

10 December 2012

To: Carrie Blakeslee

From: Brent Stewart

Re: Drakes Estero harbor seals

I have reviewed the time lapse sequences for 15 May 2008 and for 11 June 2008 with the comments below:

1. 15 May 2008: There were three event sequences provided for review. The quality of all three was relatively poor.
 - a. Event 1: 1345 hrs through 1415 hrs.
 - i. A boat appears in the upper distant frame just near coast at 1355
 - ii. Boat lands at distant mud flats at 1356
 - iii. People apparently on mud flats at 1357
 - iv. Boat leaving mud flats and heading toward distant channel at 1404
 - v. Boat not visible in frame at 1405No obvious movements of seals throughout this sequence above
 - vi. Small number of seals (ca 4-6?) enter water and some of others hauled out move towards water at 1407. No stimulus obvious. A few seabirds scattered about
 - vii. 1408 seals back ashore
 - viii. 1409 through 1415 conditions similar to conditions before 1407.

The small movement of seals obvious in this sequence appeared to me to be most similar to responses of small number of neighboring seals to sudden movements of recently hauled out seals (especially juveniles) that are settling at haulout but energetic and active. I did not consider this to be a flush in response to some other kind of stimulus, and no other stimulus was apparent to account for it.
- b. Event 2: 1412 hrs through 1432 hrs, overlaps with event sequence 1
 - i. 1418: large white birds (white pelicans? The quality of the photographs is far too poor to allow identification) flying into area
 - ii. 1419: large white birds roost on water and move towards seal group through 1428

- iii. 1429: large white birds go ashore near seal group, ca 50% of seals enter water
- iv. 1430 large white birds gone
- v. 1432 seals returning.

It appeared that a few seals at the top of the frame responded to the white birds coming ashore near them and then that response startled some of the seals farther away.

I considered this to be a startle response of a few seals initially stimulated by the birds followed by the startle of those seals stimulating a startle of seals farther away, rather than a flushing event.

- c. Event 3: 1530 hrs through 1540 hrs, and 1542 hrs through 1551 hrs.
 - i. Seal numbers substantially greater ashore than at beginning of Event Sequence
 - 1. Tide has been falling for several hours
 - ii. Camera moved at 1540 and reset at 1542. It would be helpful to know when the person(s) servicing the camera arrived at the site.
 - iii. No evidence of startle or disturbance.
- 2. 11 June 2008: There was one event sequence provided for review. The quality was poor and visibility obstructed by vegetation in front of the camera
 - a. Sequence duration 1118 hrs through 1151. Quality of photos poor and partially obscured by vegetation in front of camera.
 - i. 1125 hrs: slight movement of seals toward water's edge, no obvious entry of seals into water
 - ii. 1128 hrs: boat appearing in upper frame
 - iii. 1129 hrs: boat lands on mud flat
 - iv. 1130 hrs: people obvious on mud flat
 - v. 1140 hrs: boat leaving mud flat
 - vi. 1141 hours: boat not visible in frame

No response of seals apparent from 1126 hrs until end of sequence at 1151 hrs. The minor startle of seals unexplained, but I don't consider this to be a flush but rather likely a startle of most seals owing to a sudden movement or startle of one or two seals with or without external stimulus.