cetus
RESEARCH & CONSERVATION SOCIETY

straitwatch

Quantifying Boater Activity Around SRKWs In Their Critical Habitat

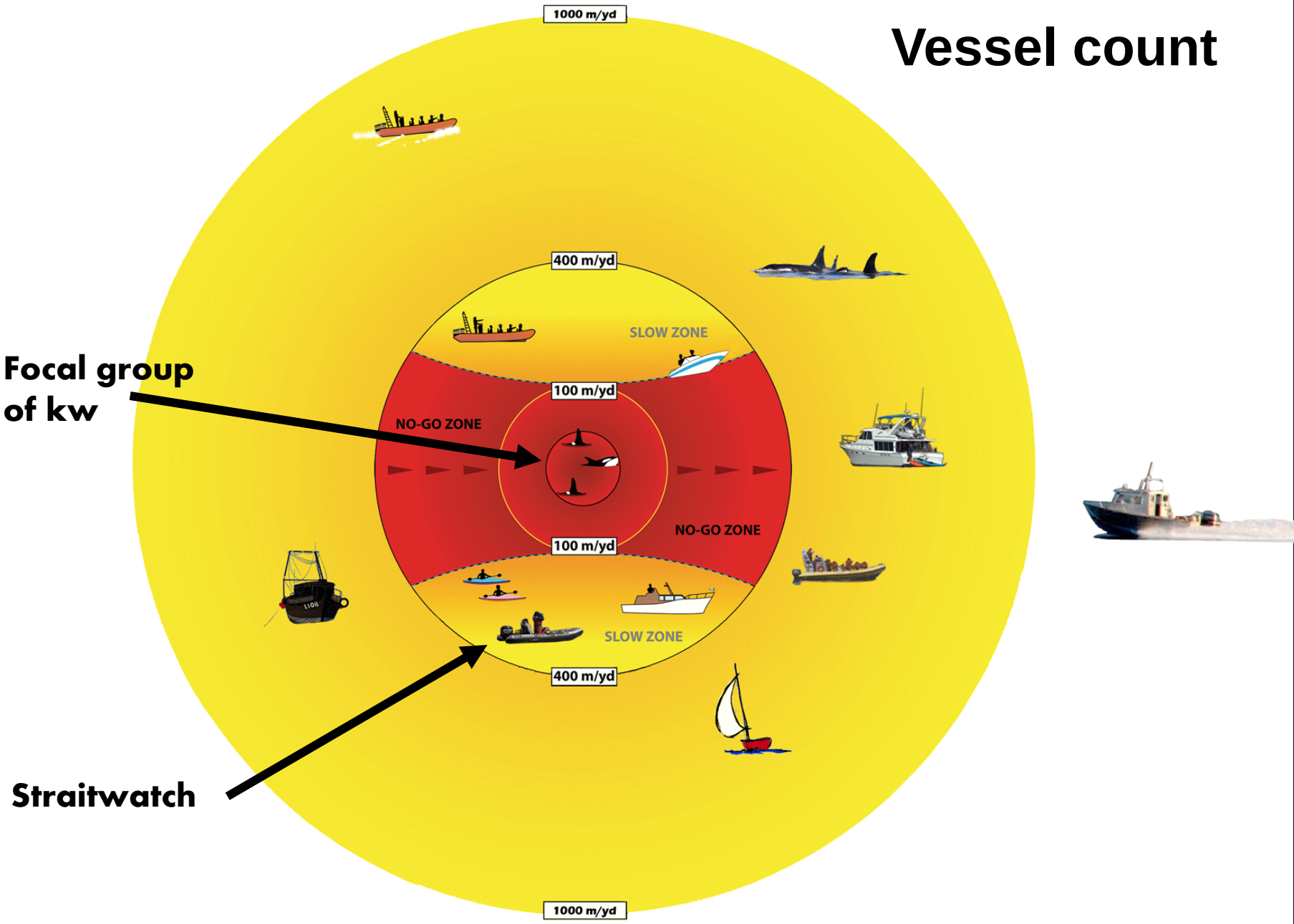
2012

Number of Monitoring Events Per Year

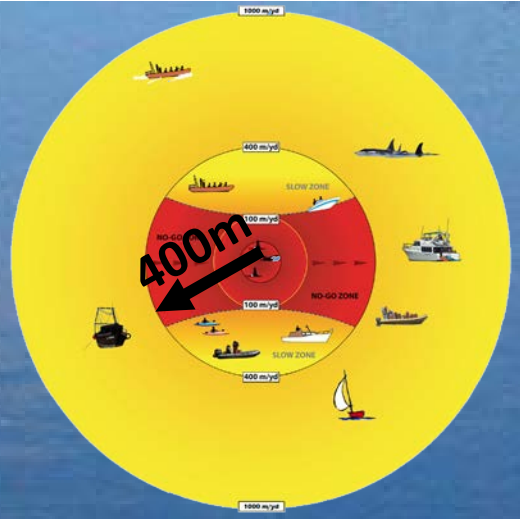
	2007	2008	2009	2010	2011	2012	Monthly Average
MAY	1	35	0	18	117	30	33.5
JUNE	229	242	48	170	355	119	193.8
JULY	602	417	222	556	543	70	401.7
AUGUST	497	654	481	693	502	0	471.2
SEPTEMBER	414	374	279	316	268	0	275.2

274 boat contacts in 2012 vs 631 boat contacts in 2011

Vessel count



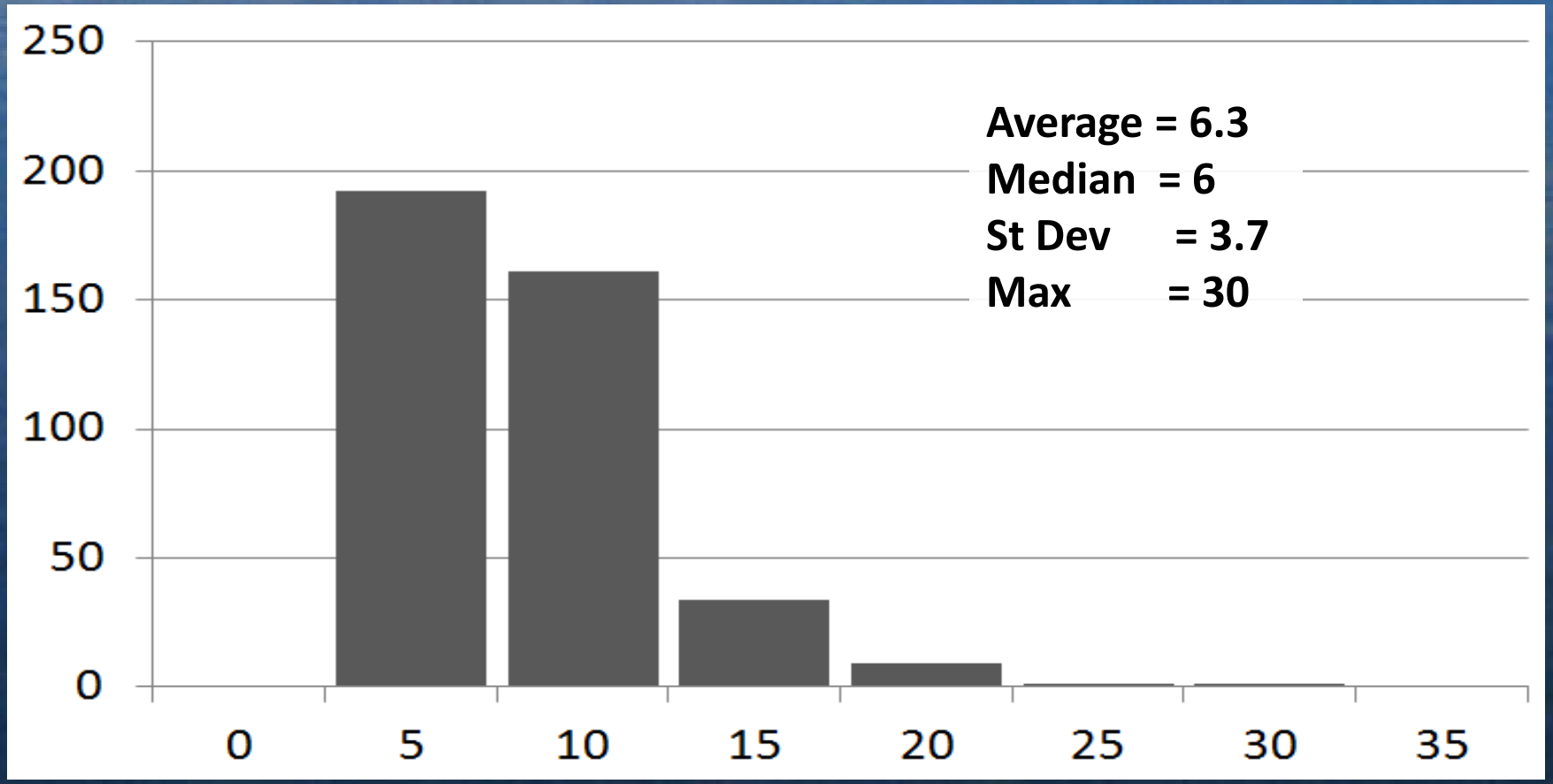
Summary of 400 m Vessel Counts 2012



Southern Resident Killer Whales

– basic stats of vessel counts –

Vessels within 400 meters of whales



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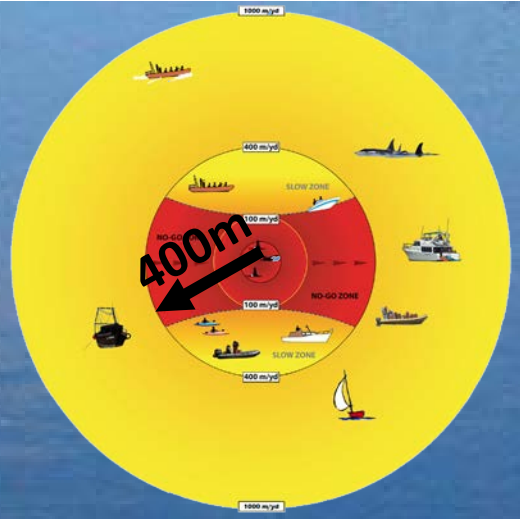

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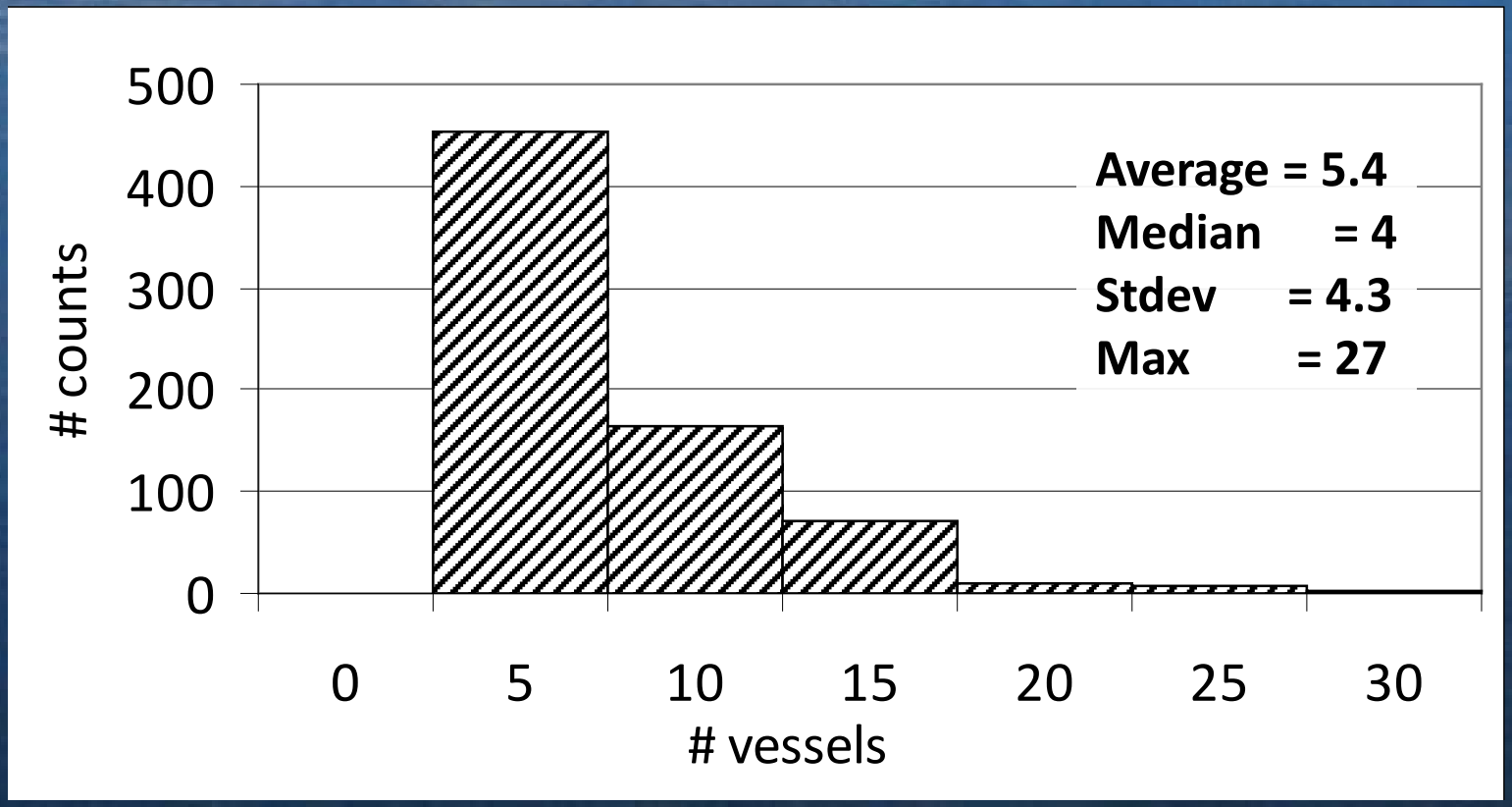
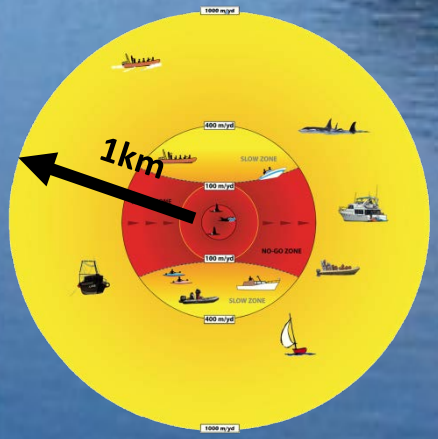


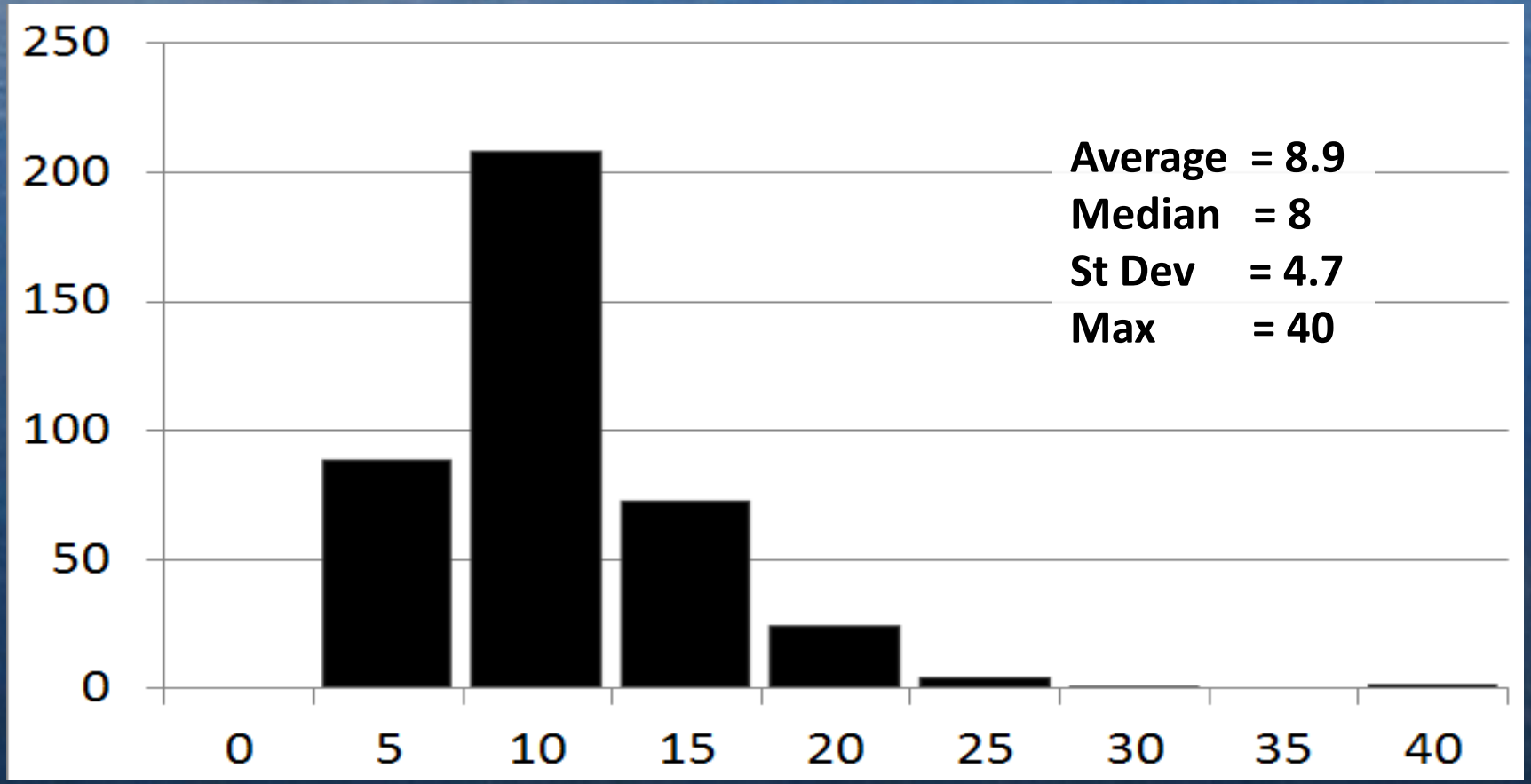
Summary of 1 km Vessel Counts 2012

Southern Resident Killer Whales

– basic stats of vessel counts –

vessels within 1 km of whales





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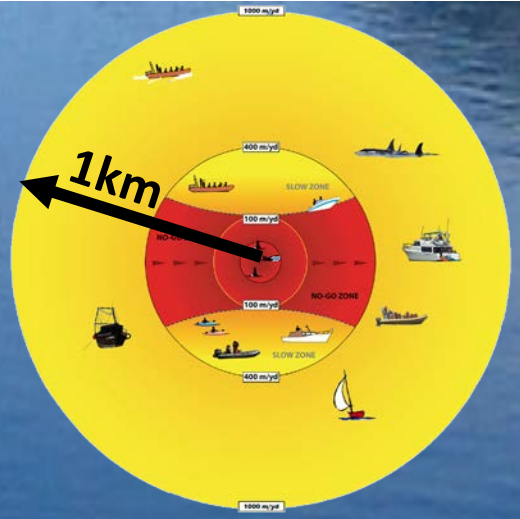
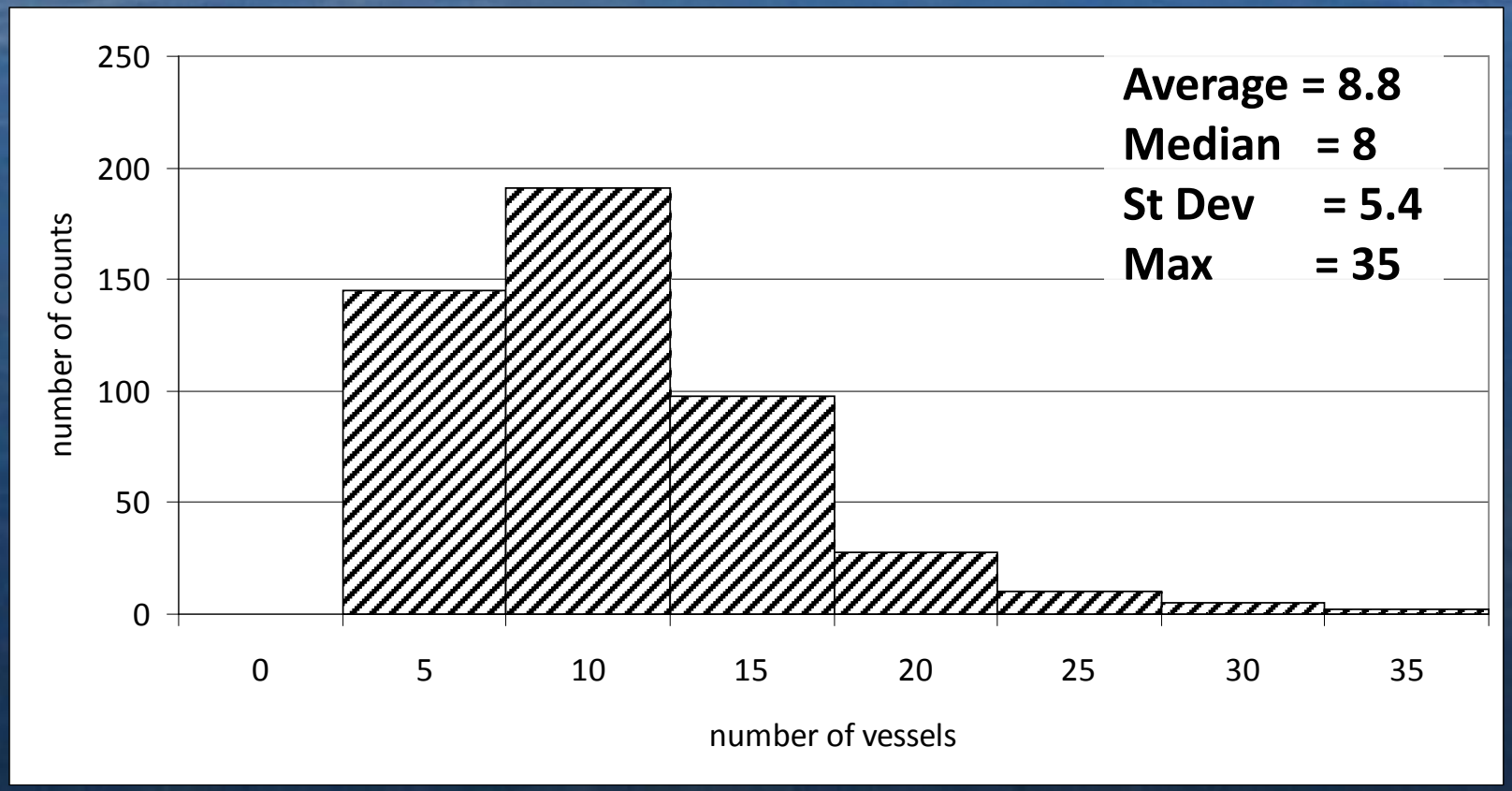


Southern Resident Killer Whales

– basic stats of vessel counts –

vessels within 1 km of whales



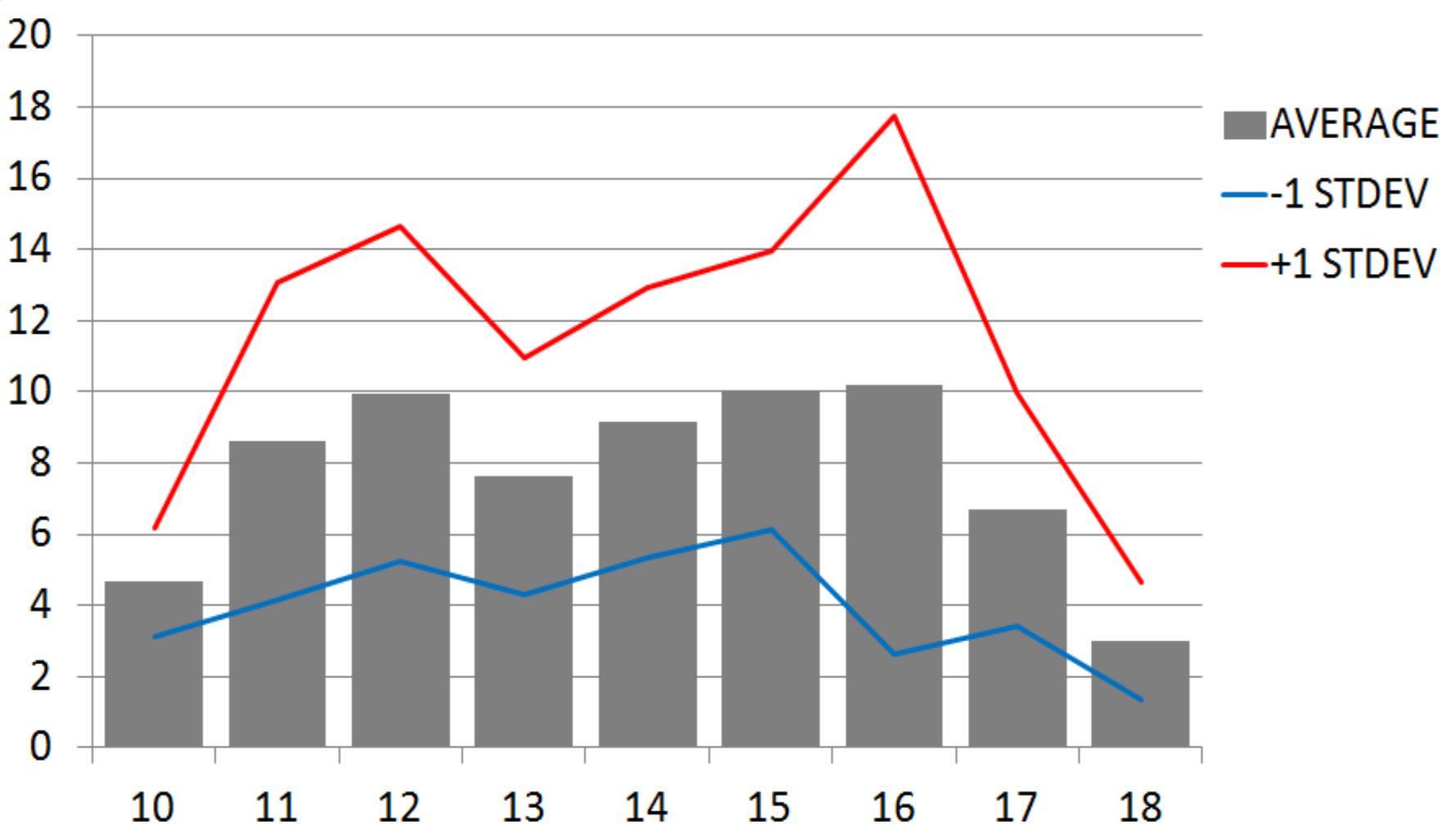
Southern Resident
1 km Vessel Count Summary

Year	Average	Max
2007	14.6	53
2008	9.7	55
2009	9.6	36
2010	8.8	35
2011	8.2	34
2012	8.9	40

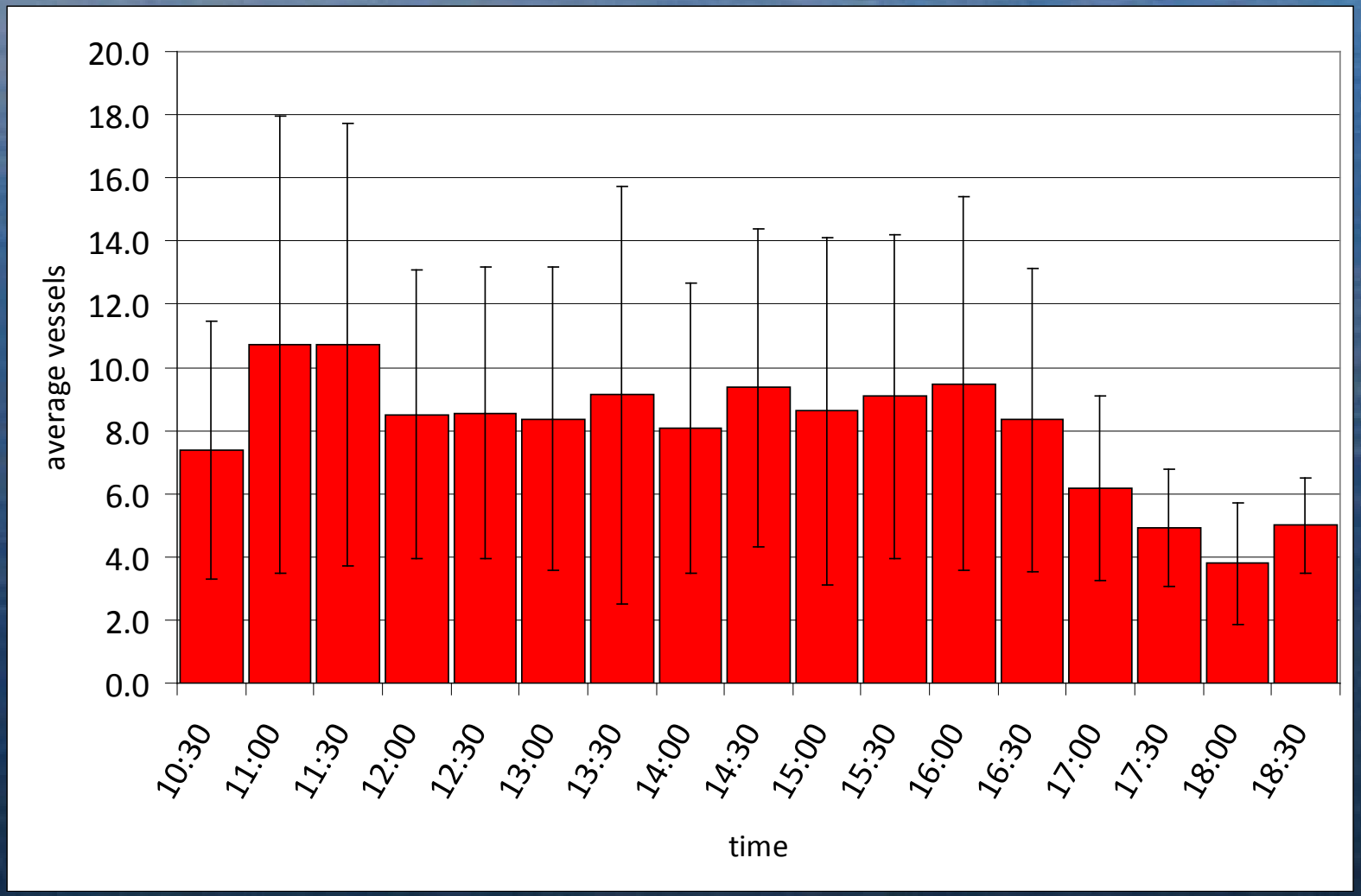
Southern Resident Killer Whales 2012

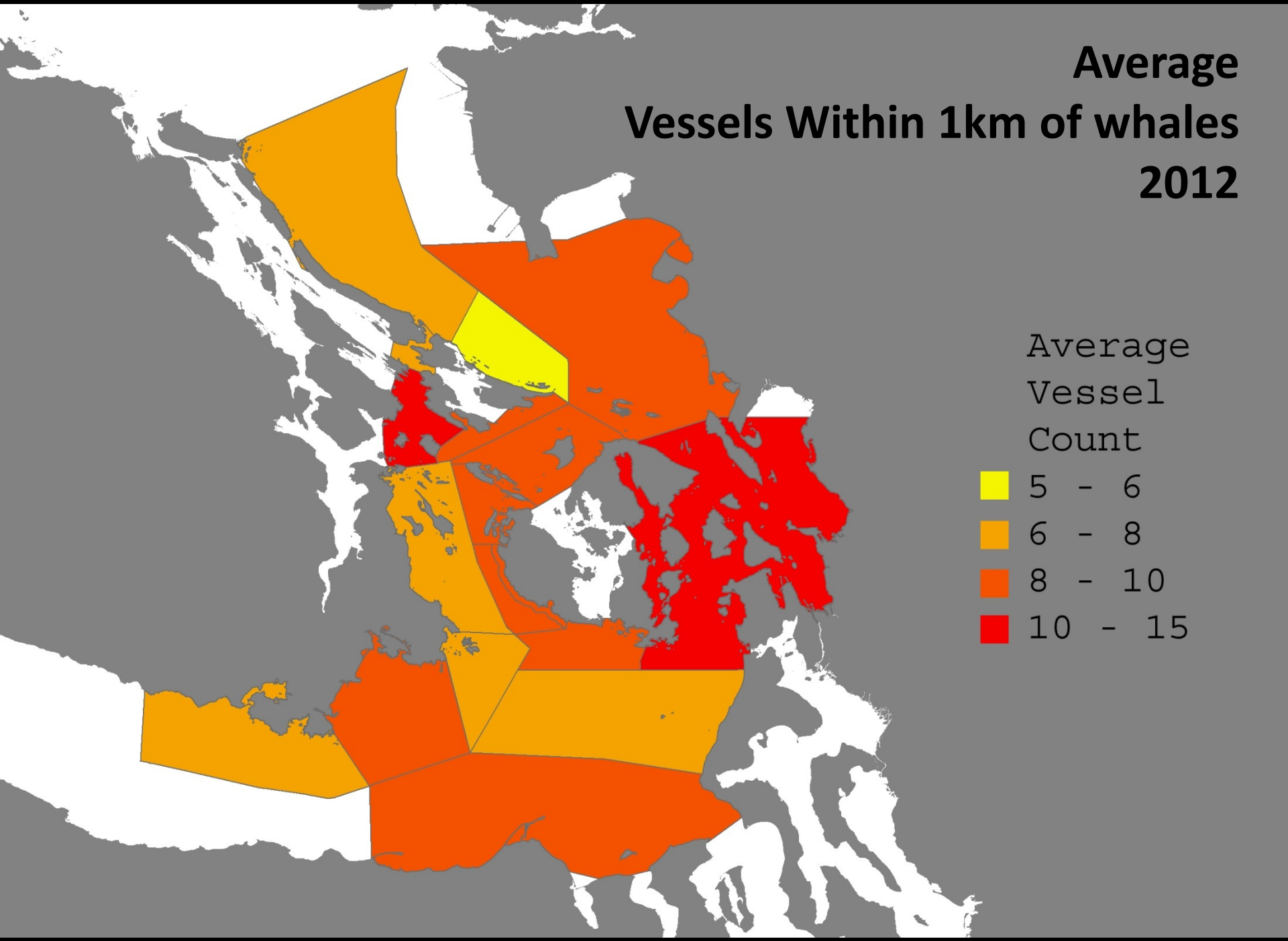
– time of day –

Vessels within 1 km of whales

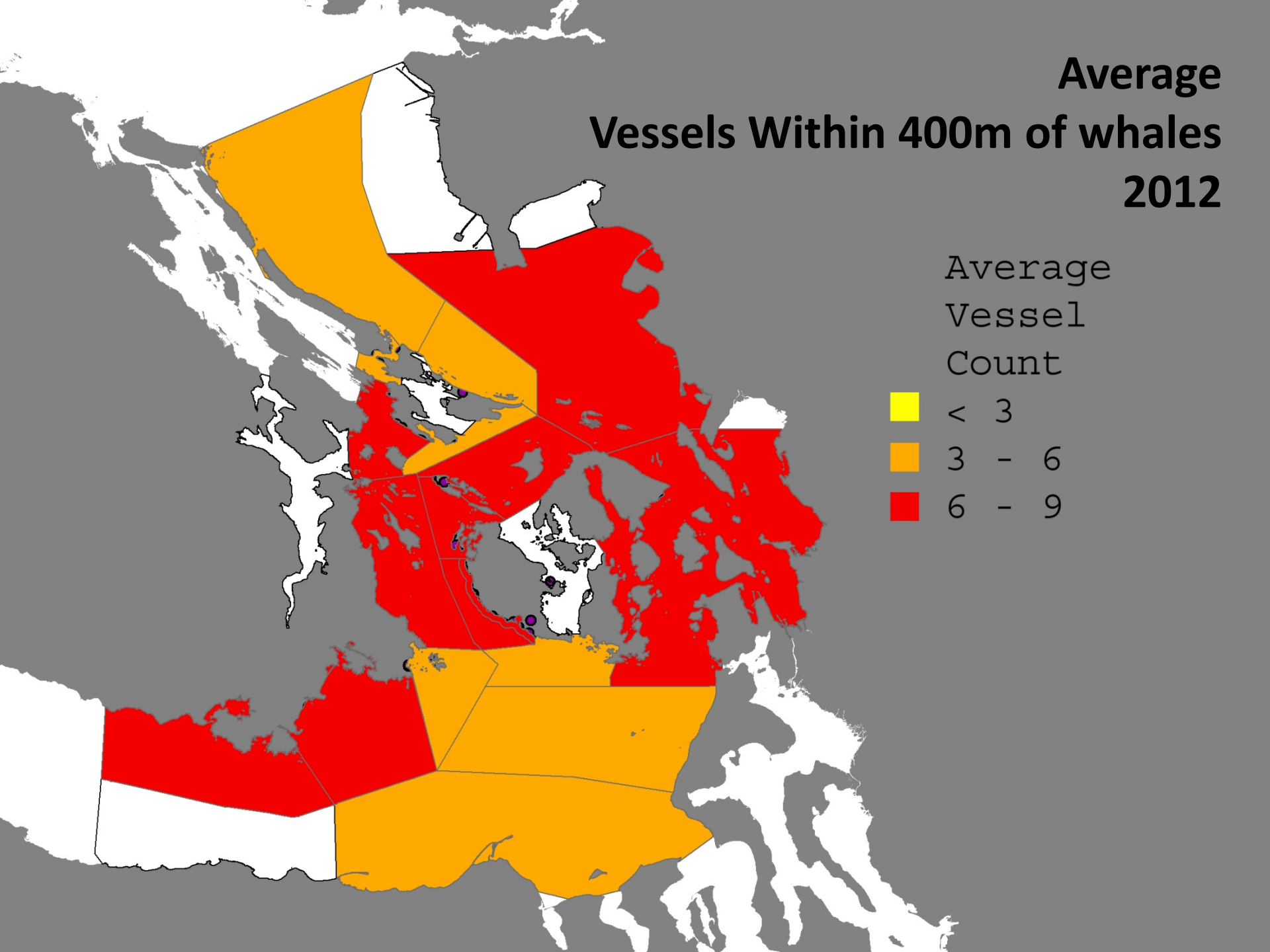


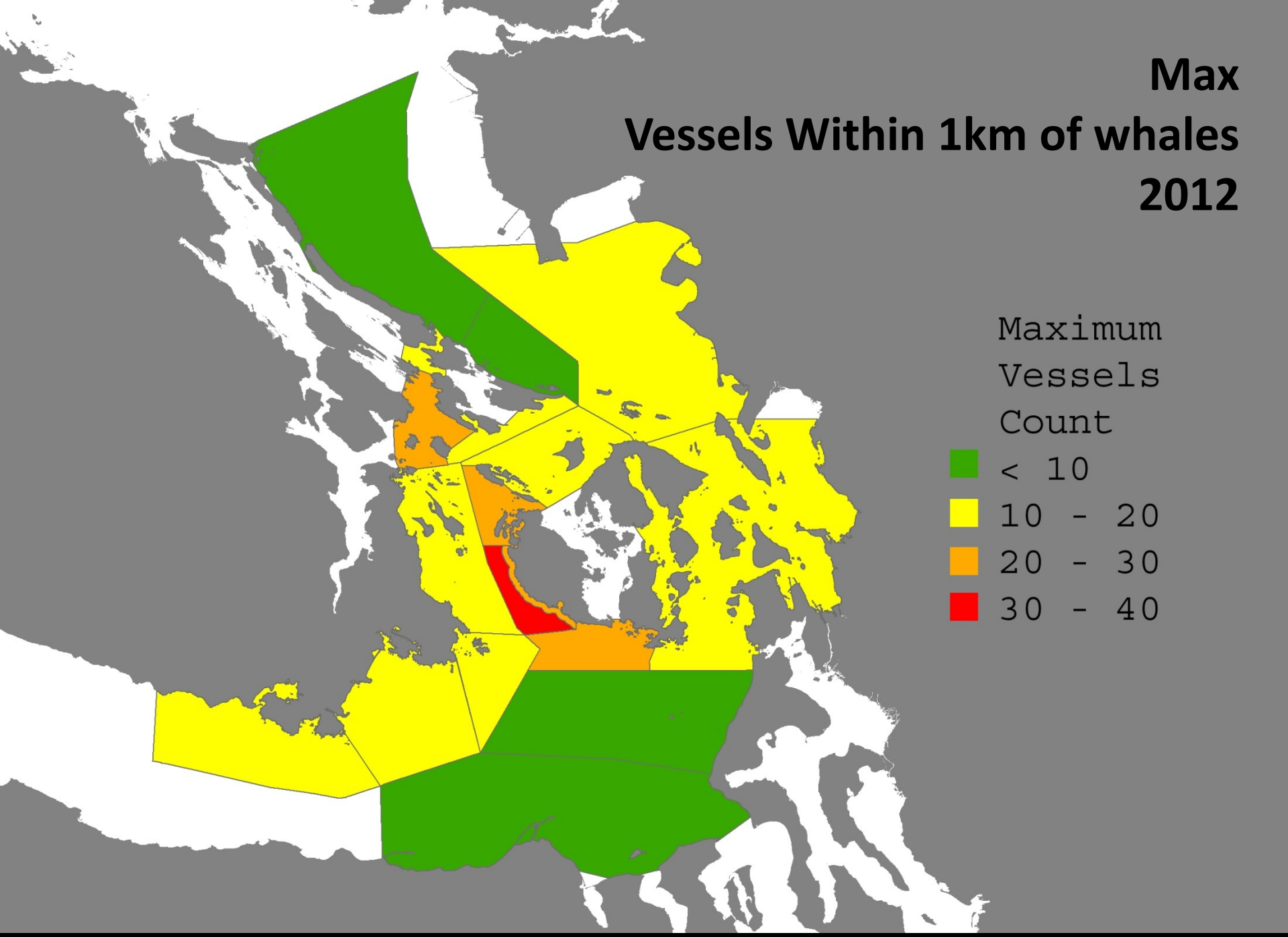
Southern Resident Killer Whales 2010
– time of day –
vessels within 1 km of whales

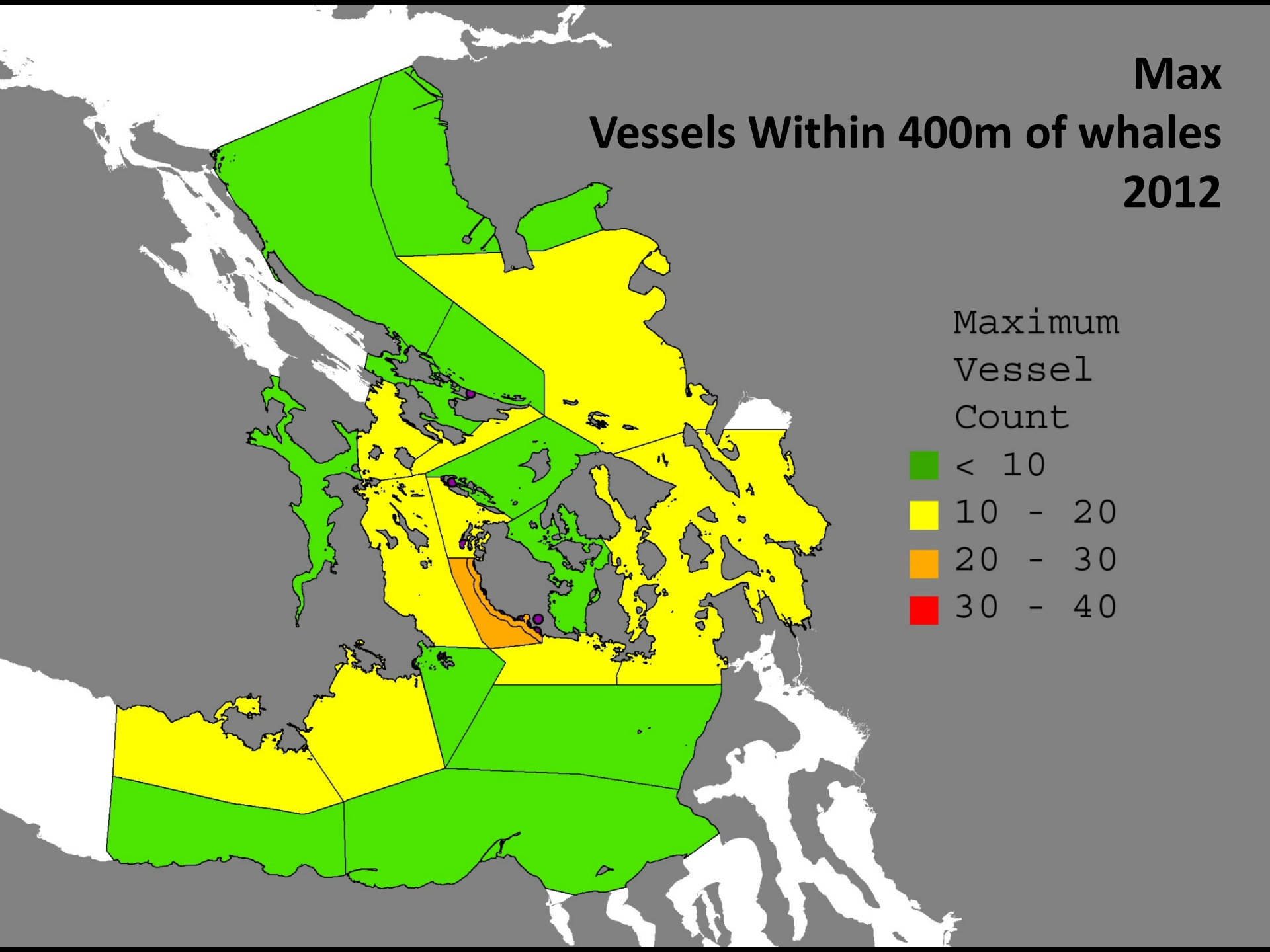



Average
Vessels Within 1km of whales
2012
Average
Vessel
Count
5 - 6
6 - 8
8 - 10
10 - 15

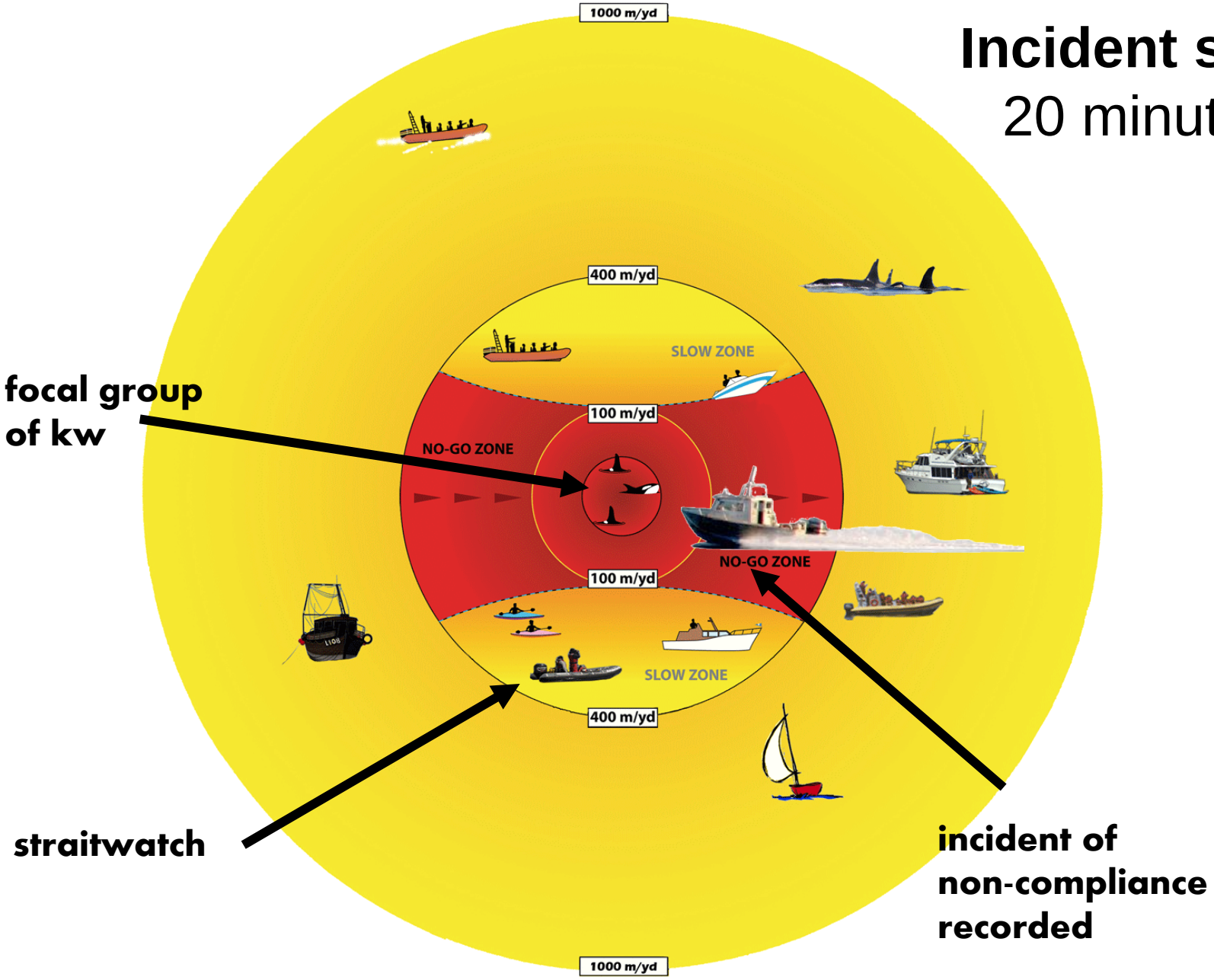
Average Vessels Within 400m of whales 2012




Max
Vessels Within 1km of whales
2012
Maximum
Vessels
Count
< 10
10 - 20
20 - 30
30 - 40


Max
Vessels Within 400m of whales
2012
Maximum
Vessel
Count
< 10
10 - 20
20 - 30
30 - 40

Incident scan
20 minutes

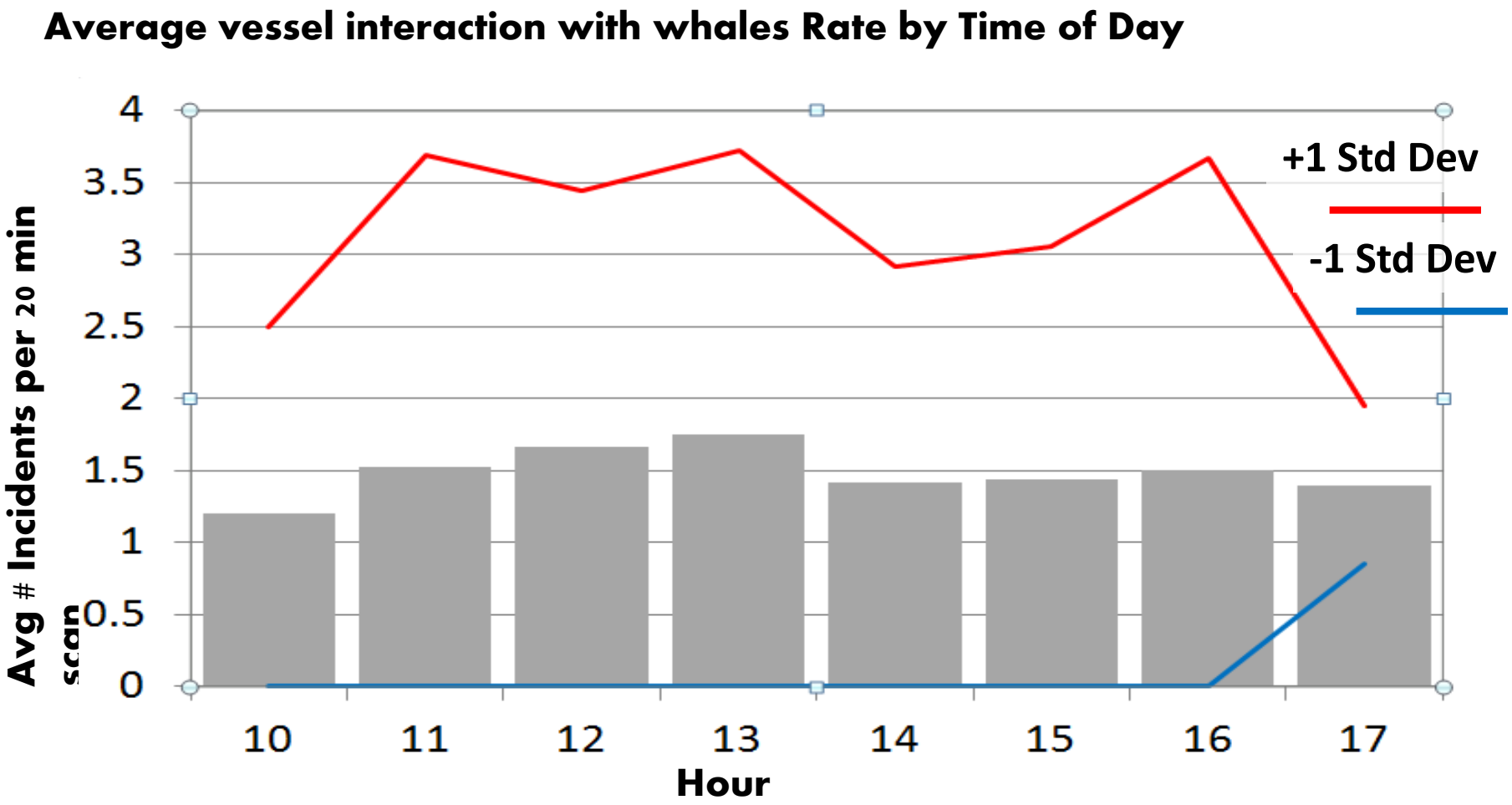


YEAR	Rate of Vessel Interaction	Std Dev
2007	3.2	4.4
2008	2.5	3.3
2009	3.3	2.4
2010	2.4	2.1
2011	2.8	3.0
2012	1.5	1.9
Average	2.6	2.8

Note – May to mid July only

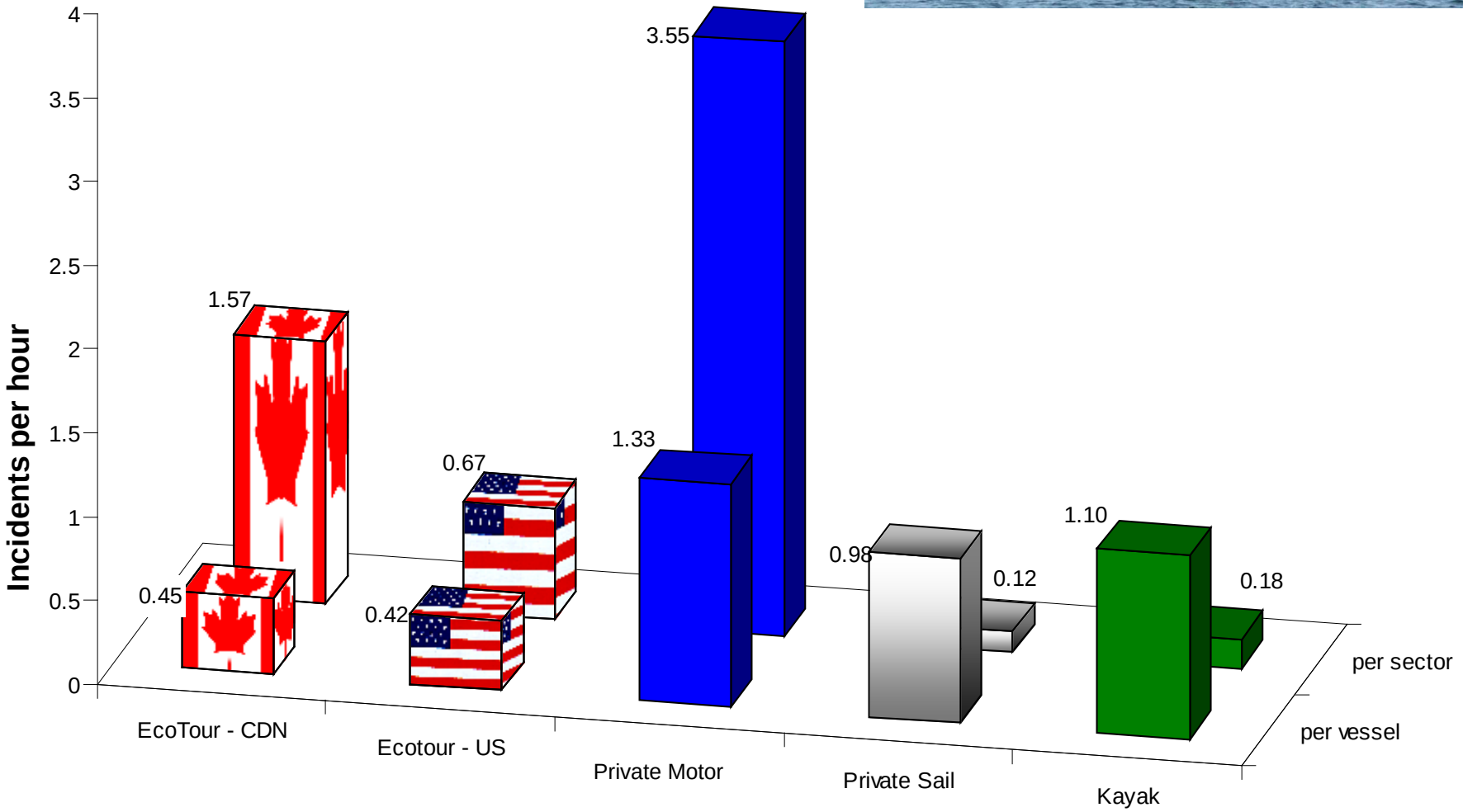
Over the past six years, the expected number of vessel interactions a SRKW would experience over 12 hours (0800 to 2000) is 76.

Average vessel interactions with whales
Rates per 20 minute Scan - 2012



From May to mid-July 2012, the expected number of vessel interactions a SRKW would experience over a 12 hour period is 53.

Southern Resident Killer Whales



Thoughts

The rates of vessel interaction with whales reported should be considered a minimum number of potential disturbances to whales, as:

- There are other conditions that cause whales to change their behaviour that we don’t capture (e.g. acoustic).
- We only record incidents that we are positive occurred.
- We are only measuring 12 hours of the day.

Kayaks & Killer Whales

Research paper: Rob Williams, Erin Ashe, Doug Sandilands, David Lusseau

- **Killer whales responded to kayaks by increasing their probability of switching to travel – they spent significantly more time travelling in the presence of kayaks than if kayaks were absent.**

- **Kayaks were less likely to disrupt feeding but tend to increase killer whales' energetic demand by increasing travel.**