

From: [B Boekelheide](#)
To: [Elizabeth Tobin](#)
Cc: [Thomas, Sue](#); [Ken Wiersema](#); [Robert Phreaner](#)
Subject: [EXTERNAL] Re: Dungeness Spit data from Christmas Bird Count
Date: Wednesday, December 5, 2018 1:51:48 PM
Attachments: [DungSpitCBC.pdf](#)
[ATT00001.txt](#)

Hold the presses! I made a mistake with the table I sent you last time — I didn't adjust the annual sum when I added some rows to the table, so the total number of birds each year was incorrect. Ken Wiersema caught the mistake — thanks, Ken!

So here is a corrected table, with the correct totals for each year. Please destroy the first table I sent you yesterday.

Bob B

Birds counted by the Dungeness Spit Christmas Bird Count field party from 2001-2017

(Note: No spit walkers in 2012 because of bad weather)

The Sequim-Dungeness CBC occurs in mid-December on the first Monday of the CBC count period, which begins December 14 every year
91 total species observed

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2013	2014	2015	2016	2017	Number of Years Observed	Mean Number
Count Date	17-Dec	16-Dec	15-Dec	20-Dec	19-Dec	18-Dec	17-Dec	15-Dec	14-Dec	20-Dec	19-Dec	16-Dec	15-Dec	14-Dec	19-Dec	18-Dec	N = 16	Counted
Emperor Goose	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.3
Snow Goose	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
Brant	200	250	265	160	1200	350	900	1800	2835	400	2700	480	170	465	150	85	16	775.6
Cackling Goose	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	2	0.3
Canada Goose	130	3	13	70	85	27	0	0	2	3	2	25	0	0	0	0	10	22.5
Trumpeter Swan	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	2	0.6
Gadwall	0	0	8	0	8	6	0	4	4	0	12	0	6	2	1	0	9	3.2
Eurasian Wigeon	1	0	1	2	0	6	2	4	5	3	2	1	2	0	1	1	13	1.9
American Wigeon	1087	2000	3150	2600	1500	7000	1750	3200	10000	1000	7160	2000	2500	2300	5500	650	16	3337.3
Mallard	2650	2000	3500	2404	500	10000	8100	800	10000	300	7015	2000	4000	4060	3002	4000	16	4020.7
Northern Shoveler	0	2	0	0	15	2	1	4	20	0	8	1	6	0	3	0	10	3.9
Northern Pintail	1233	1000	1750	2001	4500	6000	4100	2000	10000	150	6000	2004	1500	3075	2500	150	16	2997.7
Green-winged Teal	500	250	58	0	25	750	6	6	500	2	26	25	250	780	0	250	14	214.3
Canvasback	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0.1
Greater Scaup	82	20	20	50	5	31	55	0	30	120	118	250	87	33	13	158	15	67.0
Lesser Scaup	0	0	0	0	0	0	28	1	15	0	0	0	0	1	0	0	4	2.8
scaup sp.	0	0	0	0	0	0	0	0	150	0	0	0	0	0	0	0	1	9.4
Harlequin Duck	35	50	47	8	3	10	20	25	30	6	18	35	50	14	12	39	16	25.1
Surf Scoter	56	75	52	65	35	50	60	40	72	1	206	130	57	250	29	24	16	75.1
White-winged Scoter	40	14	24	7	19	23	17	15	5	0	4	6	3	5	35	0	14	13.6
Black Scoter	8	34	30	28	25	10	22	40	80	10	24	20	22	12	3	5	16	23.3
Long-tailed Duck	11	125	61	45	25	35	56	30	39	8	67	40	10	44	9	14	16	38.7
Bufflehead	450	1000	520	80	150	170	230	200	290	12	250	250	132	140	55	57	16	249.1
Common Goldeneye	80	55	36	43	12	50	84	30	70	100	105	55	40	48	38	37	16	55.2
Barrow's Gldneye	0	0	0	0	0	0	1	0	1	0	0	0	2	2	0	0	4	0.4
Common Merganser	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0	0	2	0.4
Red-Breasted Merganser	40	32	57	29	75	91	36	50	125	50	58	65	12	14	16	13	16	47.7
Red-throated Loon	10	13	2	4	15	1	9	30	25	2	16	3	21	19	5	2	16	11.1
Pacific Loon	25	23	12	20	27	26	38	10	125	0	55	25	8	2	16	8	15	26.3
Common Loon	4	7	18	105	9	2	6	10	20	7	13	12	17	5	2	16	16	15.8
Yellow-billed Loon	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1
Horned Grebe	10	2	7	27	12	5	19	10	24	12	17	25	12	38	1	2	16	13.9
Red-necked Grebe	0	0	16	19	5	6	10	2	17	2	2	2	2	5	1	2	14	5.7
Eared Grebe	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	2	0.3
Western Grebe	2	0	0	1	3	1	7	2	0	0	0	0	0	3	0	0	7	1.2
Short-tailed Shearwater	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.4
Leach's Storm-Petrel	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0.1
Brandt's Cormorant	5	8	0	60	0	3	2	5	5	0	41	35	5	4	10	0	12	11.4
Double-crested Cormorant	212	125	61	31	27	40	100	10	230	50	42	66	70	13	20	90	16	74.2
Pelagic Cormorant	13	15	25	5	15	1	26	12	60	6	12	25	7	8	0	2	15	14.5
Great Blue Heron	7	3	14	14	5	10	2	2	9	1	15	13	3	3	4	1	16	6.6
Bald Eagle (adult)	4	4	3	4	1	4	4	6	7	6	4	3	4	6	0	3	15	3.9
Bald Eagle (immature)	2	2	3	3	3	4	1	1	2	1	2	9	3	0	0	1	14	2.3
Bald Eagle (unknown age)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0.4
Northern Harrier	2	3	4	2	1	4	2	1	3	5	4	4	0	4	2	0	14	2.6
Sharp-shinned Hawk	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Cooper's Hawk	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1
Merlin	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1
Peregrine Falcon	1	2	1	1	1	0	2	1	0	0	2	2	0	0	2	1	11	1.0
large falcon, sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.1
Black-billed Plover	15	0	250	365	420	100	30	350	209	0	100	0	250	21	37	8	13	134.7
Killdeer	0	2	1	1	2	0	1	5	1	0	0	0	0	1	0	0	8	0.9
Long-billed Curlew	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1
Marbled Godwit	30	0	0	0	0	7	0	0	0	0	0	2	0	0	0	0	3	2.4
Ruddy Turnstone	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1
Black Turnstone	6	0	11	2	5	18	20	2	0	0	0	0	3	8	8	21	11	6.5
Red Knot	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Sanderling	193	150	250	253	75	75	202	200	26	15	60	125	25	150	55	359	16	138.3
Dunlin	53	550	650	2030	3250	1750	860	2000	1036	0	600	2000	600	1250	2000	1151	15	1236.3
Rock Sandpiper	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
Western Sandpiper	0	2	0	1	1	0	0	5	0	0	0	0	0	0	0	1	5	0.6
Long-billed Dowitcher	0	0	1	0	0	0	16	0	0	0	0	0	0	0	0	0	2	1.1
Red Phalarope	0	350	13	0	0	0	0	0	0	0	0	0	0	0	0	0	2	22.7
Mew Gull	107	83	50	55	150	40	45	6	55	20	40	35	50	62	65	0	15	53.9
Ring-billed Gull	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1
California Gull	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0.3
Herring Gull	2	0	1	3	1	1	0	0	2	0	0	0	0	0	0	0	6	0.6
Thayer's Gull	0	0	1	12	2	4	0	0	1	0	0	0	0	0	0	0	5	1.3
Western Gull	16	12	25	34	7	25	8	3	17	10	13	15	0	2	0	20	14	12.9
Glaucous-wng/Olympic Gull	377	250	40	98	163	40	140	150	170	60	87	55	50	72	70	20	16	115.1
Glaucous Gull	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0.1

Continued on P. 2

Birds counted by Dungeness Spit Christmas Bird Count field party from 2001-2017, continued.

P. 2

Year Count Date	<u>2001</u> 17-Dec	<u>2002</u> 16-Dec	<u>2003</u> 15-Dec	<u>2004</u> 20-Dec	<u>2005</u> 19-Dec	<u>2006</u> 18-Dec	<u>2007</u> 17-Dec	<u>2008</u> 15-Dec	<u>2009</u> 14-Dec	<u>2010</u> 20-Dec	<u>2011</u> 19-Dec	<u>2013</u> 16-Dec	<u>2014</u> 15-Dec	<u>2015</u> 14-Dec	<u>2016</u> 19-Dec	<u>2017</u> 18-Dec	Number of Years Observed N = 16	Mean Number Counted
Common Murre	2	35	14	106	85	12	44	20	300	30	111	4	60	126	75	35	16	66.2
Pigeon Guillemot	17	25	57	26	32	51	20	8	90	2	58	25	1	16	15	18	16	28.8
Marbled Murrelet	2	0	4	29	2	6	0	3	24	0	0	0	0	2	0	0	8	4.5
Ancient Murrelet	0	100	20	392	183	20	81	25	90	0	175	12	8	400	50	25	14	98.8
Rhinoceros Auklet	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0.3
Snowy Owl	0	0	0	0	4	0	0	0	0	0	3	0	0	0	0	0	2	0.4
Short-eared Owl	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0.2
Anna's Hummingbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1
Belted Kingfisher	2	2	1	2	1	0	0	0	0	0	2	1	0	0	1	0	8	0.8
Northern Flicker	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Common Raven	5	2	2	0	0	11	2	8	9	0	5	10	7	2	2	1	13	4.1
Horned Lark	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0.1
Pacific Wren	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	2	0.2
Marsh Wren	2	1	8	0	2	1	1	0	0	0	1	1	0	0	0	0	8	1.1
Golden-crowned Kinglet	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	1	1.0
Ruby-crowned Kinglet	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0.1
Varied Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1
American Pipit	0	0	0	0	0	0	4	0	0	0	0	12	0	0	0	8	3	1.5
Lapland Longspur	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0.1
Snow Bunting	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	2	0.2
Savannah Sparrow	0	0	0	0	2	2	2	0	2	0	0	2	1	3	0	0	7	0.9
Song Sparrow	2	3	5	3	1	2	3	4	1	0	2	1	2	2	1	0	14	2.0
Western Meadowlark	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0.1
House Finch	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1	0.5
TOTAL NO. INDIVIDUALS	7734	8708	11167	11305	12700	26890	17190	11149	36841	2396	25258	9913	10062	13498	13818	7278		14119
Number of parties	1	1	1	1	1	1 to 2	1	1 to 2	1	1	1	1	2	1	1	1		
Number of counters	2	3	3	5	4	4	4	4	4	2	2	4	4	2	2	2		3
Miles on foot	7	8	8.5	9	13	5	10.5	17	10	7	6	8	14	15	11	10		9.9
Hours on foot	8.25	8	8	8	7.5	4.5	7.5	9	7.5	4	6	7	8	7	6.45	7		7.1

> On Dec 4, 2018, at 3:37 PM, B Boekelheide <bboek@olympus.net> wrote:

>

> Hi, Liz,

>

> Here is a table showing the birds counted by the Dungeness Spit field party on the Sequim-Dungeness Christmas Bird Count from 2001 to 2017. I isolated just the Spit counts, for your purposes. The Spit party observed 91 species over that period, but only 38 of those species occurred on at least 75% of the years.

>

> Some background info: First, the Dungeness Spit party tallies birds on both sides of the spit, but most species are fairly specific about which side of the spit they spend their time. Second, the abundant species we see in Dungeness Bay during Christmas Counts are almost all winter residents, here from late fall through early spring, so I believe these numbers provide good guidance for the entire period. Third, you'll notice that there is a lot of variability in the numbers for many species, but that is typical of these counts, not only from year to year, but also from day to day. We set the date of our CBC several months in advance, and we do the count on the appointed date regardless of weather, so numbers fluctuate. Regardless, the two right-hand columns are the most important for you: 1) the number of years each species was observed, and 2) their average numbers to compare abundance.

>

> Consequently, here is a list of the most consistent and abundant species that I believe will be most impacted by oyster farm operations on the inside of the spit and within Dungeness Harbor, for the period including late fall, winter, and early spring:

>

- > 1. Brant
- > 2. Several dabbling duck species: American Wigeon, Mallard, Northern Pintail, and Green-winged Teal
- > 3. Several diving duck species: Greater Scaup, Surf Scoter, White-winged Scoter, Bufflehead, Common Goldeneye, and Red-breasted Merganser
- > 4. Double-crested and Pelagic Cormorants
- > 5. Great Blue Heron
- > 6. Bald Eagle
- > 7. Several shorebird species: Black-bellied Plover, Sanderling, and Dunlin
- > 8. Mew and Glaucous-winged Gulls

>

> As far as migration periods and summer, unfortunately we (OPAS) don't have replicate surveys for Dungeness Harbor for those periods. We do have four years of surveys of the bay from 3 Crabs, with lots of parallels to the inner bay, but not a perfect match. I could put together some info for you from our other observations over the years, if you wish, including information available from eBird, a citizen-science birding site, but it will take some time.

>

> Hope this helps,

>

> Bob

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> <DungSpitCBC.pdf>