



Salish Sea Guillemot Network – Pigeon Guillemot Breeding Survey

Preliminary Results 2021

(14 October 2021 Data Dump)

Study Sites

- Whidbey Island 2008-2021
- South Puget Sound 2013-2021
- Clallam County 2016-2021
- Vashon Island 2018-2021
- Kitsap County 2020-2021
- Camano Island 2020-2021
- Jefferson County – East (New)

Definitions

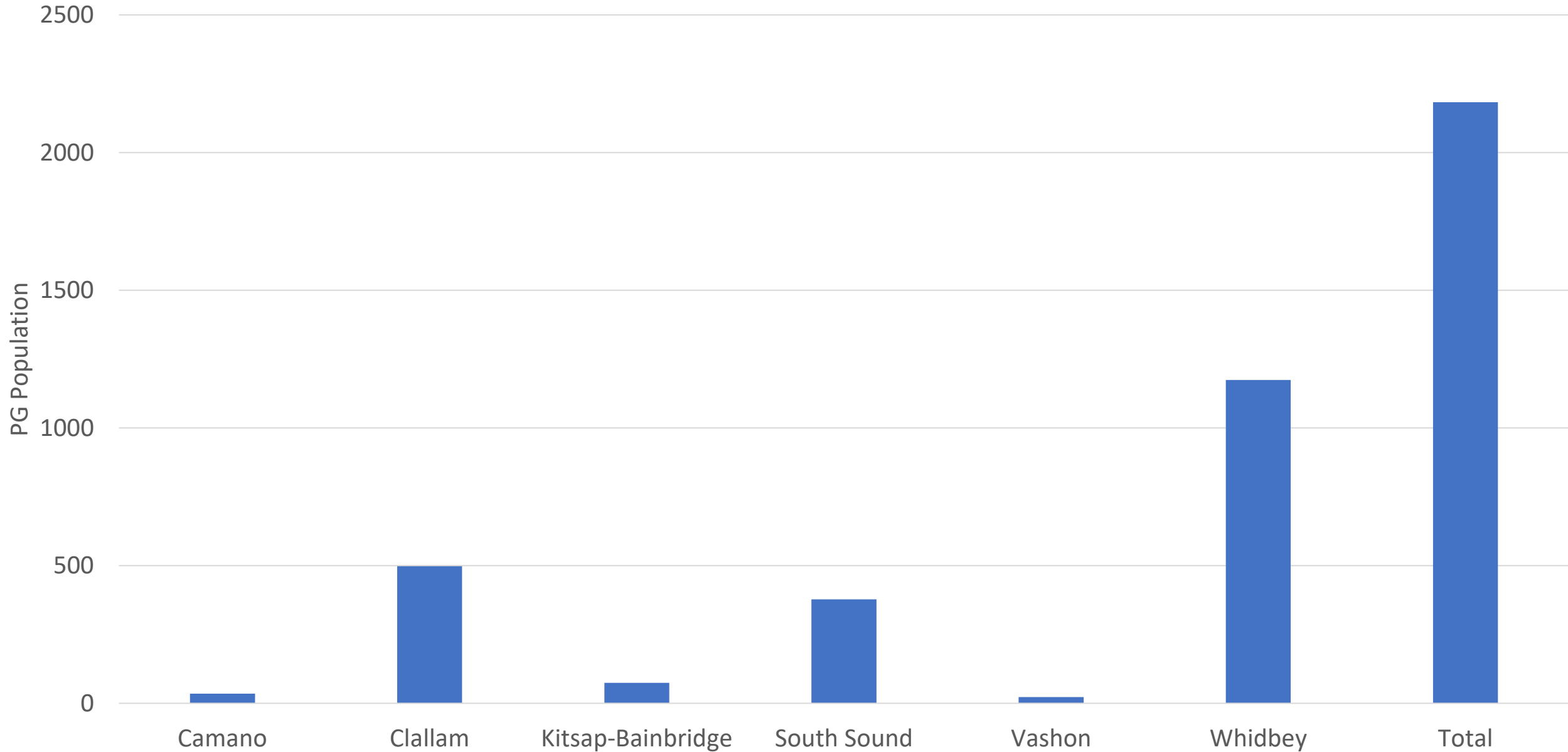
- PG Population for a Region: the sum of the maximum PG counts for each beach/colony over the length of the survey.
- Active Burrow: a burrow for which a PG has been seen entering. This is considered a burrow in which there is an attempt to breed.
- Chick Burrow: a burrow to which a PG has delivered prey. Chick Burrows are a subset of Active Burrows.

2021 Quick Stats

- Regions: 6
- Colonies surveyed: 67
- Surveys performed: 699
- Volunteer hours: 3,671
- PG population: 2,183
- Active burrows: 423
- Chick burrows: 275
- Prey delivered: 1,041

PG Populations per Region

SSGN 2021



Region Statistics - SSGN 2021

	Colonies	Surveys	Volunteer	PG	Active	PGs	% PGs	Chick	Breeding	% PGs
	Surveyed	Performed	Hours	Population	Burrows	Attempting	Attempting	Burrows	PGs ²	Breeding
						to Breed ¹	to Breed			% PGs
Camano	1	13	143	35	14	28	80%	11	22	63%
Clallam	12	140	522	498	70	140	28%	47	94	19%
Kitsap-Bainbridge	7	52	148	75	17	34	45%	13	26	35%
South Sound	16	156	989	378	81	162	80%	54	108	29%
Vashon	3	26	50	23	14	28	122%	7	14	61%
Whidbey	28	312	1819	1174	227	454	39%	143	286	24%
Totals/Averages	67	699	3671	2183	423	846	39%	275	550	25%

¹PGs Attempting to Breed = (2 x Active Burrows)/PG Population

²Breeding PGs = (2 x Chick Burrows)/PG Population

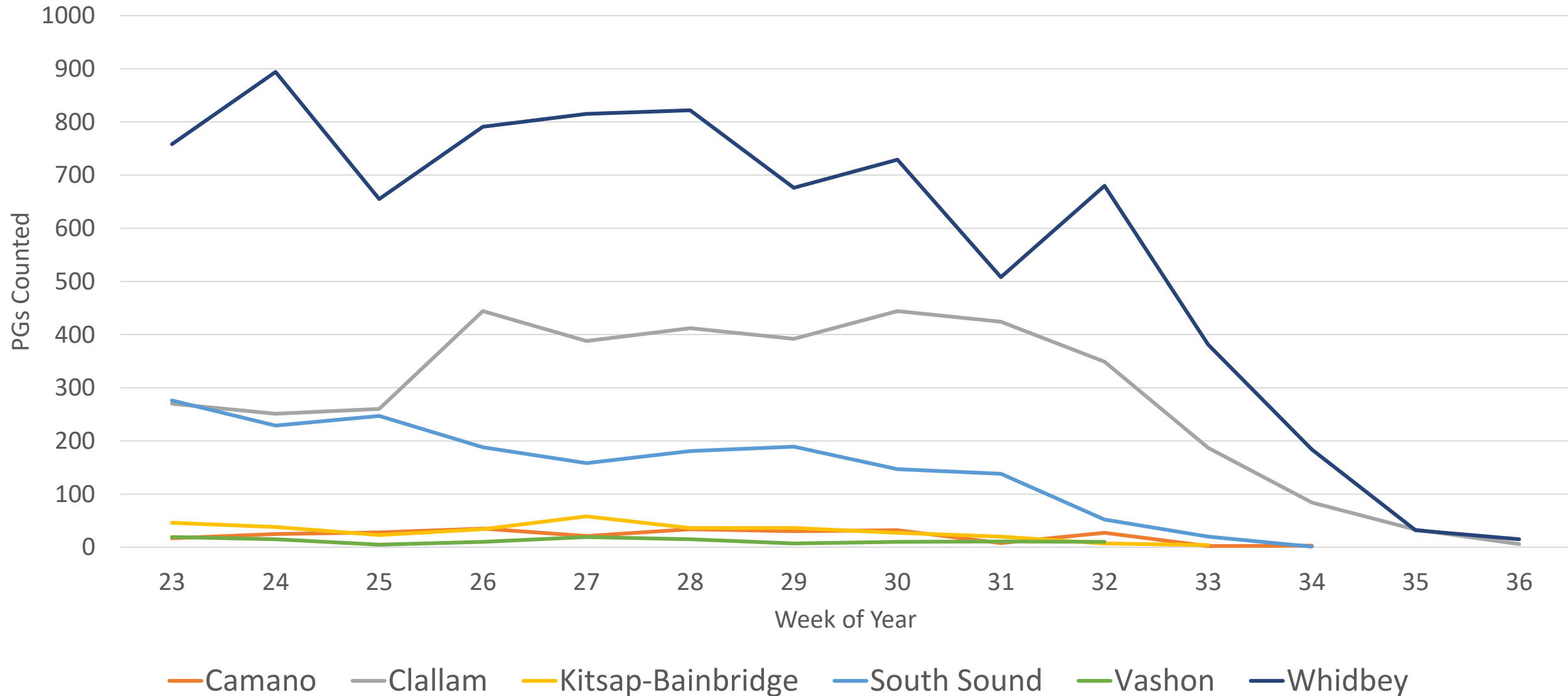
Visits/Deliveries to Burrows										
	Total	Total	No Prey				%	%	%	Deliveries
	Visits to	Prey	Visits	Sculpin	Gunnel	Other	Sculpin	Gunnel	Other	per Chick
	Burrows	Deliveries								Burrow
Camano	41	25	16	1	21	3	4%	84%	12%	2.3
Clallam	385	222	163	33	180	9	15%	81%	4%	4.7
Kitsap-Bainbridge	44	31	13	4	25	2	13%	81%	6%	2.4
South Sound	373	198	175	45	136	17	23%	69%	9%	3.7
Vashon	42	10	32	1	9	0	10%	90%	0%	1.4
Whidbey	1272	555	717	213	281	61	38%	51%	11%	3.9
Totals/Averages	2157	1041	1116	297	652	92	29%	63%	9%	3.8

	PG Population Stats										Visits to Burrow Stats									
	PGU Population					Percent Breeding					Total Prey					Deliveries per Chick				
	Active Burrows	Chick Burrows	Attempt to Breed	Breeding PGs	Percent Breeding	Volunteer Hours	No Prey	Prey	Sculpin	Gunnel	Other	Total Visits	Total Burrow	Per Chick	Per Burrow					
Camano	Country Club North/Cavalero	35	14	11		143	16	25	1	21	3	41								
	Region Totals:	35	14	11	80%	22	63%	143	16	25	4%	21	84%	12%	41	2.3				
Clallam	Bachelor Rock	42	9	5		61	28	25	12	8	5	53								
	Dungeness Spit 1	24	7	7		74	2	28	8	16	4	30								
	Mussel Beach	12	3	1		63	9	3		3		12								
	Port Angeles 1	12				45		0				0								
	Port Williams 0	9	3	1		24	9	4	1	3	3	13								
	Port Williams 0.5	26	2	1		21	3	3		3		6								
	Port Williams 1	108	13	9		68	42	36	6	30	78	78								
	Port Williams 1.5	0	2			22	5	0				5								
	Port Williams 2	147	13	8		38	35	46	5	41	81	81								
	Port Williams 2.5	0	6	3		22	21	13		13	34	34								
	Port Williams 3	78	4	4		34		10		10	10	10								
	Port Williams 4	40	8	8		52	9	54	1	53	63	63								
	Region Totals:	498	70	47	28%	94	19%	522	163	222	33	180	9	385	4.7					
	Prey Type Percent of Total:								15%	81%	4%									
Kitsap-Bainbridge	Agate Point	7	2	2		22	7	2		2		9								
	Battle Point	12	1	1		9	2	2		2		2								
	Fletcher Bay	11	3	2		22	2	6	2	4		8								
	Hansen Road	2				4		0				0								
	Manzanita	15	6	6		44	11	11	2	8	1	11								
	Rolling Bay	19	4	2		35	3	10		9	1	13								
	Sunrise Drive	9	1			13	1	0				1								
	Region Totals:	75	17	13	45%	26	35%	148	13	31	4	25	2	44	2.4					
	Prey Type Percent of Total:								13%	81%	6%									
South-Sound	Amsterdam Bay	26	1			12	1	0				1								
	Beachcrest	43	1			32	1	0				1								
	Big Fish Trap	15	2	2		22	13	8	1	6	1	21								
	Brisco East	18	8	6		48	8	27	14	12	1	35								
	Brisco Pt	30	7	2		59	15	4	3	1	1	19								
	Burfoot Park	9	3	2		125	7	9	1	8		16								
	Butterball Cove	23				28		0				0								
	Edgewater	20	6	4		39	6	7		7		13								
	Elizan	12	3	1		0	6	5	1	2	2	11								
	Ketron Ferry	19	2	1		78	10	9	2	4	3	19								
	Lyle Point	46	13	11		122	28	39	15	17	7	67								
	Mill Bight	22	8	7		96	3	17	1	16		20								
	Sandy Pt	28	8	6		17	6	20	4	15	1	26								
	Walnut Road	35	6	6		68	15	31		31		46								
	Young's Cove	28	13	6		174	56	22	3	17	2	78								
	Zangle Cove	4				72		0				0								
	Region Totals:	378	81	54	43%	108	29%	989	175	198	45	136	17	373	3.7					
	Prey Type Percent of Total:								23%	69%	9%									
Vashon	Camp Sealth Pier	4	2			11	4	0				4								
	KVI	7				20		0				0								
	Vashon Ferry Dock	12	12	7		19	28	10	1	9		38								
	Region Totals:	23	14	7	122%	14	61%	50	32	10	1	9	0	42	1.4					
	Prey Type Percent of Total:								10%	90%	0%									
Whidbey	Bush Point Dock	5	1	1		17	29	2	1	1		31								
	Cliffside	32	12	3		31	65	16		14	2	81								
	Clinton Ferry Dock	13	5	2		18	6	2	1		1	8								
	Coupeville Wharf	16	2	2		20	3	5		4	1	8								
	Double Bluff North	61	8	7		165	5	24	18	6		29								
	Double Bluff South	15				6		0				0								
	Forbes Point	31	8	8		48	21	18	6	11	1	39								
	Fort Casey North	72	22	13		213	48	54	40	13	1	102								
	Glendale	24	8	6		64	28	21	2	14	5	49								
	Harrington	33	11	6		58	29	32	3	27	2	61								
	Hastie Lake South	58	11	7		72	56	26	4	20	2	82								
	Keystone	105	4	4		80	4	25	14	6	5	29								
	Lagoon Point North	86	24	12		154	177	44	27	16	1	221								
	Lagoon Point South	32	15	5		86	96	30	18	10	2	126								
	Lake Hancock North	78	1	1		58	3	13	4	9		16								
	Langley Marina	10				12		0				0								
	Ledgewood	57	10	6		120	28	30	16	13	1	58								
	Limpet Lane	114	10	6		50	31	8	1	5	2	39								
	Malmo Bluff	20	5	3		27	11	27	7	12	8	38								
	Maylor Point	19	2	2		7	5	5		5	5	5								
	Monroe Landing	22	4	4		50	3	20		17	3	23								
	Mutiny Sands	46	9	6		114	4	27	15	4	8	31								
	Possession Point	7	1			18	1	0			1	1								
	Pratts Bluff	30	5			96	6	0			6	6								
	Rolling Hills	43	13	12		62	29	40	8	30	2	69								
	Shangri-La Shores	12	4	2		22	10	21		20	1	31								
	Shore Meadows	96	28	23		108	17	61	28	23	10	78								
	Swantown	37	4	2		48	7	4		1	3	11								
	Region Totals:	1174	227	143	39%	286	24%	1819	717	555	213	281	61	1272	3.9					
	Prey Type Percent of Total:								38%	51%	11%									
Grand Totals:		2183	423	275	39%	550	25%	3671	1116	1041	297	652	92	2157	3.8					
	Prey Type Percent of Total:								29%	63%	9%									

Observed PGs per Week per Region - SSGN 2021

Week 23 is Jun 7-13

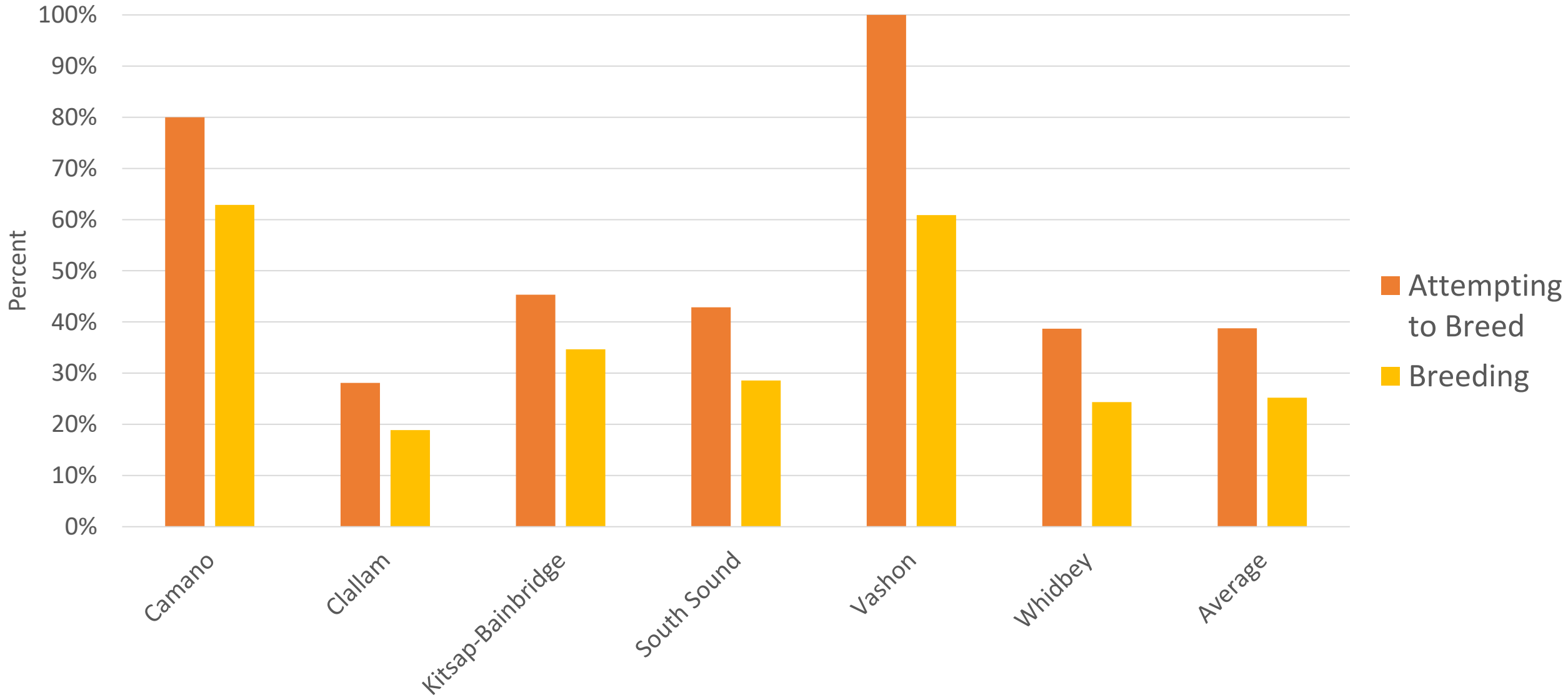
Week 33 is Aug 16-22



PG Population Breeding Percentages - SSGN 2021

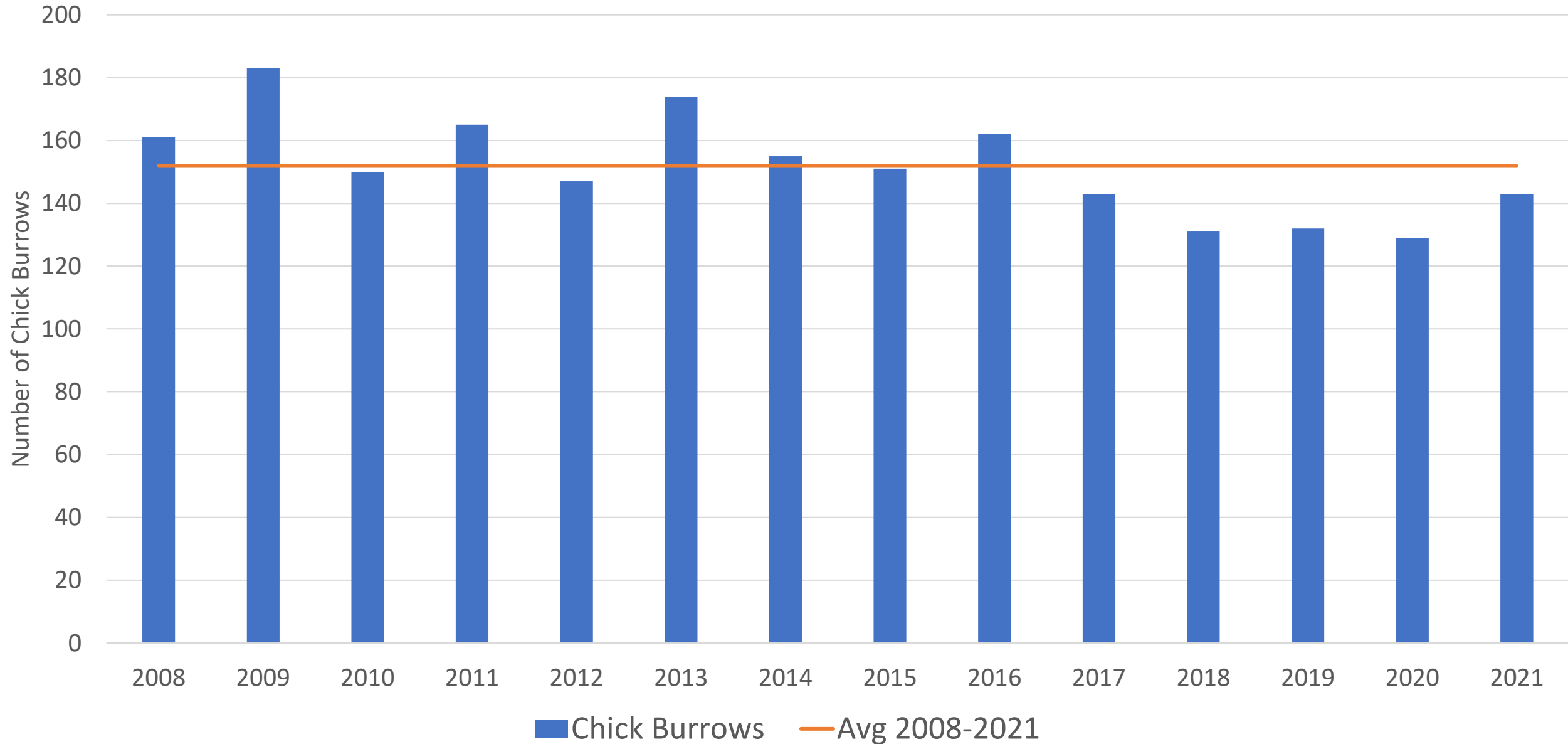
Attempting to Breed = $(2 \times \text{Active Burrows}) / \text{PG Population}$

Breeding = $(2 * \text{Chick Burrows}) / \text{PG Population}$



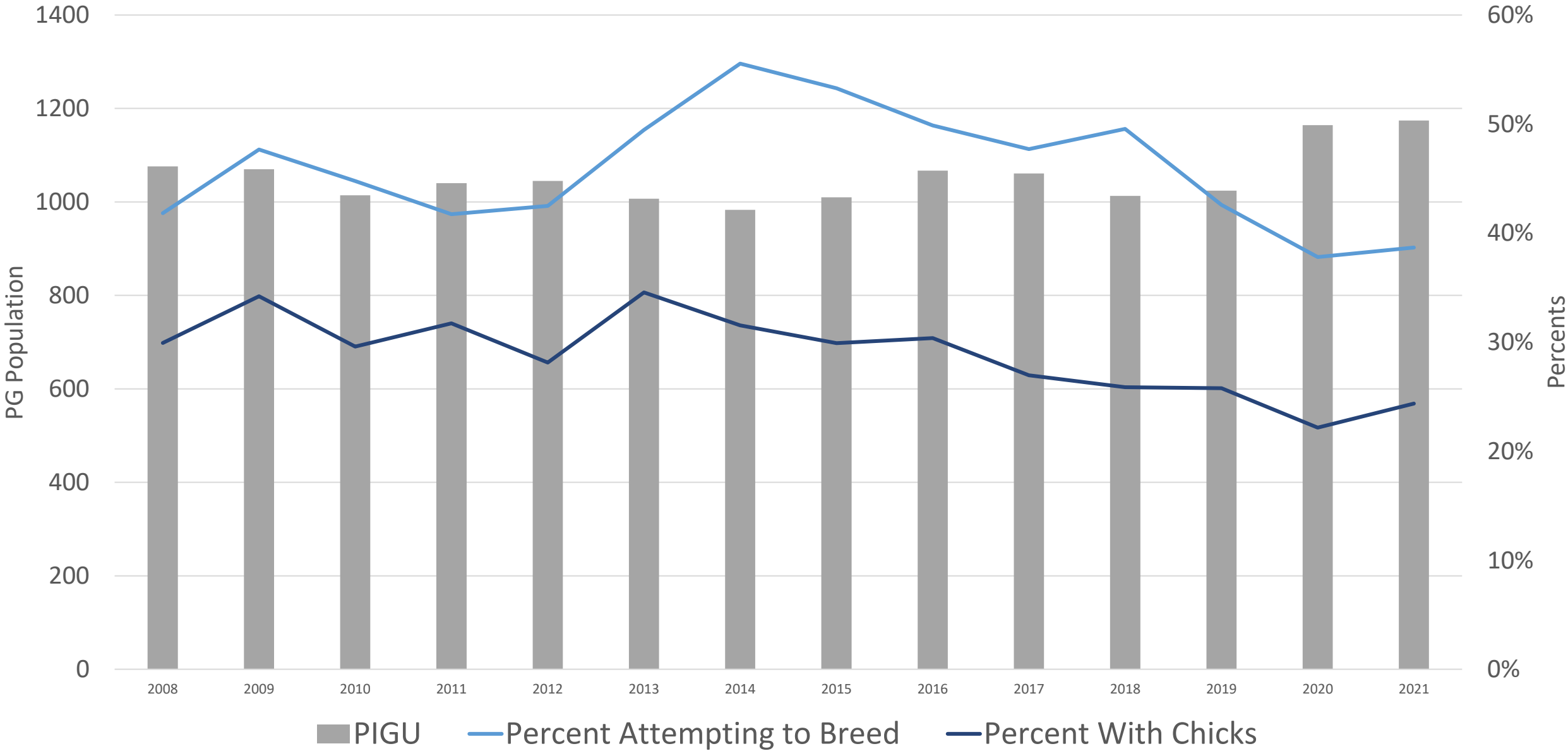
Number of Chick Burrows

Whidbey Island Survey 2008-2021



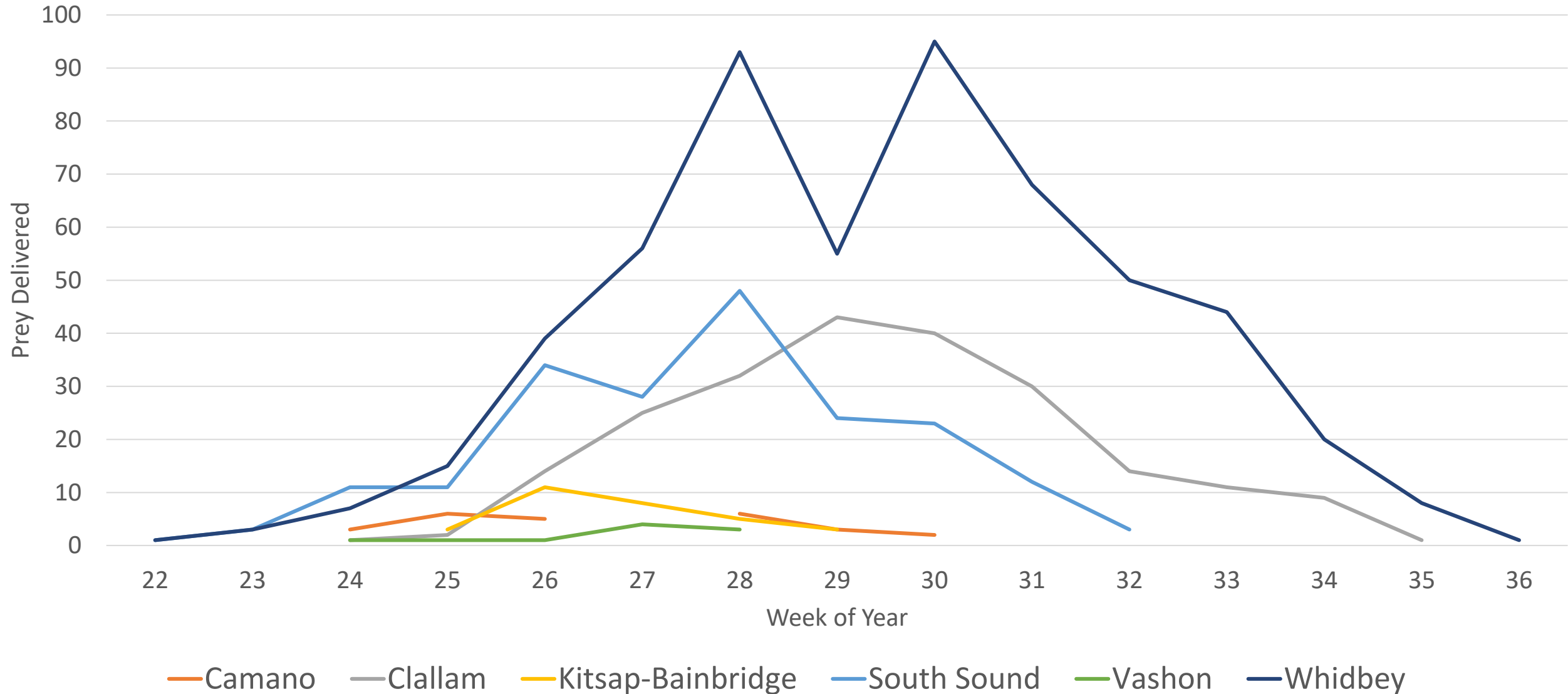
Total PGs and Breeding Percentages

Whidbey Island Study 2008-2021



Prey Deliveries per Week per Region - SSGN 2021

Week 23 is Jun 7-13
Week 33 is Aug 16-22



Distribution of Delivered Prey Types

SSGN 2021

