Appendix 1. Seasonal abundances of sea ducks estimated during aerial surveys (Lower Great Lakes Migrant Waterfowl Survey [LGLMWS], Mid-Winter Survey [MWS]; raw data with visual correction factors applied) or counted during ground-based surveys (Christmas Bird Count [CBC]; no visual correction factors applied) undertaken within the **Central Lake Erie, Long Point Bay** Key Site between 1997 and 2018.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Survey** | **Season** | **Year** | **Total** | **LTDU** | **BUFF** | **COGO** | **HOME** | **COME** | **RBME** | **BLSC** | **SUSC** | **WWSC** |
| LGLMWS | Spring | 1999 | 3,918 | 21 | 156 | 1,058 | 14 | 2,607 | 62 | 0 | 0 | 0 |
|  |  | 2001 | 8,534 | 0 | 3,410 | 2,208 | 0 | 2,916 | 0 | 0 | 0 | 0 |
|  |  | 2009 | 2,993 | 0 | 313 | 1,299 | 196 | 367 | 818 | 0 | 0 | 0 |
|  |  | 2010 | 16,907 | 21 | 4,544 | 2,792 | 0 | 5,158 | 4,392 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Max: | 16,907 | 21 | 4,544 | 2,792 | 196 | 5,158 | 4,392 | 0 | 0 | 0 |
|  |  | Avg: | 8,088 | 10 | 2,106 | 1,839 | 53 | 2,762 | 1,318 | 0 | 0 | 0 |
|  |  | %: |  | 0.00 | 0.26 | 0.23 | 0.01 | 0.34 | 0.16 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| CMMN - | Spring | 1997 | 883 | 125 | 116 | 22 | 6 | 66 | 486 | 0 | 18 | 44 |
| DET |  | 1998 | 1,891 | 200 | 64 | 12 | 3 | 40 | 1,343 | 0 | 25 | 204 |
|  |  | 1999 | 1,102 | 65 | 125 | 4 | 3 | 26 | 490 | 2 | 68 | 319 |
|  |  | 2000 | 2,206 | 700 | 55 | 20 | 0 | 187 | 1,187 | 17 | 20 | 20 |
|  |  | 2001 | 2,767 | 1200 | 80 | 35 | 10 | 62 | 1,297 | 5 | 3 | 75 |
|  |  | 2002 | 788 | 38 | 25 | 3 | 5 | 14 | 152 | 26 | 86 | 438 |
|  |  | 2003 | 1,199 | 46 | 18 | 3 | 8 | 17 | 1,063 | 5 | 8 | 31 |
|  |  | 2004 | 2,040 | 36 | 12 | 4 | 0 | 52 | 1,833 | 4 | 93 | 6 |
|  |  | 2005 | 2,886 | 216 | 17 | 30 | 9 | 112 | 2,309 | 14 | 108 | 72 |
|  |  | 2006 | 4,346 | 110 | 40 | 19 | 2 | 23 | 4,086 | 10 | 35 | 21 |
|  |  | 2007 | 16,503 | 1635 | 135 | 17 | 1 | 92 | 14,520 | 5 | 68 | 30 |
|  |  | 2008 | 750 | 8 | 14 | 8 | 2 | 26 | 589 | 15 | 25 | 63 |
|  |  | 2009 | 4,400 | 360 | 37 | 10 | 2 | 1,084 | 2,619 | 44 | 151 | 93 |
|  |  | 2010 | 1,220 | 55 | 30 | 10 | 2 | 36 | 1,028 | 4 | 30 | 25 |
|  |  | 2011 | 1,512 | 112 | 42 | 42 | 3 | 278 | 944 | 3 | 47 | 41 |
|  |  | 2012 | 789 | 7 | 27 | 0 | 1 | 23 | 531 | 3 | 75 | 122 |
|  |  | 2013 | 2,528 | 141 | 27 | 2 | 2 | 80 | 2,064 | 4 | 73 | 135 |
|  |  | 2014 | 4,728 | 1500 | 146 | 38 | 5 | 131 | 1,906 | 44 | 808 | 151 |
|  |  | 2015 | 3,149 | 2131 | 88 | 79 | 5 | 80 | 479 | 38 | 128 | 121 |
|  |  | 2016 | 1,007 | 79 | 48 | 13 | 5 | 70 | 528 | 1 | 63 | 200 |
|  |  | 2017 | 3,050 | 136 | 40 | 7 | 6 | 50 | 2,347 | 19 | 168 | 277 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Max: | 16,503 | 2,131 | 146 | 79 | 10 | 1,084 | 14,520 | 44 | 808 | 438 |
|  |  | Avg: | 2,845 | 424 | 56 | 18 | 4 | 121 | 1,991 | 13 | 100 | 118 |
|  |  | %: |  | 0.15 | 0.02 | 0.01 | 0.00 | 0.04 | 0.70 | 0.00 | 0.04 | 0.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

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| Appendix 1 – **Central Lake Erie, Long Point Bay** (cont.) | | | | | | | | | | | | | | | | | | | | | | | |
| **Survey** | **Season** | | **Year** | | **Total** | | **LTDU** | | **BUFF** | | **COGO** | | **HOME** | | **COME** | | **RBME** | | **BLSC** | | **SUSC** | | **WWSC** |
| LPWS | | Spring | | 1998 | | 11,738 | | 89 | | 2,872 | | 1,958 | | 110 | | 2,205 | | 4,307 | | 0 | | 47 | 150 |
|  | |  | | 1999 | | 8,807 | | 68 | | 1,314 | | 3,149 | | 0 | | 3,276 | | 973 | | 7 | | 3 | 17 |
|  | |  | | 2000 | | 9,844 | | 137 | | 2,546 | | 3,306 | | 0 | | 2,951 | | 871 | | 0 | | 0 | 33 |
|  | |  | | 2001 | | 19,901 | | 58 | | 5,806 | | 8,526 | | 4 | | 4,533 | | 619 | | 9 | | 2 | 345 |
|  | |  | | 2002 | | 17,632 | | 68 | | 2,595 | | 4,443 | | 20 | | 10,044 | | 402 | | 47 | | 3 | 9 |
|  | |  | | 2003 | | 15,074 | | 34 | | 7,136 | | 2,930 | | 20 | | 4,112 | | 760 | | 12 | | 0 | 70 |
|  | |  | | 2004 | | 13,553 | | 0 | | 3,762 | | 3,170 | | 2 | | 5,762 | | 841 | | 3 | | 0 | 12 |
|  | |  | | 2005 | | 20,608 | | 0 | | 7,703 | | 5,163 | | 51 | | 5,909 | | 1,768 | | 3 | | 0 | 10 |
|  | |  | | 2006 | | 11,952 | | 10 | | 3,394 | | 1,507 | | 15 | | 6,528 | | 486 | | 12 | | 0 | 0 |
|  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |  |
|  | |  | | Max: | | 20,608 | | 137 | | 7,703 | | 8,526 | | 110 | | 10,044 | | 4,307 | | 47 | | 47 | 345 |
|  | |  | | Avg: | | 14,345 | | 52 | | 4,125 | | 3,795 | | 25 | | 5,036 | | 1,225 | | 10 | | 6 | 72 |
|  | |  | | %: | |  | | 0.00 | | 0.29 | | 0.26 | | 0.00 | | 0.35 | | 0.09 | | 0.00 | | 0.00 | 0.01 |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
| LGLMWS | Fall | | 1999 | | 1,281 | | 0 | | 33 | | 504 | | 293 | | 441 | | 10 | | 0 | | 0 | | 0 |
|  |  | | 2000 | | 4,024 | | 0 | | 962 | | 48 | | 0 | | 3,015 | | 0 | | 0 | | 0 | | 0 |
|  |  | | 2009 | | 3,281 | | 0 | | 440 | | 1,467 | | 209 | | 1,012 | | 152 | | 0 | | 0 | | 0 |
|  |  | | 2010 | | 9,366 | | 1,436 | | 3,185 | | 310 | | 0 | | 258 | | 4,176 | | 0 | | 0 | | 0 |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  |  | | Max: | | 9,366 | | 1,436 | | 3,185 | | 1,467 | | 2 93 | | 3,015 | | 4,176 | | 0 | | 0 | | 0 |
|  |  | | Avg: | | 4,488 | | 359 | | 1,155 | | 582 | | 126 | | 1,181 | | 1,085 | | 0 | | 0 | | 0 |
|  |  | | %: | |  | | 0.08 | | 0.26 | | 0.13 | | 0.03 | | 0.26 | | 0.24 | | 0.00 | | 0.00 | | 0.00 |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
| CMMN - | Fall | | 1997 | | 463 | | 3 | | 35 | | 40 | | 20 | | 8 | | 325 | | 5 | | 4 | | 22 |
| DET |  | | 1998 | | 1,035 | | 24 | | 60 | | 70 | | 1 | | 28 | | 742 | | 2 | | 56 | | 52 |
|  |  | | 1999 | | 1,000 | | 30 | | 50 | | 30 | | 160 | | 70 | | 345 | | 15 | | 75 | | 225 |
|  |  | | 2000 | | 719 | | 10 | | 40 | | 74 | | 0 | | 29 | | 544 | | 0 | | 12 | | 10 |
|  |  | | 2001 | | 764 | | 13 | | 150 | | 88 | | 4 | | 115 | | 342 | | 15 | | 17 | | 20 |
|  |  | | 2002 | | 3,211 | | 18 | | 23 | | 74 | | 1 | | 3 | | 501 | | 740 | | 1,028 | | 824 |
|  |  | | 2003 | | 1,390 | | 6 | | 36 | | 31 | | 5 | | 72 | | 1,149 | | 4 | | 45 | | 42 |
|  |  | | 2004 | | 2,790 | | 66 | | 28 | | 24 | | 0 | | 1,678 | | 864 | | 19 | | 71 | | 40 |
|  |  | | 2005 | | 2,035 | | 300 | | 6 | | 12 | | 2 | | 523 | | 1,107 | | 12 | | 19 | | 54 |
|  |  | | 2006 | | 9,895 | | 30 | | 20 | | 14 | | 6 | | 175 | | 9,570 | | 18 | | 28 | | 34 |
|  |  | | 2007 | | 24,132 | | 170 | | 25 | | 26 | | 2 | | 368 | | 23,434 | | 22 | | 55 | | 30 |
|  |  | | 2008 | | 4,347 | | 50 | | 40 | | 48 | | 1 | | 64 | | 4,094 | | 12 | | 12 | | 26 |
|  |  | | 2009 | | 4,775 | | 343 | | 23 | | 23 | | 2 | | 280 | | 3,912 | | 11 | | 109 | | 72 |
|  |  | | 2010 | | 11,037 | | 255 | | 111 | | 53 | | 1 | | 136 | | 10,273 | | 16 | | 56 | | 136 |
|  |  | | 2011 | | 13,168 | | 868 | | 93 | | 14 | | 3 | | 40 | | 11,993 | | 7 | | 43 | | 107 |
|  |  | | 2012 | | 13,543 | | 1837 | | 395 | | 80 | | 5 | | 160 | | 10,364 | | 39 | | 136 | | 527 |
|  |  | | 2013 | | 19,047 | | 279 | | 46 | | 38 | | 7 | | 52 | | 18,390 | | 26 | | 37 | | 172 |
|  |  | | 2014 | | 7,520 | | 94 | | 48 | | 26 | | 11 | | 194 | | 7,013 | | 18 | | 40 | | 76 |
|  |  | | 2015 | | 6,921 | | 272 | | 75 | | 43 | | 26 | | 179 | | 6,013 | | 22 | | 74 | | 217 |
|  |  | | 2016 | | 20,740 | | 181 | | 88 | | 20 | | 16 | | 18 | | 20,169 | | 10 | | 46 | | 192 |
|  |  | | 2017 | | 2,321 | | 444 | | 138 | | 74 | | 61 | | 51 | | 1,400 | | 10 | | 46 | | 97 |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  |  | | Max: | | 24,132 | | 1,837 | | 395 | | 88 | | 160 | | 1,678 | | 23,434 | | 740 | | 1,028 | | 824 |
|  |  | | Avg: | | 7,183 | | 252 | | 73 | | 43 | | 16 | | 202 | | 6,312 | | 49 | | 96 | | 142 |
|  |  | | %: | |  | | 0.04 | | 0.01 | | 0.01 | | 0.00 | | 0.03 | | 0.88 | | 0.01 | | 0.01 | | 0.02 |

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| Appendix 1 – **Central Lake Erie, Long Point Bay** (cont.) | | | | | | | | | | | | |
| **Survey** | **Season** | **Year** | **Total** | **LTDU** | **BUFF** | **COGO** | **HOME** | **COME** | **RBME** | **BLSC** | **SUSC** | **WWSC** |
| LPWS | Fall | 1998 | 12,763 | 366 | 5,852 | 938 | 130 | 46 | 5,284 | 77 | 37 | 35 |
|  |  | 1999 | 4,216 | 17 | 3,143 | 494 | 7 | 171 | 323 | 5 | 30 | 26 |
|  |  | 2000 | 9,341 | 51 | 3,022 | 1,830 | 0 | 20 | 4,346 | 31 | 28 | 12 |
|  |  | 2001 | 4,588 | 7 | 3,462 | 267 | 104 | 55 | 661 | 9 | 0 | 23 |
|  |  | 2002 | 5,524 | 3 | 2,201 | 634 | 2 | 1,531 | 1,080 | 12 | 40 | 21 |
|  |  | 2003 | 14,861 | 0 | 7,459 | 976 | 28 | 899 | 5,197 | 90 | 3 | 209 |
|  |  | 2004 | 7,771 | 130 | 3,589 | 854 | 2 | 184 | 2,901 | 84 | 0 | 26 |
|  |  | 2005 | 3,808 | 51 | 1,314 | 1,069 | 0 | 29 | 1,324 | 17 | 0 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Max | 14,861 | 366 | 7,459 | 1,830 | 130 | 1,531 | 5,284 | 90 | 40 | 209 |
|  |  | Avg | 7,859 | 78 | 3,755 | 883 | 34 | 367 | 2,640 | 41 | 17 | 44 |
|  |  | %: |  | 0.01 | 0.48 | 0.11 | 0.00 | 0.05 | 0.34 | 0.01 | 0.00 | 0.01 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| MWS | Winter | 2002 | 2,048 | 0 | 851 | 445 | 0 | 747 | 6 | 0 | 0 | 0 |
|  |  | 2003 | 2,780 | 41 | 447 | 334 | 0 | 1,591 | 367 | 0 | 0 | 0 |
|  |  | 2004 | 2,026 | 0 | 486 | 866 | 0 | 621 | 54 | 0 | 0 | 0 |
|  |  | 2005 | 2,005 | 0 | 303 | 208 | 0 | 347 | 1,130 | 0 | 0 | 17 |
|  |  | 2006 | 5,508 | 0 | 479 | 646 | 0 | 2,952 | 1,430 | 0 | 0 | 0 |
|  |  | 2007 | 32,381 | 17 | 267 | 566 | 0 | 780 | 30,750 | 0 | 0 | 0 |
|  |  | 2008 | 1,582 | 0 | 166 | 1,037 | 0 | 75 | 303 | 0 | 0 | 0 |
|  |  | 2009 | 1,381 | 0 | 196 | 437 | 0 | 315 | 434 | 0 | 0 | 0 |
|  |  | 2010 | 1,955 | 0 | 326 | 1,243 | 0 | 216 | 170 | 0 | 0 | 0 |
|  |  | 2011 | 352 | 27 | 0 | 166 | 0 | 4 | 154 | 0 | 0 | 0 |
|  |  | 2012 | 2,397 | 96 | 231 | 296 | 0 | 148 | 1,625 | 0 | 0 | 0 |
|  |  | 2013 | 3,320 | 571 | 1,369 | 1,051 | 0 | 33 | 293 | 0 | 0 | 2 |
|  |  | 2014 | 955 | 0 | 20 | 360 | 32 | 38 | 492 | 0 | 0 | 14 |
|  |  | 2015 | 175 | 0 | 0 | 160 | 0 | 15 | 0 | 0 | 0 | 0 |
|  |  | 2016 | 3,020 | 0 | 156 | 1,886 | 0 | 250 | 708 | 0 | 0 | 19 |
|  |  | 2017 | 9,803 | 0 | 3,368 | 589 | 0 | 811 | 4,191 | 70 | 0 | 774 |
|  |  | 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Max: | 32,381 | 571 | 3,368 | 1,886 | 32 | 2,952 | 30,750 | 70 | 0 | 774 |
|  |  | Avg: | 4,217 | 44 | 510 | 605 | 2 | 526 | 2,477 | 4 | 0 | 49 |
|  |  | %: |  | 0.01 | 0.12 | 0.14 | 0.00 | 0.12 | 0.59 | 0.00 | 0.00 | 0.01 |

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| Appendix 1 – **Central Lake Erie, Long Point Bay** (cont.) | | | | | | | | | | | | |
| **Survey** | **Season** | **Year** | **Total** | **LTDU** | **BUFF** | **COGO** | **HOME** | **COME** | **RBME** | **BLSC** | **SUSC** | **WWSC** |
| CBC | Winter | 1997 | 2,210 | 0 | 390 | 304 | 122 | 1,338 | 56 | 0 | 0 | 0 |
|  |  | 1998 | 941 | 0 | 564 | 109 | 99 | 146 | 23 | 0 | 0 | 0 |
|  |  | 1999 | 2,925 | 0 | 634 | 168 | 61 | 1,883 | 179 | 0 | 0 | 0 |
|  |  | 2000 | 4,039 | 0 | 282 | 194 | 9 | 1,399 | 2,154 | 0 | 1 | 0 |
|  |  | 2001 | 1,227 | 25 | 516 | 186 | 112 | 119 | 269 | 0 | 0 | 0 |
|  |  | 2002 | 1,151 | 1 | 312 | 110 | 12 | 539 | 177 | 0 | 0 | 0 |
|  |  | 2003 | 1,584 | 1 | 265 | 106 | 64 | 929 | 218 | 0 | 1 | 0 |
|  |  | 2004 | 2,338 | 2 | 372 | 217 | 31 | 1,345 | 367 | 0 | 0 | 4 |
|  |  | 2005 | 5,147 | 3 | 338 | 238 | 14 | 2,231 | 2,323 | 0 | 0 | 0 |
|  |  | 2006 | 11,542 | 12 | 287 | 174 | 36 | 1,633 | 9,399 | 0 | 1 | 0 |
|  |  | 2007 | 3,073 | 1 | 127 | 239 | 22 | 2,482 | 202 | 0 | 0 | 0 |
|  |  | 2008 | 4,129 | 7 | 255 | 201 | 16 | 2,434 | 1,216 | 0 | 0 | 0 |
|  |  | 2009 | 1,343 | 9 | 280 | 414 | 9 | 388 | 243 | 0 | 0 | 0 |
|  |  | 2010 | 6,446 | 0 | 145 | 142 | 9 | 5,938 | 212 | 0 | 0 | 0 |
|  |  | 2011 | 4,493 | 20 | 626 | 206 | 63 | 533 | 3,037 | 0 | 0 | 8 |
|  |  | 2012 | 7,932 | 0 | 1,284 | 77 | 76 | 181 | 6,308 | 0 | 0 | 6 |
|  |  | 2013 | 2,869 | 8 | 333 | 880 | 36 | 1,298 | 314 | 0 | 0 | 0 |
|  |  | 2014 | 3,626 | 6 | 605 | 699 | 87 | 1,983 | 246 | 0 | 0 | 0 |
|  |  | 2015 | 1,297 | 11 | 687 | 190 | 100 | 93 | 216 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Max: | 11,542 | 25 | 1,284 | 880 | 122 | 5,938 | 9,399 | 0 | 1 | 8 |
|  |  | Avg: | 3,595 | 6 | 437 | 255 | 51 | 1,415 | 1,429 | 0 | 0 | 1 |
|  |  | %: |  | 0.00 | 0.12 | 0.07 | 0.01 | 0.39 | 0.40 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |