



Your 2008 Crane Count Results Are Enclosed!



Dear Midwest Crane Counter,

The International Crane Foundation (ICF) is pleased to present the results of the 2008 Crane Count. The 33rd Annual Midwest Crane Count took place on April 19. This program completely depends on your dedication and participation – we could not do it without you. Thank you to everyone involved, especially the County Coordinators for all of their volunteer work to organize the Count in your area! It is our County Coordinators that give ICF the ability to reach the thousands of people involved with Crane Count and maintain such a wide geographic range for the survey. Thank you for all of the hard work you have done and for your gifts of time and talent.

Enclosed you will find a map of the reporting counties throughout the Upper Midwest, and tables summarizing data from each one. The totals for counties seem to have been fairly consistent.

We appreciate all of the time and effort you put into this count every year. Thank you for helping with the 33rd Anniversary of Crane Count. We look forward to your continuation of participation for many more years to come.

To show our appreciation for the time and energy you put into the Crane Count, ICF is offering free admission for all crane counters to our site in Baraboo, Wisconsin during our 2009 season. Free admission will be granted to all individuals whose name(s) appear on the mailing label on this letter. Simply cut out the free admission pass from the back page of the newsletter (your address label will be on the back). Present the pass upon arrival at our Visitor Center for your free admission. In June 2009, ICF will be opening its new Africa Exhibit with the four Sub-Saharan cranes. We hope you will visit us!

Lots of useful information about Crane Count can be found on the ICF website: www.savingcranes.org. The easiest way of finding the Crane Count portion of the ICF website is by accessing the information at: www.cranecount.org

Mark your calendars for the **34th Annual Midwest Crane Count on April 18, 2009**. Thank you once again for your dedication and hard work!

Sincerely,

Alyssa Rod, ICF Crane Count Coordinator; Heath Anderson, GIS Research Assistant
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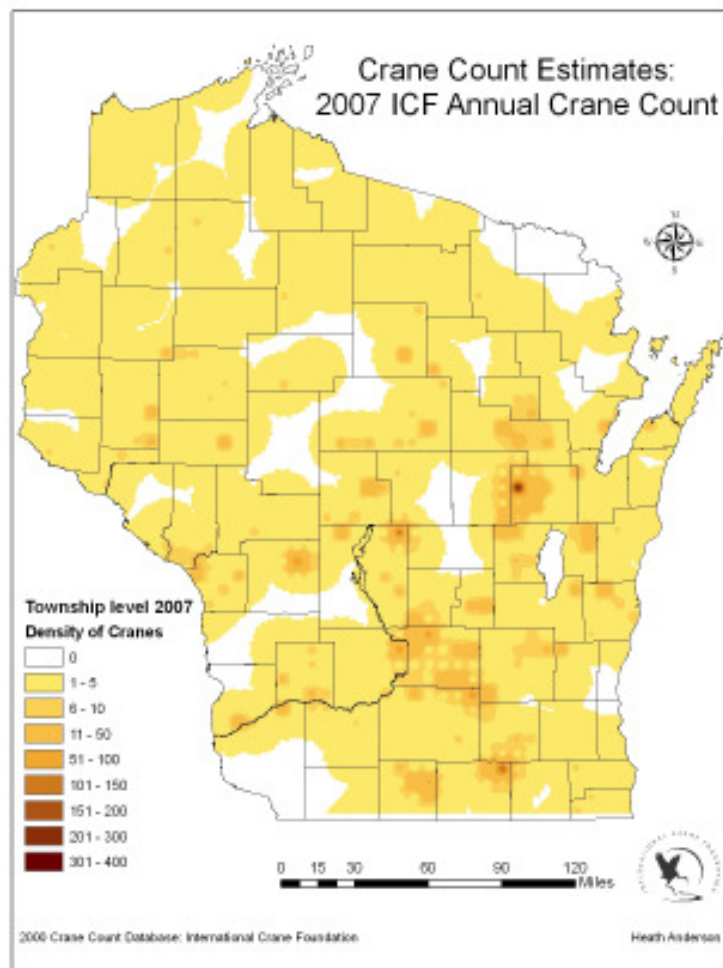
Digitizing Crane Count

By Heath Anderson, ICF GIS Research Assistant

The International Crane Foundation (ICF) has compiled the handwritten data from the Midwest Sandhill Crane Count since 1982. Bringing the Crane Count data into the 21st century by constructing a higher resolution map was a daunting task for a research assistant! Digitizing the data required a painstaking review of all data sheets spanning two decades. Several key problems were revealed during this process: 1) erroneous counts associated with more than one site within a county had the same designation; 2) identification and correction of situations where crane site counts varied from year to year; 3) development of a well structured process to assign consistent site identification numbers across the state. Correcting such problems to ensure a high degree of data accuracy is a prerequisite for developing higher resolution maps.

Creating unique identifiers for each site ties databases to the digitized locations ensuring consistent database design and development, as well as systematic mapping and data entry. The database houses specific information; such as number of cranes and number of crane pairs attributed to each location. Digitizing count locations is the process of converting paper maps into a digital

form that the mapping software ArcGIS (a computer program capable of assembling, storing, manipulating, and displaying geographically referenced information) can use for analysis. This necessitates linking physical features such as roads, railroad crossings, and



Interpolation of crane density at the “township level” based on site locations and crane estimates in the state of Wisconsin.

What about the Weather?

from the ICF Crane Count Staff

Everyone knows the weather can change quickly. We’ve all counted cranes in the sun, rain, snow or fog. Past Crane Counts have been full of weather obstacles, from large amounts of snow in the north to flooding in the south. Yet, cranes don’t seem to mind. What happened to the cranes during this year’s flooding?

If floods occur during nesting, eggs may get washed away. Some wetlands can take more water volume and pairs may be able to successfully shore up nests against the rising water. Birds with chicks that are old enough can usually walk away from rising water. It all depends on the age of the eggs or chicks, and how quickly the water rises.

How did the June 2008 flooding affect nests and chicks?

Most nests in our study area around the Briggsville, WI region were already hatched, so they fared just fine – there was high productivity this year! We believe that the high water from snow melt led to successful nests during the first round. We do know that there were several renests that were lost at the time of high water in June.

How did flooding around the count date affect the population or number trends?

We did not detect any changes as a result of high water in early spring.



ICF Free Admission Pass

Thank you for making Crane Count 2008 possible!
Present this certificate at the ICF Visitor Center for free admission to ICF any time during the 2009 season.

Valid to all crane counters whose names appear on the mailing label on the reverse side. Any accompanying guests who are not listed on the mailing label will be charged the standard admission fee.

ICF is open daily from 9:00 a.m. until 5:00 p.m., April 15-October 31. Daily guided tours are available at 10 a.m., 1 p.m., and 3 p.m. from Memorial Day through Labor Day, and on weekends only in April, May, September, and October.

Thank you for your generous gift of time!

Whooping Crane Eastern Migratory Flock Updates

By Alyssa Rod, Visitor Services Coordinator

What's going on with the Whooping Cranes in Wisconsin? How many are there? What's happening next with the Eastern Migratory Flock?

Currently there are 73 wild Whooping Cranes in the Eastern Migratory flock with an additional 14 birds being released during the fall/winter 2008-09. In the spring and fall, project staff from ICF and the U.S. Fish and Wildlife Service track and monitor the released cranes in an effort to learn as much as possible about their unassisted journeys and the habitat choices they make both along the way and on their summering and wintering grounds.

Direct Autumn Release

In 2005, ICF and the USFWS began to test an alternative release method to the ultralight reintroduction called Direct Autumn Release (DAR). Through this method, chicks are hatched and reared for a month at ICF and then transferred to the Necedah National Wildlife Refuge. When the chicks are about five months old, they are released on the refuge in the company of older cranes from whom the young birds learn the migration route. This year five cranes made their first southward migration using this method. An additional whooping crane, which had been removed from the ultralight-led cohort due to aggressive behavior, was released on the Necedah NWR using DAR methods. This juvenile crane and one of the DAR birds arrived in Florida in late December. The other four birds are currently in Tennessee.

Ultralight Reintroduction

Fourteen juvenile Whooping Cranes left from the Necedah National Wildlife Refuge in central Wisconsin with four ultralight aircraft for Florida on October 17, 2008. This year these cranes followed a new route to Florida, from Wisconsin through Illinois, Kentucky, Tennessee, Alabama, and Georgia. Also, upon reaching Florida, the birds were split into two separate groups. The decision to split the cohort comes after the loss in February 2007 of 17 of the 18 Class of 2006 whooping cranes in a severe storm at Chassahowitzka National Wildlife Refuge. WCEP hopes the two wintering locations will help reduce the risk of another catastrophic loss.

Seven cranes arrived at St. Marks NWR on January 17 and seven arrived at the Chassahowitzka NWR on January 23, 2009 — 88 days after leaving Necedah NWR.

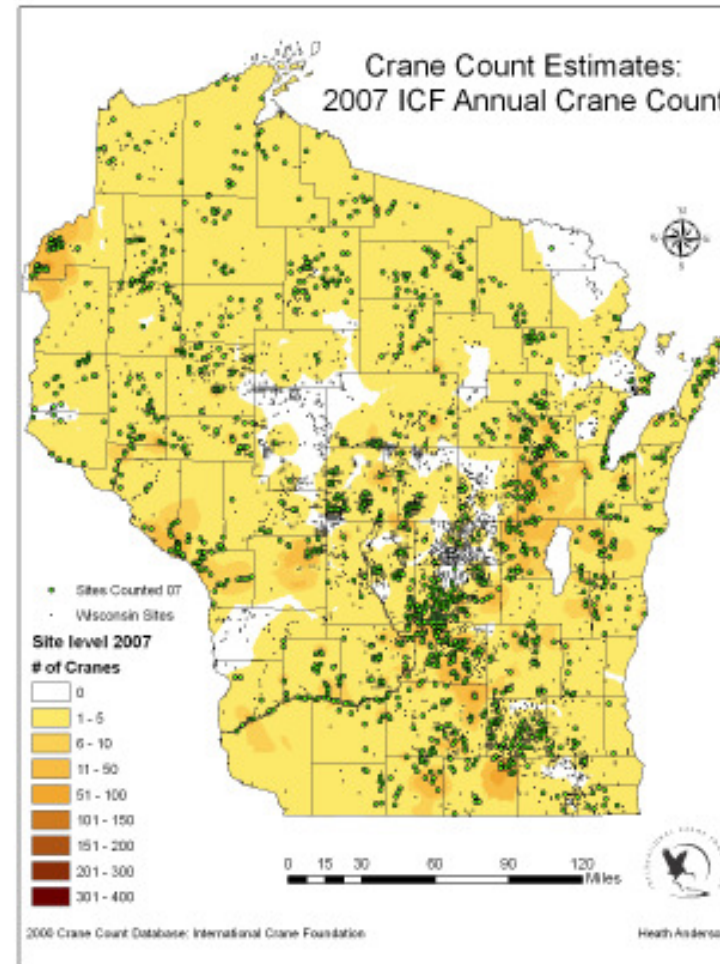
With the 2008 migration completed, ICF Crane Counters can look forward to more updates on these beautiful birds and their migration back to Wisconsin this spring. To stay ahead and become an expert on Whooping Crane migration, email ICF at cranes@savingcranes.org and ask to receive the Whooping Crane email updates. These updates will allow Counters, like you, to not only impress your family and friends with your knowledge of Sandhill Cranes, but also provide information about the Whooping Crane, one of the most historic conservation projects in the United States.

bodies of water, to reference points, allowing the creation of a digital representation of the real world site.

Two different data analysis methods were used during this project to determine crane density estimates. This first type of analysis is referred to as site level. Site level provides a more accurate crane location and aids our understanding of where to focus volunteer efforts. "Township level"

is another type of analysis that divides the state into a grid composed of 6 x 6 mile squares. The benefits associated with "Township level" analysis provides a more precise visual representation of crane density. Township analysis also corrects count errors associated with observers detecting cranes through hearing calls not directly linkable to the site boundary. This correction occurs when the crane density is encompassed within a single grid square rather than a site. Even though the site method offered a higher degree of crane location accuracy, we chose the township analysis method indexed over time providing a realistic representation of crane dispersal along bodies of water. When exposed to time analysis of corrected data, several trends became apparent. These trends were reviewed and compared with the crane count gathering process. For example, there is a strong positive correlation between the number of cranes and the number of crane observers. Other data anomalies within a particular year can be associated with known weather conditions such as dense fog (reducing both the audible and visual detection of cranes).

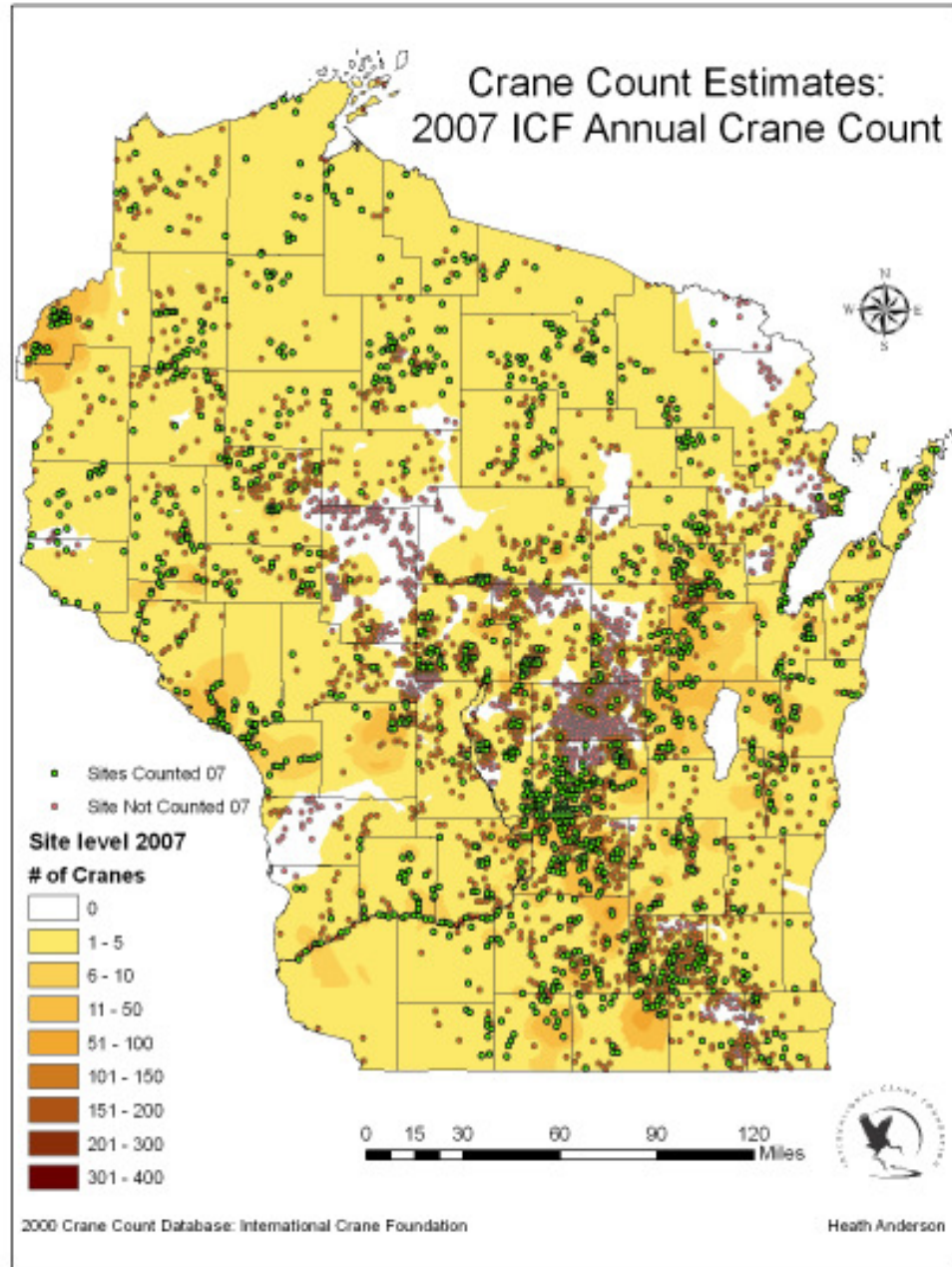
The final product is a high-resolution map providing accurate crane counts and locations. The consistent data gathering and digital mapping techniques allow more accurate mapping and aid scientists in the understanding of the cranes and mankind's impact on their habitat. These new maps and techniques,



Interpolation of crane estimates at the "site level" based upon counted site locations within the state of Wisconsin.

injunction with overlapping of relevant characteristics for a specific purpose will form the foundation of future studies. ICF will thus be able to provide ever more accurate and credible information to our clients and volunteers.

2008 Crane Count Results By State and County



Interpolation of site distribution overlaid by crane count estimates to show the areas in need of volunteers throughout the state of Wisconsin.

Michigan

| County | Cranes | Pairs | Sites | Observers |
|-------------|---------------|---------------|---------------|---------------|
| Alger | 180 | 67 | 30 | 44 |
| Allegan | 55 | 6 | 6 | 8 |
| Baraga | 25 | 8 | 10 | 15 |
| Cass | not available | not available | not available | not available |
| Clinton | 22 | 1 | 1 | 4 |
| Delta | 28 | 10 | 5 | 8 |
| Dickinson | not available | not available | not available | not available |
| Hillsdale | not available | not available | not available | not available |
| Houghton | 77 | 16 | 24 | 49 |
| Ingham | not available | not available | not available | not available |
| Iron | not available | not available | not available | not available |
| Jackson | not available | not available | not available | not available |
| Keweenaw | 6 | 1 | 8 | 12 |
| Lenawee | not available | not available | not available | not available |
| Marquette | 39 | 11 | 10 | 18 |
| Menominee | 41 | 10 | 7 | 12 |
| Ontonagon | 38 | 10 | 25 | 38 |
| Schoolcraft | 34 | 1 | 9 | 9 |
| Shiawasee | not available | not available | not available | not available |
| Washtenaw | 41 | 2 | 6 | 12 |

Minnesota

| County | Cranes | Pairs | Sites | Observers |
|----------|---------------|---------------|---------------|---------------|
| Anoka | 12 | 4 | 1 | 2 |
| Beltrami | 1 | 0 | 1 | 1 |
| Chisago | 29 | 6 | 6 | 8 |
| Dakota | not available | not available | not available | not available |
| Hennepin | 3 | 0 | 11 | 11 |
| Houston | 30 | 8 | 9 | 15 |
| Morrison | 30 | 0 | 1 | 2 |
| Polk | not available | not available | not available | not available |
| Ramsey | 7 | 3 | 6 | 9 |
| Roseau | 0 | 0 | 1 | 2 |
| Wabasha | 46 | 9 | 11 | 16 |
| Winona | not available | not available | not available | not available |

Illinois

| County | Cranes | Pairs | Sites | Observers |
|------------|---------------|---------------|---------------|---------------|
| Boone | 2 | 0 | 2 | 3 |
| Carroll | 6 | 2 | 3 | 4 |
| Cook | 0 | 0 | 2 | 4 |
| DuPage | 0 | 0 | 4 | 7 |
| Grundy | 0 | 0 | 1 | 2 |
| Jo Davies | not available | not available | not available | not available |
| Kane | 17 | 5 | 12 | 18 |
| Lake | 60 | 16 | 17 | 44 |
| La Salle | 0 | 0 | 1 | 2 |
| McHenry | not available | not available | not available | not available |
| Stephenson | 21 | 5 | 12 | 24 |
| Whiteside | 5 | 2 | 2 | 5 |
| Winnebago | 74 | 15 | 18 | 30 |

Iowa

| County | Cranes | Pairs | Sites | Observers |
|------------|---------------|---------------|---------------|---------------|
| Allamakee | 22 | 4 | 1 | 1 |
| Bremer | 20 | 4 | 9 | 15 |
| Buchanan | not available | not available | not available | not available |
| Butler | not available | not available | not available | not available |
| Chickasaw | not available | not available | not available | not available |
| Clinton | 10 | 3 | 2 | 6 |
| Greene | not available | not available | not available | not available |
| Hancock | 0 | 0 | 5 | 5 |
| Humboldt | not available | not available | not available | not available |
| Jackson | 20 | 1 | 2 | 2 |
| Johnson | 0 | 0 | 1 | 2 |
| Jones | 6 | 0 | 1 | 5 |
| Kossuth | not available | not available | not available | not available |
| Louisa | not available | not available | not available | not available |
| Polk | not available | not available | not available | not available |
| Scott | not available | not available | not available | not available |
| Tama | 9 | 1 | 6 | 24 |
| Winnebago | 1 | 0 | 1 | 1 |
| Winneshiek | not available | not available | not available | not available |
| Worth | 0 | 0 | 4 | 4 |
| Wright | not available | not available | not available | not available |

2008 Crane Count Results in the State of Wisconsin By County

| County | Cranes | Pairs | Sites | Observers |
|-------------|---------------|---------------|---------------|---------------|
| Adams | 77 | 6 | 22 | 50 |
| Ashland | 8 | 1 | 6 | 13 |
| Barron | 66 | 28 | 25 | 44 |
| Bayfield | 2 | 1 | 14 | 21 |
| Brown | 170 | 15 | 38 | 70 |
| Buffalo | 94 | 16 | 11 | 22 |
| Burnett | 233 | 31 | 25 | 60 |
| Calumet | 237 | 47 | 14 | 20 |
| Chippewa | 125 | 47 | 25 | 42 |
| Clark | 66 | 21 | 11 | 21 |
| Columbia | 1432 | 177 | 89 | 192 |
| Crawford | 97 | 22 | 10 | 21 |
| Dane | 284 | 51 | 49 | 99 |
| Dodge | 511 | 104 | 36 | 64 |
| Door | 87 | 15 | 20 | 29 |
| Douglas | 5 | 1 | 10 | 14 |
| Dunn | 127 | 32 | 30 | 60 |
| Eau Claire | 121 | 39 | 21 | 41 |
| Florence | 6 | 1 | 1 | 1 |
| Fond du Lac | 134 | 43 | 8 | 15 |
| Forest | 42 | 17 | 11 | 12 |
| Grant | 10 | 3 | 5 | 7 |
| Green | 88 | 16 | 14 | 27 |
| Green Lake | 231 | 104 | 21 | 40 |
| Iowa | 77 | 15 | 15 | 22 |
| Iron | 42 | 21 | 10 | 16 |
| Jackson | 38 | 11 | 11 | 20 |
| Jefferson | 462 | 103 | 44 | 79 |
| Juneau | 64 | 14 | 7 | 12 |
| Kenosha | 55 | 12 | 11 | 26 |
| Kewaunee | 17 | 4 | 3 | 3 |
| LaCrosse | 120 | 37 | 18 | 49 |
| LaFayette | not available | not available | not available | not available |
| Langlade | 23 | 8 | 1 | 1 |
| Lincoln | 83 | 26 | 13 | 22 |
| Manitowoc | 162 | 28 | 9 | 11 |

| County | Cranes | Pairs | Sites | Observers |
|-------------|--------|-------|-------|-----------|
| Marathon | 246 | 60 | 35 | 66 |
| Marinette | 62 | 22 | 19 | 25 |
| Marquette | 470 | 102 | 84 | 140 |
| Menominee | 87 | 25 | 13 | 19 |
| Milwaukee | 2 | 0 | 1 | 1 |
| Monroe | 138 | 28 | 13 | 28 |
| Oconto | 127 | 25 | 25 | 33 |
| Oneida | 203 | 83 | 42 | 110 |
| Outagamie | 556 | 74 | 30 | 50 |
| Ozaukee | 12 | 5 | 2 | 2 |
| Pepin | 35 | 12 | 8 | 13 |
| Pierce | 10 | 2 | 9 | 12 |
| Polk | 2 | 1 | 1 | 1 |
| Portage | 107 | 37 | 24 | 145 |
| Price | 102 | 14 | 48 | 123 |
| Racine | 15 | 6 | 5 | 14 |
| Richland | 122 | 26 | 19 | 30 |
| Rock | 377 | 40 | 24 | 48 |
| Rusk | 26 | 4 | 12 | 19 |
| St. Croix | 38 | 5 | 14 | 24 |
| Sauk | 155 | 42 | 28 | 68 |
| Sawyer | 9 | 2 | 10 | 11 |
| Shawano | 1057 | 63 | 51 | 92 |
| Sheboygan | 114 | 17 | 15 | 29 |
| Taylor | 20 | 7 | 5 | 6 |
| Trempealeau | 159 | 52 | 25 | 44 |
| Vernon | 31 | 5 | 9 | 12 |
| Vilas | 43 | 18 | 9 | 21 |
| Walworth | 40 | 6 | 10 | 12 |
| Washburn | 39 | 13 | 28 | 33 |
| Washington | 35 | 8 | 5 | 8 |
| Waukesha | 140 | 21 | 17 | 31 |
| Waupaca | 111 | 19 | 17 | 23 |
| Waushara | 100 | 18 | 12 | 18 |
| Winnebago | 665 | 59 | 34 | 69 |
| Wood | 403 | 79 | 46 | 80 |

Annual Midwest Crane Count 2008 Results

Pages 5-9 contain the results of Crane Count 2008 (this includes all of the data returned to ICF by December 31, 2008).

Tables:

Pages 8 and 9 contain a table for each of the 5 Crane Count states (Wisconsin, Michigan, Minnesota, Illinois and Iowa.) The tables provide a county-by-county summary of 2008 Crane Count data. The number of cranes (seen or heard), the number of pairs (determined by unison calls heard), the number of sites, and number of observers, are reported.

Map:

Pages 6 and 7 contain a map of the five-state Crane Count area. The map illustrates total crane sightings by county (how many cranes were seen or heard in each county during the

official two-hour Crane Count period). Counties that participated in the Count are shown in varying shades of grey, depending upon how many cranes were observed.

The number of cranes observed or heard during Crane Count does not tell us precisely how many cranes are found in any given county. Factors such as weather conditions during the Count, number of sites counted, and number of counters has to be considered when we use Crane Count data to estimate crane population trends.

2008 Crane Count State Totals

| State | Cranes | Pairs | Observers |
|---------------|---------------|--------------|--------------|
| Wisconsin | 11,254 | 2,117 | 2,706 |
| Michigan | 586 | 143 | 229 |
| Minnesota | 158 | 30 | 66 |
| Illinois | 185 | 45 | 143 |
| Iowa | 88 | 13 | 65 |
| Total: | 12,271 | 2,348 | 3,209 |



Annual Midwest Crane Count Results 2008

