.6 | 13.9 | 14.0 | 13.9 | 13.4 | | | | |
| WI | 19.4 | 20.5 | 17.1 | 16.4 | 21.9 | 18.9 | | | | |
| WV | 7.4 | 7.5 | 7.7 | 7.8 | 7.8 | 7.8 | | | | |
| Nonhunt states | 12.3 | 12.6 | 12.4 | 12.7 | 13.0 | 13.0 | | | | |
| MI | 18.3 | 18.2 | 18.7 | 18.0 | 18.6 | 19.0 | | | | |
| N. England[b] | 10.4 | 10.7 | 10.2 | 10.5 | 10.8 | 10.8 | | | | |
| NJ | 12.0 | 11.4 | 11.4 | 11.3 | 10.8 | 10.5 | | | | |
| NY | 14.9 | 15.3 | 15.5 | 15.7 | 16.4 | 16.3 | | | | |
| Central | 24.2 | 23.6 | 22.7 | 23.9 | 23.1 | 21.7 | | | | |
| AR | 16.1 | 16.3 | 16.1 | 15.5 | 15.3 | 15.8 | | | | |
| CO | 24.5 | 25.9 | 25.0 | 25.9 | 22.7 | 27.9 | | | | |
| IA | 28.2 | 27.7 | 27.3 | 26.6 | 26.7 | 25.5 | | | | |
| KS | 53.2 | 51.9 | 49.6 | 52.3 | 48.6 | 51.3 | | | | |
| MN | 15.8 | 15.8 | 15.5 | 15.3 | 15.2 | 14.8 | | | | |
| MO | 16.5 | 16.2 | 14.6 | 14.7 | 15.5 | 14.7 | | | | |
| MT | 13.8 | 12.8 | 13.3 | 14.4 | 13.1 | 12.0 | | | | |
| NE | 43.4 | 43.8 | 42.7 | 43.3 | 43.3 | 42.5 | | | | |
| NM | 14.0 | 15.7 | 12.0 | 14.3 | 13.8 | 10.7 | | | | |
| ND | 42.8 | 37.2 | 43.5 | 40.4 | 44.7 | 36.0 | | | | |
| OK | 28.3 | 28.0 | 23.5 | 26.8 | 25.2 | 17.9 | | | | |
| SD | 44.4 | 44.0 | 44.6 | 43.7 | 42.3 | 42.4 | | | | |
| TX | 18.9 | 17.6 | 15.6 | 19.0 | 18.0 | 15.0 | | | | |
| WY | 7.6 | 7.2 | 7.5 | 7.1 | 7.0 | 6.9 | | | | |
| Western | 11.2 | 9.6 | 9.2 | 9.3 | 9.6 | 8.6 | | | | |
| AZ | 21.5 | 16.7 | 17.0 | 16.6 | 20.2 | 14.5 | | | | |
| CA | 10.3 | 10.2 | 10.3 | 10.1 | 9.9 | 9.7 | | | | |
| ID | 11.0 | 10.0 | 9.1 | 8.2 | 8.9 | 7.7 | | | | |
| NV | 8.1 | 4.4 | 3.7 | 4.9 | 3.8 | 5.3 | | | | |
| OR | 6.1 | 7.1 | 6.1 | 6.2 | 5.3 | 4.9 | | | | |
| UT | 10.7 | 8.9 | 8.3 | 9.2 | 9.0 | 9.1 | | | | |
| WA | 4.7 | 5.0 | 4.4 | 4.5 | 4.6 | 4.7 | | | | |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 5.*** Estimated annual abundance indices[a] of mourning doves based on Call-count Survey **seen** data for management units and states, 1966–2011.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 |
| Eastern | 16.8 | 16.6 | 16.4 | 16.6 | 16.4 | 16.2 | 17.1 | 16.3 | 16.4 | 16.6 |
| Hunt states | 18.6 | 18.4 | 18.2 | 18.4 | 18.2 | 17.9 | 18.9 | 18.0 | 18.1 | 18.3 |
| AL | 19.8 | 20.0 | 19.3 | 19.7 | 19.4 | 19.1 | 21.3 | 20.6 | 18.9 | 19.4 |
| DE-MD | 13.2 | 15.2 | 13.2 | 14.3 | 16.1 | 14.4 | 15.7 | 15.5 | 15.5 | 14.6 |
| FL | 6.1 | 5.6 | 6.3 | 6.4 | 5.3 | 5.5 | 7.4 | 7.5 | 6.8 | 8.2 |
| GA | 20.5 | 20.0 | 19.4 | 19.4 | 19.3 | 18.9 | 18.9 | 18.5 | 18.1 | 18.3 |
| IL | 21.1 | 24.8 | 22.6 | 22.7 | 20.4 | 20.9 | 22.0 | 20.6 | 20.2 | 21.2 |
| IN | 46.0 | 45.0 | 44.3 | 45.8 | 45.1 | 41.9 | 42.3 | 41.3 | 44.2 | 41.2 |
| KY | 21.0 | 20.1 | 20.6 | 20.3 | 20.5 | 18.9 | 21.2 | 19.8 | 20.7 | 20.3 |
| LA | 7.4 | 7.1 | 6.8 | 7.3 | 7.0 | 7.3 | 7.4 | 7.5 | 7.6 | 7.9 |
| MS | 40.7 | 37.0 | 37.5 | 36.8 | 34.8 | 34.4 | 38.1 | 32.5 | 32.0 | 32.6 |
| NC | 32.1 | 32.0 | 31.8 | 31.5 | 32.3 | 32.5 | 32.1 | 32.0 | 32.3 | 31.9 |
| OH | 19.0 | 19.8 | 19.9 | 22.8 | 23.7 | 23.8 | 25.1 | 24.3 | 23.9 | 25.6 |
| PA | 9.0 | 8.9 | 9.0 | 9.3 | 9.3 | 9.5 | 9.7 | 10.0 | 10.3 | 10.5 |
| SC | 20.2 | 20.5 | 20.1 | 20.6 | 19.9 | 21.2 | 21.0 | 20.4 | 21.2 | 21.8 |
| TN | 27.0 | 26.7 | 26.4 | 26.2 | 26.3 | 26.7 | 26.6 | 25.7 | 25.9 | 25.6 |
| VA | 15.9 | 15.1 | 15.1 | 14.7 | 15.3 | 14.4 | 15.1 | 14.7 | 14.9 | 14.4 |
| WI | 4.9 | 4.6 | 4.9 | 4.7 | 5.6 | 5.2 | 7.0 | 5.5 | 6.2 | 6.5 |
| WV | 2.7 | 2.5 | 2.4 | 2.3 | 2.5 | 2.8 | 2.6 | 2.4 | 2.6 | 2.9 |
| Nonhunt states | 4.6 | 4.6 | 4.7 | 4.8 | 5.0 | 4.9 | 4.9 | 5.1 | 4.9 | 5.3 |
| MI | 6.7 | 6.6 | 6.9 | 6.7 | 7.1 | 7.3 | 7.6 | 7.5 | 7.8 | 8.4 |
| N. England[b] | 4.2 | 4.1 | 4.1 | 4.2 | 4.3 | 4.2 | 4.3 | 4.3 | 4.3 | 4.5 |
| NJ | 23.1 | 23.5 | 23.0 | 22.8 | 22.1 | 22.2 | 22.3 | 22.0 | 21.4 | 21.3 |
| NY | 2.5 | 2.5 | 2.7 | 3.0 | 3.3 | 3.3 | 3.2 | 3.5 | 3.2 | 4.0 |
| Central | 40.1 | 39.7 | 39.4 | 39.0 | 39.0 | 37.7 | 39.5 | 38.2 | 39.0 | 38.5 |
| AR | 21.9 | 22.8 | 22.2 | 21.9 | 21.5 | 21.3 | 21.9 | 21.8 | 21.3 | 21.1 |
| CO | 33.3 | 35.1 | 29.9 | 31.1 | 28.4 | 29.8 | 28.4 | 28.6 | 33.8 | 25.1 |
| IA | 18.7 | 19.3 | 18.9 | 18.4 | 18.2 | 18.8 | 19.8 | 18.8 | 19.2 | 18.9 |
| KS | 106.7 | 107.7 | 103.6 | 105.7 | 105.1 | 103.2 | 105.1 | 102.9 | 101.4 | 102.5 |
| MN | 19.1 | 18.4 | 18.1 | 17.5 | 17.1 | 17.4 | 17.9 | 15.9 | 16.3 | 15.8 |
| MO | 49.2 | 48.7 | 46.9 | 46.4 | 45.0 | 44.5 | 45.3 | 42.8 | 41.1 | 40.7 |
| MT | 11.1 | 13.6 | 12.7 | 12.4 | 13.4 | 13.1 | 13.0 | 12.7 | 13.4 | 12.0 |
| NE | 91.8 | 91.6 | 93.2 | 93.8 | 91.7 | 91.6 | 92.1 | 91.6 | 91.7 | 93.4 |
| NM | 14.1 | 12.8 | 12.8 | 12.5 | 12.9 | 11.4 | 17.6 | 10.8 | 18.5 | 15.1 |
| ND | 20.7 | 22.2 | 22.8 | 22.9 | 21.9 | 23.4 | 24.8 | 27.5 | 24.0 | 25.5 |
| OK | 88.2 | 94.6 | 95.0 | 91.3 | 91.7 | 88.6 | 86.5 | 85.0 | 87.3 | 88.2 |
| SD | 51.9 | 50.5 | 51.6 | 51.8 | 52.8 | 51.5 | 52.7 | 51.7 | 53.1 | 51.5 |
| TX | 40.9 | 37.6 | 41.3 | 39.5 | 42.1 | 35.8 | 42.0 | 40.5 | 40.2 | 40.7 |
| WY | 24.5 | 17.9 | 16.0 | 15.6 | 13.7 | 15.8 | 13.8 | 16.5 | 13.6 | 19.8 |
| Western | 17.2 | 19.1 | 22.0 | 18.1 | 17.8 | 17.7 | 14.9 | 15.0 | 19.6 | 16.1 |
| AZ | 12.0 | 14.9 | 25.8 | 18.0 | 20.1 | 12.6 | 10.6 | 23.6 | 17.0 | 17.2 |
| CA | 38.0 | 37.8 | 38.4 | 37.6 | 33.7 | 34.7 | 32.4 | 29.3 | 36.8 | 33.9 |
| ID | 17.3 | 26.9 | 16.3 | 13.0 | 10.9 | 16.0 | 14.7 | 10.3 | 15.9 | 12.4 |
| NV | 4.8 | 6.5 | 18.4 | 9.6 | 8.9 | 8.4 | 5.2 | 4.1 | 11.5 | 4.2 |
| OR | 11.5 | 11.3 | 11.3 | 10.1 | 9.7 | 9.6 | 10.0 | 8.7 | 9.4 | 8.9 |
| UT | 11.1 | 12.4 | 13.9 | 12.1 | 17.1 | 20.5 | 9.9 | 6.5 | 21.8 | 12.3 |
| WA | 2.0 | 1.2 | 2.2 | 1.2 | 1.8 | 1.0 | 2.3 | 1.2 | 0.9 | 1.5 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 5.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
| Eastern | 17.1 | 16.7 | 15.8 | 15.8 | 16.0 | 16.9 | 16.5 | 16.5 | 16.2 | 16.7 |
| Hunt states | 18.9 | 18.4 | 17.3 | 17.4 | 17.6 | 18.6 | 18.2 | 18.1 | 17.8 | 18.4 |
| AL | 20.0 | 19.8 | 19.8 | 20.8 | 20.4 | 19.8 | 20.6 | 20.7 | 19.9 | 20.7 |
| DE-MD | 15.9 | 16.0 | 15.7 | 14.4 | 16.5 | 16.9 | 13.9 | 15.1 | 17.6 | 17.1 |
| FL | 9.2 | 7.7 | 8.3 | 8.7 | 8.5 | 10.4 | 9.0 | 8.9 | 10.6 | 11.5 |
| GA | 17.7 | 18.0 | 17.8 | 17.7 | 17.2 | 17.6 | 16.6 | 16.3 | 16.7 | 16.9 |
| IL | 23.4 | 22.6 | 20.4 | 18.3 | 19.0 | 20.9 | 19.4 | 19.2 | 16.6 | 19.8 |
| IN | 41.7 | 38.2 | 30.2 | 31.0 | 33.1 | 36.8 | 33.0 | 33.2 | 33.1 | 32.0 |
| KY | 22.1 | 21.2 | 20.7 | 20.6 | 20.1 | 22.8 | 23.5 | 22.7 | 22.0 | 24.3 |
| LA | 7.7 | 8.6 | 8.7 | 8.9 | 9.1 | 9.2 | 9.7 | 9.9 | 10.1 | 9.5 |
| MS | 31.2 | 32.6 | 32.5 | 32.0 | 32.0 | 30.5 | 32.0 | 32.8 | 29.0 | 28.1 |
| NC | 33.0 | 32.7 | 33.3 | 33.4 | 33.1 | 33.6 | 33.0 | 32.7 | 33.9 | 33.6 |
| OH | 28.9 | 24.4 | 15.6 | 15.8 | 16.5 | 21.4 | 22.2 | 20.8 | 20.0 | 22.7 |
| PA | 10.6 | 10.2 | 10.4 | 10.9 | 11.4 | 11.3 | 11.7 | 12.0 | 11.8 | 12.6 |
| SC | 21.9 | 21.4 | 22.1 | 22.3 | 22.5 | 22.7 | 23.4 | 22.4 | 22.9 | 23.0 |
| TN | 25.9 | 26.5 | 26.0 | 25.9 | 25.7 | 25.9 | 25.9 | 25.0 | 25.5 | 25.5 |
| VA | 15.0 | 15.2 | 14.9 | 14.3 | 14.7 | 13.9 | 14.0 | 14.2 | 13.6 | 13.4 |
| WI | 6.8 | 6.7 | 5.4 | 7.2 | 7.3 | 9.3 | 7.4 | 8.1 | 7.8 | 7.3 |
| WV | 2.8 | 2.9 | 3.0 | 3.6 | 3.3 | 4.2 | 4.1 | 3.8 | 4.4 | 4.5 |
| Nonhunt states | 5.1 | 5.2 | 5.4 | 5.4 | 5.6 | 5.7 | 5.8 | 5.7 | 5.6 | 6.1 |
| MI | 8.3 | 8.5 | 8.5 | 8.4 | 9.1 | 9.8 | 9.1 | 9.4 | 9.5 | 10.3 |
| N. England[b] | 4.5 | 4.6 | 4.6 | 4.7 | 4.8 | 4.6 | 4.8 | 4.7 | 4.8 | 5.2 |
| NJ | 21.6 | 21.2 | 21.3 | 21.0 | 20.5 | 20.9 | 20.9 | 20.3 | 19.9 | 19.0 |
| NY | 3.6 | 3.8 | 4.1 | 4.2 | 4.5 | 5.0 | 5.0 | 5.0 | 4.6 | 5.4 |
| Central | 39.1 | 38.5 | 37.4 | 38.4 | 38.7 | 39.6 | 39.0 | 36.8 | 37.0 | 35.5 |
| AR | 21.9 | 20.8 | 20.4 | 20.5 | 20.9 | 20.8 | 20.6 | 21.0 | 19.4 | 19.3 |
| CO | 36.1 | 31.2 | 30.5 | 25.7 | 31.0 | 30.3 | 30.3 | 26.0 | 27.6 | 25.9 |
| IA | 19.2 | 20.0 | 19.8 | 19.4 | 20.6 | 20.1 | 20.3 | 19.5 | 20.2 | 20.3 |
| KS | 101.2 | 101.2 | 98.7 | 99.6 | 102.0 | 99.2 | 98.8 | 98.8 | 97.6 | 96.6 |
| MN | 16.8 | 17.6 | 15.7 | 16.0 | 15.8 | 15.9 | 14.4 | 14.8 | 14.2 | 13.7 |
| MO | 38.9 | 39.6 | 38.7 | 37.1 | 36.9 | 38.0 | 36.1 | 36.0 | 33.9 | 31.7 |
| MT | 12.0 | 13.2 | 11.6 | 12.0 | 12.3 | 13.6 | 12.7 | 11.3 | 11.9 | 12.6 |
| NE | 96.4 | 94.8 | 94.6 | 93.2 | 93.5 | 93.3 | 93.7 | 89.0 | 89.6 | 89.6 |
| NM | 13.9 | 11.8 | 9.3 | 10.9 | 13.4 | 13.0 | 12.6 | 11.4 | 18.6 | 12.9 |
| ND | 30.4 | 31.7 | 30.3 | 30.5 | 30.4 | 29.0 | 26.8 | 24.9 | 23.5 | 23.9 |
| OK | 86.9 | 80.9 | 96.2 | 89.2 | 91.6 | 84.8 | 88.9 | 88.3 | 81.8 | 79.9 |
| SD | 53.7 | 54.1 | 53.0 | 52.5 | 51.6 | 52.5 | 52.1 | 52.0 | 52.3 | 51.7 |
| TX | 39.2 | 38.6 | 36.9 | 44.2 | 41.4 | 48.8 | 46.9 | 41.6 | 41.6 | 38.5 |
| WY | 15.0 | 18.2 | 10.9 | 12.8 | 12.7 | 11.2 | 11.1 | 9.1 | 8.3 | 7.7 |
| Western | 18.6 | 17.4 | 13.5 | 16.6 | 19.0 | 15.4 | 14.5 | 13.1 | 14.0 | 12.1 |
| AZ | 15.5 | 13.0 | 20.8 | 33.4 | 20.4 | 11.6 | 18.0 | 20.2 | 12.3 | 14.0 |
| CA | 31.2 | 32.0 | 23.9 | 25.9 | 27.4 | 28.3 | 29.3 | 23.3 | 24.7 | 23.3 |
| ID | 16.2 | 15.4 | 11.7 | 11.5 | 12.7 | 15.7 | 14.3 | 12.2 | 14.4 | 10.9 |
| NV | 17.0 | 13.6 | 4.4 | 7.0 | 29.2 | 8.0 | 3.8 | 4.8 | 7.2 | 5.0 |
| OR | 9.2 | 10.2 | 7.0 | 7.1 | 7.8 | 9.1 | 8.1 | 6.6 | 6.9 | 6.6 |
| UT | 17.8 | 14.2 | 8.7 | 8.9 | 11.4 | 16.6 | 6.6 | 7.3 | 16.0 | 8.7 |
| WA | 2.5 | 1.1 | 1.1 | 1.3 | 1.3 | 1.1 | 2.0 | 1.0 | 2.6 | 1.1 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 5.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Eastern | 17.0 | 17.3 | 17.8 | 17.9 | 18.1 | 18.1 | 18.0 | 18.1 | 18.2 | 18.5 |
| Hunt states | 18.7 | 18.9 | 19.5 | 19.6 | 19.8 | 19.7 | 19.7 | 19.7 | 19.8 | 20.1 |
| AL | 21.5 | 19.4 | 19.8 | 19.9 | 19.8 | 19.8 | 20.4 | 20.7 | 20.9 | 20.9 |
| DE-MD | 18.0 | 15.7 | 18.5 | 18.5 | 16.7 | 19.1 | 18.1 | 16.9 | 17.3 | 17.1 |
| FL | 10.8 | 11.0 | 11.6 | 12.9 | 14.5 | 13.0 | 14.0 | 14.2 | 15.2 | 16.0 |
| GA | 16.1 | 16.1 | 16.6 | 16.3 | 15.9 | 15.7 | 15.4 | 14.8 | 15.3 | 15.6 |
| IL | 20.1 | 21.6 | 21.5 | 21.9 | 23.5 | 23.1 | 22.1 | 21.7 | 21.6 | 22.5 |
| IN | 32.3 | 34.8 | 33.2 | 33.5 | 33.3 | 31.1 | 29.8 | 29.8 | 29.5 | 28.9 |
| KY | 22.1 | 24.0 | 24.8 | 25.3 | 23.8 | 26.4 | 25.0 | 25.2 | 24.6 | 25.4 |
| LA | 10.7 | 10.1 | 11.5 | 11.0 | 11.6 | 12.1 | 12.0 | 12.3 | 12.9 | 13.6 |
| MS | 28.8 | 27.1 | 30.1 | 27.6 | 28.9 | 26.1 | 28.9 | 28.2 | 27.2 | 26.4 |
| NC | 34.5 | 34.1 | 34.2 | 34.0 | 34.2 | 34.8 | 34.9 | 35.3 | 35.7 | 35.0 |
| OH | 25.0 | 26.4 | 29.0 | 30.1 | 26.5 | 28.8 | 28.8 | 27.8 | 29.9 | 29.6 |
| PA | 13.0 | 13.0 | 13.7 | 13.5 | 13.8 | 14.2 | 14.0 | 15.0 | 15.2 | 15.4 |
| SC | 22.8 | 23.3 | 24.1 | 23.8 | 24.3 | 24.4 | 24.4 | 23.7 | 24.7 | 24.5 |
| TN | 25.2 | 25.9 | 25.7 | 25.8 | 25.9 | 25.9 | 25.9 | 26.3 | 26.4 | 26.5 |
| VA | 13.1 | 13.4 | 13.3 | 12.7 | 14.2 | 13.7 | 13.3 | 13.7 | 12.4 | 13.7 |
| WI | 8.9 | 10.0 | 9.9 | 10.3 | 11.1 | 10.9 | 10.3 | 10.9 | 9.7 | 10.4 |
| WV | 4.0 | 4.2 | 4.1 | 5.7 | 4.3 | 5.8 | 5.3 | 6.2 | 6.4 | 6.4 |
| Nonhunt states | 6.3 | 6.3 | 6.2 | 7.3 | 6.8 | 7.5 | 7.4 | 7.2 | 7.5 | 7.9 |
| MI | 10.9 | 11.2 | 11.3 | 11.4 | 12.2 | 12.1 | 12.1 | 12.4 | 12.7 | 12.9 |
| N. England[b] | 5.1 | 5.1 | 5.2 | 5.5 | 5.6 | 5.8 | 5.7 | 6.0 | 6.0 | 6.2 |
| NJ | 19.7 | 18.6 | 18.3 | 18.9 | 18.4 | 19.6 | 19.3 | 18.7 | 18.8 | 18.8 |
| NY | 6.0 | 6.2 | 5.9 | 8.0 | 6.9 | 8.1 | 8.0 | 7.2 | 7.8 | 8.5 |
| Central | 36.8 | 36.7 | 36.4 | 36.0 | 35.7 | 40.6 | 38.9 | 36.7 | 36.7 | 35.9 |
| AR | 19.9 | 19.8 | 19.1 | 20.0 | 19.9 | 19.1 | 19.7 | 19.6 | 19.6 | 19.6 |
| CO | 30.0 | 27.9 | 29.2 | 27.4 | 28.7 | 28.7 | 26.8 | 28.5 | 28.1 | 27.3 |
| IA | 20.1 | 20.3 | 20.7 | 21.5 | 21.2 | 21.1 | 21.4 | 20.9 | 21.3 | 21.5 |
| KS | 96.5 | 96.3 | 97.8 | 97.5 | 94.7 | 98.0 | 97.2 | 94.4 | 97.2 | 97.6 |
| MN | 13.2 | 13.4 | 13.2 | 13.1 | 12.5 | 13.0 | 12.0 | 11.5 | 11.0 | 11.1 |
| MO | 32.7 | 32.8 | 32.6 | 32.0 | 31.3 | 31.1 | 30.1 | 28.3 | 27.9 | 28.1 |
| MT | 11.5 | 11.6 | 13.8 | 12.5 | 12.8 | 11.2 | 11.3 | 11.0 | 11.4 | 11.5 |
| NE | 87.4 | 89.2 | 89.4 | 85.1 | 86.8 | 90.2 | 89.0 | 85.3 | 86.3 | 85.8 |
| NM | 13.9 | 10.8 | 11.5 | 12.4 | 11.5 | 13.3 | 10.1 | 10.9 | 11.2 | 10.2 |
| ND | 24.7 | 25.4 | 26.1 | 27.4 | 28.1 | 28.2 | 31.3 | 27.8 | 24.5 | 22.0 |
| OK | 83.6 | 80.4 | 82.2 | 80.0 | 82.0 | 84.5 | 84.7 | 81.1 | 82.6 | 82.8 |
| SD | 49.0 | 50.8 | 50.5 | 51.5 | 51.5 | 51.2 | 51.3 | 49.8 | 49.6 | 48.3 |
| TX | 43.4 | 44.4 | 40.0 | 40.8 | 39.0 | 61.1 | 55.1 | 48.4 | 47.6 | 45.5 |
| WY | 9.0 | 10.1 | 8.3 | 7.8 | 8.6 | 9.3 | 8.0 | 6.6 | 7.1 | 6.3 |
| Western | 10.8 | 10.7 | 10.9 | 11.1 | 11.2 | 10.1 | 10.4 | 11.1 | 11.3 | 10.4 |
| AZ | 9.7 | 6.5 | 8.0 | 7.7 | 7.6 | 11.2 | 12.5 | 17.0 | 10.8 | 13.7 |
| CA | 20.3 | 20.9 | 20.3 | 19.7 | 21.4 | 18.3 | 19.8 | 17.3 | 19.7 | 15.3 |
| ID | 11.5 | 14.7 | 15.7 | 13.1 | 15.3 | 12.3 | 12.0 | 10.8 | 14.6 | 12.6 |
| NV | 4.3 | 5.2 | 5.0 | 5.0 | 4.7 | 2.7 | 3.2 | 5.0 | 7.2 | 9.2 |
| OR | 7.1 | 7.1 | 5.9 | 6.5 | 6.7 | 5.6 | 5.7 | 4.9 | 5.6 | 5.1 |
| UT | 8.9 | 7.5 | 8.7 | 13.5 | 9.2 | 7.9 | 6.0 | 7.6 | 7.6 | 4.3 |
| WA | 2.0 | 1.2 | 1.2 | 1.6 | 2.2 | 1.8 | 1.5 | 4.8 | 2.1 | 1.6 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 5.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| Eastern | 18.0 | 17.8 | 19.0 | 19.6 | 19.7 | 19.6 | 19.9 | 20.5 | 20.7 | 20.3 |
| Hunt states | 19.6 | 19.4 | 20.6 | 21.1 | 21.2 | 21.1 | 21.4 | 22.2 | 22.4 | 21.9 |
| AL | 19.6 | 20.1 | 20.3 | 20.9 | 21.2 | 20.3 | 21.6 | 21.8 | 21.1 | 21.1 |
| DE-MD | 18.0 | 16.0 | 17.8 | 18.9 | 17.5 | 17.4 | 15.9 | 17.3 | 19.4 | 19.3 |
| FL | 14.7 | 18.0 | 16.2 | 18.7 | 17.6 | 20.1 | 18.2 | 21.8 | 21.5 | 19.5 |
| GA | 15.0 | 15.0 | 14.9 | 14.7 | 14.9 | 14.8 | 15.0 | 14.1 | 14.5 | 14.4 |
| IL | 21.6 | 19.7 | 22.5 | 20.4 | 23.8 | 21.3 | 23.1 | 24.6 | 26.5 | 25.1 |
| IN | 30.3 | 27.3 | 29.8 | 29.9 | 29.3 | 28.0 | 27.7 | 29.0 | 29.6 | 28.7 |
| KY | 25.9 | 24.7 | 26.0 | 27.6 | 28.2 | 28.4 | 28.5 | 28.1 | 29.8 | 27.4 |
| LA | 12.8 | 13.7 | 14.1 | 15.8 | 15.8 | 15.5 | 17.1 | 17.1 | 17.5 | 17.7 |
| MS | 24.5 | 24.6 | 24.6 | 24.7 | 23.2 | 23.2 | 23.4 | 23.5 | 21.3 | 21.8 |
| NC | 35.5 | 35.0 | 35.0 | 35.8 | 36.1 | 36.0 | 36.4 | 37.0 | 37.5 | 37.2 |
| OH | 26.1 | 24.5 | 33.0 | 32.8 | 32.9 | 32.8 | 31.5 | 36.8 | 34.9 | 29.3 |
| PA | 15.9 | 16.3 | 16.9 | 18.2 | 17.4 | 17.8 | 18.4 | 18.5 | 19.0 | 18.6 |
| SC | 24.7 | 24.6 | 25.2 | 26.9 | 26.2 | 26.0 | 26.8 | 25.5 | 26.6 | 26.7 |
| TN | 26.3 | 26.6 | 26.8 | 26.6 | 27.1 | 27.1 | 26.7 | 27.0 | 27.4 | 27.2 |
| VA | 13.5 | 13.5 | 13.7 | 14.0 | 13.5 | 13.4 | 14.6 | 13.3 | 14.1 | 14.2 |
| WI | 10.6 | 9.6 | 12.4 | 12.0 | 12.5 | 11.7 | 13.1 | 14.6 | 14.3 | 15.7 |
| WV | 5.9 | 5.8 | 6.1 | 7.0 | 7.7 | 8.1 | 7.5 | 6.6 | 8.5 | 8.2 |
| Nonhunt states | 7.7 | 7.6 | 8.7 | 9.8 | 9.2 | 9.8 | 9.8 | 9.7 | 9.8 | 10.2 |
| MI | 13.3 | 13.4 | 15.0 | 15.3 | 16.3 | 16.2 | 16.4 | 17.0 | 17.0 | 18.4 |
| N. England[b] | 6.2 | 6.1 | 6.4 | 7.0 | 6.9 | 7.0 | 7.3 | 7.2 | 7.4 | 7.6 |
| NJ | 18.6 | 18.4 | 18.1 | 18.6 | 17.2 | 17.5 | 18.2 | 17.8 | 17.6 | 17.5 |
| NY | 8.2 | 8.1 | 10.5 | 12.2 | 11.1 | 12.5 | 12.1 | 12.0 | 11.8 | 12.6 |
| Central | 34.6 | 37.3 | 38.1 | 38.5 | 37.1 | 36.1 | 37.2 | 37.2 | 37.5 | 38.7 |
| AR | 18.8 | 19.3 | 19.1 | 19.3 | 19.0 | 19.2 | 18.6 | 19.2 | 19.3 | 18.8 |
| CO | 27.5 | 27.3 | 28.2 | 29.2 | 29.7 | 26.5 | 28.6 | 28.7 | 27.2 | 26.4 |
| IA | 21.9 | 21.2 | 22.7 | 22.0 | 23.4 | 22.9 | 23.5 | 23.8 | 24.7 | 24.7 |
| KS | 93.9 | 97.6 | 97.7 | 98.9 | 97.0 | 94.1 | 95.7 | 97.7 | 98.7 | 100.8 |
| MN | 10.7 | 11.3 | 11.8 | 10.7 | 11.2 | 10.5 | 10.0 | 9.8 | 10.4 | 9.4 |
| MO | 26.9 | 26.1 | 26.3 | 25.3 | 24.7 | 24.7 | 24.5 | 24.1 | 24.2 | 22.8 |
| MT | 11.4 | 13.2 | 11.6 | 12.3 | 11.1 | 10.5 | 12.4 | 11.9 | 11.4 | 11.2 |
| NE | 85.3 | 83.1 | 87.0 | 86.9 | 88.3 | 85.9 | 85.0 | 85.7 | 88.1 | 88.3 |
| NM | 11.2 | 13.2 | 11.6 | 12.0 | 11.8 | 10.5 | 11.0 | 12.2 | 11.1 | 13.9 |
| ND | 25.4 | 24.2 | 29.2 | 31.8 | 27.9 | 24.9 | 24.5 | 24.1 | 26.7 | 24.9 |
| OK | 77.3 | 78.7 | 82.9 | 83.2 | 82.3 | 78.6 | 76.9 | 80.2 | 80.9 | 85.9 |
| SD | 47.9 | 49.1 | 51.2 | 52.6 | 51.1 | 50.7 | 50.9 | 50.1 | 49.4 | 49.5 |
| TX | 41.1 | 51.2 | 51.8 | 52.7 | 47.6 | 48.9 | 52.1 | 50.9 | 52.1 | 56.7 |
| WY | 5.8 | 8.0 | 7.6 | 6.0 | 7.0 | 6.1 | 7.0 | 5.5 | 5.0 | 5.1 |
| Western | 11.2 | 10.1 | 10.0 | 11.7 | 10.5 | 8.6 | 9.7 | 8.6 | 9.9 | 8.6 |
| AZ | 7.2 | 8.0 | 15.6 | 13.6 | 11.4 | 10.2 | 7.0 | 11.3 | 10.3 | 11.0 |
| CA | 20.2 | 17.8 | 16.8 | 18.0 | 17.4 | 15.7 | 17.3 | 14.8 | 16.2 | 14.7 |
| ID | 15.8 | 13.1 | 10.2 | 12.9 | 14.8 | 11.6 | 13.5 | 11.1 | 15.9 | 12.4 |
| NV | 9.7 | 7.5 | 4.2 | 8.9 | 6.3 | 3.4 | 6.6 | 3.4 | 5.2 | 3.7 |
| OR | 5.6 | 5.9 | 5.2 | 6.4 | 5.4 | 4.4 | 4.6 | 4.2 | 5.0 | 4.6 |
| UT | 5.8 | 5.4 | 4.5 | 8.0 | 5.9 | 3.3 | 7.3 | 4.3 | 4.9 | 2.6 |
| WA | 1.5 | 3.3 | 2.2 | 1.4 | 1.6 | 2.0 | 1.6 | 2.1 | 2.2 | 3.0 |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 5.*** Continued.

| Management Unit | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| State | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Eastern | 20.6 | 21.1 | 21.1 | 21.3 | 21.9 | 21.7 | | | | |
| Hunt states | 22.1 | 22.6 | 22.7 | 22.8 | 23.4 | 23.2 | | | | |
| AL | 20.7 | 21.0 | 20.9 | 22.5 | 22.3 | 21.5 | | | | |
| DE-MD | 17.4 | 20.6 | 19.8 | 18.8 | 20.1 | 19.2 | | | | |
| FL | 19.0 | 20.0 | 23.2 | 23.6 | 21.9 | 25.6 | | | | |
| GA | 14.2 | 14.4 | 14.7 | 14.6 | 14.1 | 14.6 | | | | |
| IL | 28.0 | 25.1 | 22.8 | 22.7 | 24.8 | 23.3 | | | | |
| IN | 26.7 | 26.1 | 26.6 | 24.0 | 26.0 | 25.8 | | | | |
| KY | 29.3 | 29.6 | 30.0 | 31.2 | 31.9 | 31.4 | | | | |
| LA | 17.7 | 18.8 | 18.8 | 19.5 | 19.8 | 20.0 | | | | |
| MS | 21.8 | 22.9 | 23.1 | 22.8 | 21.6 | 21.4 | | | | |
| NC | 37.0 | 37.2 | 37.4 | 37.9 | 38.2 | 38.3 | | | | |
| OH | 31.3 | 33.3 | 33.7 | 33.8 | 37.1 | 33.0 | | | | |
| PA | 19.3 | 19.7 | 20.4 | 20.4 | 21.8 | 21.6 | | | | |
| SC | 27.4 | 27.4 | 27.1 | 28.6 | 28.9 | 28.5 | | | | |
| TN | 27.2 | 26.9 | 28.0 | 28.2 | 28.1 | 28.0 | | | | |
| VA | 14.2 | 15.1 | 15.6 | 14.6 | 14.2 | 15.0 | | | | |
| WI | 16.3 | 17.4 | 15.5 | 15.0 | 18.8 | 16.2 | | | | |
| WV | 6.1 | 8.8 | 9.2 | 9.2 | 9.4 | 9.2 | | | | |
| Nonhunt states | 11.1 | 10.7 | 10.9 | 11.4 | 11.8 | 11.4 | | | | |
| MI | 18.3 | 20.0 | 18.4 | 19.4 | 19.3 | 20.3 | | | | |
| N. England[b] | 8.2 | 8.1 | 8.0 | 8.5 | 8.8 | 8.5 | | | | |
| NJ | 17.5 | 17.9 | 17.8 | 17.7 | 17.3 | 17.1 | | | | |
| NY | 14.0 | 13.3 | 13.8 | 14.3 | 15.0 | 14.5 | | | | |
| Central | 37.8 | 38.9 | 37.2 | 37.7 | 37.2 | 35.9 | | | | |
| AR | 19.3 | 19.1 | 18.7 | 18.7 | 18.8 | 18.5 | | | | |
| CO | 28.2 | 29.6 | 27.6 | 28.6 | 26.4 | 28.9 | | | | |
| IA | 25.4 | 26.1 | 26.0 | 26.3 | 26.0 | 27.1 | | | | |
| KS | 100.3 | 99.4 | 98.1 | 100.7 | 101.0 | 99.9 | | | | |
| MN | 10.0 | 9.7 | 9.2 | 9.2 | 9.7 | 9.4 | | | | |
| MO | 23.3 | 22.6 | 22.3 | 21.9 | 21.3 | 20.9 | | | | |
| MT | 14.4 | 12.5 | 13.4 | 12.6 | 11.6 | 11.9 | | | | |
| NE | 86.6 | 88.2 | 89.1 | 89.7 | 89.4 | 87.2 | | | | |
| NM | 12.8 | 17.8 | 12.2 | 13.4 | 12.3 | 12.3 | | | | |
| ND | 26.3 | 25.5 | 23.7 | 25.0 | 24.2 | 22.1 | | | | |
| OK | 83.3 | 82.4 | 75.5 | 77.4 | 78.4 | 72.3 | | | | |
| SD | 49.1 | 49.3 | 48.6 | 49.8 | 48.1 | 48.0 | | | | |
| TX | 50.0 | 54.6 | 51.2 | 51.2 | 51.4 | 46.6 | | | | |
| WY | 6.0 | 4.9 | 6.0 | 5.0 | 4.6 | 4.3 | | | | |
| Western | 10.0 | 9.8 | 9.4 | 9.6 | 9.0 | 8.9 | | | | |
| AZ | 11.3 | 7.3 | 8.8 | 9.7 | 13.3 | 7.3 | | | | |
| CA | 13.4 | 16.2 | 12.4 | 14.1 | 11.9 | 13.0 | | | | |
| ID | 18.8 | 17.4 | 17.7 | 16.4 | 16.5 | 14.2 | | | | |
| NV | 6.3 | 6.1 | 9.2 | 5.4 | 4.5 | 8.0 | | | | |
| OR | 5.7 | 5.2 | 4.6 | 5.0 | 4.3 | 3.8 | | | | |
| UT | 4.4 | 4.7 | 3.3 | 6.5 | 2.9 | 6.5 | | | | |
| WA | 2.4 | 3.7 | 2.2 | 2.2 | 2.4 | 2.8 | | | | |

[a] Annual indices are estimated from exponentiated year effects derived from a log-linear hierarchical model fit using Bayesian methods; 95% credible intervals for the annual indices are available upon request.

[b] New England consists of CT, ME, MA, NH, RI, and VT; RI is a hunt state but was included in this group for purposes of analysis.

***Table 6.*** Preliminary estimates and 95% confidence intervals (CI, expressed as the interval half width in percent) of mourning dove harvest and hunter activity for management units and states during the 2009 hunting season[a].

| Management Unit | Total harvest | | Active hunters | | Hunter days afield | | Harvest per hunter[b] | |
|---|---|---|---|---|---|---|---|---|
| State | Estimate | CI | Estimate | CI | Estimate | CI | Estimate | CI |
| Eastern | 7,639,200 | 7 | 437,600 | †[c] | 1,245,700 | 6 | † | † |
| AL | 1,113,500 | 13 | 61,800 | 9 | 152,200 | 12 | 18.0 | 16 |
| DE | 36,300 | 36 | 1,800 | 20 | 5,700 | 28 | 19.7 | 42 |
| FL | 292,500 | 21 | 18,100 | 19 | 53,900 | 19 | 16.1 | 28 |
| GA | 857,200 | 22 | 48,500 | 18 | 119,000 | 19 | 17.7 | 28 |
| IL | 659,600 | 27 | 28,400 | 13 | 102,900 | 23 | 23.2 | 30 |
| IN | 243,200 | 17 | 13,200 | 16 | 40,300 | 15 | 18.4 | 23 |
| KY | 451,300 | 34 | 21,400 | 33 | 62,800 | 34 | 21.1 | 48 |
| LA | 482,700 | 51 | 25,000 | 24 | 77,700 | 32 | 19.3 | 56 |
| MD | 174,900 | 38 | 9,100 | 21 | 26,900 | 27 | 19.2 | 43 |
| MS | 361,500 | 19 | 19,800 | 13 | 47,400 | 18 | 18.3 | 23 |
| NC | 581,100 | 21 | 40,300 | 18 | 99,800 | 25 | 14.4 | 28 |
| OH | 295,800 | 27 | 16,700 | 19 | 75,500 | 27 | 17.7 | 33 |
| PA | 188,000 | 30 | 18,100 | 23 | 71,000 | 38 | 10.4 | 37 |
| RI | <50 | 191 | 100 | 96 | 100 | 104 | 0.3 | 214 |
| SC | 885,700 | 21 | 42,600 | 13 | 125,900 | 19 | 20.8 | 25 |
| TN | 619,800 | 22 | 41,100 | 16 | 90,800 | 19 | 15.1 | 27 |
| VA | 305,500 | 12 | 20,900 | 13 | 57,500 | 24 | 14.6 | 17 |
| WI | 74,900 | 36 | 9,500 | 28 | 33,700 | 32 | 7.9 | 46 |
| WV | 15,600 | 27 | 1,300 | 24 | 2,700 | 29 | 11.9 | 36 |
| Central | 7,474,600 | 12 | 393,400 | † | 1,312,700 | 8 | † | † |
| AR | 353,500 | 21 | 22,400 | 19 | 53,800 | 26 | 15.8 | 28 |
| CO | 242,400 | 17 | 20,300 | 13 | 45,400 | 18 | 11.9 | 22 |
| KS | 572,600 | 16 | 29,400 | 10 | 97,000 | 14 | 19.5 | 19 |
| MN | 61,500 | 67 | 6,800 | 36 | 24,100 | 64 | 9.1 | 77 |
| MO | 294,700 | 26 | 21,500 | 16 | 58,700 | 21 | 13.7 | 30 |
| MT | 12,700 | 32 | 2,500 | 32 | 6,400 | 46 | 5.1 | 45 |
| NE | 277,600 | 17 | 16,000 | 12 | 51,800 | 15 | 17.4 | 21 |
| NM | 170,200 | 26 | 7,800 | 16 | 35,700 | 26 | 21.9 | 30 |
| ND | 40,000 | 31 | 2,800 | 28 | 10,800 | 50 | 14.3 | 42 |
| OK | 378,400 | 17 | 18,600 | 12 | 55,500 | 15 | 20.4 | 21 |
| SD | 105,400 | 24 | 6,500 | 19 | 21,700 | 23 | 16.2 | 31 |
| TX | 4,945,100 | 18 | 236,600 | 10 | 846,200 | 12 | 20.9 | 21 |
| WY | 20,600 | 31 | 2,300 | 27 | 5,800 | 31 | 8.8 | 41 |
| Western | 2,241,000 | 8 | 143,400 | † | 429,000 | 7 | † | † |
| AZ | 784,400 | 12 | 37,200 | 8 | 130,600 | 11 | 21.1 | 14 |
| CA | 1,069,700 | 13 | 67,200 | 8 | 197,400 | 12 | 15.9 | 15 |
| ID | 143,300 | 38 | 10,600 | 28 | 27,200 | 30 | 13.5 | 48 |
| NV | 41,500 | 31 | 4,600 | 18 | 11,600 | 31 | 9.0 | 36 |
| OR | 38,600 | 25 | 4,300 | 25 | 16,400 | 32 | 9.0 | 35 |
| UT | 122,800 | 26 | 15,200 | 17 | 34,600 | 19 | 8.1 | 31 |
| WA | 40,700 | 50 | 4,200 | 36 | 11,100 | 40 | 9.7 | 61 |
| United States | 17,354,800 | 6 | 974,400 | † | 2,987,400 | 4 | † | † |

[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] Seasonal harvest per hunter.

[c] † = no estimate available.

***Table 7.*** Preliminary estimates and 95% confidence intervals (CI, expressed as the interval half width in percent) of mourning dove harvest and hunter activity for management units and states during the 2010 hunting season[a].

| Management Unit | Total harvest | | Active hunters | | Hunter days afield | | Harvest per hunter[b] | |
|---|---|---|---|---|---|---|---|---|
| State | Estimate | CI | Estimate | CI | Estimate | CI | Estimate | CI |
| Eastern | 7,473,500 | 7 | 403,200 | †[c] | 1,167,100 | 7 | † | † |
| AL | 1,022,900 | 17 | 48,600 | 9 | 127,100 | 14 | 21.00 | 19 |
| DE | 42,300 | 34 | 2,200 | 21 | 6,400 | 28 | 18.90 | 40 |
| FL | 321,200 | 38 | 12,800 | 29 | 48,200 | 38 | 25.20 | 47 |
| GA | 1,053,900 | 19 | 47,100 | 13 | 148,600 | 19 | 22.40 | 23 |
| IL | 464,400 | 22 | 28,900 | 14 | 89,300 | 21 | 16.10 | 26 |
| IN | 185,700 | 25 | 10,000 | 21 | 29,600 | 19 | 18.50 | 33 |
| KY | 357,100 | 26 | 20,100 | 35 | 43,400 | 25 | 17.70 | 44 |
| LA | 303,000 | 54 | 18,000 | 28 | 46,300 | 39 | 16.80 | 61 |
| MD | 113,900 | 35 | 7,600 | 22 | 20,800 | 28 | 15.10 | 41 |
| MS | 514,300 | 22 | 22,400 | 12 | 57,400 | 17 | 23.00 | 25 |
| NC | 686,900 | 24 | 44,300 | 18 | 111,700 | 31 | 15.50 | 30 |
| OH | 221,500 | 37 | 12,700 | 20 | 45,900 | 28 | 17.50 | 42 |
| PA | 226,500 | 31 | 19,900 | 22 | 69,600 | 25 | 11.40 | 38 |
| RI | 7,800 | 118 | 400 | 99 | 1,400 | 98 | 20.90 | 154 |
| SC | 998,700 | 21 | 43,100 | 15 | 138,300 | 22 | 23.20 | 25 |
| TN | 530,600 | 23 | 31,500 | 18 | 83,400 | 27 | 16.80 | 29 |
| VA | 299,000 | 14 | 23,200 | 12 | 55,300 | 15 | 12.90 | 19 |
| WI | 99,400 | 76 | 9,100 | 29 | 39,800 | 43 | 10.90 | 81 |
| WV | 24,500 | 30 | 1,400 | 23 | 4,600 | 48 | 17.60 | 38 |
| Central | 7,194,900 | 10 | 406,100 | † | 1,362,300 | 8 | † | † |
| AR | 446,400 | 28 | 23,900 | 20 | 63,300 | 28 | 18.70 | 34 |
| CO | 172,000 | 18 | 15,900 | 14 | 38,400 | 19 | 10.80 | 22 |
| KS | 511,200 | 15 | 28,200 | 10 | 93,900 | 13 | 18.10 | 18 |
| MN | 98,900 | 58 | 10,000 | 42 | 55,300 | 115 | 9.90 | 72 |
| MO | 426,000 | 20 | 29,300 | 10 | 75,200 | 14 | 14.50 | 23 |
| MT | 17,400 | 36 | 1,600 | 35 | 4,700 | 44 | 10.70 | 50 |
| NE | 276,400 | 19 | 15,800 | 14 | 49,700 | 21 | 17.50 | 24 |
| NM | 128,000 | 29 | 5,900 | 20 | 21,000 | 20 | 21.90 | 35 |
| ND | 54,200 | 38 | 3,800 | 28 | 11,800 | 37 | 14.10 | 48 |
| OK | 268,700 | 28 | 19,500 | 14 | 51,300 | 22 | 13.80 | 31 |
| SD | 64,300 | 23 | 5,000 | 21 | 14,200 | 26 | 12.90 | 31 |
| TX | 4,699,300 | 14 | 244,600 | 10 | 876,500 | 10 | 19.20 | 17 |
| WY | 32,100 | 36 | 2,700 | 26 | 7,100 | 32 | 12.00 | 45 |
| Western | 2,562,000 | 9 | 150,600 | † | 494,800 | 9 | † | † |
| AZ | 941,800 | 15 | 40,500 | 6 | 145,300 | 13 | 23.30 | 16 |
| CA | 1,244,900 | 14 | 70,400 | 8 | 249,200 | 14 | 17.70 | 16 |
| ID | 90,600 | 39 | 10,100 | 28 | 25,500 | 33 | 9.00 | 48 |
| NV | 60,300 | 27 | 4,500 | 19 | 12,700 | 26 | 13.30 | 33 |
| OR | 43,700 | 97 | 3,600 | 35 | 11,600 | 46 | 12.00 | 103 |
| UT | 102,800 | 25 | 14,300 | 23 | 31,500 | 28 | 7.20 | 34 |
| WA | 77,900 | 31 | 7,200 | 25 | 18,900 | 42 | 10.80 | 40 |
| United States | 17,230,400 | 5 | 959,900 | † | 3,024,200 | 5 | † | † |

[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] Seasonal harvest per hunter.

[c] † = no estimate available.

***Appendix A.*** Federal framework dates, season length, and daily bag limit for mourning dove hunting in the United States by management unit, 1918–2010.

| | Management Unit | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Eastern | | | Central | | | Western | | |
| Year | Dates[a] | Days | Bag | Dates | Days | Bag | Dates | Days | Bag |
| 1918 | Sep 1–Dec 31 | 107 | 25 | Sep 1–Dec 15 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1919–22 | Sep 1–Jan 31 | 108 | 25 | Sep 1–Dec 15 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1923-28 | Sep 1–Jan 31 | 108 | 25 | Sep 1–Dec 31 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1929 | Sep 1–Jan 31 | 106 | 25 | Sep 1–Dec 31 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1930 | Sep 1–Jan 31 | 108 | 25 | Sep 1–Dec 15 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1931 | Sep 1–Jan 31 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 | Sep 1–Dec 15 | 106 | 25 |
| 1932–33 | Sep 1–Jan 31 | 106 | 18 | Sep 1–Dec 15 | 106 | 18 | Sep 1–Dec 15 | 106 | 18 |
| 1934 | Sep 1–Jan 31 | 106 | 18 | Sep 1–Jan 15 | 106 | 18 | Sep 1–Dec 15 | 106 | 18 |
| 1935 | Sep 1–Jan 31 | 107 | 20 | Sep 1–Jan 16 | 106 | 20 | Sep 1–Jan 05 | 107 | 20 |
| 1936 | Sep 1–Jan 31 | 77 | 20 | Sep 1–Jan 16 | 76 | 20 | Sep 1–Nov 15 | 76 | 20 |
| 1937[b] | Sep 1–Jan 31 | 77 | 15 | Sep 1–Nov 15 | 76 | 15 | Sep 1–Nov 15 | 76 | 15 |
| 1938 | Sep 1–Jan 31 | 78 | 15 | Sep 1–Nov 15 | 76 | 15 | Sep 1–Nov 15 | 76 | 15 |
| 1939 | Sep 1–Jan 31 | 78 | 15 | Sep 1–Jan 31 | 77 | 15 | Sep 1–Nov 15 | 76 | 15 |
| 1940 | Sep 1–Jan 31 | 77 | 12 | Sep 1–Jan 31 | 76 | 12 | Sep 1–Nov 15 | 76 | 12 |
| 1941 | Sep 1–Jan 31 | 62 | 12 | Sep 1–Oct 27 | 42 | 12 | Sep 1–Oct 12 | 42 | 12 |
| 1942 | Sep 1–Oct 15 | 30 | 10 | Sep 1–Oct 27 | 42 | 10 | Sep 1–Oct 12 | 42 | 10 |
| 1943 | Sep 1–Dec 24 | 30 | 10 | Sep 1–Dec 19 | 42 | 10 | Sep 1–Oct 12 | 42 | 10 |
| 1944 | Sep 1–Jan 20 | 58 | 10 | Sep 1–Jan 20 | 57 | 10 | Sep 1–Oct 25 | 55 | 10 |
| 1945 | Sep 1–Jan 31 | 60 | 10 | Sep 1–Jan 31 | 60 | 10 | Sep 1–Oct 30 | 60 | 10 |
| 1946 | Sep 1–Jan 31 | 61 | 10 | Sep 1–Jan 31 | 60 | 10 | Sep 1–Oct 30 | 60 | 10 |
| 1947–48[c] | Sep 1–Jan 31 | 60 | 10 | Sep 1–Dec 3 | 60 | 10 | Sep 1–Oct 30 | 60 | 10 |
| 1949 | Sep 1–Jan 15 | 30 | 10 | Sep 1–Nov 14 | 45 | 10 | Sep 1–Oct 15 | 45 | 10 |
| 1950 | Sep 1–Jan 15 | 30 | 10 | Sep 1–Dec 3 | 45 | 10 | Sep 1–Oct 15 | 45 | 10 |
| 1951 | Sep 1–Jan 15 | 30 | 8 | Sep 1- Dec 24 | 42 | 10 | Sep 1–Oct 15 | 45 | 10 |
| 1952 | Sep 1–Jan 10 | 30 | 8 | Sep 1–Nov 6 | 42 | 10 | Sep 1–Oct 12 | 42 | 10 |
| 1953 | Sep 1–Jan 10 | 30 | 8 | Sep 1–Nov 9 | 42 | 10 | Sep 1–Oct 12 | 42 | 10 |
| 1954[d] | Sep 1–Jan 10 | 40 | 8 | Sep 1–Nov 9 | 40 | 10 | Sep 1–Oct 31 | 40 | 10 |
| 1955 | Sep 1–Jan 10 | 45 | 8 | Sep 1–Nov 28 | 45 | 10 | Sep 1–Dec 31 | 45 | 10 |
| 1956[e] | Sep 1–Jan 10 | 55 | 8 | Sep 1–Jan 10 | 55 | 10 | Sep 1–Jan 10 | 50 | 10 |
| 1957 | Sep 1–Jan 10 | 60 | 10 | Sep 1–Jan 10 | 60 | 10 | Sep 1–Jan 10 | 50 | 10 |
| 1958–59 | Sep 1–Jan 15 | 65 | 10 | Sep 1–Jan 15 | 65 | 10 | Sep 1–Jan 15 | 50 | 10 |
| 1960–61[f] | Sep 1–Jan 15 | 70[g] | 12 | Sep 1–Jan 15 | 60 | 15 | Sep 1–Jan 15 | 50 | 10 |
| 1962 | Sep 1–Jan 15 | 70[g] | 12 | Sep 1–Jan 15 | 60 | 12 | Sep 1–Jan 15 | 50 | 10 |
| 1963 | Sep 1–Jan 15 | 70[g] | 10 | Sep 1–Jan 15 | 60 | 10 | Sep 1–Jan 15 | 50 | 10 |
| 1964–67 | Sep 1–Jan 15 | 70[g] | 12 | Sep 1–Jan 15 | 60 | 12 | Sep 1–Jan 15 | 50 | 12 |
| 1968 | Sep 1–Jan 15 | 70[g] | 12 | Sep 1–Jan 15 | 60 | 12 | Sep 1–Jan 15 | 50 | 10 |
| 1969–70 | Sep 1–Jan 15 | 70[g] | 18[h] | Sep 1–Jan 15 | 60 | 10 | Sep 1–Jan 15 | 50 | 10 |
| 1971–79 | Sep 1–Jan 15 | 70[g] | 12 | Sep 1–Jan 15 | 60 | 10 | Sep 1–Jan 15 | 50 | 10 |
| 1980 | Sep 1–Jan 15 | 70 | 12 | Sep 1–Jan 15[i] | 60 | 10 | Sep 1–Jan 15 | 70[j] | 10[k] |
| 1981 | Sep 1–Jan 15 | 70 | 12 | Sep 1–Jan 15[i] | 45[l] | 15[l] | Sep 1–Jan 15 | 70[j] | 10[k] |
| 1982 | Sep 1–Jan 15 | 45[m] | 15[m] | Sep 1–Jan 15[i] | 45[m] | 15[m] | Sep 1–Jan 15 | 45[m] | 15[m] |
| 1983–86 | Sep 1–Jan 15 | 60[m] | 15[m] | Sep 1–Jan 15[i] | 60[m] | 15[m] | Sep 1–Jan 15 | 60[m] | 15[m] |
| 1987–07[n] | Sep 1–Jan 15 | 60[m] | 15[m] | Sep 1–Jan 15[i] | 60[m] | 15[m] | Sep 1–Jan 15 | 60[o] | 10 |
| 2008 | Sep 1–Jan 15 | 70 | 15 | Sep 1–Jan 15[i] | 60[m] | 15[m] | Sep 1–Jan 15 | 60[o] | 10 |
| 2009 | Sep 1–Jan 15 | 70 | 15 | Sep 1–Jan 15[i] | 70 | 15 | Sep 1–Jan 15 | 60[o] | 10 |
| 2010 | Sep 1-Jan 15 | 70 | 15 | Sep 1-Jan 15 [i] | 70 | 15 | Sep 1–Jan 15 | 60[o] | 10 |

[a] From 1918–1947, seasons for doves and other "webless" species were selected independently and the dates were the earliest opening and latest closing dates chosen. Dates were inclusive. There were different season lengths in various states with some choosing many fewer days than others. Only bag and possession limits, and season dates were specified.

[b] Beginning in 1937, the bag and possession limits included white-winged doves in selected states.

[c] From 1948–1953, states permitting dove hunting were listed by waterfowl flyway. Only bag and possession limits, and season dates were specified.

[d] In 1954–1955, states permitting dove hunting were listed separately. Only bag and possession limits, and season dates were specified.

[e] From 1956–1959, states permitting dove hunting were listed separately. Framework opening and closing dates for seasons (but no maximum days for season length) were specified for the first time along with bag and possession limits.

[f] In 1960, states were grouped by management unit for the first time. Maximum season length was specified for the first time.

[g] Half days.

**Appendix A.** Continued.

[h] More liberal limits allowed in conjunction with an Eastern Management Unit hunting regulations experiment.
[i] The framework extended to January 25 in Texas.
[j] 50–70 days depending on state and season timing.
[k] Arizona was allowed 12.
[l] States had the option of a 60-day season and daily bag limit of 12.
[m] States had the option of a 70-day season and daily bag limit of 12.
[n] Beginning in 2002, the limits included white-winged doves in all states in the Central Management Unit. Beginning in 2006, the limits included white-winged doves in all states in the Eastern Management Unit.
[o] 30–60 days depending on state (30 in Idaho, Nevada, Oregon, Utah, Washington; 60 in Arizona and California).

**U.S. Fish and Wildlife Service**
**Division of Migratory Bird Management**
**Population and Habitat Assessment Branch**
**11510 American Holly Drive**
**Laurel, Maryland, 20708-4016**

**http://www.fws.gov**

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