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### **Response to Dr. Corey Goodman's April 3 Pt Reyes Light "Opinion"**

Dr. Goodman makes the accusation that *"NPS and CCC continue to recycle the false claim that the oyster farm disturbs the harbor seals."* Dr. Goodman's accusation is false and is obvious to many who have witnessed, documented and photographed seal disturbances by the oyster operation. See the [photograph](#) at [www.savedrakesbay.org](http://www.savedrakesbay.org).

Dr. Goodman claims his analysis of the NPS database proves his accusation of no seal disturbance, but that is the equivalent of the analysis that concluded that bumblebees cannot fly. When analysis conflicts with reality, it is the analysis that is wrong, not the reality. Drakes Bay Oyster Company (DBOC) was, is and continues to be disturbing seals, despite Dr. Goodman's false accusations to the contrary.

Also on our [website](#) is the August 2006 Map in which the State Department of Health Services (DHS) described an area around test side 17, the square box at the southern boundary of the oyster lease, that was cleared for year-round harvest. This area had not been used by the prior oyster operation and the '06 map shows no oyster beds present.

However, DBOC wanted to expanded operations in this area because it provided the competitive advantage of being able to claim year-round harvest as well as room for expansion, but there was one problem. The year-round harvest area was in and around documented harbor seal pupping areas.

NPS wrote to DHS and to DBOC informing them of the potential conflict if oyster operations expanded to this new area, but DBOC proceeded to fill the area with oyster bags anyway. In the year following the DHS Survey, the number of oyster beds increased from 16 to 32 as can be seen on our [website](#) in the Dec '07 Map from the Coastal Commission, which proposed "seal protection areas."

A careful comparison of the maps shows that DBOC, in the year following the August 2006 survey, expanded beds #6 and #17 into seal protection areas and created new beds #14, #15, #20 on the border of seal protection areas. Of course none of these new and expanded oyster beds in or near seals is proof, by themselves, that DBOC caused any disturbance, but it certainly documents the cause for the Park's concerns.

Yet Dr. Goodman asserts (emphasis ours): *"The NPS database contains record of over 2,000 seal FW's (flush into water disturbance) between April 5, 2005 and April 5 seal FW's during the three consecutive pupping seasons from 2005 until April 5, 2007; not one was caused by DBOC."* We do note, however, that the Estero is closed to kayaking "to protect breeding wildlife" from March 1 to June 30, not April 5.

We believe this April 5, 2007 date was chosen by Dr. Goodman to conceal impacts from DBOC's recent expansion into and near the seal pupping sites in the weeks preceding the May 8 date at which the Park made its concerns public. In fact, later in Dr. Goodman's Opinion, he himself notes that DBOC seal disturbances were reported on April 26 and April 29. And he claims the initial April 26 report by PRNS Chief Scientist Dr. Sarah Allen may have been fabricated, rather than simply being the first report of impacts from DBOC's recent expansion.

We believe the Seashore has made reasonable efforts to protect the seals at their most vulnerable time by closing the entire Estero to kayaks during the March-June pupping season. The Sierra Club has urged that the Seashore and the Coastal Commission to put similar permit conditions on DBOC such as those in a 5/15/92 Agreement with Johnson Oyster Company.

Those conditions included that the Estero's Main Channel would be closed from March 15 to June 30, and the Lateral channel closed from March 15 to June 1 and used as little as possible between June 1 and June 30. The Agreement also calls for oyster operations near the seal pupping areas to be deferred past June 1, or coordinated with NPS. There is no indication yet that DBOC will agree to such limitations.

We believe there is a difference between accidental disturbances by park visitors and those that necessarily occur because oyster workers have been instructed to place bags in or near seal nursing areas. We believe there is a difference between brief seal disturbances, such as from a passing kayak, and those longer disturbances as may be caused by a workday of tending oyster beds near seal nurseries. Some disturbances may end up being permanent, if oyster bags are placed on seal haulouts.

We believe there is a difference between seal disturbances outside the pupping season and those that occur when young pups are more vulnerable. But we were advised that the NPS database, which may show these differences, was unpublished data and therefore not public so we have no way of checking our beliefs or Dr. Goodman's assertions.

Yet something is clearly wrong with Dr. Goodman's no-disturbance conclusion that is based on an analysis, which, like the analysis of bumblebee flight, has produced an obviously false conclusion. Dr. Goodman is using his analysis of the NPS database as the basis for his 1900 word accusation. We challenge Dr. Goodman to provide us with his analysis and the underlying NPS database so that so that we can determine where his mistakes are.

There is a principle in science called "Occam's Razor, which can be paraphrased as "The simplest explanation is the best." We believe the profit-driven April 2007 expansion by DBOC into and near seal pupping areas easily explains why seal disturbances from oyster operations began to be reported. On the other hand, Dr. Goodman would have the public believe his alternative explanation that several scientists, two public agencies, eyewitnesses and the Sierra Club are all guilty of fraud when we claim that DBOC began to disturb harbor seals in April 2007. We believe Occam's Razor shreds Dr. Goodman's explanation.

Dr. Goodman also accuses that the Sierra Club *"published an article in the Coastal Post claiming that DBOC operations had expanded at sandbar A...DBOC gets nowhere near sandbar A, which is outside the lease area and in the wilderness area... the Sierra Club... has [not] retracted their false claims."*

The Coastal Post article is at [www.coastalpost.com/07/05/10\\_Estero.html](http://www.coastalpost.com/07/05/10_Estero.html) and here is what it actually says (emphasis ours): *"In the past, as many as 300-500 seal pups were born annually in the Estero, 100-200 of which use the middle sandbars. Now that oyster operations have expanded and oyster bags are placed in seal nursery areas, baby seal numbers on the middle sandbars have been reduced...."*

Dr. Goodman also uses the false Sandbar "A" reference on the Seashore's chief scientist Dr. Sarah Allen: *"Allen repeated the false science when she testified that disturbances by DBOC had caused an 80% reduction in the seals and pups at sandbar A (false)."*

What Dr. Allen actually testified is *"Over the past few weeks we have documented oyster operations disturbing mothers with pups and oyster bags left on sandbars where the seals would normally give birth and nurse their pups."*  
([http://marin.granicus.com/MediaPlayer.php?view\\_id=16&clip\\_id=2173](http://marin.granicus.com/MediaPlayer.php?view_id=16&clip_id=2173)):

Neither the Sierra Club nor Dr. Allen made any reference to sandbar "A", which is not in the middle of the Estero, but rather at the far southern end and not even on the oyster bed maps. A claim that DBOC was disturbing seals at Sandbar "A" would appear to be an easily demonstrated false accusation against DBOC. We thus believe that, in an effort to pin this false accusation on Dr. Allen and the Sierra Club, Dr. Goodman has created these sandbar "A" references out of thin air.

Unfortunately, Dr. Goodman then goes on to launch similar false accusations against PRNS Superintendent Neubacher: *"Neubacher told the Supervisors that DBOC had recently placed oyster bags in pupping areas (false)."* But contrary to Dr. Goodman's false accusation, the Superintendent's statement is actually true, as can be seen by comparing the two oyster bed maps on our website.

Dr. Goodman then makes a second falsely accusation against the Superintendent *"He said that many pups had been lost that year due to DBOC (false)"* (emphasis ours). Dr. Goodman is incorrect. What the Superintendent actually said, per the <http://marin.granicus.com> website, is: *"It's amazing how many pups we have probably lost this year."* The difference between Dr. Goodman's incorrect quote and the Superintendent's actual quote may not be obvious to all but it is significant and important.

It can be very difficult to tie immediate population changes to contemporaneous incidents of disturbance. Seals choose haul outs based largely on how predator proof they are. Seals flushed from their favorite haul out may simply return to their original site, or if the disturbance is chronic may disperse to less-favored sites more prone to predation.

It may take considerable time for predators to realize that, for example, at certain tides they now have access to these new sites. What is known is that chronic disturbance appears to increase seal mortality, and although this impact is a direct result of chronic disturbances, it may take months or years to become apparent.

Dr. Goodman and others have claimed that recent counts of unchanged seal populations in Drakes Estero are "proof" that DBOC is not disturbing seals. This claim is mistaken. Disturbance impact on seal populations may take years to become apparent. Seals that are counted elsewhere may use Drakes Estero to pup, thus pupping disturbances at Drakes may not be reflected in numbers at Drakes. Moreover, under park rules, as well as under the Marine Mammal Protection Act, simple disturbance is a violation irrespective of its impact on seal populations.

When the Superintendent provided his May 8th testimony, the April expansion of DBOC into and near seal pupping areas posed a reasonable threat to the seals that are the Superintendent's job to protect. Dr. Goodman likely knows from the data analysis that there was no evidence of seal population changes and no dead pups just weeks after the oyster beds expanded.

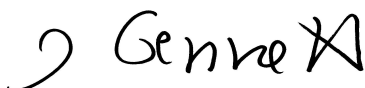
We believe Dr. Goodman's false assertion that the Superintendent said that there were actual dead pups (instead of a probability) right after DBOC began moving into or near the seal areas is an attempt to make it appear that the Superintendent was falsely accusing DBOC. This appears to be the same tactic Dr. Goodman used in making up the Sandbar "A" reference.

Dr. Goodman's false accusations and personal attacks make creative resolution of differences that occur in any community much more difficult. We believe Drakes Bay Oyster Company can operate profitably in the Estero with minor impacts to seals, just as did the Johnson Oyster Company.

Neither NPS nor the Sierra Club has ever objected to the oyster company's right to operate in the Estero until 2012, when the Estero converts to Wilderness. We believe that Dr. Goodman is simply inflaming what should be an easily resolvable controversy in order to construct a rationale for the Oyster Company to extend past 2012. Instead we believe the controversy demonstrates why Congress recognized that the profit motive and Wilderness cannot mix.

The Sierra Club hopes that our response makes it easier for others to see what Dr. Goodman is up to. We believe Dr. Goodman's April 3 "Opinion" would have been better published two days earlier, but since it is apparent that Dr. Goodman hopes to be taken seriously, then he should issue a retraction and an apology to Superintendent Neubacher, Dr. Allen, the Sierra Club and EAC for the false accusations in his April 3 Opinion.

Gordon Bennett



Sierra Club Marin Group Conservation Chair