

Richardson Bay Audubon Sanctuary waterbird surveys, 2006-2016 summary.

-K. Wilcox, 2016

March 24, 2016 marked the close of the 2015-16 waterbird season for the Richardson Bay Audubon Center & Sanctuary, and the opening of the Sanctuary waters to boats until October. It also marked the completion of ten years of data collection on waterbird use of the Sanctuary waters during the closure period.

The Center began the surveys ten years ago to track long-term changes in bird use of the Sanctuary waters, engage the public and inform the boat closure. It is clear that Richardson Bay is particularly important to waterbirds due to its large eelgrass bed and for hosting the most important site for Pacific herring spawning on the west coast of the U.S. Now with a ten-year data set, we are also planning to compare our data to other waterbird data from the region, as well as to other ecological metrics such as herring and eelgrass.

Twice a month (weather permitting) during October-March, surveys are conducted from shore at five viewing locations around the Sanctuary by mostly volunteer observers and scribes. Since 2006, over 60 individuals have helped with the surveys—many returning each season. These Community Science volunteers are key to the success of this monitoring program. There simply would be no way Audubon staff could complete the surveys on their own given the large area to cover. The volunteers' bird identification skills help to insure accurate information is collected, and their enthusiasm and willingness to return year after year creates an engaging atmosphere.



The following graphs summarize the data we've collected during this period. Data has been proofed against raw data and corrected in the electronic database.

Our sincere appreciation goes to everyone who has helped as observers and scribes over the years:

A.T. Lynne, Alexis Clark, Andrew Frosthalm, Anne Ardillo, Beth Schriock, Beverly McIntosh, Bob Hinz*, Bruce Bajema, Carmen Tan, Casey Arndt, Danylo Hawks, Debbie Miller, Delia Hitz, Diana Benner, Don Reinberg, Ed Nute, Elizabeth Onesto, Elizabeth Riviere, Emma Gildesgame, Eric Palm, Erin Eve, Hale Prather, Helen Lindqvist*, Iris Clearwater, Jane Anfinson, Jane Medley, Janet Bair, Jeanine Starritt, Jen Miller, Jennifer Roth, Jesse Duff-Woodruff, Jim White*, Jody Newman, Joe Madden, Joe Northrup, Johanna Anderson, John Robeson, Juliet Grable, Karen Velas, Laura Whitten, Len Blumin, Lesley Zwillinger, Lisa Woodward, Liz Lewis, Lorri Gong, Lowell Sykes, Mardi Leland, Marisela Alvarez, Maureen Fallon, Maureen Lahif, Meg Fawcett, Meryl Sundove, Mischa McCormick, Nancy Willet, Nevin Cullen, Pete White, Rachel Hendrickson, Reuben Brandt, Rich Cimino, Rich Stallcup, Richard Jenkins, Rudy Wallen, Sandy Lemke, Sonya Suzuki, Susan Kelly, Susana Ives, Tony Harrow, and Zoe McCormick.

*Special thanks goes to **Bob Hinz, Helen Lindqvist, and Jim White** who have contributed their skills every season since we began in 2006!

COMMON SPECIES OBSERVED DURING WATERBIRD SURVEYS, 2006-16:

Greater (left) & Lesser (right) Scaup:



Ruddy Duck:



Bufflehead:

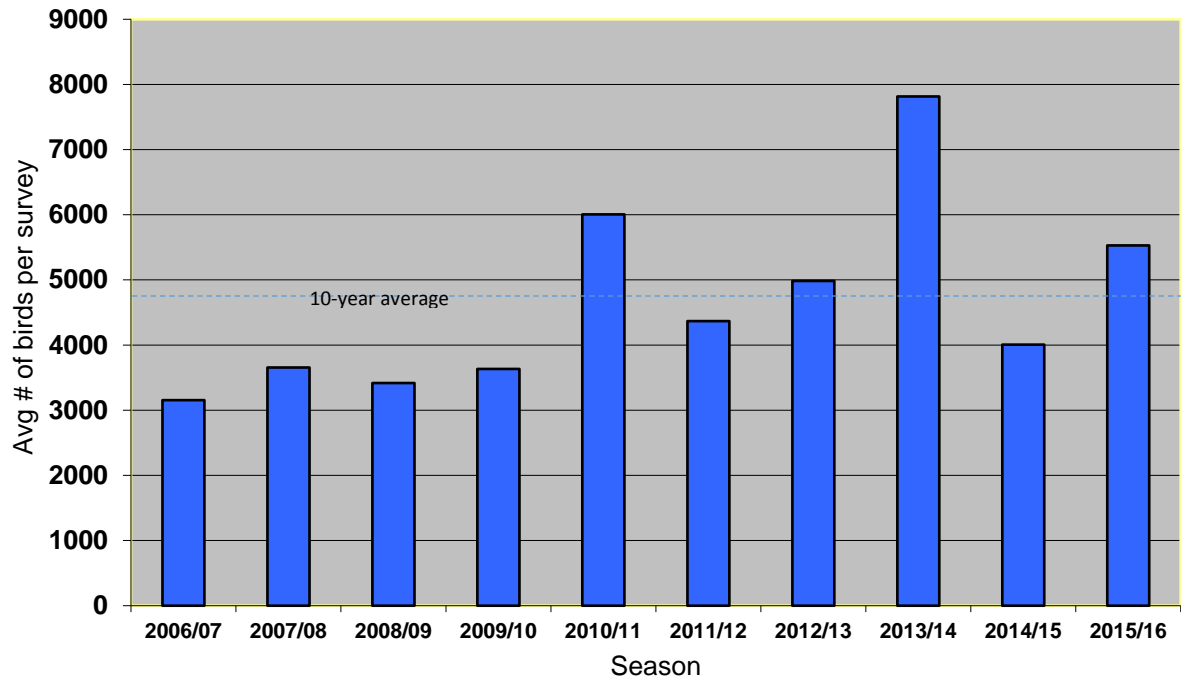


Western & Clark's (left, front) Grebe:

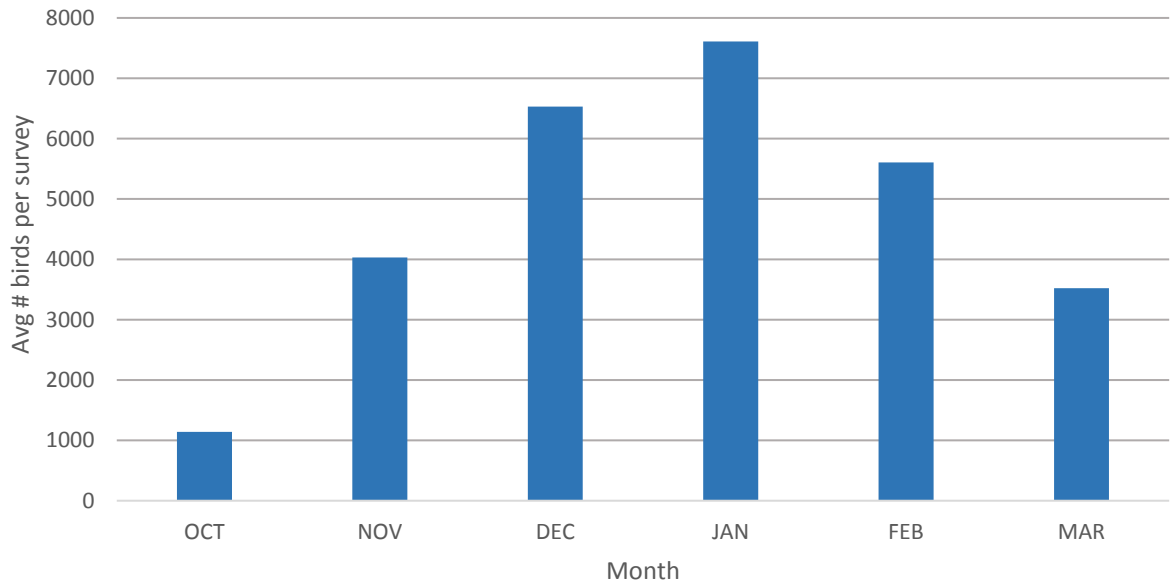


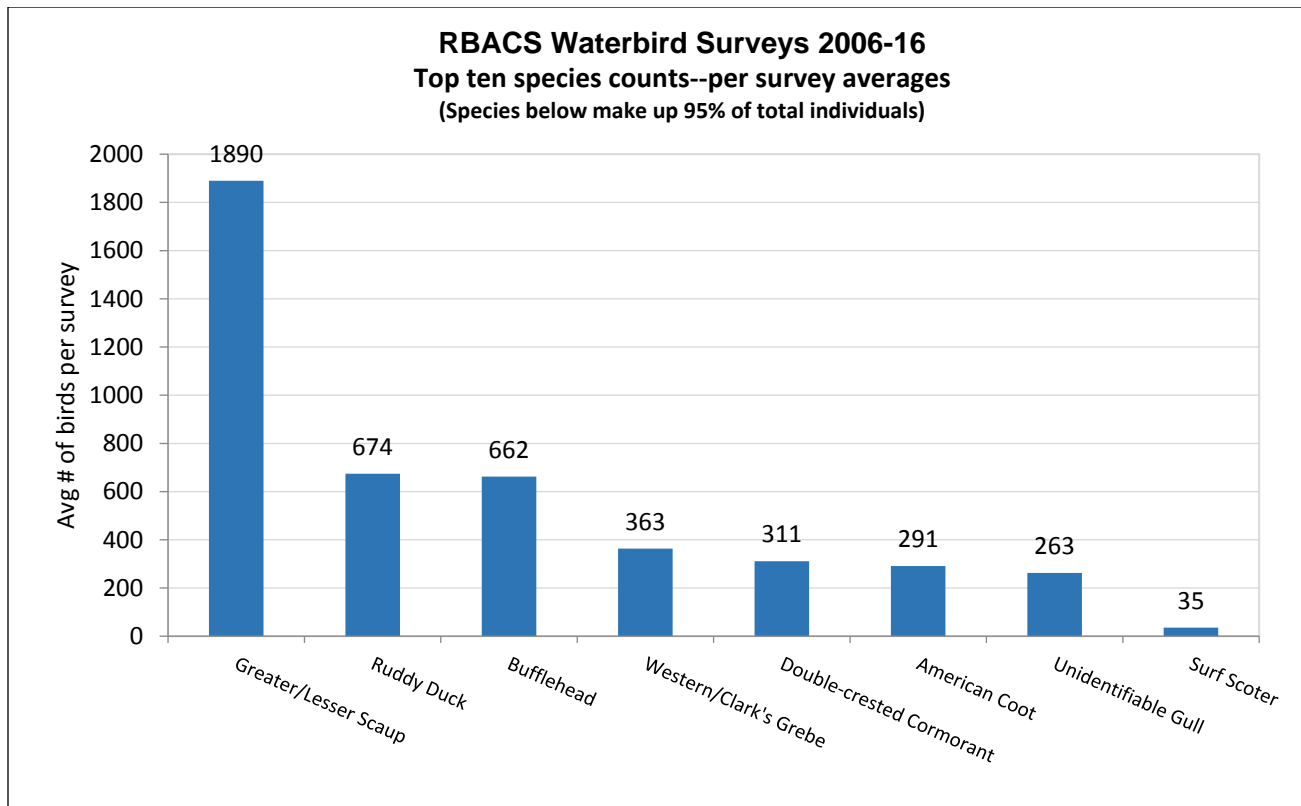
Photo credits, Flickr Creative Commons: Greater/Lesser Scaup, Andrew A. Reding; Ruddy Duck, Ananda Debnath; Bufflehead, Yankech Gary; Western/Clark's Grebe, J.N. Stuart.

RBACS Waterbird Surveys 2006-16 Seasonal average count totals



Monthly average counts 2006-2016



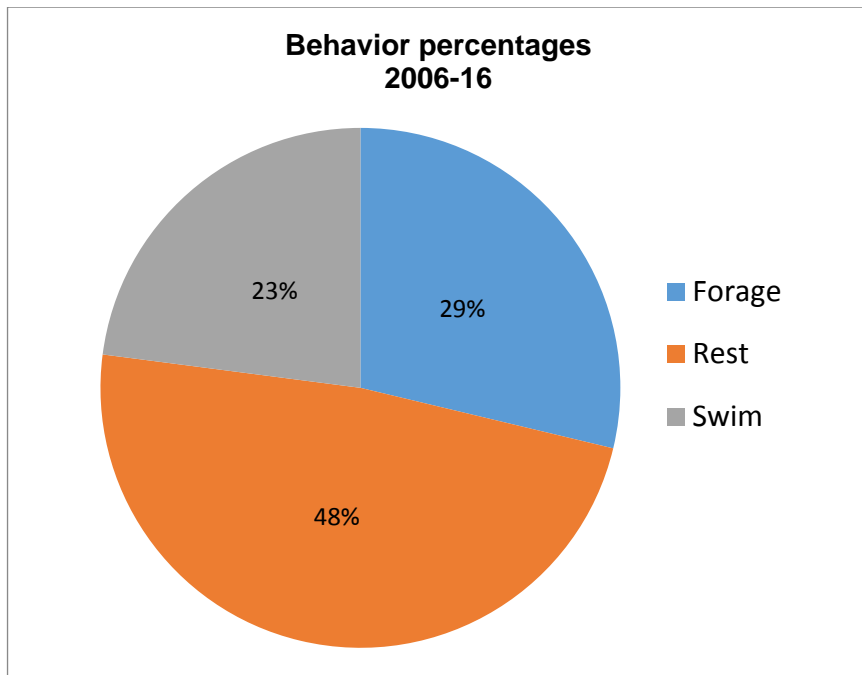
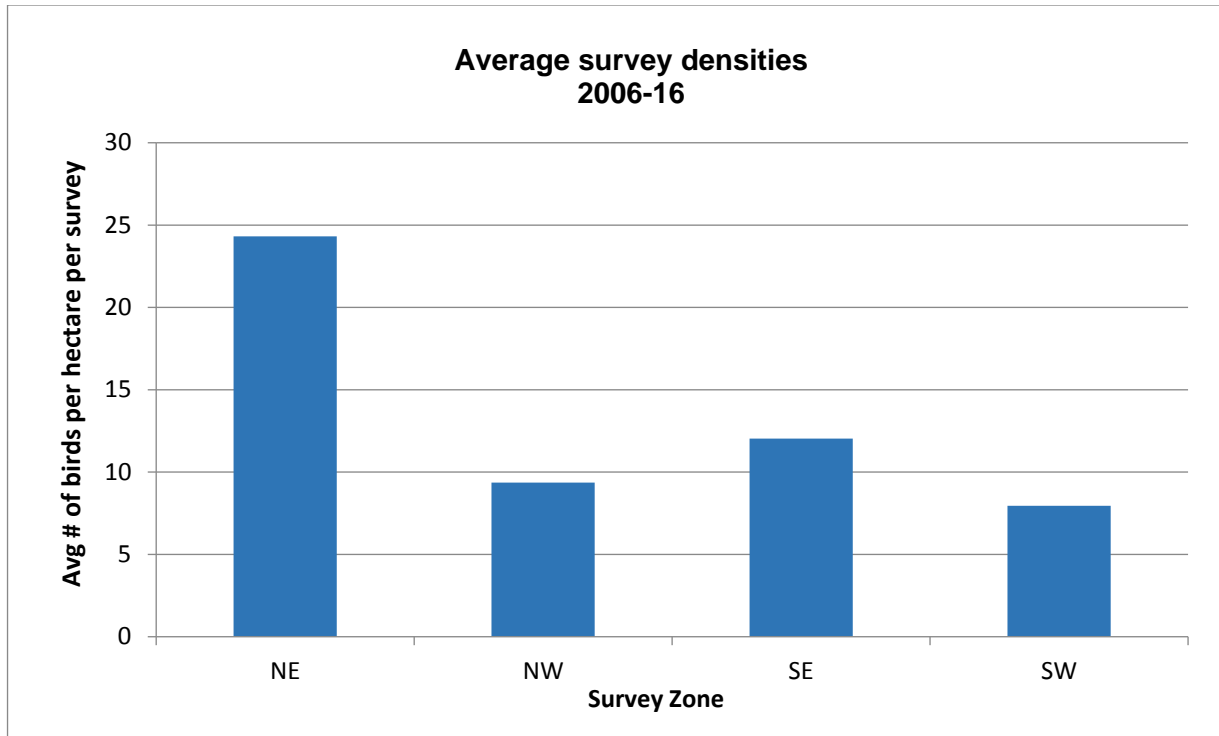


****Greater/Lesser Scaup make up 40% of total individuals counted during surveys!**

Percentages of North American populations in RB Sanctuary, based on peak day counts during surveys:

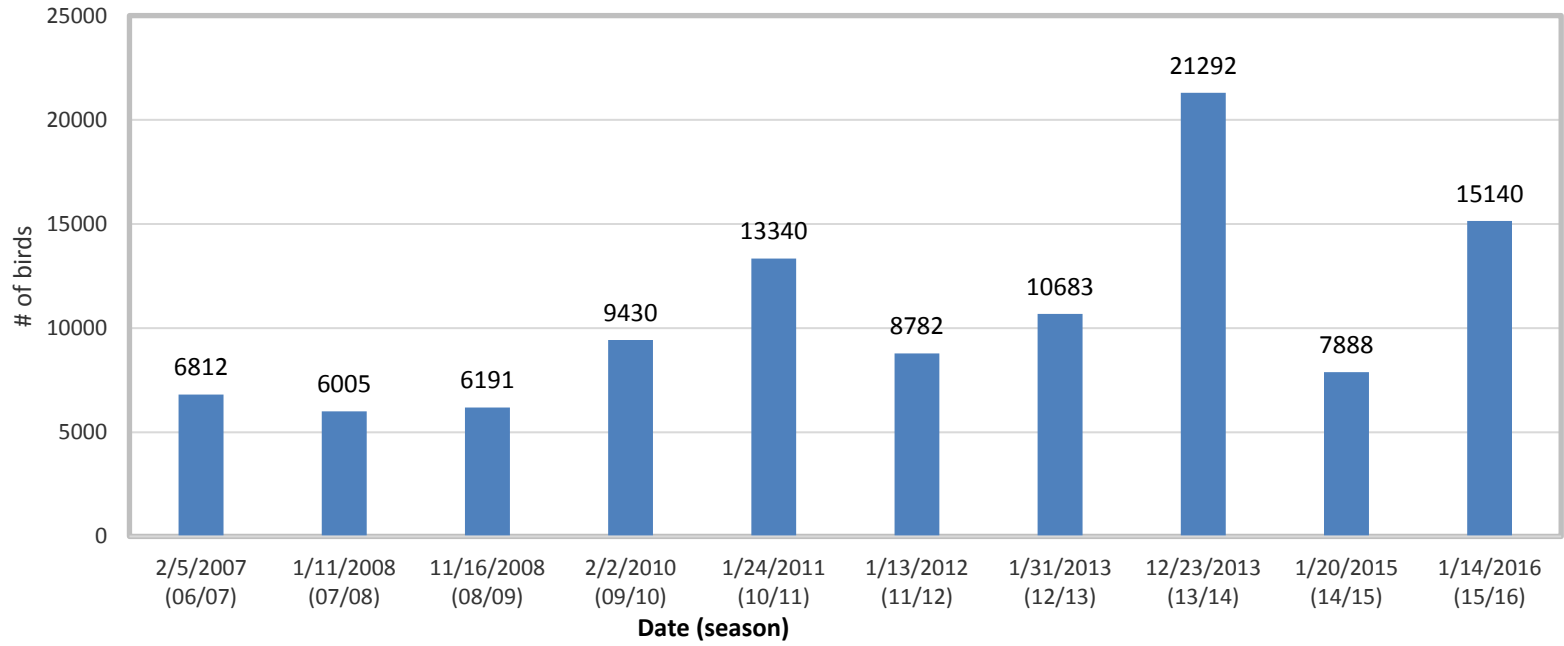
- Greater Scaup— up to 1.75% of NA pop on peak counts (assuming 60% GRSC for lumped Greater/Lesser data)
- Ruddy Duck-- up to 0.4% of NA pop on peak counts
- Bufflehead— up to 0.3% of NA pop on peak counts
- Western Grebe— up to 1.4% of NA pop on peak counts (assuming 80% WEGR for lumped Western/Clark's data)
- Clark's Grebe— up to 2.8% of NA pop on peak counts (assuming 20% CLGR for lumped Western/Clark's data)

(Population estimate data from Delany, S., and D. Scott, eds. 2006. Waterbird Population Estimates – Fourth Edition. Wetlands International, Wageningen, The Netherlands.)



Behavior observations made on 96% of individuals counted. "Forage" includes active diving, aerial surveying, dabbling; "Rest" includes sleeping, preening; "Swim" includes active locomotion on the water.

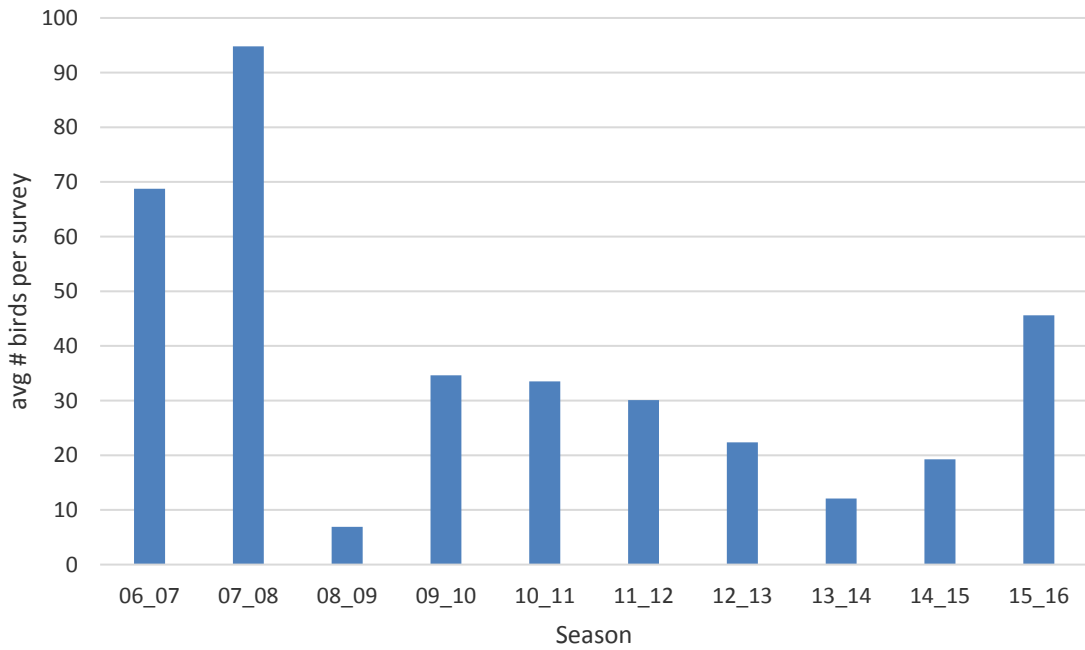
Seasonal peak counts, 2006-16



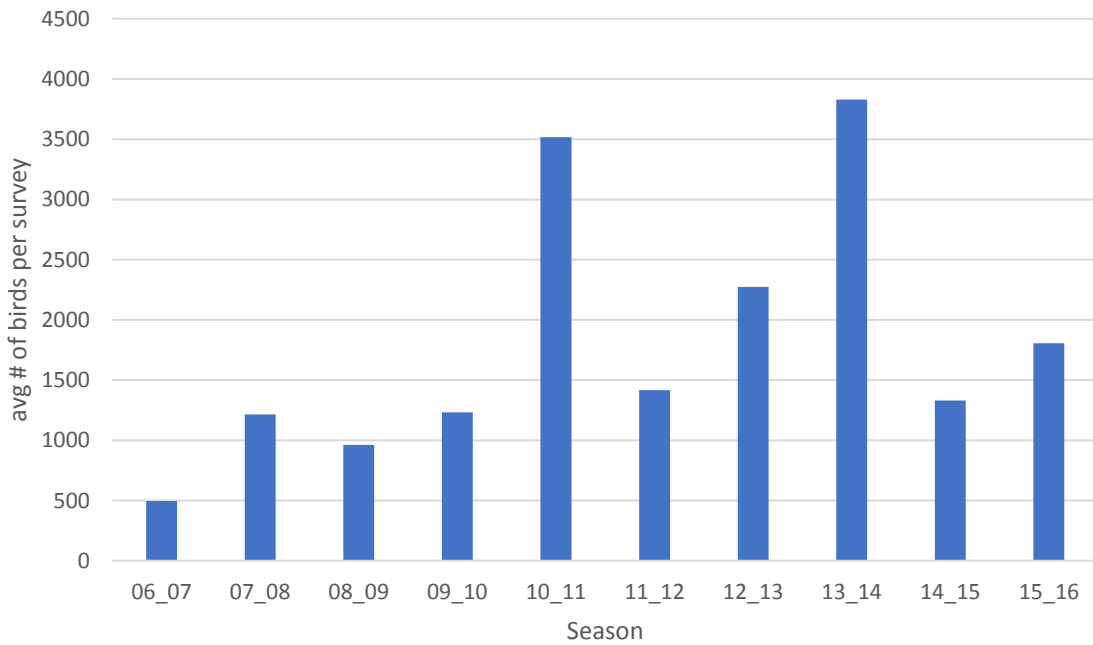
Peak activity dates, RBACS waterbird surveys 2006-16

OCT	NOV	DEC	JAN	FEB	MAR
	★	★	★ ★ ★ ★ ★	★ ★ ★	

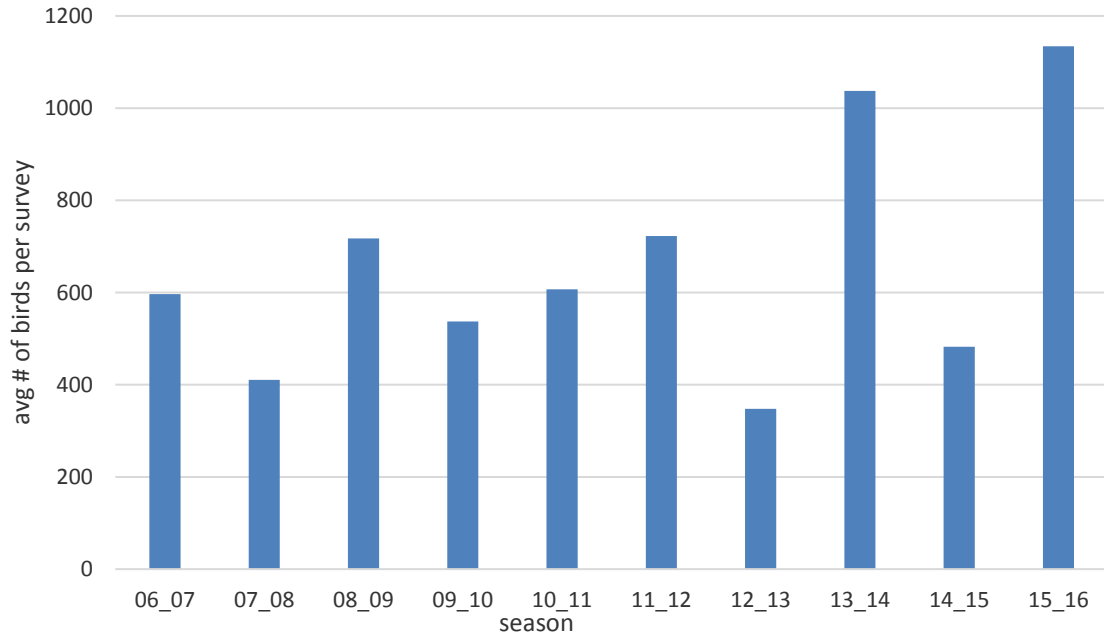
**Average number of Surf Scoters per survey
2006-2016**



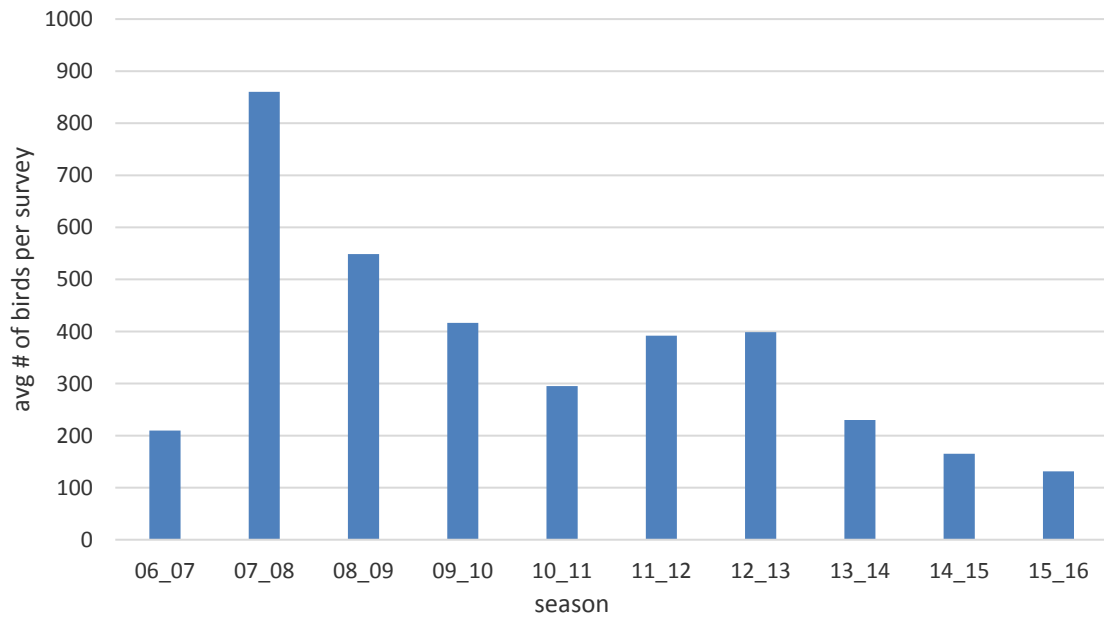
**Average number of Scaup per survey, 2006-2016
(Greater/Lesser combined)**



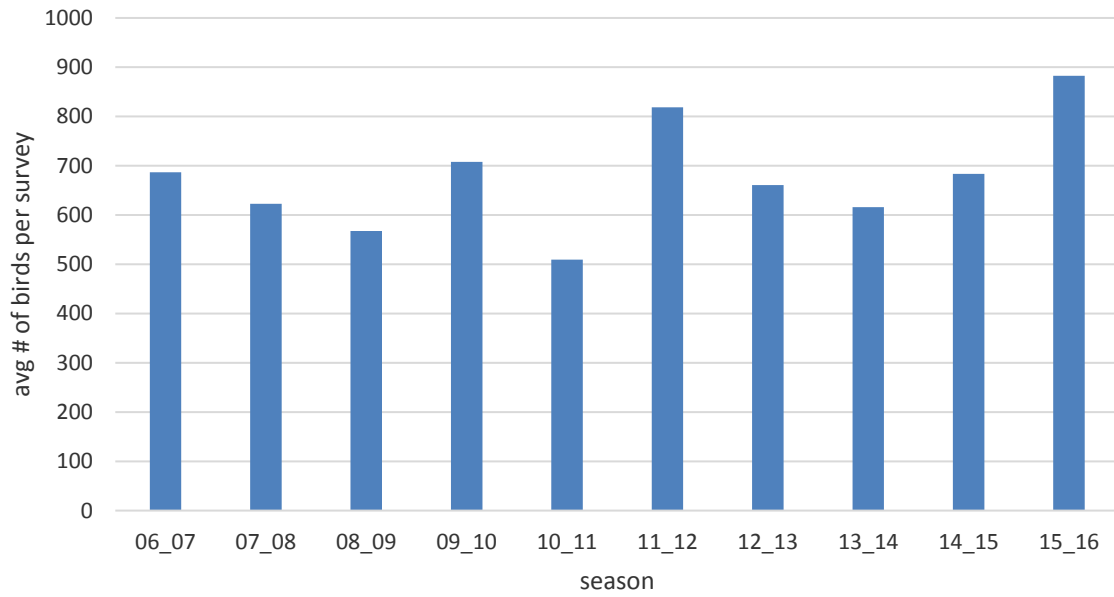
**Average number of Bufflehead per survey
2006-2016**



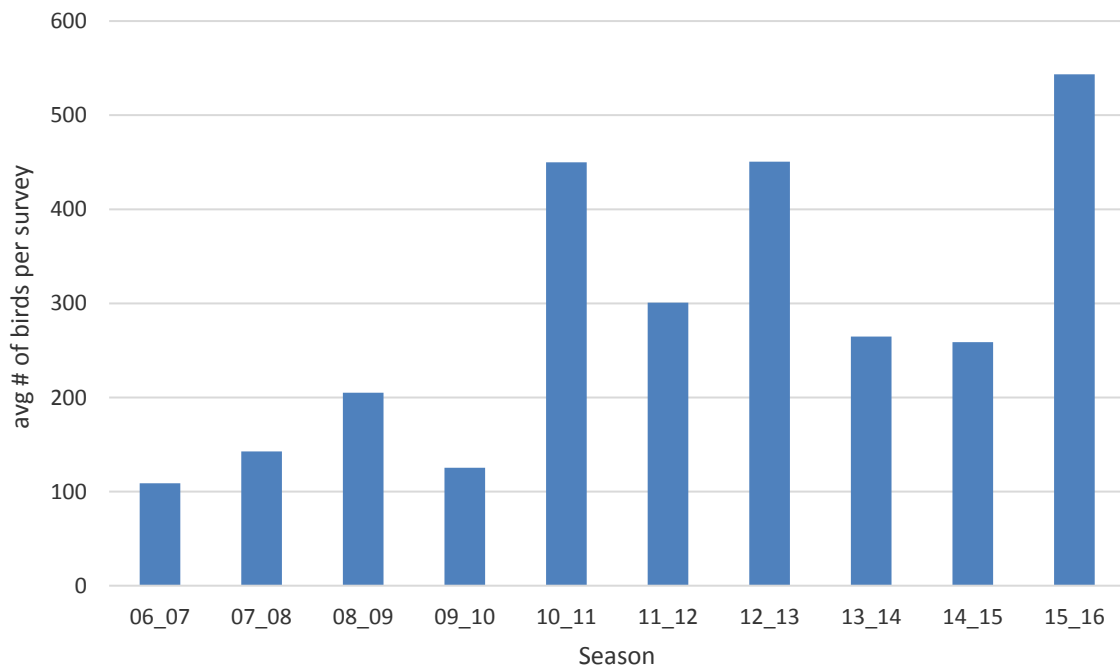
**Average number of Western/Clark's Grebes per survey,
2006-16**



**Average number of Ruddy Duck per survey
2006-2016**



**Average number of American Coot per survey
2006-2016**



Average number of gulls per survey, 2006-2016
(all gull species combined)

