

**Marine Bird Abundance in the Cherry Point  
and Fidalgo Bay Aquatic Reserves 2013-2018  
Appendices**

## Appendix A: Figures

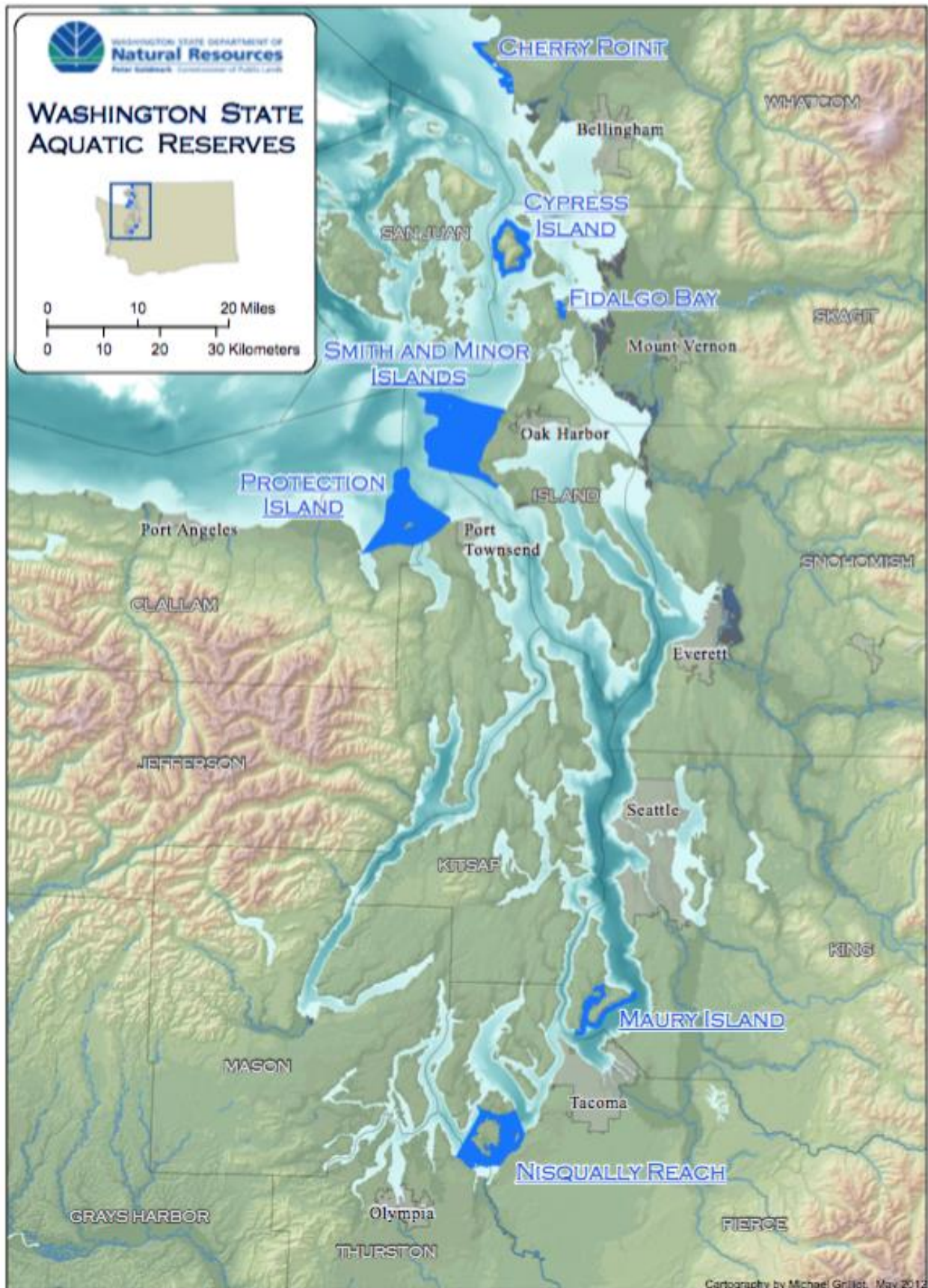


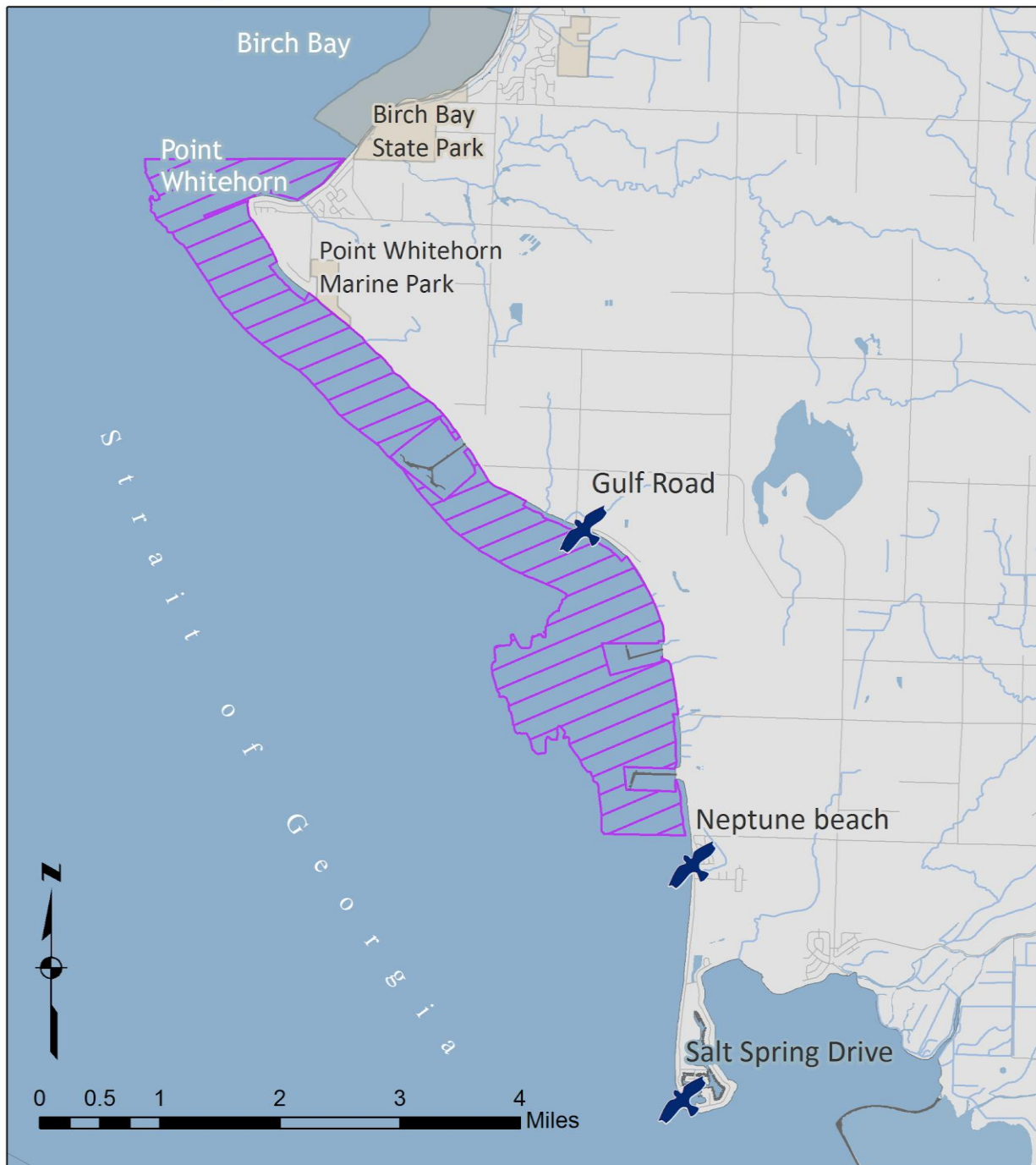
Figure 1. Location of the aquatic reserves in Puget Sound (WA DNR 2012).



# Cherry Point Aquatic Reserve

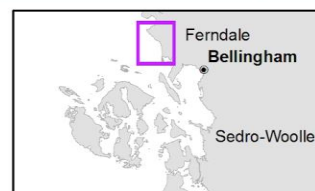
## Bird Monitoring Sites



WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**



-  Cherry Point Aquatic Reserve
-  Citizen Stewardship Committee Bird Survey Sites



Created by JMK 2017


**Figure 2.** The boundaries of the CPAR map shows marine bird monitoring sites. Map courtesy of Jamie Kilgo of the Washington Department of Natural Resources Aquatic Reserves Program (WA DNR 2018).





# Fidalgo Bay Aquatic Reserve

## Bird Monitoring Sites



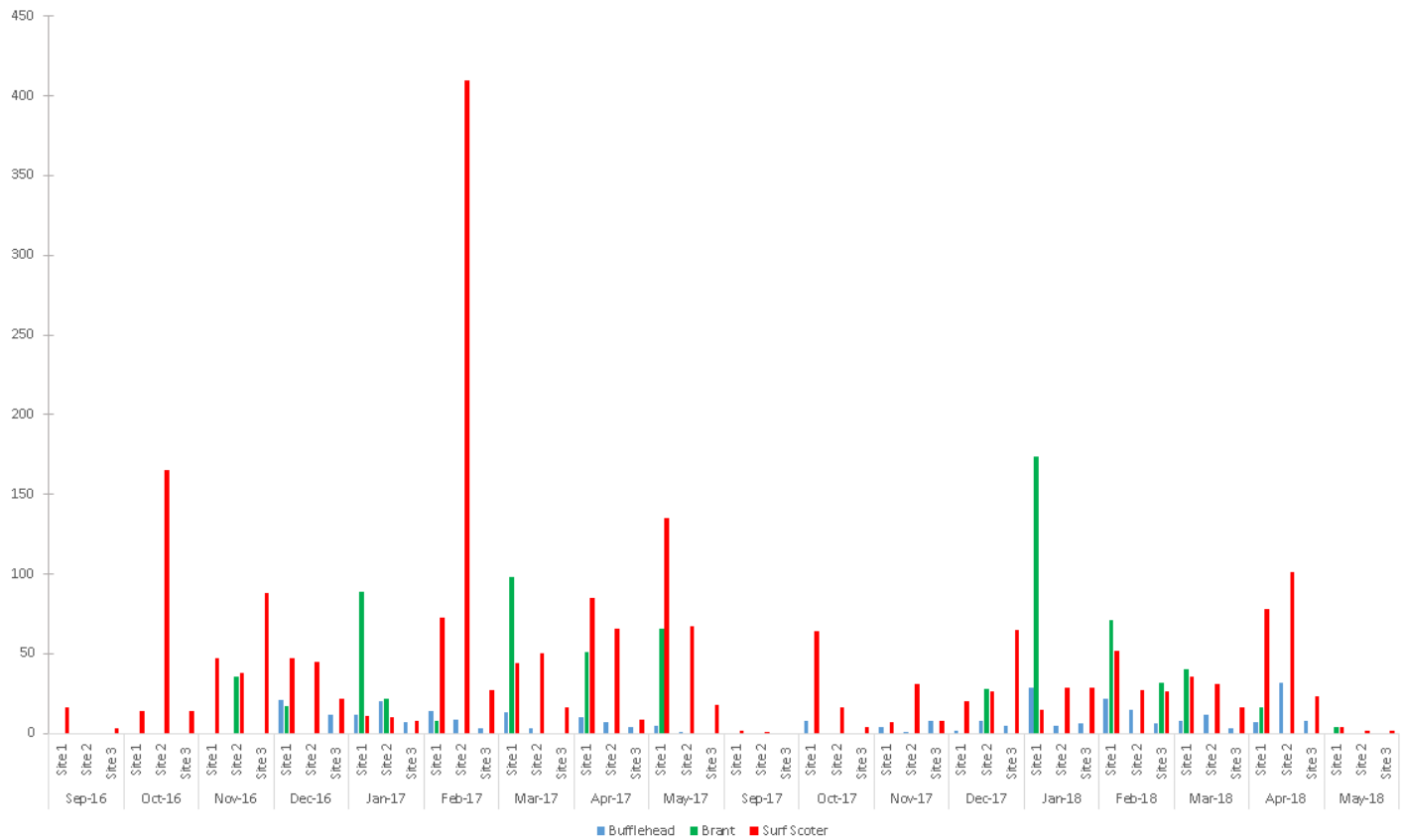
 Fidalgo Bay Aquatic Reserve  
Citizen Stewardship Committee  
Bird Monitoring Sites

 Fidalgo Bay Aquatic Reserve  
 Watercourse

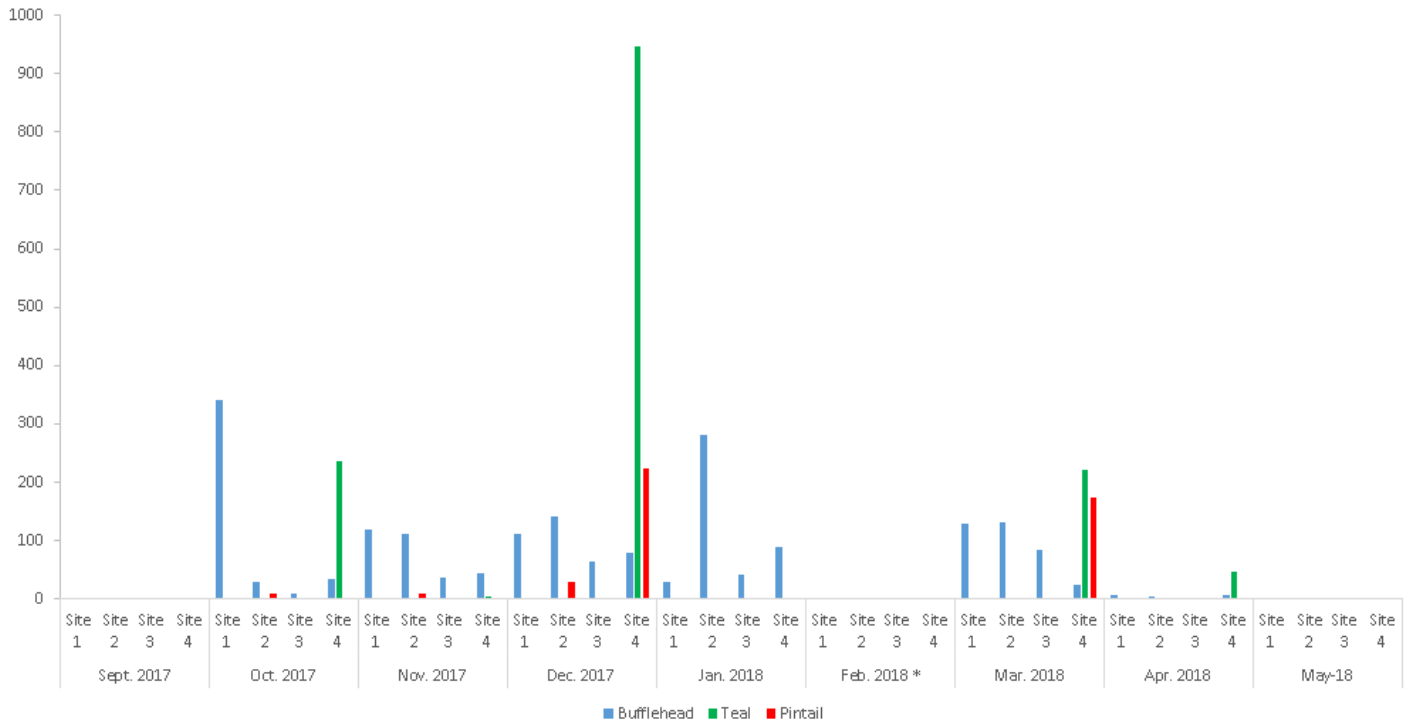


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**Figure 3.** The boundaries of the FBAR showing marine bird monitoring sites. Map courtesy of Jamie Kilgo of the Washington Department of Natural Resources Aquatic Reserves Program (WA DNR 2018).



**Figure 4.** Individual counts of Bufflehead, Brant, and Surf Scoter (the three most abundant species at CPAR) at three Cherry Point Aquatic Reserve sites from September 2016-May 2018 (Site 1: Sandy Point, Site 2: Neptune, Site 3: Gulf Rd.)



**Figure 5.** Individual counts of Bufflehead, Green-winged Teal, and Pintail (the three most abundant species at FBAR) at four Fidalgo Bay Aquatic Reserve sites from September 2017-May 2018 (Site 1: FBAR Sign, Site 2: Trestle South, Site 3: Trestle North, Site 4: March Point Rd.) \*No survey was conducted in February 2018 due to inclement weather.

## Appendix B: Tables

**Table 1.** CPAR Marine bird census results 2013-2016. Abbreviations denote locations at Salt Spring Drive (SP), Neptune Beach (NB), and Gulf Road (GR).

Date	Brant			Harlequin Duck			Surf Scoter			Common Goldeneye			Common Loon			Western Grebe			Bald Eagle		
	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR
4/10/2013	18	14	0	0	0	2	83	5	3	4	1	0	3	4	5	0	0	0	0	1	2
4/25/2013	110	15	0	0	0	0	177	19	18	2	1	0	9	12	13	0	0	51	0	1	1
5/5/2013	291	22	0	2	0	0	87	23	15	2	0	0	1	11	8	0	0	65	0	1	0
5/23/2013	1	0	0	0	0	0	15	0	5	0	0	0	6	6	1	0	2	1	0	0	0
9/14/2013	0	0	0	0	0	3	11	0	64	0	0	0	1	1	15	0	0	0	0	0	1
10/14/2013	0	0	0	2	0	0	49	105	5	0	0	2	5	10	2	2	7	1	0	0	3
11/17/2013	77	38	0	0	0	0	32	37	9	2	0	8	0	1	3	3	4	3	0	0	2
12/9/2013	136	0	0	0	0	1	36	7	21	15	3	7	3	3	5	0	0	3	1	1	2
1/18/2014	460	1	0	0	0	0	95	29	24	15	4	6	4	7	5	0	0	0	0	0	1
3/10/2014	73	0	0	0	0	2	43	25	1	11	4	1	0	5	6	0	0	1	4	2	1
4/7/2014	112	0	0	0	0	10	85	17	4	7	1	3	5	2	8	0	0	0	0	7	2
4/21/2014	434	39	5	0	0	0	320	88	0	5	0	0	6	10	7	0	0	0	0	1	0
5/5/2014	119	0	0	0	0	0	165	49	24	2	1	0	4	3	1	0	1	0	0	1	0
5/18/2014	9	0	0	0	0	0	80	155	0	0	2	0	2	2	0	9	39	0	0	0	0
6/1/2014	4	0	0	0	0	0	0	21	0	0	0	0	1	1	13	0	0	0	2	0	0
9/15/2014	0	0	0	0	0	0	19	5	9	0	0	0	1	2	3	0	0	2	0	0	1
10/20/2014	0	0	0	0	0	0	16	54	5	0	0	0	13	6	4	0	16	239	0	1	2
11/10/2014	0	0	0	4	4	7	26	60	4	1	0	15	8	2	7	1	0	1	1	0	1
12/8/2014	139	0	0	9	0	6	50	39	12	11	2	7	4	6	6	0	0	0	1	0	0
1/12/2015	309	754	3	2	0	2	48	23	11	23	1	5	8	11	10	0	0	0	1	1	1
2/9/2015	178	0	0	3	0	0	57	29	5	17	4	10	7	5	5	0	0	2	1	1	0
3/8/2015	85	0	0	4	0	0	68	24	0	18	3	0	5	2	7	0	0	1	3	0	1
4/13/2015	138	0	0	3	0	6	239	22	13	3	0	0	1	9	12	NA	1	50	NA	1	2
4/27/2015	36	0	0	0	0	0	614	104	71	7	3	0	10	11	1	0	2	5	2	0	0
5/11/2015	41	0	5	3	0	0	828	296	0	0	0	0	2	9	1	0	0	0	1	1	0
9/7/2015	0	0	0	3	0	0	3	10	13	0	0	0	6	2	6	0	0	0	0	0	0
12/7/2015	68	0	NA	1	0	7	25	57	NA	19	0	4	2	2	7	3	2	5	0	0	0
1/4/2016	803	0	10	2	0	3	58	20	261	17	0	41	3	0	2	0	3	1	0	0	2
2/8/2016	42	55	0	0	0	1	28	19	261	5	0	21	4	4	3	0	2	0	0	0	1
3/7/2016	50	10	0	3	0	3	11	24	10	7	3	3	4	3	8	0	0	0	3	0	1
4/10/2016	326	0	0	0	0	1	86	22	4	4	4	1	2	3	8	0	0	0	3	1	2
4/24/2016	736	0	0	0	0	2	239	21	26	3	0	1	9	1	16	0	0	5	0	0	1
5/9/2016	11	2	0	0	0	0	92	45	19	0	0	0	1	3	11	13	6	3	0	1	0
5/22/2016	8	16	0	0	0	0	46	82	65	2	0	0	4	6	1	0	2	0	0	1	1
9/6/2016	0	0	0	0	0	1	16	266	25	0	0	0	12	2	0	4	0	0	0	0	1
10/17/2016	0	0	0	0	0	0	14	5	3	0	1	0	15	6	8	5	0	0	0	1	0
11/6/2016	0	0	0	3	2	2	47	0	14	0	0	0	3	9	2	2	0	0	0	0	0
12/3/2016	17	0	0	0	0	0	47	165	88	16	0	0	4	4	2	0	0	0	0	2	1

**Table 2.** For Cherry Point between 2017-2018, the number of birds for each survey date per location. Abbreviations denote locations at Salt Spring Drive (SP), Neptune Beach (NB), and Gulf Road (GR).

Date	Double-Crested Cormorant			Pelagic Cormorant			Cormorant sp.			Mallard			Greater Scaup			Harlequin Duck			Long-Tailed Duck			Bufflehead			Ruddy Duck			Duck sp.			
	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	
1/8/2017	12	1	1	2	4	1	0	0	0	0	0	0	1	0	0	0	0	0	1	3	0	0	12	20	7	0	0	0	0	0	0
2/14/2017	12	1	1	1	1	2	0	0	0	0	0	5	0	0	5	0	0	0	17	3	0	14	9	3	0	0	0	0	0	0	
3/5/2017	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	2	2	13	3	0	0	0	0	0	0	0		
4/16/2017	0	1	0	3	1	8	0	0	0	0	0	0	9	0	0	0	0	4	11	3	0	10	7	4	0	0	0	0	0	0	
5/8/2017	0	0	13	13	3	26	0	0	10	0	0	0	11	0	0	0	0	11	11	1	5	1	0	0	0	0	0	0	0	0	
9/3/2017	2	1	0	6	6	5	9	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/15/2017	0	3	1	8	4	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8	0	0	0	0	0	0	0	0	0	
11/15/2017	9	4	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	6	4	0	4	1	8	0	0	0	0	0	0	
12/9/2017	17	1	5	0	2	3	0	1	0	0	0	0	0	0	0	4	4	5	3	10	5	2	8	5	0	8	0	0	0	0	
1/15/2018	20	0	1	2	4	0	0	0	0	0	0	0	2	0	0	2	1	3	1	1	12	29	5	6	0	0	0	0	0	0	
2/5/2018	6	0	1	2	4	4	0	1	0	0	0	0	17	0	0	4	7	3	7	12	2	22	15	6	0	0	0	0	0	16	
3/11/2018	0	0	0	0	3	2	0	0	0	0	0	0	7	0	0	2	0	2	13	9	5	8	12	3	0	0	0	0	0	0	
4/23/2018	5	0	0	3	1	7	0	0	0	0	0	0	14	0	0	0	0	4	2	3	0	7	32	8	0	0	0	0	0	0	
5/21/2018	0	1	3	7	13	7	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	0	
11/5/2018	8	5	5	7	4	6	0	0	0	0	0	0	0	0	0	0	0	3	22	0	0	2	10	0	0	0	0	0	0	0	

Date	Bald Eagle			Canada Goose			Brant			Goose sp.			Common Goldeneye			Barrow's Goldeneye			Goldeneye sp.			Red-Necked Grebe			Horned Grebe			Western Grebe		
	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR
1/8/2017	4	6	2	0	0	0	89	22	0	0	0	0	25	12	10	0	0	0	1	0	0	0	0	0	8	13	7	0	0	0
2/14/2017	0	1	0	0	0	2	8	0	0	0	0	0	9	2	18	0	0	0	0	0	NA	0	0	2	14	14	8	0	0	0
3/5/2017	1	1	2	0	0	0	98	0	0	0	0	0	15	0	9	0	0	0	0	0	0	1	0	0	8	7	8	0	0	0
4/16/2017	4	0	2	0	0	0	51	0	0	0	0	0	5	2	5	0	0	0	0	0	0	2	0	7	22	11	9	4	11	7
5/8/2017	3	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	7	2	3
9/3/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
10/15/2017	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	27	9	10	0	3	3
11/15/2017	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	1	1	3	3	16	7	5	17	1
12/9/2017	0	2	0	0	0	0	0	28	0	0	0	0	18	5	8	0	0	0	0	0	0	1	1	6	7	13	18	0	1	53
1/15/2018	1	1	3	0	0	0	174	0	0	0	0	0	7	1	8	0	0	0	1	0	0	1	2	7	13	7	7	2	0	19
2/5/2018	1	2	1	0	0	0	71	0	32	0	0	0	20	14	10	0	0	0	0	0	0	4	0	3	11	23	23	14	0	107
3/11/2018	1	0	1	0	0	0	40	0	0	0	0	0	8	0	9	0	0	0	0	1	0	0	0	3	10	11	6	2	0	1
4/23/2018	1	0	1	0	0	0	16	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	8	8	7	8	0	10	1
5/21/2018	0	2	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0	1	0
11/5/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8	16	13	12	0	9	4			



**Table 2 (Continued).** For Cherry Point between 2017-2018, the number of birds for each survey date per location. Abbreviations denote locations at Salt Spring Drive (SP), Neptune Beach (NB), and Gulf Road (GR).

Date	Grebe sp.			Red-Throated Loon			Pacific Loon			Common Loon			Loon sp.			Red-Breasted Merganser			Merganser sp.			Surf Scoter			Black Scoter			White-Winged Scoter		
	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR
1/8/2017	0	0	0	1	0	0	0	0	0	3	2	2	0	0	0	2	19	3	0	0	4	11	10	8	0	0	0	13	105	0
2/14/2017	0	0	0	0	0	0	3	2	0	7	3	0	0	0	0	2	4	2	0	0	0	73	410	27	0	0	0	10	0	0
3/5/2017	0	0	0	3	0	1	5	0	0	1	2	3	0	0	0	5	0	2	0	0	0	44	50	16	0	1	0	19	2	0
4/16/2017	0	0	0	1	0	1	0	0	0	2	5	10	0	0	0	7	11	5	2	0	0	85	66	9	0	0	0	1	9	0
5/8/2017	0	0	0	2	1	0	1	1	2	15	4	11	0	0	1	5	0	0	0	0	0	135	67	18	0	0	0	4	12	0
9/3/2017	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0
10/15/2017	1	0	1	0	0	0	0	0	0	16	11	5	0	0	0	4	4	0	0	0	0	64	16	4	0	0	0	13	8	2
11/15/2017	0	0	0	2	7	2	0	1	0	3	0	0	0	0	0	0	1	1	0	0	0	7	31	8	0	0	0	16	32	0
12/9/2017	0	0	0	0	2	6	0	0	0	5	5	2	0	0	0	4	12	6	0	0	0	20	26	65	0	0	0	6	129	1
1/15/2018	0	0	0	0	0	0	0	0	0	4	5	5	0	0	1	1	5	1	0	0	1	15	29	29	9	0	0	7	32	1
2/5/2018	0	0	0	2	0	4	0	0	0	2	6	4	2	0	5	8	20	0	0	0	0	52	27	26	0	0	0	6	31	0
3/11/2018	0	0	0	2	0	3	0	0	0	2	5	5	0	0	0	1	2	0	0	0	0	36	31	16	0	0	0	0	22	0
4/23/2018	0	0	0	0	0	0	0	0	0	3	5	5	0	0	0	8	11	7	0	0	9	78	101	23	0	0	0	0	8	0
5/21/2018	0	0	0	0	0	0	0	1	2	6	8	1	0	0	0	3	0	0	0	0	0	4	2	2	0	0	0	0	2	0
11/5/2018	0	0	0	1	0	0	0	0	0	7	7	5	0	0	0	10	0	4	0	0	0	35	109	43	0	0	0	2	0	7

Date	Scoter sp.			Caspian Tern			Common Murre			Pigeon Guillemot			Marbled Murrelet			Rhinoceros Auklet			Alcid sp.			Great Blue Heron								
	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR	SP	NB	GR						
1/8/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/14/2017	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/5/2017	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2017	0	0	0	0	0	0	0	0	0	4	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8/2017	0	0	0	5	0	0	0	0	0	2	2	3	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0
9/3/2017	70	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	3	1	0	0	
10/15/2017	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0
11/15/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/9/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/15/2018	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/5/2018	0	5	1	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/11/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/23/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/21/2018	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	9	0	0	0	0	0	1	4	0	0	0	0	0	0	0
11/5/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

**Table 3.** For Fidalgo Bay between 2017-2018, the number of birds for each survey date per location. Abbreviations denote locations at Fidalgo Bay Sign (FBS), Trestle South (TS), Trestle North (TN), and March Point Road (MPR).

Date	Double-Crested Cormorant				Pelagic Cormorant				Cormorant sp.				American Wigeon				Gadwall				Green-winged Teal				Northern Pintail				
	Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR
9/27/2017	11	NA	NA	54	0	NA	NA	0	0	NA	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0	NA	NA	NA	0
10/30/2017	0	1	20	0	0	0	0	0	0	0	0	0	0	NA	0	0	0	NA	0	0	0	NA	0	0	236	NA	9	0	0
11/15/2017	1	0	1	0	0	0	0	0	0	0	0	0	0	NA	0	0	0	NA	0	0	0	NA	0	0	3	NA	NA	0	0
12/12/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	23	0	NA	0	0	0	NA	0	0	947	NA	9	0	224
1/18/2018	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0
3/14/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	220	0	0	0	173
4/27/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0
5/1/2018	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Date	Northern Shovler				Lesser Scaup				Mallard				Greater Scaup				Long-Tailed Duck				Bufflehead				Ruddy Duck							
	Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR			
9/27/2017	NA	NA	NA	0	NA	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0
10/30/2017	NA	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	341	30	8	35	0	0	0	0	0		
11/15/2017	NA	0	0	0	NA	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	120	112	37	44	0	0	0	0	0		
12/12/2017	NA	0	0	0	NA	0	0	0	20	0	3	3	0	0	0	0	0	0	0	0	0	112	141	65	79	0	0	0	79	0		
1/18/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	281	42	90	0	0	0	0	0		
3/14/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	131	83	23	0	0	0	0	0		
4/27/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	5	2	7	0	0	0	0	0		
5/1/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Date	Duck sp.				Bald Eagle				Canada Goose				Brant				Goose sp.				Common Goldeneye				Barrow's Goldeneye							
	Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR			
9/27/2017	0	NA	NA	6	1	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0
10/30/2017	0	0	0	32	0	0	1	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11/15/2017	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
12/12/2017	0	12	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	9	1	0	0	0	0	0	0	
1/18/2018	0	7	0	0	2	1	0	0	0	0	0	25	0	0	12	0	0	0	0	0	0	0	5	7	3	0	0	0	0	3	0	
3/14/2018	0	19	17	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	3	5	3	0	0	0	0	0	0	
4/27/2018	0	0	0	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/1/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

**Table 3 (Continued).** For Fidalgo Bay between 2017-2018, the number of birds for each survey date per location. Abbreviations denote locations at Fidalgo Bay Sign (FBS), Trestle South (TS), Trestle North (TN), and March Point Road (MPR).

Date	Goldeneye sp.				Red-Necked Grebe				Horned Grebe				Western Grebe				Grebe sp.				Pacific Loon				Common Loon							
Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR				
9/27/2017	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	1	0	NA	NA	0	0	NA	NA	0	0	NA	NA	1	0	NA	NA	1
10/30/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	1	0	0	0	1	4	0	0				
11/15/2017	0	0	0	0	0	2	0	0	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2				
12/12/2017	1	0	2	0	0	0	1	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	9	2				
1/18/2018	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	1				
3/14/2018	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4	3	5	3				
4/27/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1				
5/1/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				

Date	Loon sp.				Common Merganser				Hooded Merganser				Red-Breasted Merganser				Merganser sp.				Surf Scoter				White-Winged Scoter							
Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR				
9/27/2017	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	1	0	NA	NA	0	0	NA	NA	0
10/30/2017	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15/2017	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/12/2017	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/18/2018	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
3/14/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
4/27/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
5/1/2018	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Date	Scoter sp.				Common Murre				Pigeon Guillemot				Alcid sp.				Great Blue Heron			
Location	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR	FBS	TS	TN	MPR
9/27/2017	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	0	NA	NA	0	4	NA	NA	14
10/30/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11/15/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/12/2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/18/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/14/2018	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4/27/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	7
5/1/2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

## Appendix C: Field Sheets

Cherry Point Aquatic Reserve:

Team One	Team two			
Site		Sandy Pt.	Neptune Beach	Cherry Pt.
cormorant	double-crested cormorant			
cormorant	pelagic cormorant			
cormorant	cormorant sp.			
dabbling duck	mallard			
diving duck	greater scaup			
diving duck	harlequin duck			
diving duck	long-tailed duck			
diving duck	bufflehead			
diving duck	ruddy duck			
diving duck	duck species			
eagle	bald eagle			
goose	canada goose			
goose	brant			
goose	goose species			
goldeneye	common goldeneye			
goldeneye	barrow's goldeneye			
goldeneye	goldeneye species			
grebe	red-necked grebe			
grebe	horned grebe			
grebe	western grebe			
grebe	grebe species			
loon	red-throated loon			
loon	pacific loon			
loon	common loon			
loon	loon species			
merganser	red-breasted merganser			
merganser	merganser species			
scoter	surf scoter			
scoter	black scoter			
scoter	white-winged scoter			
scoter	scoter species			



Team One	Team two		Sandy Pt.	Neptune Beach	Cherry Pt
tern	<del>caspian</del> tern				
<del>alcid</del>	common murre				
<del>alcid</del>	pigeon guillemot				
<del>alcid</del>	marbled <del>murrelet</del>				
<del>alcid</del>	rhinoceros auklet				
<del>alcid</del>	<del>alcid</del> sp.				
heron	great blue heron				
Site #			Sandy Pt.	Neptune Beach	Cherry Pt
Date					
Counter					
Spotter					
Data Recorder					
Weather conditions					
% Cloud cover					
Wind direction					
Visibility* (P,F,G,E)					
Beaufort Scale**					
Starting Time					
Stop Time					
Glare (yes/no)					
Human/Animal Activity:					
Other Notes:					
* P = Poor (rainy/foggy/windy), F = Fair (drizzling), G = Good (some fog/drizzle, haze/glare), E = Excellent (clear, sunny/well-lit, no glare)					
** 0 = calm, 1 = ripples, 2 = crests/no breaks, 3 = scattered whitecaps, 4 = frequent whitecaps, 5 = many whitecaps, some spray					
frequent whitecaps, 5 = many whitecaps, some spray					
			Date: 9/3/2017		Time
	Tide data from:		Low	0.4	10:10 AM
	<a href="http://wa.us harbors.com">http://wa.us harbors.com</a>		High	7.1	2:57 AM
	Cherry Point		Low	5.3	11:02 PM
	48°52'N 122°45'W		High	8.4	5:39 PM

Fidalgo Bay Aquatic Reserve:

Team One / Team Two		01: FBAR Sign	02: Trestle Looking S	03: Trestle Looking N	04: Marches Point Rd.
loon	pacific loon				
loon	common loon				
loon	loon species				
merganser	common merganser				
merganser	hooded merganser				
merganser	red-breasted merganser				
merganser	merganser species				
scoter	surf scoter				
scoter	white-winged scoter				
scoter	scoter species				
<b>Counter</b>					
<b>Spotter</b>					
<b>Data Recorder</b>					
Weather Conditions					
% cloud cover					
wind direction					
visibility * (P,F,G,E)					
Beaufort scale**					
start time					
stop time					
glare (yes/no)					
human/animal activity:					
other notes:					
* P = Poor (rainy/foggy/windy), F = Fair (drizzling), G = Good (some fog/drizzle, haze/glare), E = Excellent (clear, sunny/well-lit, no glare)					
** 0 = calm, 1 = ripples, 2 = crests/no breaks, 3 = scattered whitecaps, 4 = frequent whitecaps, 5 = many whitecaps, some spray					
	<b>10/30/17 tide data from:</b>	high	5.3	12:38 AM	
	<a href="http://wa.us harbors.com">http://wa.us harbors.com</a>	low	2.1	6:58 AM	
	48°31'N 122°37'W	high	7.9	2:22 PM	
		low	3.7	8:54 PM	

Team One / Team Two		01: FBAR Sign	02: Trestle Looking S	03: Trestle Looking N	04: Marches Point Rd.
loon	pacific loon				
loon	common loon				
loon	loon species				
merganser	common merganser				
merganser	hooded merganser				
merganser	red-breasted merganser				
merganser	merganser species				
scoter	surf scoter				
scoter	white-winged scoter				
scoter	scoter species				
<b>Counter</b>					
<b>Spotter</b>					
<b>Data Recorder</b>					
Weather Conditions					
% cloud cover					
wind direction					
visibility * (P,F,G,E)					
Beaufort scale**					
start time					
stop time					
glare (yes/no)					
human/animal activity:					
other notes:					
* P = Poor (rainy/foggy/windy), F = Fair (drizzling), G = Good (some fog/drizzle, haze/glare), E = Excellent (clear, sunny/well-lit, no glare)					
** 0 = calm, 1 = ripples, 2 = crests/no breaks, 3 = scattered whitecaps, 4 = frequent whitecaps, 5 = many whitecaps, some spray					
	<b>10/30/17 tide data from:</b>	high	5.3	12:38 AM	
	<a href="http://wa.us harbors.com">http://wa.us harbors.com</a>	low	2.1	6:58 AM	
	48°31'N 122°37'W	high	7.9	2:22 PM	
		low	3.7	8:54 PM	