

April 16, 2008

Memorandum

To: Don Neubacher, Superintendent
Point Reyes National Seashore

From: David Press
SFAN Inventory and Monitoring Program
Network Data Manager
April 16, 2008

Subject: Comments regarding “Neubacher’s False Science: One Year Later”, published by Dr. Corey Goodman in the *Point Reyes Light* on April 3, 2008

My position with the National Park Service is with the San Francisco Area Network Inventory and Monitoring Program, where I serve as the Network Data Manager. I am one of 32 permanent Data Managers that serve the NPS I&M Networks around the country. One of my primary responsibilities is the design, maintenance, and analysis of our long-term monitoring databases, for which we have adopted Microsoft Access software as our database program standard. I have over 10 years of programming and management experience for the NPS in Microsoft Access.

I grew up in West Marin and have been closely involved with the NPS harbor seal monitoring program since 1997 when I first began as a volunteer for the project. I later served as the harbor seal volunteer coordinator and designed the first database employed by the program. I currently oversee all database design, data entry, and data analysis activities associated with the harbor seal monitoring program. I prepared the harbor seal data and associated metadata records in response to several Freedom of Information Act (FOIA) requests within the last year, including two by Dr. Corey Goodman. In addition to my background in data management, I received my Masters of Science in Marine Ecology from UC Davis in 2005, where I studied green algae and invertebrate interactions in Drakes Estero.

With this background, expertise, and familiarity with the NPS harbor seal data, I wish to dispute Dr. Corey Goodman’s analysis of the harbor seal data in his opinion article titled “Neubacher’s False Science: One Year Later”, published in the *Point Reyes Light* on April 3, 2008.

In reference to disturbance events that flush harbor seals from haul-out sites into the water (FW), Dr. Goodman states that the NPS harbor seal database contains “over 2,000 FW’s from 2005 to April 5, 2007”. This database was been submitted to Dr. Goodman twice through two separate FOIA requests.

When I accessed the NPS database on April 9, 2008, I was only able to retrieve 344 total records of disturbed subsites from the database for this range of dates. Of these, 160 were FW records, 62 of which occurred in Drakes Estero. Dr. Goodman’s methods to arrive at “over 2,000 seal FW’s” are undocumented and appear to be in great error.

Dr. Goodman states that prior to April 2007, not one FW disturbance event was a result of oyster mariculture activities. Not true. As documented in the database distributed to Dr. Goodman twice within the last year, a motorboat attributed to the oyster farm flushed 24 seals into the water on May 6, 2006.

Dr. Goodman accuses PRNS Science Advisor Sarah Allen of fabricating her April 26, 2007 Trip Report in which she reported a FW disturbance to the harbor seals as a result of DBOC oyster mariculture activities. Dr. Goodman claims that the oyster boat was not in the water that day because the engine was being fixed. Interestingly, but not noted by Dr. Goodman, the database in his possession documents the oyster boat and workers in Drakes Estero *the afternoon before* Dr. Allen’s Trip Report, tending oyster bags near harbor seal haul-out sites in the central part of the estuary, and three days later on April 29.

Dr. Goodman also chides Dr. Allen for not entering her Trip Report into the NPS harbor seal database “even though the NPS Management Plan defines that she must do so”. There is in fact no NPS Management Plan in existence that regulates how NPS park scientists must handle their data. Dr. Goodman has taken a document describing recommended, best data management practices for the SFAN Inventory and Monitoring Program, authored by me (Press 2005) and falsely turned it into official NPS regulations. Moreover, the Trip Report *has* been entered into the NPS harbor seal database, already submitted to Dr. Goodman in his second FOIA request of the data.

In his final analysis of the harbor seal data, Dr. Goodman states, “As of April 29, DBOC accounted for 1/500 or 0.2 percent of the 2,900 FW’s during the 2005 to 2007 pupping seasons, mostly from park visitors.”

First of all, it is entirely unclear why Dr. Goodman would limit his analysis to an end date of April 29, 2007. The monitoring season extends each year until the end of July, and Dr. Goodman was supplied with this entire data set on two occasions. Additionally, it is customary to review all disturbance types when reporting the data, not just FW events.

My preliminary analysis of the data (Table 1) further confirms that Dr. Goodman is not analyzing the NPS harbor seal data set accurately.

Table 1. Summary results of harbor seal subsite disturbance data, 2005 to 2007.

Year	All Locations			Drakes Estero			Caused by DBOC		
	Total ¹	FW ²	Seals FW ³	Total ¹	FW ²	Seals FW ³	Total ¹	FW ²	Seals FW ³
2005	112	67	5804	44	27	1552	0	0	0
2006	137	64	3615	42	28	2094	1	1	24
2007	208	116	5818	64	46	3102	11	7	62
Total	457	247	15237	150	101	6748	12	8	86

1. Total number of subsites disturbed by head alert (HA), flush toward water (F) and flush into water (FW) events

2. Total number of subsites disturbed by FW events

3. Total number of seals flushed during FW events

By my results, from 2005 to 2007, compared to disturbances from all locations, DBOC accounted for 2.6% of all disturbed subsites, 3.2% of all FWs, and 0.5% of the total harbor seals flushed.

Within Drakes Estero, during the same time period from 2005-2007, DBOC accounted for 8.0% of all disturbed subsites, 7.9% of all FWs, and 1.3% of the total harbor seals flushed.

During 2007, when the NPS first raised its concerns regarding harbor seal disturbances caused by DBOC, DBOC accounted for 17.2% of all disturbed subsites in Drakes Estero, 15.2% of all FWs in Drakes Estero, and 2.0% of the total harbor seals flushed in Drakes Estero.

The disturbances caused by DBOC in Drakes Estero all occurred during the critical pupping months of March, April, and May at subsites OB, UEF, and UEN, nearby where DBOC has increased their oyster production by using a method of staked oyster bags placed on the sandbars. These sandbars in the middle of the estuary are not connected to the mainland, are afforded protection from mainland predators, and are largely protected from park visitors, due especially in part to the seasonal recreational boat closure in Drakes Estero. In fact, with the exception of two aircraft incidents, the only documented anthropogenic disturbances to these subsites during the 2005, 2006, and 2007 pupping months were caused by DBOC. During the five years of monitoring prior to DBOC's lease purchase, NPS volunteers only documented two anthropogenic disturbances to these middle Estero subsites during the pupping months. Finally, please note that subsite A, as repeatedly identified in error by Dr. Goodman, has never been mentioned by the NPS in public or written testimony and is in fact not the focus of concern regarding impact to harbor seals by DBOC.

My results differ drastically from Dr. Goodman's and show clear cause for concern and action to protect harbor seals in Drakes Estero. Dr. Goodman is correct that the majority of the harbor seal disturbances that the NPS has documented, including within Drakes Estero, are caused by park visitors. The NPS has made no claims to the contrary. However, the NPS has documented a substantial increase in disturbances to subsites OB, UEN, and UEF since DBOC took over the oyster business from the Johnson family. Given that DBOC runs a commercial business within the park boundaries, it seems quite appropriate for the NPS to request that DBOC alter its operations to protect harbor seals in Drakes Estero and that DBOC complies with these requests.

Dr. Goodman has relentlessly criticized the scientific credibility of the NPS in our local papers and before the Marin County Board of Supervisors. Dr. Goodman's latest treatment of the harbor seal monitoring data, however, adds to a pattern of inaccurate reporting of the data, errors of omission, and baseless accusations.

- In testimony before the Marin County Board of Supervisors (May 8, 2007), Dr. Goodman cited a paper by Sydeman and Allen (1999) as evidence that oyster farming in Drakes Estero does not impact harbor seals, but he failed to note that the paper only analyzed harbor seal data from Double Point and the Farallon Islands.
- On September 13, 2007, in John Hull's article "Park Service Seal Data Proves Suspect" published in the *Point Reyes Light*, average seal count numbers for Drakes Estero from May 2007 are presented. Presumably Dr. Goodman, the only recipient of the harbor seal data, is the source of the summary data presented in the article. Dr. Goodman is quoted extensively in the article, and Hulls notes that, "Goodman has been deciphering the information over the past few days." Using the same data as Dr. Goodman, I was unable to re-produce his results, and I can only conclude that the data was reported in error.
- In database metadata records submitted twice to Dr. Goodman, the NPS requested that he refrain from publishing the data until the scientists who were involved in the primary data collection had an opportunity to publish their work. Dr. Goodman has consistently denied receiving these metadata records and published the data anyway. I am not aware of any other instance in which a scientist has published data that is not their own prior to publication by the principal investigator.
- In correspondence with the NPS following his initial FOIA request, Dr. Goodman complained that the data were not submitted "in a form that I can analyze". The database was in fact submitted in Microsoft Access, a readily available software program, with complete metadata records compliant with Executive Order 12906. As noted by Dr. Goodman in the *Point Reyes Light* on September 20, 2007, he was only able to open the database after he brought it to John Hulls of the *Point Reyes Light* seeking assistance. This, coupled with his errors in reporting the data, raises serious questions regarding whether Dr. Goodman is qualified to analyze the harbor seal data provided to him in Microsoft Access format.
- Dr. Goodman has repeatedly claimed that the NPS did not release all of the harbor seal monitoring data in response to his FOIA request. Dr. Goodman has reported that he only received "some of the requested data" and only "recent information" (*Point Reyes Light*, September 13 and 20, 2007), when in fact he was provided with the past 11 years of data, representing the entire NPS data set.