

Oklahoma Winter Bird Atlas Handbook

Dan L. Reinking

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Important Reminders

Completed (and incomplete) data forms are due each year no later than February 21!

QUESTIONS?

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INTRODUCTION

Whereas studies of breeding birds are commonplace in North America, populations in winter are generally less well studied—consider that nearly every state has completed a breeding bird atlas, while wintering bird atlas projects are underway in only two states. Existing information on the winter distribution of most bird species in Oklahoma is limited to general statements of occurrence within broad regional areas, and is based on many decades of information, both opportunistic and anecdotal. Christmas Bird Count data are often used to indicate winter bird distribution, but there are only about 20 such count areas in Oklahoma, and these counts

Oklahoma, and these counts take place in the early winter period. The use of a standardized methodology to systematically survey nearly 600 locations across the entire state, during both early and late winter, within the relative confines of a five year period will provide an accurate snapshot of current bird distribution within Oklahoma during the winter. An Oklahoma Winter Bird Atlas project (OWBA) provides the robust survey design and exhaustive statewide

coverage needed for a meaningful inventory. This baseline information can be used to develop appropriate conservation and management priorities including land acquisition and targeted habitat protection. Such information will serve as an important benchmark for evaluating future changes in winter bird distribution in the context of land use change and

Oklahoma will be one of very few places to have completed both breeding and wintering bird atlases. other processes affecting bird populations. An OWBA project will also nicely complement the recently completed Oklahoma Breeding Bird Atlas Project (OBBA; Reinking 2004) and will make Oklahoma one of very

few locations in North America to have completed both breeding and wintering bird atlases. The only completed and published project of this nature of which I am aware took place in Britain and Ireland (Lack 1986). In addition, San Diego County, California (Unitt 2004) and the state of Ohio (Fazio 2002) are currently working on winter bird atlas projects.

ATLASING TIPS: Much atlas surveying can be done from the road, but ask landowner permission to enter areas of differing habitat types so that you will find the most species and largest numbers that are present in a block.

Feeders are good locations to find some species of wintering birds.

METHODS

Definition of winter season

Oklahoma's mid-south latitude means fall migration in many species continues well into November and spring migration for some species begins in late February (Oklahoma Bird Records Committee 2000).

Because the objective of mapping

distributions of wintering birds would be hampered by the inclusion (to an unknown extent) of migrants, the OWBA winter season is

"Early" and "Late" periods: 1 Dec – 7 January 8 January – 14 February

defined as 1 December–14 February, a period believed to capture wintering species with minimal data corruption from migrants. A major difference between the OBBA and the OWBA is that in contrast to the breeding season when most individual birds remain on local territories, birds in winter may be

more mobile in response to regional or local weather and foraging conditions. Thus, winter distributions may be more plastic, leading to distributional differences between early and late winter periods, particularly for irruptive

species (e.g., Snowy Owl, Red-breasted Nuthatch, Evening Grosbeak, or Pine Siskin) or "halfhardy" species (e.g., some shorebirds,

Sedge Wren,

Eastern Phoebe, etc.). To assess such intra-winter distributional patterns, the OWBA season and survey effort are equally divided into early winter (1 December–7 January) and late winter (8 January–14 February) periods.

Sampling design

To gather data for the atlas, we are using the grid of 7½-minute guads established by the U.S. Geological Survey. Each of these quads is 7½ x 7½ minutes of latitude and longitude. or approximately 7 x 8 miles, about one-third the area of a Christmas Bird Count circle. The grid covers the entire state, with about 1200 quads covering Oklahoma. However, the atlas project will be sampling only one-sixth of every-other quad. This unit of land is referred to as an atlas block, and is about 3.5 x 3 miles in size. Nearly 600 such blocks will need to be surveyed in the five

years of atlas field work. We have selected this sampling scheme because of Oklahoma's relatively large land area and small birder population compared to many of the eastern states. The same blocks used for the

OBBA will be surveyed for the OWBA. As with the OBBA and other atlas projects, the sampling design used has an effect on the results. For many atlas projects, including the OBBA, the stratified random sampling design leads to poor detection of rare and local

species, and in the case of the OWBA will also lead to poor detection of the many wintering water birds (loons,

The same blocks will be used as in the OBBA

grebes, waterfowl, gulls, etc.) because few large lakes fall within atlas blocks. These sampling problems were to a significant extent overcome during the OBBA by requesting observers to submit observations of "special interest species" from anywhere in Oklahoma. This allowed data for rare and local species to be collected and mapped; these data would otherwise have gone

unreported in the project publication. A list of special interest species is incorporated into the OWBA design, and requests for bird reports from lakes across the state will also be collected to enhance detection and reporting of aquatic species. Be sure to visit all of the major habitat types within each block.

Amount and distribution of effort

The OBBA required observers to make a minimum of two visits totaling 10 hours of survey time in each block (Reinking 1998). Breeding bird atlas methodologies are based on the hierarchical classification of breeding evidence derived from observing bird behavior, and observers are instructed to attempt to elevate the known breeding status of each species in a block from Possible to Probable to Confirmed whenever possible.

The significant amount of time spent in observing bird behavior in order to upgrade breeding status for each species will not be required during the OWBA, which will simply record a species' presence in a block along with some measure of abundance. This should enable blocks to be effectively surveyed in less time than was required for the OBBA, a total of 8 hours per block (minimum) instead of 10.

Because of the desire to evaluate differences in bird distributions during early winter and late winter periods, a minimum of 4 hours will be spent surveying each block during each of the two winter periods. The first early period visit and the last late period visit are further required to be a minimum of 14 days apart. Volunteers who plan to

spend more than twice the minimum amount of time surveying a block are encouraged instead to sign up for an additional block. It is important that all blocks are surveyed within five years. It is recognized that winter bird distributions and abundances

vary from year to year, and that the species present in any one block may differ in years prior to or later than the

year of the survey. If an irruptive species is not recorded in a specific block during one year, it will likely be recorded in a nearby block in a previous or subsequent year. It is important, therefore, that some blocks be surveyed in all regions of the state in each year of the project. Analysis

and mapping of single-year results will be possible, enhancing interpretation of distributional differences among winters.

A minimum of 4 hours must be spent surveying in both early and late periods.

The first early period visit and the last late period visit must be a minimum of 14 days apart.

Abundance measures

Both breeding bird atlas projects and winter bird atlas projects in various locations have differed in collection of abundance data from blocks, ranging

from no data collection at all to complete counts of each species. Most projects have used either an order of magnitude scale (1–9; 10–99; 100–999) or some other scale with several numerical range categories for the number of

individuals observed (the OBBA used optional abundance categories of 1–2; 3–30; and >30). An order of magnitude scale will be used to record the abundance of each species in

When recording the abundance category for each species, include only the number of birds you actually saw or heard.

each block for the OWBA. This will allow three (or four if needed) sizes or colors of markers on distribution maps

and will provide useful information on broad abundance patterns without overwhelming observers with the need to count each individual bird.

Only the number of birds actually seen

or heard should be included; do not extrapolate to the number of birds you think might actually be present in the

Be sure to visit all major habitat types in your block to record the largest number of species and individuals you can find.

Completed (and incomplete) data forms are due each year no later than February 21!

block.

A=1-9

B=10-99

C=100-999

D=1000-9999

LITERATURE CITED

Fazio, V. W. III. 2002. A winter bird atlas for Ohio: 2003-2007. Http://www.aves.net/winter-atlas/.

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Oklahoma Bird Records Committee. 2000. Date Guide to the Occurrences of Birds in Oklahoma. Third edition. Oklahoma Ornithological Society, Tulsa, Oklahoma.

Reinking, D. L., Compiler. 1998 edition. Handbook for Atlasers. Unpublished handbook.

Reinking, D. L., ed. 2004. *Oklahoma Breeding Bird Atlas*. University of Oklahoma Press, Norman, Oklahoma.

Unitt, P. 2004. San Diego County Bird Atlas. San Diego Society for Natural History, San Diego, California.

DATA FORM INSTRUCTIONS (Sample forms follow beginning on page 7.)

Participants in the Oklahoma Breeding Bird Atlas Project will recognize most of the forms used for the winter bird atlas. One important difference, though, is that separate forms must be used if a block is visited in more than one winter. Observers are strongly encouraged to: 1) ensure that both early and late period visits to a block are completed within the same winter, and 2) sign up for a new block rather than spend significantly more than the minimum required time in an already surveyed block.

Block Visitation Form

One form should be used for each block, and for each winter if a block is visited in more than one winter. The winter season in which the block was surveyed should be listed in the YEARS line; e.g., 2003-2004 for the first year of the project and 2007-2008 for the last year. The grid box is divided into an upper section for visits during the early winter period, and a lower section for visits in the late winter period. Record the month, day, and year of each visit along with the time of day surveying started and ended. A minimum of four hours of survey time is required in each period, and the first early period visit must be at least 14 days earlier than the last late period visit. If multiple observers visit the block on the same day and work in separate parties, record the number of parties in the rightmost column. If multiple observers work together while surveying, consider it a single party.

Species List Form

This is the form used to record the bird

observations from within a block. Use a separate species list for each block, and for each winter if a block is visited in more than one winter. There is a column for the abundance of each species in the block in both the early and late winter periods. If you visit a block on December 4 and see 7 Northern Cardinals, you would record the letter "A" in the Early period column. If you visit the block again on December 19 and see 11 Northern Cardinals, you can simply record the letter "B" next to the "A" you have already written to show that you have upgraded the abundance of cardinals in that block to the next higher category. There is no need to erase or cross out the letter "A" in this case; the highest abundance letter listed for each species will be used for analysis. If you later make a single visit to the block on January 21 (during the late winter period) and see 4 cardinals, you would record "A" in the Late period column.

Species marked with an asterisk (*) are considered species of special interest and should be documented using a Special Interest Species Form (see next paragraph). If you see any of these species, or any of the species listed on page 11 anywhere in Oklahoma between December 1 and February 14, please fill out this form.

Special Interest Species Form

One of these forms should be filled out for each observation of a species listed on page 11 (and any species with an asterisk on the Species List Form) from December 1 to February 14. These forms add greatly to the value of the information collected by the atlas project, and help to clarify distributions of species that would otherwise not be measured well by this project. Please seek out these species and report them. Be as specific as possible with the location information, and include a reference to a nearby town, highway intersection, or lake. "Four miles east and 1 mile south of Agra" is much better than saying "northern Lincoln County."

Lake Visitation Form

Because few of Oklahoma's lakes are included within the randomly selected blocks being surveyed for this project, observers are asked to visit lakes

Be sure to complete both the early and late period visits in the same winter. Use a separate set of forms if a block or lake is visited in more than one winter.

across Oklahoma and report the abundance of aquatic species (loons, grebes, pelicans, cormorants, ducks, geese, swans, coots, gulls, terns, and Bald Eagles) during the winter. It is of the most value to visit a lake at least twice during the early winter period and at least twice during the late winter period, but even a single visit in each period is useful. Abundance records for each species during each period can be upgraded in a similar fashion as the data on the Species List Form. and the highest abundance category recorded for each species in each period will be used. Be sure to use a separate form if a lake is visited in more than one winter. You do not need to sign up in advance for lakes to visit.

Please seek out and report Special Interest Species.

Each observer will be mailed a map of the block(s) they signed up to survey, along with a set of data forms. Data forms are also available on the Winter Bird Atlas Project web site at www.suttoncenter.org/WBA.html

Completed (and incomplete) data forms are due each year no later than February 21!

QUESTIONS?

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OKLAHOMA WINTER BIRD ATLAS PROJECT

BLOCK VISITATION DATA FORM (use one per atlas block and winter)

NAME: Jane Birder COUNTY: Greer

ADDRESS: Box 21 BLOCK: 7654321.12

Anytown, OK 77777 YEARS: 2004-2005

PHONE: (580) 555-1212 E-MAIL: JaneBirder@bol.com

A minimum of 4 hours of survey time is required in both early and late periods. The first early period visit and the last late period visit must be at least 14 days apart.

Early = 1 Dec - 7 Jan Late = 8 Jan - 14 Feb

VISIT	MONTH, DAY, TIMES	Total Party Hours	# of Parties
Early 1 (required)	Dec 4, 2004 1000-1230	2.5	1
Early 2	Jan 1, 2005 1300-1500	2	1
Early 3			
Early 4			
Early 5			
	TOTAL EARLY HOURS	4.5	\searrow
Late 1 (required)	Jan 8, 2005 0800-1100	3	1
Late 2	Feb 4, 2005 1045-1215; 1330-1430	2.5	1
Late 3			
Late 4			
Late 5			
	TOTAL LATE HOURS	5.5	\searrow
	TOTAL SURVEY HOURS	10	

Abundance Codes: A = 1–9 B = 10–99 C = 100–999 D = 1000–9999

Please read instruction handbook before filling out data form.

Return forms to: Winter Bird Atlas Sutton Avian Research Center P.O. Box 2007 Bartlesville, OK 74005-2007

NAME	_Jane Birder_	1	BLOCK	7654321.12	2	YEARS	2004-2005	
		Ok1	ahama Winte	r Rird Atlan	Project 1 of 3			

Oklahoma Winter Bird Atlas Project 1 of 3

Species List Form: Use a separate form for each block and winter.

Early = 1 Dec-7 Jan & Late = 8 Jan-14 Feb. A = 1-9; B = 10-99; C = 100-999; D = 1000-9999 (actually seen or heard)

ABUNDANCE

		77.110 E
SPECIES	EARLY	LATE
1. Red-throated Loon*		
2. Pacific Loon*		
3. Common Loon		
4. Yellow-billed Loon*		
5. Pied-billed Grebe		
6. Horned Grebe		
7. Eared Grebe		
8.Western Grebe		
9. American White Pelican		
10. Double-crested Cormorant		
11. Great Blue Heron		
12. Black Vulture		
13. Turkey Vulture		
14. Greater White-fronted Goose		
15. Snow Goose		
16. Ross's Goose		
17. Canada Goose		
18. Trumpeter Swan*		
19. Tundra Swan*		
20. Wood Duck		
21. Gadwall		
22. American Wigeon		
23. American Black Duck*		
24. Mallard		
25. Blue-winged Teal		
26. Cinnamon Teal		
27. Northem Shoveler		
28. Northem Pintail		
29. Green-winged Teal		
30. Canvasback		
31. Redhead		

SPECIES	EARLY	LATE
32. Ring-necked Duck		
33. Greater Scaup*		
34. Lesser Scaup		
35. Surf Scoter*		
36. White-winged Scoter*		
37. Long-tailed Duck*		
38. Bufflehead		
39. Common Goldeneye		
40. Hooded Merganser		
41. Common Merganser		
42. Red-breasted Merganser		
43. Ruddy Duck		
44. Bald Eagle		
45. Northem Harrier	А	
46. Sharp-shinned Hawk		
47. Cooper's Hawk	А	А
48. Northern Goshawk*		
49. Red-shouldered Hawk		
50. Red-tailed Hawk	А	А
51. Ferruginous Hawk		
52. Rough-legged Hawk		
53. Golden Eagle		
54. American Kestrel	А	
55. Merlin		
56. Prairie Falcon		
57. Ring-necked Pheasant		
58. Greater Prairie-Chicken*		
59. Lesser Prairie-Chicken*		
60. Wild Turkey		
61. Scaled Quail		
62. Northern Bobwhite	Α	Α

NAME	_Jane Birder	 BLOCK_	7654321	.12	 YEARS	2004-2005	

Oklahoma Winter Bird Atlas Project 2 of 3

SPECIES	EARLY	LATE
63. Virginia Rail*		
64. American Coot		
65. Sandhill Crane		
66. Killdeer		
67. Greater Yellowlegs		
68. Wilson's Snipe		
69. American Woodcock*		
70. Little Gull*		
71. Bonaparte's Gull		
72. Ring-billed Gull		
73. Herring Gull		
74. Glaucous Gull		
75. Rock Pigeon		
76. Eurasian Collared-Dove		
77. White-winged Dove*		
78. Mourning Dove	А В	А
79. Inca Dove*		
80. Greater Roadrunner	Α	
81. Barn Owl		Α
82. Western Screech-Owl*		
83. Eastern Screech-Owl		
84. Great Horned Owl		А
85. Snowy Owl*		
86. Burrowing Owl*		
87. Barred Owl		
88. Long-eared Owl*		
89. Short-eared Owl*		
90. Belted Kingfisher		
91. Lewis's Woodpecker*		
92. Red-headed Woodpecker		
93. Golden-fronted Woodpecker		
94. Red-bellied Woodpecker		
95. Yellow-bellied Sapsucker		
96. Ladder-backed Woodpecker	Α	

SPECIES	EARLY	LATE
97. Downy Woodpecker		
98. Hairy Woodpecker		
99. Red-cockaded Woodpecker*		
100. Northern Flicker	Α	A
101. Pileated Woodpecker		
102. Eastern Phoebe		
103. Loggerhead Shrike		
104. Northern Shrike*		
105. Steller's Jay		
106. Blue Jay		
107. Western Scrub-Jay		
108. Pinyon Jay		
109. Black-billed Magpie		
110. American Crow	В	В
111. Fish Crow*		
112. Chihuahuan Raven*		
113. Common Raven		
114. Horned Lark	В	ВС
115. Carolina Chickadee		
116. Mountain Chickadee*		
117. Juniper Titmouse		
118. Tufted Titmouse		
119. Black-crested Titmouse*		
120. Verdin*		
121. Bushtit		
122. Red-breasted Nuthatch		
123. White-breasted Nuthatch		
124. Brown-headed Nuthatch		
125. Brown Creeper		
126. Rock Wren		
127. Canyon Wren		
128. Carolina Wren		
129. Bewick's Wren		
130. House Wren		

NAME	Jane Birder	BLOCK	7654321.12	YEARS	2004-2005

Oklahoma Winter Bird Atlas Project 3 of 3

SPECIES	EARLY	LATE
131. Winter Wren		
132. Sedge Wren*		
133. Marsh Wren*		
134. Golden-crowned Kinglet		
135. Ruby-crowned Kinglet		
136. Eastern Bluebird		
137. Mountain Bluebird		
138. Townsend's Solitaire		
139. Hermit Thrush		
140. American Robin	В	
141. Northern Mockingbird	Α	Α
142. Sage Thrasher*		
143. Brown Thrasher		
144. Curve-billed Thrasher		
145. European Starling	В	В
146. American Pipit		
147 Sprague's Pipit		
148. Cedar Waxwing		
149. Orange-crowned Warbler		
150. Yellow-rumped Warbler		
151. Pine Warbler		
152. Common Yellowthroat		
153. Spotted Towhee		
154. Eastern Towhee		
155. Canyon Towhee		
156. Rufous-crowned Sparrow		
157. American Tree Sparrow		
158. Chipping Sparrow		
159. Field Sparrow		
160. Vesper Sparrow		
161. Lark Bunting*		А
162. Savannah Sparrow	В	ВС
163. Le Conte's Sparrow		
164. Fox Sparrow		

SPECIES	EARLY	LATE
165. Song Sparrow		
166. Lincoln's Sparrow		
167. Swamp Sparrow		
168. White-throated Sparrow		
169. Harris's Sparrow		
170. White-crowned Sparrow		
171. Dark-eyed Junco		
172. McCown's Longspur		
173. Lapland Longspur		А
174. Smith's Longspur		
175. Chestnut-collared Longspur		
176. Northern Cardinal		
177. Red-winged Blackbird	В	А
178. Eastern Meadowlark		
179. Western Meadowlark	В	В
180. Rusty Blackbird		
181. Brewer's Blackbird		В
182. Common Grackle	А	А
183. Great-tailed Grackle		
184. Brown-headed Cowbird		
185. Purple Finch*		
186. Cassin's Finch*		
187. House Finch		
188. Red Crossbill*		
189. Pine Siskin		
190. American Goldfinch	А	А
192. Evening Grosbeak*		
193. House Sparrow	В	В

Return forms to: Winter Bird Atlas, Sutton Avian Research Center, P.O. Box 2007, Bartlesville, OK 74005-2007

Special Interest Species

Oklahoma Winter Bird Atlas Project 2003–2008

The Oklahoma Winter Bird Atlas Project is a volunteer effort to document the winter distribution of Oklahoma's birds. Coverage of about 600 randomly selected blocks of land throughout Oklahoma forms the core of the project, but there are selected species for which we desire information regardless of their location in the state. If you see any of the following species between December 1 and February 14 anywhere in Oklahoma, please fill out and return a Special Interest Species form. For more information contact: Winter Bird Atlas, Sutton Avian Research Center, P.O. Box 2007, Bartlesville, OK 74005-2007. Phone (918) 336-7778. E-mail GMSARC@AOL.COM

Red-throated Loon

Pacific Loon

Yellow-billed Loon

Trumpeter Swan

Tundra Swan

White-winged Scoter

Black Scoter

American Black Duck

Long-tailed Duck

Northern Goshawk

Harris's Hawk

Gyrfalcon

Greater Prairie-Chicken

Lesser Prairie-Chicken

Virginia Rail

American Woodcock

Little Gull

Iceland Gull

Thaver's Gull

Lesser Black-backed Gull

Glaucous-winged Gull

Glaucous Gull

Great Black-backed Gull

White-winged Dove

Inca Dove

Western Screech-Owl

Burrowing Owl

Long-eared Owl

Short-eared Owl

Any hummingbirds Lewis's Woodpecker

Red-cockaded Woodpecker

Northern Shrike

Blue-headed Vireo

Fish Crow

Chihuahuan Raven

Mountain Chickadee

Black-crested Titmouse

Verdin

Sedge Wren

Marsh Wren

Sage Thrasher

Lark Bunting

Purple Finch

Cassin's Finch

Red Crossbill

White-winged Crossbill

Common Redpoll

Evening Grosbeak

And any other notably rare wintering species in Oklahoma (if in doubt, ask or go ahead and

send in a form).

SPECIAL INTEREST SPECIES OBSERVATION FORM

(For sightings of special interest species <u>anywhere in the state</u> from 1 Dec to 14 Feb)

SPECIESLark Bunting	NAMEJane Birder
COUNTYGreer	ADDRESSBox 21
SPECIFIC LOCATIONTwo miles south	Anytown, OK 77777
of Brinkman	EMAILjanebirder@bol.com
	ATLAS BLOCK (if in)7654321.12
	DATE_8 JanYEAR_2005
	NUMBER OBSERVED1
Description (include details of voice, size, shape to similar species). You may attach photos or add Sparrow size, with a thick blue bill. Brownish ab patch in the wing and black wingtips. Perched on has a longer, thinner bill and a longer tail, and lace	litional sheets if you need more space. bove, heavily streaked below, with a large white barbed wire fence by a pasture. Mockingbird
H-bit-4 (concept): Don colond	
Habitat (general): Rangeland	
Habitat (specific): Perched on a fence at pasture	edge along roadside.

Return form to: Oklahoma Winter Bird Atlas Sutton Avian Research Center P.O. Box 2007 Bartlesville, OK 74005-2007

OKLAHOMA WINTER BIRD ATLAS PROJECT

LAKE VISITATION DATA FORM (use one for each lake and each winter)
Use to report wintering aquatic species at Oklahoma lakes during 2003-2008

 NAME:
 Jane Birder
 COUNTY:
 Greer/Kiowa

 ADDRESS:
 Box 21
 LAKE:
 Altus Lake

 Anytown, OK 77777
 WINTER:
 2004-2005

 PHONE:
 (580) 555-1212
 E-MAIL:
 janebirder@bol.com

Lake Visitation Record (indicate the month, day, and year of each visit)

,	
1. December 7, 2004	16
2. December 30, 2004	17
3. January 10, 2005	18
4. January 21, 2005	19
5. February 7, 2005	20
6	21
7	22
8	23
9	24
10	25
11	26
12	27
13	28
14	29
15	30

Record the species you observe on the back of this form

Please read instruction handbook before filling out data form.

Return forms to: Winter Bird Atlas Sutton Avian Research Center P.O. Box 2007 Bartlesville, OK 74005-2007

NAME Jane Birder	LAKE	Altus	WINTER	2004-2005
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Record the abundance category for each aquatic species (include Bald Eagle) you observe at this lake in the appropriate winter period column. If on a subsequent visit during the same period you see enough of any species to qualify for a higher category, you can update the abundance letter. Please visit the lake at least once in both winter periods if possible.

Early Period = 1 December to 7 January Late period = 8 January to 14 February

Abundance Codes: A = 1–9 B = 10–99 C = 100–999 D = 1000–9999

ABUNDANCE

	ABUNI	DANCE
SPECIES	EARLY	LATE
Red-throated Loon*		
Pacific Loon*		
Common Loon		А
Yellow-billed Loon*		
Pied-billed Grebe		
Horned Grebe		
Eared Grebe	А	А
Western Grebe		
American White Pelican		
Double-crested Cormorant	В	
Great Blue Heron	А	А
Gr. White-fronted Goose		
Snow Goose		
Ross's Goose		
Canada Goose		
Trumpeter Swan*		
Tundra Swan*		
Wood Duck		
Gadwall	В	АВ
American Wigeon		
American Black Duck*		
Mallard	В	В
Blue-winged Teal		
Cinnamon Teal		
Northern Shoveler	В	В
Northern Pintail	В	В

Include any other related species seen and use SIS.

SPECIES **EARLY** LATE Green-winged Teal Canvasback Redhead Ring-necked Duck Α Greater Scaup* ΑВ Lesser Scaup Surf Scoter* White-winged Scoter* Long-tailed Duck* Bufflehead Common Goldeneye **Hooded Merganser** Common Merganser Red-breasted Merganser Ruddy Duck В В Α Bald Eagle American Coot В ВС Bonaparte's Gull ВС В В Ring-billed Gull Α Herring Gull Glaucous Gull*

ABUNDANCE

^{*} Fill out a SIS form for these species.

OKLAHOMA WINTER BIRD ATLAS PROJECT

VOLUNTEER

I always ask permission before entering private property.