

## TRENDS IN DUCK BREEDING POPULATIONS, 1955-2005

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***50 Years & Still Counting***

This report summarizes information about the status of duck populations and wetland habitats during spring 2005, focusing on areas encompassed by the U.S. Fish and Wildlife (USFWS) and Canadian Wildlife Services' (CWS) Waterfowl Breeding Population and Habitat Survey. The estimates do not include information from surveys conducted by State or Provincial agencies. In the traditional survey area, which includes strata 1-18, 20-50, and 75-77 (Fig. 1), the total duck population estimate (excluding scoters [*Melanitta* spp.], eiders [*Somateria* and *Polysticta* spp.], long-tailed ducks [*Clangula hyemalis*], mergansers [*Mergus* and *Lophodytes* spp.], and wood ducks [*Aix sponsa*]) was  $31.7 \pm 0.6$  [SE] million birds, similar to last year's estimate of  $32.2 \pm 0.6$  million birds but 5% below the 1955-2004 long-term average<sup>a</sup>. Mallard (*Anas platyrhynchos*) abundance was  $6.8 \pm 0.3$  million birds, which was 9% below last year's estimate of  $7.4 \pm 0.3$  million birds and 10% below the long-term average. Blue-winged teal (*A. discors*) abundance was  $4.6 \pm 0.2$  million birds. This value was similar to last year's estimate of  $4.1 \pm 0.2$  million birds and the long-term average. Of the other duck species, gadwall (*A. strepera*;  $2.2 \pm 0.1$  million) was 16% below that of 2004, while estimates of northern pintails (*A. acuta*;  $2.6 \pm 0.1$  million; +17%) and northern shovelers (*A. clypeata*;  $3.6 \pm 0.2$  million; +28%) were significantly above 2004 estimates. The estimate for northern shovelers was 67% above the long-term average for this species, as were estimates of gadwall (+30%) and green-winged teal (*A. crecca*;  $2.2 \pm 0.1$  million; +16%). Northern pintails remained 38% below their long-term average despite this year's increase in abundance. Estimates of American wigeon (*A. americana*;  $2.2 \pm 0.1$  million; -15%) and scaup (*Aythya affinis* and *A. marila* combined;  $3.4 \pm 0.2$ ; -35%) also were below their respective long-term averages; the estimate for scaup was a record low.

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<sup>a</sup> Populations are considered to have changed from the previous year or long-term average if observed significance value associated with change is  $\leq 0.10$ . Actual p-values are given in tables.

Abundances of redheads (*A. americana*) and canvasbacks (*A. valisineria*) were unchanged from last year's counts and long-term averages.

Habitat conditions at the onset of the survey in May were variable, with some areas improved from last year and others remaining or becoming increasingly dry. Habitat on the U.S. prairies was in fair to poor condition due to a dry fall, winter, and early spring and warm winter temperatures. Nesting habitat was particularly poor in South Dakota because of below average precipitation resulting in degraded wetland conditions and increased tilling and grazing of wetland margins. Birds may have overflowed the state for wetter conditions to the north. Water levels and upland nesting cover were relatively better in North Dakota and eastern Montana and wetland conditions in these regions improved markedly during June, with the onset of well-above average precipitation amounts. The 2005 pond estimate for north-central U.S. ( $1.5 \pm 0.1$  million) was similar to last year's estimate (Fig. 2).

The prairies of southern Alberta and southwestern Saskatchewan were also quite dry in May. The U.S. and Canadian prairies received substantial rain in late May and during the entire month of June that recharged wetlands and encouraged growth of vegetation. While this improved habitat quality on the Prairies, it probably came too late to benefit early-nesting species or prevent overflight. This heavy rain likely benefited late nesting species and renesting efforts.

In contrast, the Canadian Parklands were much improved compared to last year, due to a combination of several years of improving nesting cover and above-normal precipitation last fall and winter. These areas were in good-to-excellent condition. Record high levels of rain flooded the lower elevation prairie areas of central Manitoba during April to date, producing fair or poor nesting conditions for breeding waterfowl. Overall, pond counts in the Canadian prairies and the Canadian and U.S. prairies combined increased over last year. The estimate of ponds in Prairie Canada was  $3.9 \pm 0.2$  million. This was a 56% increase relative to last year's estimate of  $2.5 \pm 0.1$  million ponds and 17% higher than the long-term average of  $3.3 \pm 0.3$  million ponds. The total pond estimate (Prairie Canada and the U.S. combined) was  $5.4 \pm 0.2$  million ponds. This was 37% greater than last year's estimate of  $3.9 \pm 0.2$  million ponds and 12% higher than the long-term average of  $4.8 \pm 0.1$  million ponds.

Portions of Northern Manitoba and Northern Saskatchewan also experienced flooding, resulting in only fair conditions for breeding waterfowl. By contrast, dry conditions in parts of the Northwest Territories and Northern Alberta made for low water levels in lakes and ponds and the complete drying of some wetlands. Therefore, habitat was also classified as fair in these areas. However, most of the Northwest Territories was in good condition due to adequate water and a timely spring break up that made habitat available to early-nesting species. Alaska was in mostly excellent condition, with an early spring and good water, except for a few flooded river areas and the North Slope where spring was late.

In the Eastern survey area (strata 51-72), biologists reported that habitat conditions were good due to adequate water and relatively mild spring temperatures. The exceptions were the coast of Maine and the Maritimes, where May temperatures were cool and some flooding occurred along the coast and major rivers. Also, below-normal precipitation left some habitats in fair to poor condition in southern Ontario. However, precipitation in southern Ontario after survey completion improved habitat conditions in the region. Population estimates of four species were below 2004 levels as determined by non-overlap of Bayesian 95% credibility levels. These species were American black ducks (*Anas rubripes*; 0.8 million; -24%), mallards (0.4 million; -36%), mergansers (common *Mergus merganser*, red-breasted *M. serrator*, and hooded *Lophodytes cucullatus*; all 3 species pooled 0.8 million; -25%), and green-winged teal (0.4 million; -46%). All species were similar to 1999-2004 averages.

In 2005, the USFWS and CWS took initial steps toward the integration of several previously-independent waterfowl surveys of eastern North America. Specifically, new analytical methods were used to generate composite estimates from USFWS and CWS survey data, total indicated bird definitions for American black ducks were modified to provide a common index across the surveys, and adjustments were made to the geographic stratification in eastern North America. For these reasons, population estimates presented in this report for the Eastern survey area are not directly comparable with estimates presented in previous reports. Additionally, composite estimates are presently available only for 1999-2005. In future reports, composite estimates will be presented for a longer time-span. Changes in methods and results will be presented in greater detail in the 2005 Waterfowl Status Report. We anticipate that composite estimates for the Eastern survey area will change in the coming years as the USFWS and CWS refine the integrated survey design and analytical methods.

The data in this report were contributed by the following individuals:

Alaska, Yukon Territory, and Old Crow Flats (Strata 1-12): B. Conant and D. Groves

Northern Alberta, Northeastern British Columbia, and Northwest Territories (Strata 13-18, 20, and 77): C. Ferguson and J. Allen

Northern Saskatchewan and Northern Manitoba (Strata 21-24): F. Roetker and B. Fortier

Southern and Central Alberta (Strata 26-29, 75, and 76):

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Ground P. Pryor<sup>a</sup>, K. Froggatt<sup>b</sup>, S. Barry<sup>a</sup>, E. Hofman<sup>b</sup>, M. Barr<sup>c</sup>, N. Clements<sup>a</sup>,  
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Montana and Western Dakotas (Strata 41-44):

Air R. Bentley and H. Woods  
Ground K. Richkus and T. Wilkendorf

Eastern Dakotas (Strata 45-49):

Air J. Solberg and M. Rich  
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Central Quebec (Strata 68 and 69):

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(Strata 52-58):

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Helicopter K. Ross<sup>a</sup>, D. McNichol<sup>a</sup>, D. Fillman<sup>a</sup>, B. Collins<sup>a</sup>, and G. Ertel<sup>d</sup>

Central and Western Ontario (Strata 50 and 51):

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Habitat information was provided by U.S. Fish and Wildlife Service and Canadian Wildlife Service biologists.

Analysis of Eastern survey data by John R. Sauer, U.S. Geological Survey.

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<sup>a</sup> Canadian Wildlife Service

<sup>b</sup> State, Provincial, or Tribal Conservation Agency

<sup>c</sup> Ducks Unlimited - Canada

<sup>d</sup> Other organization

All others – U.S. Fish and Wildlife Service

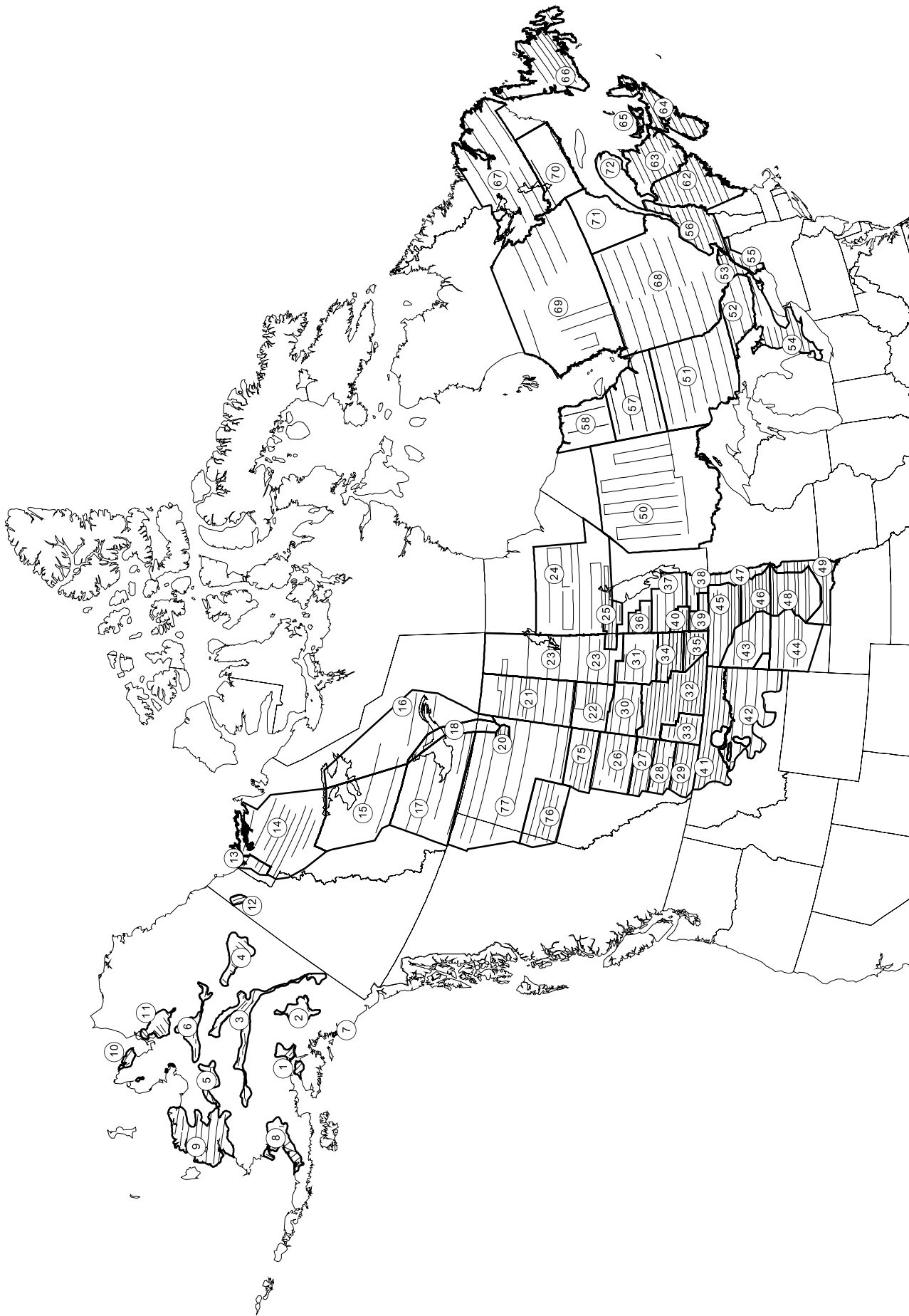


Table 1. Duck breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005   | 2004   | Change from 2004 |          | LTA <sup>a</sup> | Change from LTA |          |
|--|--------|--------|------------------|----------|------------------|-----------------|----------|
|  |        |        | %                | <i>P</i> |                  | %               | <i>P</i> |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 5,114  | 5,456  | -6               | 0.194    | 3,519            | +45             | <0.001   |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 4,713  | 5,882  | -20              | 0.001    | 7,202            | -35             | <0.001   |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 3,223  | 4,085  | -21              | 0.007    | 3,564            | -10             | 0.099    |
| S. Alberta   | 3,178  | 2,499  | +27              | 0.002    | 4,305            | -26             | <0.001   |
| S. Saskatchewan  | 7,967  | 5,783  | +38              | <0.001   | 7,336            | +9              | 0.024    |
| S. Manitoba  | 1,627  | 1,474  | +10              | 0.172    | 1,542            | +5              | 0.287    |
| Montana and western Dakotas  | 1,290  | 1,615  | -20              | 0.006    | 1,620            | -20             | <0.001   |
| Eastern Dakotas  | 4,623  | 5,370  | -14              | 0.022    | 4,193            | +10             | 0.067    |
| Total <sup>b</sup>   | 31,735 | 32,164 | -1               | 0.593    | 33,281           | -5              | 0.006    |

<sup>a</sup> Long-term average, 1955-2004.

<sup>b</sup> Includes 10 species in Appendix A plus American black duck, ring-necked duck, goldeneyes, bufflehead, and ruddy duck; excludes eiders, long-tailed duck, scoters, mergansers, and wood duck.

Table 2. Mallard breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005  | 2004  | Change from 2004 |          | LTA   | Change from LTA |          |
|--|-------|-------|------------------|----------|-------|-----------------|----------|
|  |       |       | %                | <i>P</i> |       | %               | <i>P</i> |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 703   | 811   | -13              | 0.199    | 350   | +101            | <0.001   |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 533   | 776   | -31              | 0.025    | 1,097 | -51             | <0.001   |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 937   | 1,283 | -27              | 0.143    | 1,163 | -19             | 0.165    |
| S. Alberta   | 671   | 600   | +12              | 0.460    | 1,107 | -39             | <0.001   |
| S. Saskatchewan  | 1,729 | 1,609 | +7               | 0.515    | 2,079 | -17             | 0.007    |
| S. Manitoba  | 455   | 393   | +16              | 0.194    | 377   | +21             | 0.054    |
| Montana and western Dakotas  | 387   | 495   | -22              | 0.160    | 502   | -23             | 0.017    |
| Eastern Dakotas  | 1,340 | 1,456 | -8               | 0.520    | 836   | +60             | <0.001   |
| Total  | 6,755 | 7,425 | -9               | 0.092    | 7,510 | -10             | 0.008    |

Table 3. Gadwall breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005  | 2004  | Change from 2004 |          | LTA   | Change from LTA |          |
|--|-------|-------|------------------|----------|-------|-----------------|----------|
|  |       |       | %                | <i>P</i> |       | %               | <i>P</i> |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 3     | 2     | +42              | 0.734    | 2     | +43             | 0.705    |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 77    | 138   | -44              | 0.083    | 46    | +66             | 0.050    |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 19    | 22    | -16              | 0.772    | 28    | -32             | 0.133    |
| S. Alberta   | 338   | 290   | +17              | 0.492    | 308   | +10             | 0.612    |
| S. Saskatchewan  | 723   | 752   | -4               | 0.847    | 553   | +31             | 0.052    |
| S. Manitoba  | 120   | 148   | -18              | 0.362    | 65    | +84             | <0.001   |
| Montana and western Dakotas  | 187   | 205   | -9               | 0.614    | 194   | -4              | 0.797    |
| Eastern Dakotas  | 712   | 1,033 | -31              | 0.006    | 486   | +46             | 0.001    |
| Total  | 2,179 | 2,590 | -16              | 0.052    | 1,683 | +30             | <0.001   |

Table 4. American wigeon breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005  | 2004  | Change from 2004 |          | LTA   | Change from LTA |          |
|--|-------|-------|------------------|----------|-------|-----------------|----------|
|  |       |       | %                | <i>P</i> |       | %               | <i>P</i> |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 873   | 897   | -3               | 0.790    | 504   | +73             | <0.001   |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 583   | 565   | +3               | 0.889    | 919   | -36             | 0.002    |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 174   | 149   | +17              | 0.568    | 254   | -31             | 0.013    |
| S. Alberta   | 125   | 117   | +8               | 0.728    | 300   | -58             | <0.001   |
| S. Saskatchewan  | 294   | 128   | +130             | 0.002    | 428   | -31             | 0.006    |
| S. Manitoba  | 34    | 3     | +893             | 0.002    | 62    | -45             | 0.006    |
| Montana and western Dakotas  | 67    | 66    | +2               | 0.926    | 110   | -39             | <0.001   |
| Eastern Dakotas  | 73    | 56    | +30              | 0.405    | 48    | +53             | 0.114    |
| Total  | 2,225 | 1,981 | +12              | 0.177    | 2,624 | -15             | 0.005    |



Table 5. Green-winged teal breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005         | 2004         | Change from 2004 |              | LTA          | Change from LTA |              |
|--|--------------|--------------|------------------|--------------|--------------|-----------------|--------------|
|  |              |              | %                | <i>P</i>     |              | %               | <i>P</i>     |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 713          | 819          | -13              | 0.289        | 351          | +103            | <0.001       |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 437          | 835          | -48              | 0.002        | 759          | -42             | <0.001       |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 310          | 375          | -17              | 0.262        | 195          | +59             | 0.002        |
| S. Alberta   | 159          | 98           | +61              | 0.138        | 195          | -18             | 0.291        |
| S. Saskatchewan  | 359          | 124          | +189             | <0.001       | 227          | +58             | 0.027        |
| S. Manitoba  | 55           | 27           | +103             | 0.007        | 52           | +7              | 0.686        |
| Montana and western Dakotas  | 83           | 104          | -20              | 0.395        | 39           | +113            | 0.008        |
| Eastern Dakotas  | 42           | 79           | -47              | 0.079        | 45           | -8              | 0.742        |
| <b>Total</b>   | <b>2,157</b> | <b>2,461</b> | <b>-12</b>       | <b>0.114</b> | <b>1,861</b> | <b>+16</b>      | <b>0.021</b> |

Table 6. Blue-winged teal breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005         | 2004         | Change from 2004 |              | LTA          | Change from LTA |              |
|--|--------------|--------------|------------------|--------------|--------------|-----------------|--------------|
|  |              |              | %                | <i>P</i>     |              | %               | <i>P</i>     |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 3            | 2            | +25              | 0.876        | 1            | +105            | 0.626        |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 247          | 401          | -38              | 0.116        | 271          | -9              | 0.704        |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 139          | 60           | +130             | 0.102        | 268          | -48             | 0.007        |
| S. Alberta   | 649          | 360          | +80              | 0.009        | 608          | +7              | 0.665        |
| S. Saskatchewan  | 1,597        | 1,155        | +38              | 0.026        | 1,210        | +32             | 0.002        |
| S. Manitoba  | 339          | 282          | +20              | 0.206        | 383          | -12             | 0.207        |
| Montana and western Dakotas  | 286          | 320          | -10              | 0.508        | 263          | +9              | 0.467        |
| Eastern Dakotas  | 1,325        | 1,493        | -11              | 0.427        | 1,496        | -11             | 0.275        |
| <b>Total</b>   | <b>4,586</b> | <b>4,073</b> | <b>+13</b>       | <b>0.126</b> | <b>4,499</b> | <b>+2</b>       | <b>0.720</b> |

Table 7. Northern shoveler breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005         | 2004         | Change from 2004 |              | LTA          | Change from LTA |                  |
|--|--------------|--------------|------------------|--------------|--------------|-----------------|------------------|
|  |              |              | %                | <i>P</i>     |              | %               | <i>P</i>         |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 666          | 643          | +4               | 0.806        | 259          | +158            | <0.001           |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 213          | 247          | -14              | 0.554        | 213          | 0               | 0.992            |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 29           | 33           | -13              | 0.683        | 43           | -34             | 0.016            |
| S. Alberta   | 548          | 385          | +42              | 0.133        | 356          | +54             | 0.018            |
| S. Saskatchewan  | 1,314        | 784          | +68              | 0.001        | 634          | +107            | <0.001           |
| S. Manitoba  | 211          | 143          | +47              | 0.176        | 105          | +100            | 0.004            |
| Montana and western Dakotas  | 148          | 200          | -26              | 0.204        | 149          | -1              | 0.959            |
| Eastern Dakotas  | 464          | 377          | +23              | 0.212        | 388          | +19             | 0.170            |
| <b>Total</b>   | <b>3,591</b> | <b>2,810</b> | <b>+28</b>       | <b>0.001</b> | <b>2,149</b> | <b>+67</b>      | <b>&lt;0.001</b> |

Table 8. Northern pintail breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005         | 2004         | Change from 2004 |              | LTA          | Change from LTA |                  |
|--|--------------|--------------|------------------|--------------|--------------|-----------------|------------------|
|  |              |              | %                | <i>P</i>     |              | %               | <i>P</i>         |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 905          | 927          | -2               | 0.856        | 913          | -1              | 0.939            |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 108          | 193          | -44              | 0.073        | 384          | -72             | <0.001           |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 8            | 10           | -18              | 0.672        | 42           | -80             | <0.001           |
| S. Alberta   | 282          | 161          | +75              | 0.049        | 730          | -61             | <0.001           |
| S. Saskatchewan  | 858          | 474          | +81              | 0.009        | 1,225        | -30             | <0.001           |
| S. Manitoba  | 68           | 40           | +71              | 0.042        | 113          | -40             | <0.001           |
| Montana and western Dakotas  | 75           | 132          | -43              | 0.031        | 273          | -73             | <0.001           |
| Eastern Dakotas  | 256          | 247          | +4               | 0.860        | 463          | -45             | <0.001           |
| <b>Total</b>   | <b>2,561</b> | <b>2,185</b> | <b>+17</b>       | <b>0.079</b> | <b>4,142</b> | <b>-38</b>      | <b>&lt;0.001</b> |

Table 9. Redhead breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005       | 2004       | Change from 2004 |              | LTA        | Change from LTA |              |
|--|------------|------------|------------------|--------------|------------|-----------------|--------------|
|  |            |            | %                | <i>P</i>     |            | %               | <i>P</i>     |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | <1         | 2          | -91              | 0.044        | 1          | -84             | <0.001       |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 49         | 73         | -33              | 0.304        | 38         | +30             | 0.530        |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 13         | 31         | -57              | 0.136        | 28         | -53             | <0.001       |
| S. Alberta   | 91         | 79         | +16              | 0.648        | 117        | -22             | 0.170        |
| S. Saskatchewan  | 226        | 131        | +72              | 0.02         | 189        | +19             | 0.251        |
| S. Manitoba  | 98         | 102        | -4               | 0.900        | 71         | +37             | 0.338        |
| Montana and western Dakotas  | 3          | 25         | -89              | 0.102        | 10         | -70             | 0.002        |
| Eastern Dakotas  | 112        | 161        | -31              | 0.102        | 170        | -34             | 0.002        |
| <b>Total</b>   | <b>592</b> | <b>605</b> | <b>-2</b>        | <b>0.858</b> | <b>625</b> | <b>-5</b>       | <b>0.536</b> |

Table 10. Canvasback breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005       | 2004       | Change from 2004 |              | LTA        | Change from LTA |              |
|--|------------|------------|------------------|--------------|------------|-----------------|--------------|
|  |            |            | %                | <i>P</i>     |            | %               | <i>P</i>     |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 95         | 161        | -41              | 0.207        | 91         | +4              | 0.887        |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 98         | 109        | -11              | 0.768        | 72         | +35             | 0.416        |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 39         | 50         | -21              | 0.578        | 56         | -30             | 0.253        |
| S. Alberta   | 43         | 50         | -15              | 0.758        | 64         | -33             | 0.104        |
| S. Saskatchewan  | 162        | 121        | +34              | 0.181        | 183        | -11             | 0.425        |
| S. Manitoba  | 48         | 70         | -32              | 0.344        | 56         | -15             | 0.518        |
| Montana and western Dakotas  | 5          | 12         | -60              | 0.046        | 8          | -39             | 0.095        |
| Eastern Dakotas  | 31         | 44         | -28              | 0.275        | 33         | -5              | 0.817        |
| <b>Total</b>   | <b>521</b> | <b>617</b> | <b>-16</b>       | <b>0.247</b> | <b>563</b> | <b>-8</b>       | <b>0.433</b> |

Table 11. Scaup (greater and lesser combined) breeding population estimates (in thousands) for regions in the traditional survey area.

| Region   | 2005  | 2004  | Change from 2004 |          | LTA   | Change from LTA |          |
|--|-------|-------|------------------|----------|-------|-----------------|----------|
|  |       |       | %                | <i>P</i> |       | %               | <i>P</i> |
| Alaska-Yukon Territory<br>– Old Crow Flats                         | 961   | 982   | -2               | 0.865    | 914   | +5              | 0.593    |
| C. & N. Alberta – N.E. British Columbia<br>- Northwest Territories | 1,361 | 1,624 | -16              | 0.232    | 2,653 | -49             | <0.001   |
| N. Saskatchewan- N. Manitoba<br>- W. Ontario                       | 349   | 582   | -40              | <0.001   | 592   | -41             | <0.001   |
| S. Alberta   | 127   | 124   | +2               | 0.948    | 358   | -65             | <0.001   |
| S. Saskatchewan  | 381   | 185   | +106             | 0.008    | 417   | -9              | 0.595    |
| S. Manitoba  | 60    | 31    | +91              | 0.019    | 137   | -56             | <0.001   |
| Montana and western Dakotas  | 16    | 28    | -41              | 0.309    | 54    | -70             | <0.001   |
| Eastern Dakotas  | 132   | 251   | -47              | 0.034    | 96    | +37             | 0.162    |
| Total  | 3,387 | 3,807 | -11              | 0.136    | 5,220 | -35             | <0.001   |

Table 12. Estimated number (in thousands) of May ponds in portions of prairie and parkland Canada and the northcentral U.S.

| Survey Area                 | 2005         | 2004         | Change from 2004 |                  | LTA <sup>a</sup> | Change from LTA |              |  |
|-----------------------------|--------------|--------------|------------------|------------------|------------------|-----------------|--------------|--|
|                             |              |              | %                | <i>P</i>         |                  | %               | <i>P</i>     |  |
| <b>Prairie Canada</b>       |              |              |                  |                  |                  |                 |              |  |
| S. Alberta                  | 750          | 511          | +47              | 0.007            | 721              | +4              | 0.689        |  |
| S. Saskatchewan             | 2415         | 1,461        | +65              | <0.001           | 1,953            | +24             | 0.009        |  |
| S. Manitoba                 | 755          | 541          | +40              | 0.001            | 671              | +13             | 0.101        |  |
| Subtotal                    | 3,921        | 2,513        | +56              | <0.001           | 3,346            | +17             | 0.004        |  |
| <b>Northcentral U.S.</b>    |              |              |                  |                  |                  |                 |              |  |
| Montana and western Dakotas | 663          | 597          | +11              | 0.354            | 524              | +27             | 0.016        |  |
| Eastern Dakotas             | 798          | 810          | -1               | 0.913            | 1,000            | -20             | <0.001       |  |
| Subtotal                    | 1,461        | 1,407        | +4               | 0.678            | 1,524            | -4              | 0.440        |  |
| <b>Grand Total</b>          | <b>5,381</b> | <b>3,920</b> | <b>+37</b>       | <b>&lt;0.001</b> | <b>4,813</b>     | <b>+12</b>      | <b>0.008</b> |  |

<sup>a</sup>Long-term average. Prairie and parkland Canada, 1961-2004; northcentral U.S. and Grand Total, 1974-2004.

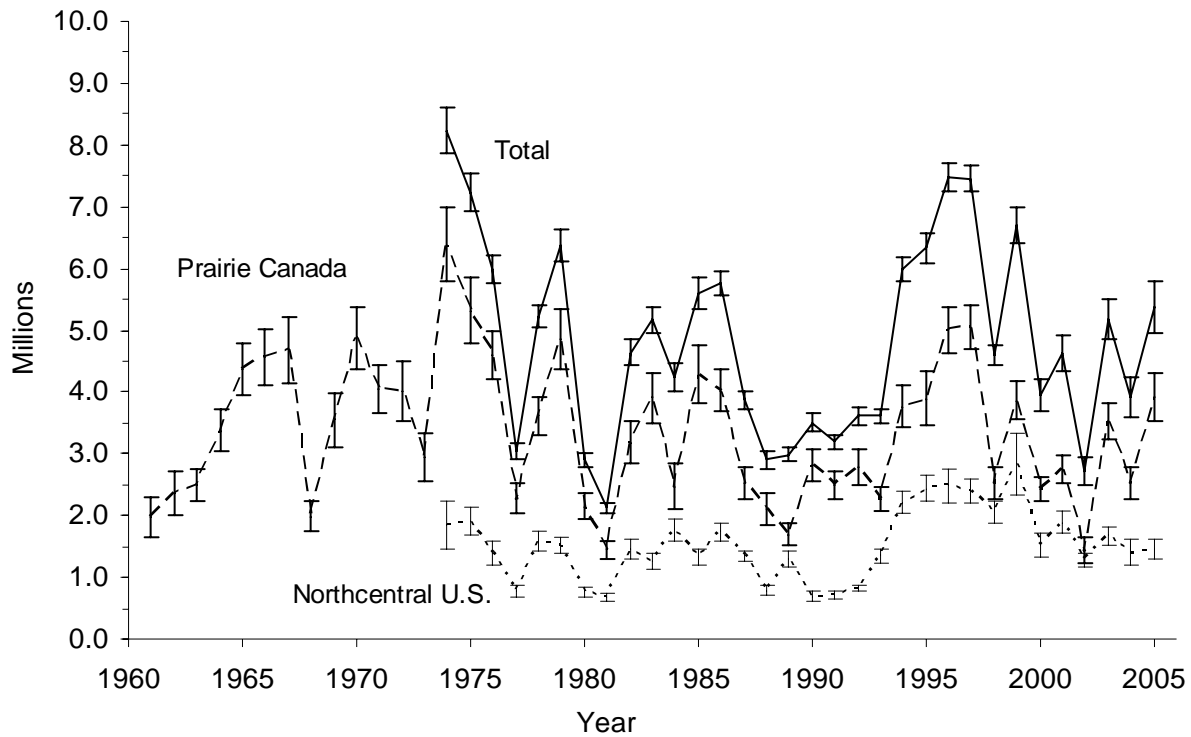


Figure 2. Number of ponds in May and 95% confidence intervals in prairie and parkland Canada and the northcentral U.S.

Table 13. Duck breeding population estimates (median, in thousands) for 6 species in the eastern survey area.

| Species                                     | 2005 | 2004 | % Change from 2004 | Average <sup>a</sup> | % Change from average |
|---|------|------|--------------------|----------------------|-----------------------|
| Mergansers (common, red-breasted, & hooded) | 753  | 995  | -25 <sup>b</sup>   | 825                  | -9                    |
| Mallard                                     | 412  | 646  | -36 <sup>b</sup>   | 546                  | -25                   |
| American black duck                         | 827  | 1093 | -24 <sup>b</sup>   | 1002                 | -18                   |
| Green-winged teal                           | 423  | 776  | -46 <sup>b</sup>   | 521                  | -19                   |
| Ring-necked duck                            | 883  | 1257 | -30                | 1032                 | -14                   |
| Goldeneye (common & Barrow's)               | 715  | 748  | -5                 | 901                  | -21                   |

<sup>a</sup> Average for 1999-2004.

<sup>b</sup> Significant ( $P < 0.05$ ) determined by non-overlap of Bayesian credibility intervals.

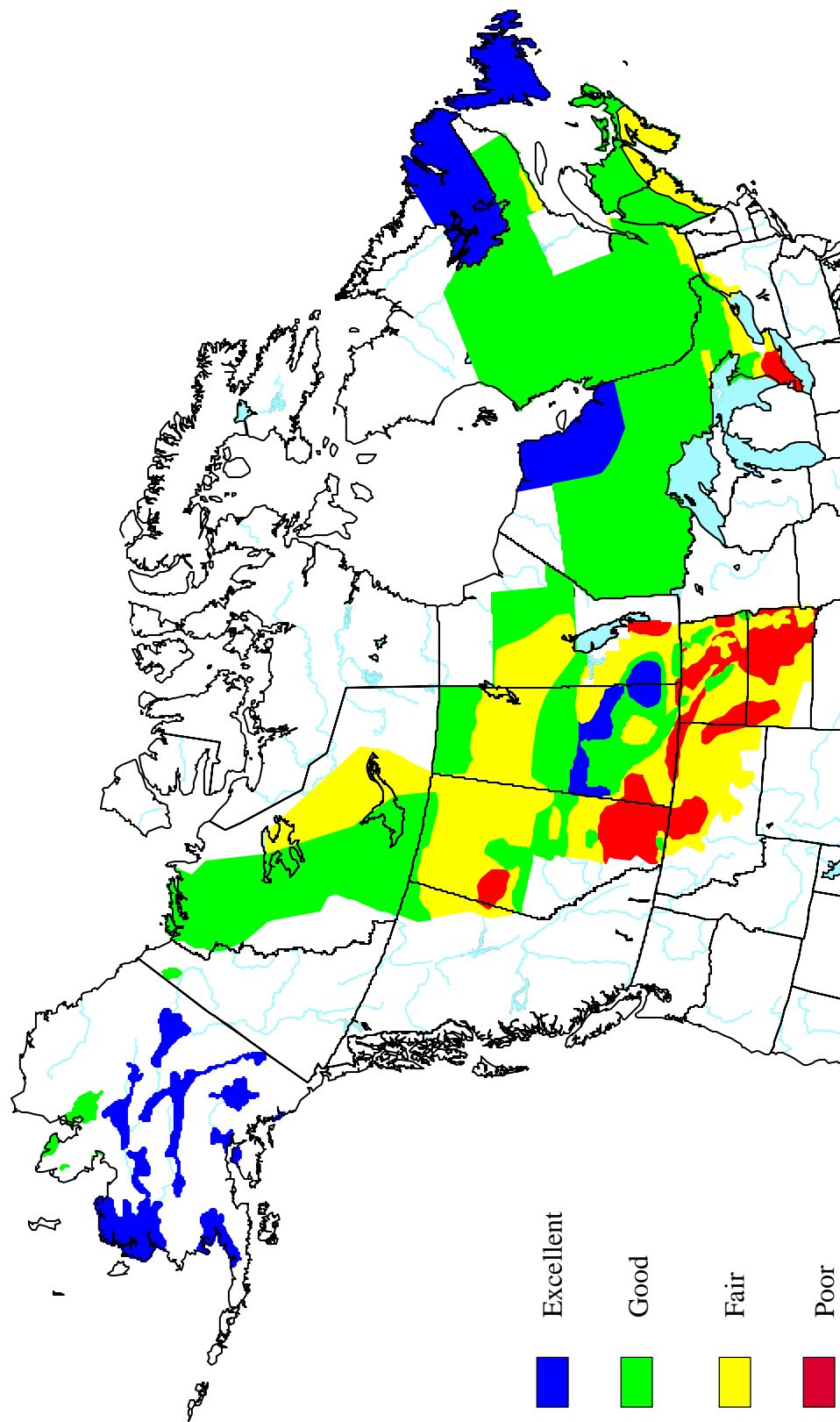


Figure 3. Breeding waterfowl habitat conditions during the 2005 Waterfowl Breeding Population and Habitat Survey, as judged by U.S. Fish and Wildlife Service Flyway Biologists. Changes in conditions due to additional precipitation following completion of survey efforts are described in the narrative.

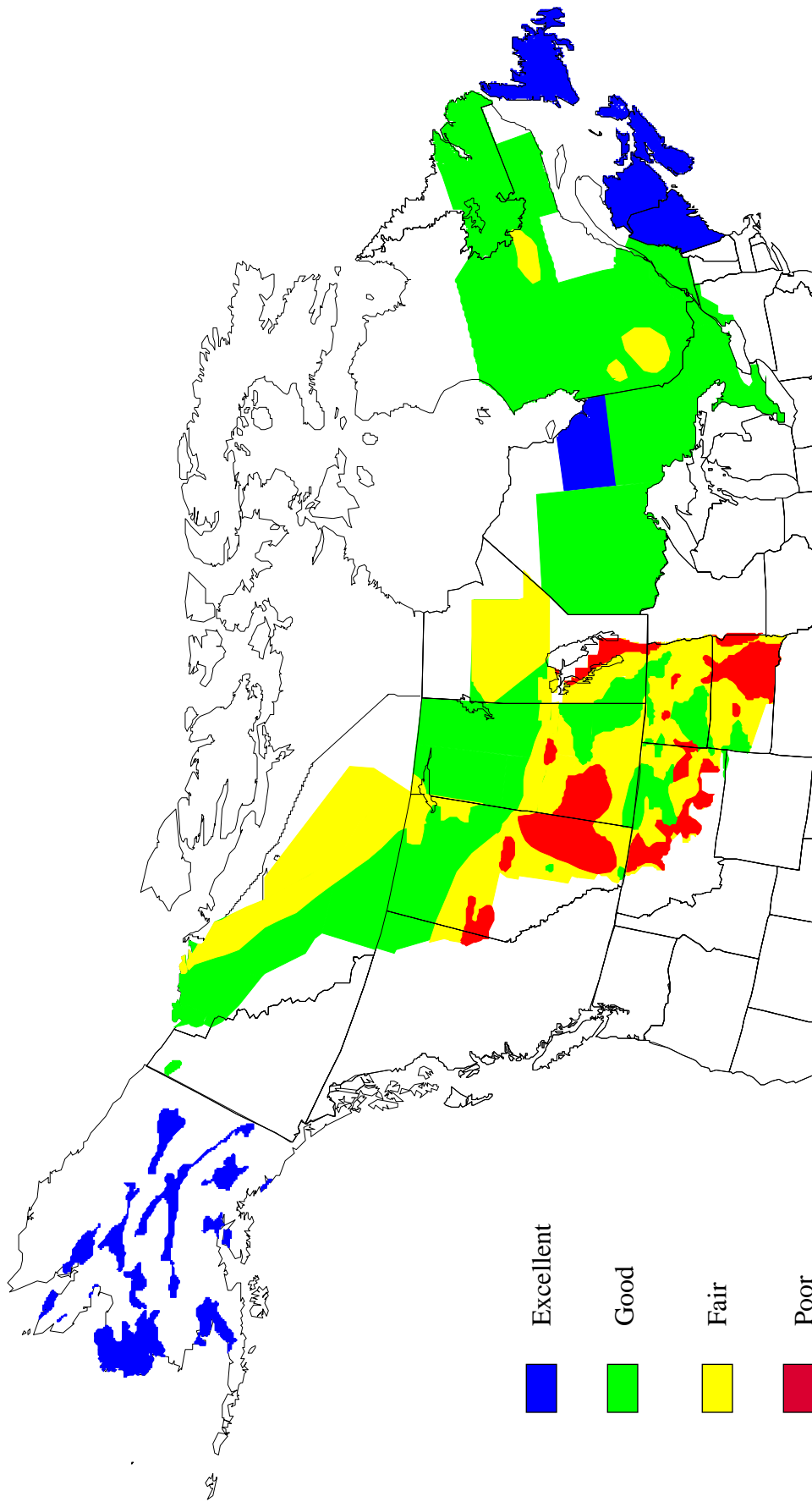


Figure 4. Breeding waterfowl habitat conditions during the 2004 Waterfowl Breeding Population and Habitat Survey, as judged by U.S. Fish and Wildlife Service Flyway Biologists.



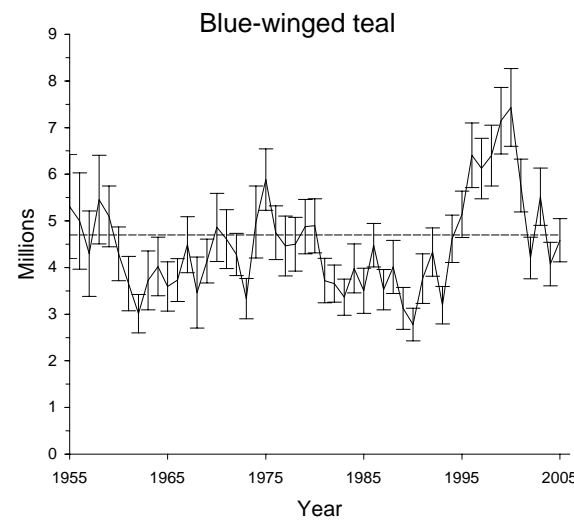
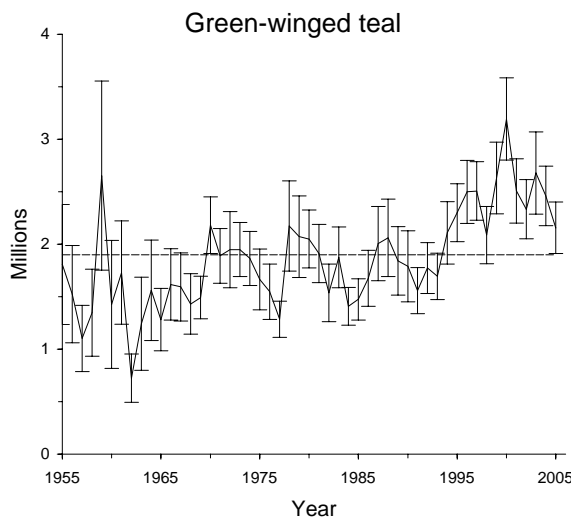
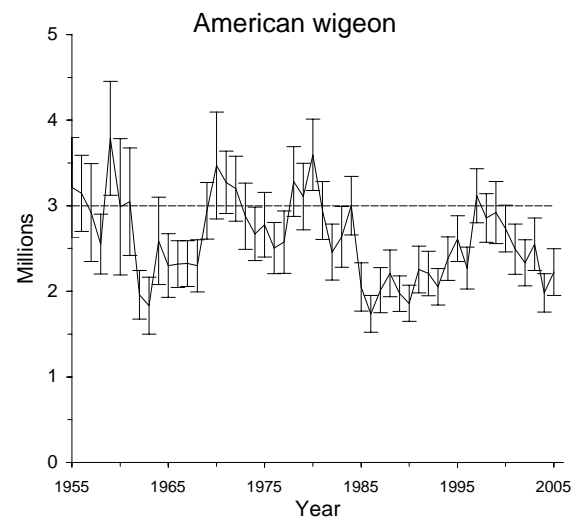
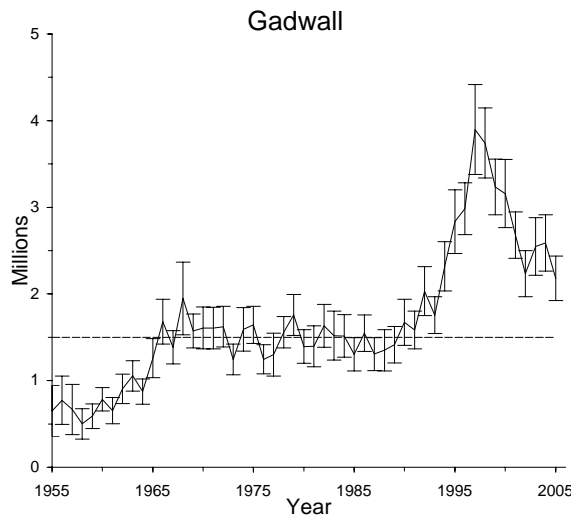
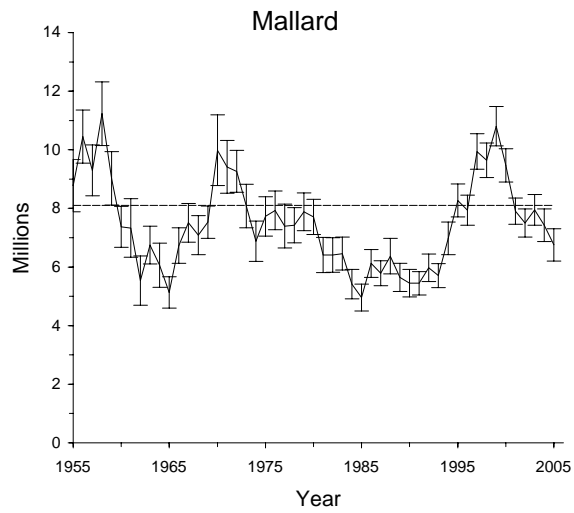
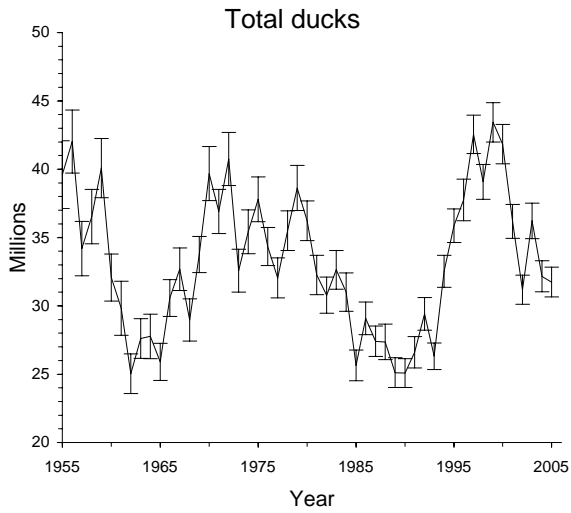


Figure 5. Breeding population estimates, 95% confidence intervals, and North American Waterfowl Management Plan population goal (dashed line) for selected species in the traditional survey area (strata 1-18, 20-50, 75-77).

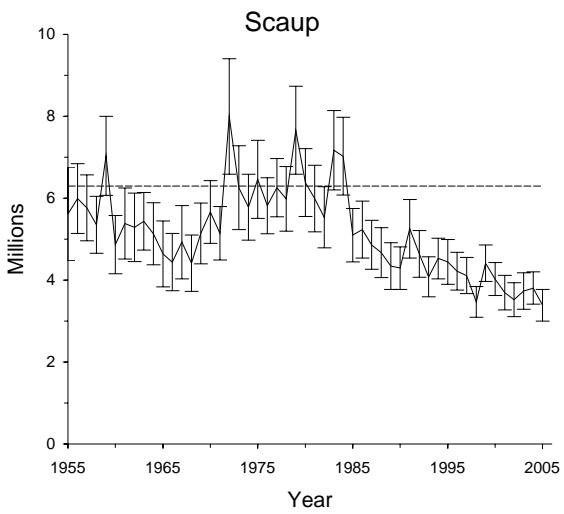
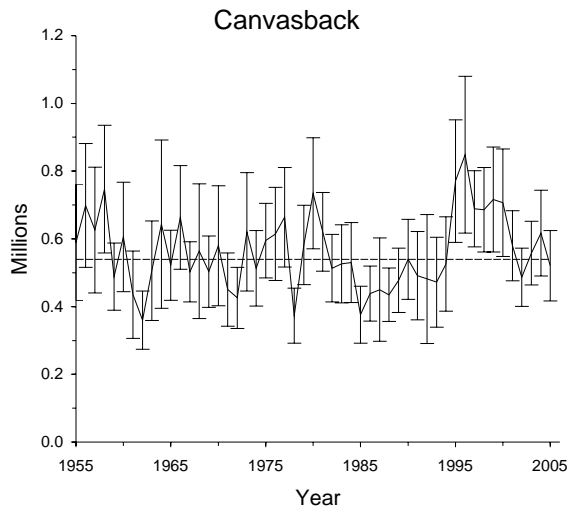
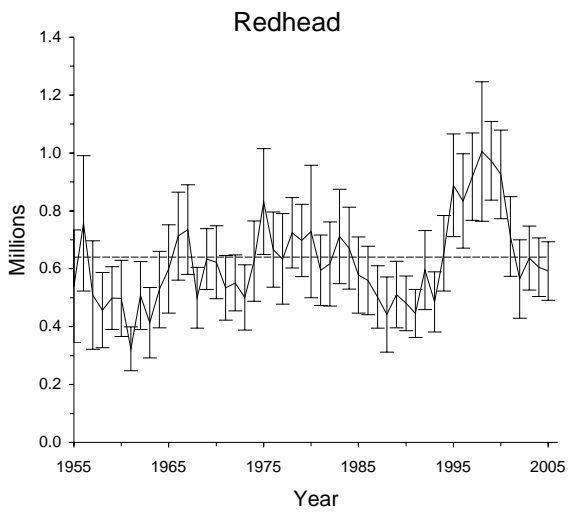
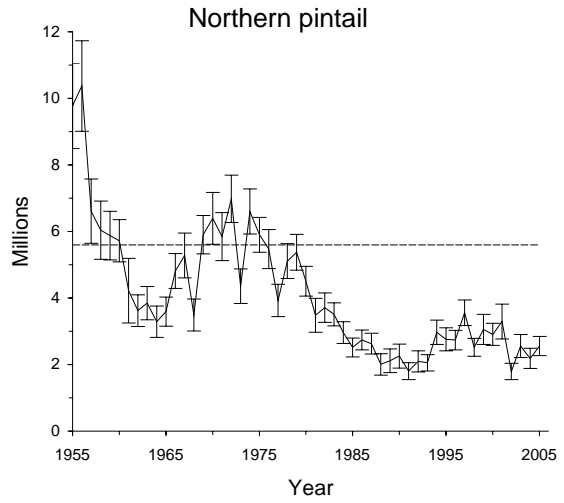
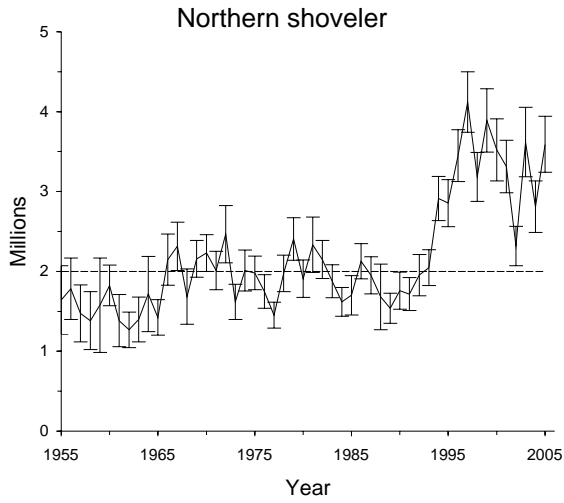


Figure 5 (continued).

Appendix A. Breeding population estimates and standard errors (in thousands) for 10 species of ducks from the traditional survey area (strata 1-18, 20-50, 75-77).

| Year | Mallard   |            | Gadwall   |            | American wigeon |            | Green-winged teal |            | Blue-winged teal |            |
|------|-----------|------------|-----------|------------|-----------------|------------|-------------------|------------|------------------|------------|
|      | $\hat{N}$ | $\hat{SE}$ | $\hat{N}$ | $\hat{SE}$ | $\hat{N}$       | $\hat{SE}$ | $\hat{N}$         | $\hat{SE}$ | $\hat{N}$        | $\hat{SE}$ |
| 1955 | 8777.3    | 457.1      | 651.5     | 149.5      | 3216.8          | 297.8      | 1807.2            | 291.5      | 5305.2           | 567.6      |
| 1956 | 10452.7   | 461.8      | 772.6     | 142.4      | 3145.0          | 227.8      | 1525.3            | 236.2      | 4997.6           | 527.6      |
| 1957 | 9296.9    | 443.5      | 666.8     | 148.2      | 2919.8          | 291.5      | 1102.9            | 161.2      | 4299.5           | 467.3      |
| 1958 | 11234.2   | 555.6      | 502.0     | 89.6       | 2551.7          | 177.9      | 1347.4            | 212.2      | 5456.6           | 483.7      |
| 1959 | 9024.3    | 466.6      | 590.0     | 72.7       | 3787.7          | 339.2      | 2653.4            | 459.3      | 5099.3           | 332.7      |
| 1960 | 7371.7    | 354.1      | 784.1     | 68.4       | 2987.6          | 407.0      | 1426.9            | 311.0      | 4293.0           | 294.3      |
| 1961 | 7330.0    | 510.5      | 654.8     | 77.5       | 3048.3          | 319.9      | 1729.3            | 251.5      | 3655.3           | 298.7      |
| 1962 | 5535.9    | 426.9      | 905.1     | 87.0       | 1958.7          | 145.4      | 722.9             | 117.6      | 3011.1           | 209.8      |
| 1963 | 6748.8    | 326.8      | 1055.3    | 89.5       | 1830.8          | 169.9      | 1242.3            | 226.9      | 3723.6           | 323.0      |
| 1964 | 6063.9    | 385.3      | 873.4     | 73.7       | 2589.6          | 259.7      | 1561.3            | 244.7      | 4020.6           | 320.4      |
| 1965 | 5131.7    | 274.8      | 1260.3    | 114.8      | 2301.1          | 189.4      | 1282.0            | 151.0      | 3594.5           | 270.4      |
| 1966 | 6731.9    | 311.4      | 1680.4    | 132.4      | 2318.4          | 139.2      | 1617.3            | 173.6      | 3733.2           | 233.6      |
| 1967 | 7509.5    | 338.2      | 1384.6    | 97.8       | 2325.5          | 136.2      | 1593.7            | 165.7      | 4491.5           | 305.7      |
| 1968 | 7089.2    | 340.8      | 1949.0    | 213.9      | 2298.6          | 156.1      | 1430.9            | 146.6      | 3462.5           | 389.1      |
| 1969 | 7531.6    | 280.2      | 1573.4    | 100.2      | 2941.4          | 168.6      | 1491.0            | 103.5      | 4138.6           | 239.5      |
| 1970 | 9985.9    | 617.2      | 1608.1    | 123.5      | 3469.9          | 318.5      | 2182.5            | 137.7      | 4861.8           | 372.3      |
| 1971 | 9416.4    | 459.5      | 1605.6    | 123.0      | 3272.9          | 186.2      | 1889.3            | 132.9      | 4610.2           | 322.8      |
| 1972 | 9265.5    | 363.9      | 1622.9    | 120.1      | 3200.1          | 194.1      | 1948.2            | 185.8      | 4278.5           | 230.5      |
| 1973 | 8079.2    | 377.5      | 1245.6    | 90.3       | 2877.9          | 197.4      | 1949.2            | 131.9      | 3332.5           | 220.3      |
| 1974 | 6880.2    | 351.8      | 1592.4    | 128.2      | 2672.0          | 159.3      | 1864.5            | 131.2      | 4976.2           | 394.6      |
| 1975 | 7726.9    | 344.1      | 1643.9    | 109.0      | 2778.3          | 192.0      | 1664.8            | 148.1      | 5885.4           | 337.4      |
| 1976 | 7933.6    | 337.4      | 1244.8    | 85.7       | 2505.2          | 152.7      | 1547.5            | 134.0      | 4744.7           | 294.5      |
| 1977 | 7397.1    | 381.8      | 1299.0    | 126.4      | 2575.1          | 185.9      | 1285.8            | 87.9       | 4462.8           | 328.4      |
| 1978 | 7425.0    | 307.0      | 1558.0    | 92.2       | 3282.4          | 208.0      | 2174.2            | 219.1      | 4498.6           | 293.3      |
| 1979 | 7883.4    | 327.0      | 1757.9    | 121.0      | 3106.5          | 198.2      | 2071.7            | 198.5      | 4875.9           | 297.6      |
| 1980 | 7706.5    | 307.2      | 1392.9    | 98.8       | 3595.5          | 213.2      | 2049.9            | 140.7      | 4895.1           | 295.6      |
| 1981 | 6409.7    | 308.4      | 1395.4    | 120.0      | 2946.0          | 173.0      | 1910.5            | 141.7      | 3720.6           | 242.1      |
| 1982 | 6408.5    | 302.2      | 1633.8    | 126.2      | 2458.7          | 167.3      | 1535.7            | 140.2      | 3657.6           | 203.7      |
| 1983 | 6456.0    | 286.9      | 1519.2    | 144.3      | 2636.2          | 181.4      | 1875.0            | 148.0      | 3366.5           | 197.2      |
| 1984 | 5415.3    | 258.4      | 1515.0    | 125.0      | 3002.2          | 174.2      | 1408.2            | 91.5       | 3979.3           | 267.6      |
| 1985 | 4960.9    | 234.7      | 1303.0    | 98.2       | 2050.7          | 143.7      | 1475.4            | 100.3      | 3502.4           | 246.3      |
| 1986 | 6124.2    | 241.6      | 1547.1    | 107.5      | 1736.5          | 109.9      | 1674.9            | 136.1      | 4478.8           | 237.1      |
| 1987 | 5789.8    | 217.9      | 1305.6    | 97.1       | 2012.5          | 134.3      | 2006.2            | 180.4      | 3528.7           | 220.2      |
| 1988 | 6369.3    | 310.3      | 1349.9    | 121.1      | 2211.1          | 139.1      | 2060.8            | 188.3      | 4011.1           | 290.4      |
| 1989 | 5645.4    | 244.1      | 1414.6    | 106.6      | 1972.9          | 106.0      | 1841.7            | 166.4      | 3125.3           | 229.8      |
| 1990 | 5452.4    | 238.6      | 1672.1    | 135.8      | 1860.1          | 108.3      | 1789.5            | 172.7      | 2776.4           | 178.7      |
| 1991 | 5444.6    | 205.6      | 1583.7    | 111.8      | 2254.0          | 139.5      | 1557.8            | 111.3      | 3763.7           | 270.8      |
| 1992 | 5976.1    | 241.0      | 2032.8    | 143.4      | 2208.4          | 131.9      | 1773.1            | 123.7      | 4333.1           | 263.2      |
| 1993 | 5708.3    | 208.9      | 1755.2    | 107.9      | 2053.0          | 109.3      | 1694.5            | 112.7      | 3192.9           | 205.6      |
| 1994 | 6980.1    | 282.8      | 2318.3    | 145.2      | 2382.2          | 130.3      | 2108.4            | 152.2      | 4616.2           | 259.2      |
| 1995 | 8269.4    | 287.5      | 2835.7    | 187.5      | 2614.5          | 136.3      | 2300.6            | 140.3      | 5140.0           | 253.3      |
| 1996 | 7941.3    | 262.9      | 2984.0    | 152.5      | 2271.7          | 125.4      | 2499.5            | 153.4      | 6407.4           | 353.9      |
| 1997 | 9939.7    | 308.5      | 3897.2    | 264.9      | 3117.6          | 161.6      | 2506.6            | 142.5      | 6124.3           | 330.7      |
| 1998 | 9640.4    | 301.6      | 3742.2    | 205.6      | 2857.7          | 145.3      | 2087.3            | 138.9      | 6398.8           | 332.3      |
| 1999 | 10805.7   | 344.5      | 3235.5    | 163.8      | 2920.1          | 185.5      | 2631.0            | 174.6      | 7149.5           | 364.5      |
| 2000 | 9470.2    | 290.2      | 3158.4    | 200.7      | 2733.1          | 138.8      | 3193.5            | 200.1      | 7431.4           | 425.0      |
| 2001 | 7904.0    | 226.9      | 2679.2    | 136.1      | 2493.5          | 149.6      | 2508.7            | 156.4      | 5757.0           | 288.8      |
| 2002 | 7503.7    | 246.5      | 2235.4    | 135.4      | 2334.4          | 137.9      | 2333.5            | 143.8      | 4206.5           | 227.9      |
| 2003 | 7949.7    | 267.3      | 2549.0    | 169.9      | 2551.4          | 156.9      | 2678.5            | 199.7      | 5518.2           | 312.7      |
| 2004 | 7425.3    | 282.0      | 2589.6    | 165.6      | 1981.3          | 114.9      | 2460.8            | 145.2      | 4073.0           | 238.0      |
| 2005 | 6755.3    | 280.8      | 2179.1    | 131.0      | 2225.1          | 139.2      | 2156.9            | 125.8      | 4585.5           | 236.3      |

## Appendix A (continued).

| Year | Northern shoveler |            | Northern pintail |            | Redhead   |            | Canvasback |            | Scaup     |            |
|------|-------------------|------------|------------------|------------|-----------|------------|------------|------------|-----------|------------|
|      | $\hat{N}$         | $\hat{SE}$ | $\hat{N}$        | $\hat{SE}$ | $\hat{N}$ | $\hat{SE}$ | $\hat{N}$  | $\hat{SE}$ | $\hat{N}$ | $\hat{SE}$ |
| 1955 | 1642.8            | 218.7      | 9775.1           | 656.1      | 539.9     | 98.9       | 589.3      | 87.8       | 5620.1    | 582.1      |
| 1956 | 1781.4            | 196.4      | 10372.8          | 694.4      | 757.3     | 119.3      | 698.5      | 93.3       | 5994.1    | 434.0      |
| 1957 | 1476.1            | 181.8      | 6606.9           | 493.4      | 509.1     | 95.7       | 626.1      | 94.7       | 5766.9    | 411.7      |
| 1958 | 1383.8            | 185.1      | 6037.9           | 447.9      | 457.1     | 66.2       | 746.8      | 96.1       | 5350.4    | 355.1      |
| 1959 | 1577.6            | 301.1      | 5872.7           | 371.6      | 498.8     | 55.5       | 488.7      | 50.6       | 7037.6    | 492.3      |
| 1960 | 1824.5            | 130.1      | 5722.2           | 323.2      | 497.8     | 67.0       | 605.7      | 82.4       | 4868.6    | 362.5      |
| 1961 | 1383.0            | 166.5      | 4218.2           | 496.2      | 323.3     | 38.8       | 435.3      | 65.7       | 5380.0    | 442.2      |
| 1962 | 1269.0            | 113.9      | 3623.5           | 243.1      | 507.5     | 60.0       | 360.2      | 43.8       | 5286.1    | 426.4      |
| 1963 | 1398.4            | 143.8      | 3846.0           | 255.6      | 413.4     | 61.9       | 506.2      | 74.9       | 5438.4    | 357.9      |
| 1964 | 1718.3            | 240.3      | 3291.2           | 239.4      | 528.1     | 67.3       | 643.6      | 126.9      | 5131.8    | 386.1      |
| 1965 | 1423.7            | 114.1      | 3591.9           | 221.9      | 599.3     | 77.7       | 522.1      | 52.8       | 4640.0    | 411.2      |
| 1966 | 2147.0            | 163.9      | 4811.9           | 265.6      | 713.1     | 77.6       | 663.1      | 78.0       | 4439.2    | 356.2      |
| 1967 | 2314.7            | 154.6      | 5277.7           | 341.9      | 735.7     | 79.0       | 502.6      | 45.4       | 4927.7    | 456.1      |
| 1968 | 1684.5            | 176.8      | 3489.4           | 244.6      | 499.4     | 53.6       | 563.7      | 101.3      | 4412.7    | 351.8      |
| 1969 | 2156.8            | 117.2      | 5903.9           | 296.2      | 633.2     | 53.6       | 503.5      | 53.7       | 5139.8    | 378.5      |
| 1970 | 2230.4            | 117.4      | 6392.0           | 396.7      | 622.3     | 64.3       | 580.1      | 90.4       | 5662.5    | 391.4      |
| 1971 | 2011.4            | 122.7      | 5847.2           | 368.1      | 534.4     | 57.0       | 450.7      | 55.2       | 5143.3    | 333.8      |
| 1972 | 2466.5            | 182.8      | 6979.0           | 364.5      | 550.9     | 49.4       | 425.9      | 46.0       | 7997.0    | 718.0      |
| 1973 | 1619.0            | 112.2      | 4356.2           | 267.0      | 500.8     | 57.7       | 620.5      | 89.1       | 6257.4    | 523.1      |
| 1974 | 2011.3            | 129.9      | 6598.2           | 345.8      | 626.3     | 70.8       | 512.8      | 56.8       | 5780.5    | 409.8      |
| 1975 | 1980.8            | 106.7      | 5900.4           | 267.3      | 831.9     | 93.5       | 595.1      | 56.1       | 6460.0    | 486.0      |
| 1976 | 1748.1            | 106.9      | 5475.6           | 299.2      | 665.9     | 66.3       | 614.4      | 70.1       | 5818.7    | 348.7      |
| 1977 | 1451.8            | 82.1       | 3926.1           | 246.8      | 634.0     | 79.9       | 664.0      | 74.9       | 6260.2    | 362.8      |
| 1978 | 1975.3            | 115.6      | 5108.2           | 267.8      | 724.6     | 62.2       | 373.2      | 41.5       | 5984.4    | 403.0      |
| 1979 | 2406.5            | 135.6      | 5376.1           | 274.4      | 697.5     | 63.8       | 582.0      | 59.8       | 7657.9    | 548.6      |
| 1980 | 1908.2            | 119.9      | 4508.1           | 228.6      | 728.4     | 116.7      | 734.6      | 83.8       | 6381.7    | 421.2      |
| 1981 | 2333.6            | 177.4      | 3479.5           | 260.5      | 594.9     | 62.0       | 620.8      | 59.1       | 5990.9    | 414.2      |
| 1982 | 2147.6            | 121.7      | 3708.8           | 226.6      | 616.9     | 74.2       | 513.3      | 50.9       | 5532.0    | 380.9      |
| 1983 | 1875.7            | 105.3      | 3510.6           | 178.1      | 711.9     | 83.3       | 526.6      | 58.9       | 7173.8    | 494.9      |
| 1984 | 1618.2            | 91.9       | 2964.8           | 166.8      | 671.3     | 72.0       | 530.1      | 60.1       | 7024.3    | 484.7      |
| 1985 | 1702.1            | 125.7      | 2515.5           | 143.0      | 578.2     | 67.1       | 375.9      | 42.9       | 5098.0    | 333.1      |
| 1986 | 2128.2            | 112.0      | 2739.7           | 152.1      | 559.6     | 60.5       | 438.3      | 41.5       | 5235.3    | 355.5      |
| 1987 | 1950.2            | 118.4      | 2628.3           | 159.4      | 502.4     | 54.9       | 450.1      | 77.9       | 4862.7    | 303.8      |
| 1988 | 1680.9            | 210.4      | 2005.5           | 164.0      | 441.9     | 66.2       | 435.0      | 40.2       | 4671.4    | 309.5      |
| 1989 | 1538.3            | 95.9       | 2111.9           | 181.3      | 510.7     | 58.5       | 477.4      | 48.4       | 4342.1    | 291.3      |
| 1990 | 1759.3            | 118.6      | 2256.6           | 183.3      | 480.9     | 48.2       | 539.3      | 60.3       | 4293.1    | 264.9      |
| 1991 | 1716.2            | 104.6      | 1803.4           | 131.3      | 445.6     | 42.1       | 491.2      | 66.4       | 5254.9    | 364.9      |
| 1992 | 1954.4            | 132.1      | 2098.1           | 161.0      | 595.6     | 69.7       | 481.5      | 97.3       | 4639.2    | 291.9      |
| 1993 | 2046.5            | 114.3      | 2053.4           | 124.2      | 485.4     | 53.1       | 472.1      | 67.6       | 4080.1    | 249.4      |
| 1994 | 2912.0            | 141.4      | 2972.3           | 188.0      | 653.5     | 66.7       | 525.6      | 71.1       | 4529.0    | 253.6      |
| 1995 | 2854.9            | 150.3      | 2757.9           | 177.6      | 888.5     | 90.6       | 770.6      | 92.2       | 4446.4    | 277.6      |
| 1996 | 3449.0            | 165.7      | 2735.9           | 147.5      | 834.2     | 83.1       | 848.5      | 118.3      | 4217.4    | 234.5      |
| 1997 | 4120.4            | 194.0      | 3558.0           | 194.2      | 918.3     | 77.2       | 688.8      | 57.2       | 4112.3    | 224.2      |
| 1998 | 3183.2            | 156.5      | 2520.6           | 136.8      | 1005.1    | 122.9      | 685.9      | 63.8       | 3471.9    | 191.2      |
| 1999 | 3889.5            | 202.1      | 3057.9           | 230.5      | 973.4     | 69.5       | 716.0      | 79.1       | 4411.7    | 227.9      |
| 2000 | 3520.7            | 197.9      | 2907.6           | 170.5      | 926.3     | 78.1       | 706.8      | 81.0       | 4026.3    | 205.3      |
| 2001 | 3313.5            | 166.8      | 3296.0           | 266.6      | 712.0     | 70.2       | 579.8      | 52.7       | 3694.0    | 214.9      |
| 2002 | 2318.2            | 125.6      | 1789.7           | 125.2      | 564.8     | 69.0       | 486.6      | 43.8       | 3524.1    | 210.3      |
| 2003 | 3619.6            | 221.4      | 2558.2           | 174.8      | 636.8     | 56.6       | 557.6      | 48.0       | 3734.4    | 225.5      |
| 2004 | 2810.4            | 163.9      | 2184.6           | 155.2      | 605.3     | 51.5       | 617.2      | 64.6       | 3807.2    | 202.3      |
| 2005 | 3591.5            | 178.6      | 2560.5           | 146.8      | 592.3     | 51.7       | 520.6      | 52.9       | 3386.9    | 196.4      |

Appendix B. Breeding population estimates (median, in thousands) and 95% credibility intervals (CI) for 6 species of ducks in the eastern survey area, 1999-2005.

| Year | <u>Mergansers</u> |               | <u>Mallard</u> |               | <u>American black duck</u> |               | <u>Green-winged teal</u> |              | <u>Ring-necked duck</u> |               | <u>Goldeneyes</u> |               |
|------|-------------------|---------------|----------------|---------------|----------------------------|---------------|--------------------------|--------------|-------------------------|---------------|-------------------|---------------|
|      | $\hat{N}$         | CI            | $\hat{N}$      | CI            | $\hat{N}$                  | CI            | $\hat{N}$                | CI           | $\hat{N}$               | CI            | $\hat{N}$         | CI            |
| 1999 | 602.7             | (422 - 951)   | 554.1          | (369 - 901)   | 1,018.0                    | (732 - 1,362) | 627.6                    | (329, 1,613) | 905.3                   | (583 - 1,560) | 821.1             | (449 - 2,075) |
| 2000 | 653.3             | (462 - 1,007) | 443.8          | (306 - 656)   | 885.9                      | (638 - 1,206) | 347.9                    | (201, 771)   | 1,342.0                 | (765 - 3,241) | 778.7             | (424 - 2,048) |
| 2001 | 636.4             | (440 - 1,039) | 465.0          | (321 - 704)   | 864.9                      | (603 - 1,206) | 265.9                    | (136, 761)   | 838.6                   | (562 - 1,361) | 1,118.0           | (566 - 3,155) |
| 2002 | 1,170.0           | (809 - 1,930) | 517.5          | (355 - 769)   | 1,174.0                    | (770 - 1,708) | 588.8                    | (254, 2,350) | 834.9                   | (590 - 1,267) | 970.3             | (507 - 2,656) |
| 2003 | 890.8             | (622 - 1,414) | 648.1          | (437 - 1,122) | 976.2                      | (675 - 1,389) | 521.1                    | (262, 1,571) | 1,012.0                 | (697 - 1,550) | 968.4             | (495 - 2,747) |
| 2004 | 995.0             | (704 - 1,547) | 645.5          | (438 - 1,114) | 1,093.0                    | (739 - 1,571) | 775.7                    | (344, 2,629) | 1,257.0                 | (839 - 2,090) | 747.8             | (440 - 1,587) |
| 2005 | 752.8             | (529 - 1,173) | 411.7          | (281 - 635)   | 826.5                      | (582 - 1,137) | 422.9                    | (195, 1,256) | 883.1                   | (572 - 1,691) | 714.7             | (371 - 2,078) |